
Appendix R

Landscape and visual

Marinus Link

Victoria terrestrial & coastal processes

Landscape and Visual Impact Assessment May 2024



MARINUS LINK

QUALITY INFORMATION

Revision history

Revision	Description	Date	Author	Reviewer	Approver
Rev0	Final	16/05/2024	H. B	K. W	H. B

Restriction on Disclosure and Use of Data

© Copyright 2023 Landform Architects Pty Ltd. The concepts, data and information contained in this document are the property of Landform Architects Pty Ltd. No part of this document may be reproduced, used, copied, published or adapted for use except in accordance with the provisions of the Copyright Act 1968 or with the consent of Landform Architects Pty Ltd.

This document has been prepared for Marinus Link Pty Ltd to satisfy the Minister for Planning's Scoping Requirements for the Marinus Link Project (project) dated 19 September 2022 under the Environment Effects Act 1978. Landform Architects Pty Ltd accepts no liability or responsibility whatsoever for, or in respect of, any use of, or reliance upon, this document by any third party. Any third party using and/or relying upon this document accepts sole responsibility and all risk for using and/or relying on this document for any purpose.

This document is based on the information available, and the assumptions made, as at the date of the document. For further information, please refer to the assumptions, limitations and uncertainties set out in the methodology section of this document.

This document is to be read in full. No excerpts are to be taken as representative of the findings without appropriate context.

CONTENTS

EXECUTIVE SUMMARY	1
Overview	1
Existing Conditions	1
Impact assessment key findings.....	1
Environmental Performance Requirements	2
GLOSSARY AND ABBREVIATIONS	3
1. INTRODUCTION	4
1.1 Purpose of this report.....	4
1.2 Project overview.....	4
1.3 Assessment context.....	7
2. ASSESSMENT GUIDELINES.....	8
2.1 Commonwealth.....	8
2.2 Tasmania.....	8
2.3 Victoria	8
2.3.1 EES evaluation objective.....	8
2.3.2 EES Scoping requirements.....	8
2.4 Linkages to other technical studies.....	10
3. PROJECT DESCRIPTION.....	11
3.1 Construction.....	12
3.1.1 Land cable construction.....	15
3.1.2 Other disturbance areas	15
3.1.3 Reinstatement and rehabilitation	16
3.2 Operation.....	16
3.2.1 Sub-Sea Cables	16
3.2.2 Land Cables.....	17
3.2.3 Converter Station	17
3.2.4 Converter Station Layouts.....	19
3.2.5 Transition station and fibre optic terminal station	21
3.3 Operational Lighting	22
3.4 Decommissioning.....	23
4. ASSESSMENT METHOD	24
4.1 Study area	25
4.2 Landscape character and viewer sensitivity.....	25

4.3	Policy review.....	25
4.4	Viewpoint assessment.....	26
4.4.1	Publicly Accessible locations	26
4.5	Scale of Effects.....	27
4.6	Cumulative visual impact.....	28
4.7	Mitigation options	29
4.8	Photomontages.....	29
4.8.1	Camera data	29
4.8.2	GPS Co-ordinates	30
4.8.3	Photomontage development.....	30
4.9	Assumptions and limitations.....	31
5.	STUDY AREA	32
6.	LEGISLATION, POLICY, AND GUIDELINES	34
6.1	Summary of Findings	34
7.	LANDSCAPE CHARACTER, FEATURES AND VALUES	37
7.1	Landscape features relevant to Landscape Character Units	37
7.1.1	Geological units.....	37
7.1.2	Topography.....	39
7.1.3	Vegetation.....	44
7.1.4	Waterways and water bodies.....	47
7.1.5	Land Use	47
7.1.6	Conservation parks and reserves	48
7.1.7	Townships.....	48
7.1.8	Other documents.....	49
7.2	Landscape Character	50
7.2.1	Landscape Character 1 – Coastal dunes and beaches	50
7.2.2	Landscape Character 2a – Townships.....	51
7.2.3	Landscape Character 2b – Rural Residential.....	52
7.2.4	Landscape Character 3a – Cleared flat farmland	52
7.2.5	Landscape Character 3b – Cleared hilly farmland.....	53
7.2.6	Landscape Character 4 – Plantation.....	53
7.2.7	Landscape Character 5 – Waterbodies and waterways.....	54
7.2.8	Landscape Character 6 – National Parks, State Parks, and State Forests	55
7.2.9	Landscape and viewer sensitivity	56
7.3	Regional Landscape Character	57

7.3.1	Coast and plains	59
7.3.2	Cleared flat farmland	59
7.3.3	Rolling farmland and forests	59
8.	CUMULATIVE IMPACT CONSIDERATIONS	60
8.1	Existing Generation and transmission.....	60
8.2	Delburn Wind Farm.....	61
8.3	Hazelwood Rehabilitation Project	63
8.4	Wooreen Energy Storage System (WESS).....	63
8.5	Summary of cumulative considerations	64
8.6	Mitigation of cumulative visual impacts.....	65
9.	IMPACT ASSESSMENT – PUBLIC VIEWPOINTS	66
9.1	Coast and plains	67
9.1.1	Viewpoint 1 – Ned Neale’s Lookout	68
9.1.2	Viewpoint 2 – Waratah Bay Beach.....	69
9.1.3	Viewpoint 3 – Waratah Road	71
9.1.4	Viewpoint 4 – Intersection Fish Creek – Walkerville Road and Waratah Road.....	74
9.2	Cleared farmland South	75
9.2.1	Viewpoint 5 – Buffalo township / Great Southern Rail Trail.....	76
9.2.2	Viewpoint 6 – South Gippsland Highway	78
9.2.3	Viewpoint 7 – Meeniy-an-Mirboo North Rd.....	79
9.3	Rolling farmland and forests.....	80
9.3.1	Viewpoint 8 – Dumbalk Township.....	82
9.3.2	Viewpoint 9 - Meeniy-an-Mirboo North Rd	84
9.3.3	Viewpoint 10 – Boolarra-Mirboo North Road.....	85
9.3.4	Viewpoint 11 – Grand Ridge Rail Trail	86
9.3.5	Viewpoint 12 – Ten Mile Creek Road.....	88
9.3.6	Viewpoint 13 – Creamery Road	90
9.3.7	Viewpoint 14 – Intersection of Strzelecki Highway and Smiths Road.....	92
9.3.8	Viewpoint 15 – Strzelecki Highway	94
9.4	Cleared farmland North	96
9.4.1	Viewpoint 16 – Yourongi Court	98
9.4.2	Viewpoint 17 – Monash Way	100
9.4.3	Viewpoint 18 – Tramway Road.....	102
10.	MITIGATION OPTIONS.....	104
11.	ENVIRONMENTAL PERFORMANCE REQUIREMENTS	105

12. CONCLUSION.....	106
13. REFERENCES.....	108

APPENDIX A: PHOTOMONTAGES

APPENDIX B: POLICY REVIEW

LIST OF TABLES

Table 2-1 EES scoping requirements.....	9
Table 2-2 Related studies.....	10
Table 3-1 Indicative laydown locations.....	13
Table 4-1 Scale of effects.....	27
Table 5-1 Zones of Visual Influence for the converter station.....	33
Table 7-1 Landscape Character and sensitivity and value rating.....	56
Table 9-1 Viewpoint Location Summary.....	67
Table 9-2 Viewpoint Location Summary.....	75
Table 9-3 Viewpoint Location Summary.....	81
Table 9-4 Viewpoint Location Summary.....	96
Table 11 LVIA Environmental Performance Requirements.....	105

LIST OF FIGURES

Figure 1-1 Project Overview.....	6
Figure 3-1 Project components considered under applicable jurisdictions (Marinus Link Pty Ltd 2022, Consultation Plan).....	12
Figure 3-2 Proposed laydown areas.....	14
Figure 3-3 Example of a rehabilitated easement.....	17
Figure 3-4 Victorian converter station location options.....	18
Figure 3-5 Typical converter station layout.....	20
Figure 3-6 Transition station location (Source Jacobs DWG No: IS360300_VIC_HVDC_COST_INFO_014 Sheet 3).....	21
Figure 3-7 Transition Station Site Layout Axonometric View (Source Jacobs DWG No: IS360300_VIC_HVDC_COST_INFO_014 Sheet 2 of 3).....	22
Figure 4-1 Visual impact – public realm.....	27
Figure 4-2 Photomontage construction.....	30
Figure 5-1 Determining the study area extent based on project infrastructure within the vertical field of view.....	32
Figure 7-1 Geological Units (Source:Surface Geology of Victoria 1:250,000 Maps 51, 52, 56 and 57).....	38
Figure 7-2 Topography within the Coast and Plains regional landscape area.....	40
Figure 7-3 Topography within the Cleared Farmland South regional landscape area.....	41
Figure 7-4 Topography within the Rolling Farmland and Forests regional landscape area.....	42
Figure 7-5 Topography within the Cleared Farmland north regional landscape area.....	43
Figure 7-6 Vegetation patterns within the Coast and Plains regional scale landscape character study area.....	44
Figure 7-7 Vegetation patterns within the Cleared Farmland South regional scale landscape character study area.....	45
Figure 7-8 Vegetation patterns within the Rollings Farmland and Forests regional scale landscape character study area.....	46
Figure 7-9 Vegetation patterns within the Cleared Farmland North regional scale landscape character study area.....	47

Figure 7-10 Waratah Bay Beach Access	50
Figure 7-11 Ned Neale's Lookout.....	51
Figure 7-12 Sandy Point Township	51
Figure 7-13 Rural Residential Example	52
Figure 7-14 Cleared Flat Farmland Example.....	52
Figure 7-15 Cleared Hilly Farmland Example	53
Figure 7-16 Plantation Example	54
Figure 7-17 Water Bodies and waterways example.....	55
Figure 7-18 National Parks, State Parks and State Forests Example.....	56
Figure 7-19 Regional scale landscape character	58
Figure 8-1 Electrical generation and transmission - Source AEMO.....	61
Figure 8-2 Delburn Wind Farm Layout (source: www.OSMI.com.au).....	62
Figure 8-3 Hazelwood rehabilitation aera	63
Figure 8-4 Site location and Layout of the WESS (Source: https://www.energyaustralia.com.au/sites/default/files/2023-01/Appendix20B.pdf)	64
Figure 9-1 – Coast and Plains viewpoint location map.....	67
Figure 9-2 – Viewpoint 1 – Existing view looking west toward the alignment.....	68
Figure 9-3 – Viewpoint 2a – Existing view looking east toward the alignment (55H 418966, 5703665).....	69
Figure 9-4 – Viewpoint 2b – Existing view looking north-east toward the alignment (55H 418969, 5703694).....	69
Figure 9-5 – Viewpoint 2c – Existing view looking north through east toward the alignment (55H 418992, 5703704)	70
Figure 9-6 – Viewpoint 3 – Existing view looking south toward the transition station	71
Figure 9-7 – Viewpoint 3 – Existing view looking north toward the alignment	71
Figure 9-8 - Viewpoint 3 - Photomontage looking south.....	72
Figure 9-9 - Photomontage enlargement.....	72
Figure 9-10 – Viewpoint 4 – Existing view looking south-west toward the alignment	74
Figure 9-11 – Cleared Farmland viewpoint location map	75
Figure 9-12 – Viewpoint 5a – Existing view looking west toward the alignment (55H 415644, 5721337)	76
Figure 9-13 – Viewpoint 5b – Existing view looking west toward the alignment (55H 415413, 5721249)	76
Figure 9-14 – Viewpoint 5c – Existing view looking north toward the alignment (55H 415402, 5721414).....	77
Figure 9-15 – Viewpoint 6 – Existing view looking west through north toward the alignment	78
Figure 9-16 – Viewpoint 7 – Existing view looking north-west through north-east toward the alignment.....	79
Figure 9-17 – Rolling farmland and forests viewpoint location map.....	80
Figure 9-18 – Viewpoint 8a – Existing view looking north toward the alignment (55H 421076, 5734628).....	82
Figure 9-19 – Viewpoint 8b – Existing view looking west through north toward the alignment (55H 421162, 5735107)	82
Figure 9-20 – Viewpoint 9 – Existing view looking south-west through north toward the alignment.....	84
Figure 9-21 – Viewpoint 10 – Existing view looking south-west through north-east toward the alignment	85
Figure 9-22 – Viewpoint 11 – Existing view looking north-east through south toward the alignment	86
Figure 9-23 – Viewpoint 12 – Existing view looking east through south toward the alignment	88
Figure 9-24 – Viewpoint 13 – Existing view looking east toward the alignment.....	90
Figure 9-25 – Viewpoint 14 – Existing view looking north-west through east toward the alignment.....	92
Figure 9-26 – Viewpoint 15 – Existing view looking south through south-west toward the alignment	94
Figure 9-27 – Viewpoint 15 – Approved Delburn Wind Farm	94
Figure 9-28 – Viewpoint 15 – Approved View with the project superimposed	95
Figure 9-29 – Cleared Farmland North viewpoint location map.....	96
Figure 9-30 – Viewpoint 16 – Existing view looking south toward the alignment.....	98
Figure 9-31 – Viewpoint 16 – Enlargement of the existing view	98
Figure 9-32 – Viewpoint 17 – Existing view looking north-east through south-east toward the alignment.....	100
Figure 9-33 – Viewpoint 17 Enlargement of the view looking east.....	101

Figure 9-34 – Viewpoint 18 – Existing view looking west through north toward the alignment102
Figure 9-35 – Viewpoint 18 – Photomontage.....103
Figure 9-36 – Viewpoint 18 – Photomontage enlargement.....103

EXECUTIVE SUMMARY

This Landscape and Visual Impact Assessment forms part of the Environment Effects Statement (EES) for the Marinus Link (the project). This report and the methodology adopted for this assessment to respond to the EES scoping requirements.

OVERVIEW

The project is proposed to be implemented as two 750 MW circuits to meet transmission network operation requirements in Tasmania and Victoria. Each 750 MW circuit will comprise two power cables and a fibre-optic communications cable bundled together in Bass Strait and laid in a horizontal arrangement on land. This assessment is focused on the Victorian section of the project.

The Victorian section includes the shoreline crossing at Waratah Bay–Shallow Inlet Coastal Reserve, approximately 90 km of underground cabling to a converter station at either Driffield or Hazelwood. There may be a need for an above-ground transition station at Waratah Bay. This will only be required should there be a need for different cable technologies to be adopted for the land and subsea cables. The transition station would also house the fibre optic transition station.

This report will also inform the environmental impact statement (EIS) being prepared to assess the project's potential environmental effects in its entirety across each jurisdiction in accordance with the legislative requirements of the Commonwealth, Tasmanian and Victorian governments.

EXISTING CONDITIONS

The majority of the land in the study area and project alignment is land within the Farming Zone. The predominant land uses comprise animal husbandry, cropping, horticulture or timber plantations.

The policy settings for land use are described in chapter 6 of this report and in the EIS/EES Technical Appendix S: Land Use and Planning impact assessment.

It is recognised that many people find these areas appealing for their apparent natural values. However, the majority of the landscape in agricultural areas has been modified from a natural state, protections are not for amenity or aesthetic purposes, and this land use is not rare.

IMPACT ASSESSMENT KEY FINDINGS

The majority of the project's visual impacts have been avoided through the undergrounding of the proposed transmission lines.

Construction impacts on coastal areas and sensitive landscapes will be mitigated through HDD rather than open-cut trenching, avoiding surface disturbance and clearing. Operational visual impacts, particularly locations in sensitive landscape coastal and hinterland areas, have been managed by undergrounding and rehabilitation of easements and construction compounds.

Residual and above-ground infrastructure will be limited to permanent features required at the terminal station adjacent Waratah Road, features of the transition station if required, cable pits located along the easement and the preferred converter station to the north. Lighting will be limited to motion-activated and therefore limited to no effect on the area's Dark Skies.

Converter station option one would be in a HVP timber plantation west of the Strzelecki Highway near Driffield. Converter station option two is proposed in farming land to the south of the existing Hazelwood terminal station. Both locations are to the south of the existing 500 kV Hazelwood to Melbourne single

circuit transmission line. Lighting will be limited to motion-activated and a background element to light glow from Traralgon further to the north.

The Driffield site will be visible from the Strzelecki Highway, and in the context of turbines associated with the approved but not yet constructed Delburn Wind Farm. The Hazelwood site would be added to views that include infrastructure similar to the proposed converter station.

ENVIRONMENTAL PERFORMANCE REQUIREMENTS

Four EPRs have been identified to assist with managing the project's visual impacts.

- LV01 seeks to - Reduce the prominence of the converter station
- LV02 seeks to - Screen views from public roads
- LV03 seeks to - Manage views of the transition station.
- LV04 supports LV02 and LV03 for the successful establishment of landscape screening.

The strategies identified to assist with these objectives are set out in Table 11 in Chapter 11.

GLOSSARY AND ABBREVIATIONS

Term	Descriptions
AoD	Area of Disturbance
DEECA	Department of Energy, Environment and Climate Action (Formerly DEWLP)
EE Act	<i>Environment Effects Act 1978</i> (Vic)
EES	Environment Effects Statement
EPBC Act	<i>Environmental Protection and Diversity Conservation Act 1999</i> (Cwth)
ESO	Environmental Significance Overlay
FZ	Farming Zone
GIS	Geographic Information System
HO	Heritage Overlay
LCU	Landscape Character Unit
LGA	Local Government Area
LPPF	Local Planning Policy Framework
LVIA	Landscape and Visual Impact
PCRZ	Public Conservation and Resource Zone
Planning and Environment Act	<i>Planning and Environment Act 1987</i> (Vic)
PPF	Planning Policy Framework
PPRZ	Public Park
RLZ	Rural Living Zone
VP	Viewpoint
VPO	Vegetation Protection Overlay
Viewshed	Visual Study Area

1. INTRODUCTION

The proposed Marinus Link (the project) comprises a high voltage direct current (HVDC) electricity interconnector between Tasmania and Victoria, to allow for the continued trading and distribution of electricity within the National Electricity Market (NEM).

The project was referred to the Australian Minister for the Environment 5 October 2021. On 4 November 2021, a delegate of the Minister for the Environment determined that the proposed action is a controlled action as it has the potential to have a significant impact on the environment and requires assessment and approval under the *Environment Protection and Biodiversity Conservation Act 1999* (Cwlth) (EPBC Act) before it can proceed. The delegate determined that the appropriate level of assessment under the EPBC Act is by an environmental impact statement (EIS).

On 12 December 2021, the former Victorian Minister for Planning under the *Environment Effects Act 1978* (Vic) (EE Act) determined that the project requires an environment effects statement (EES) under the EE Act, to describe the project's effects on the environment to inform statutory decision making.

In July 2022 a delegate of the Director of the Environment Protection Authority Tasmania determined that the project be subject to environmental impact assessment by the Board of the Environment Protection Authority (the Board) under the *Environmental Management and Pollution Control Act 1994* (Tas) (EMPCA).

As the project is proposed to be located within three jurisdictions, the Victorian Department of Transport and Planning (DTP), Tasmanian Environment Protection Authority (Tasmanian EPA) and Australian Department of Climate Change, Energy, Environment and Water (DCCEEW) have agreed to coordinate the administration and documentation of the three assessment processes. One EIS/EES is being prepared to address the requirements of DTP and DCCEEW. Two EISs are being prepared to address the Tasmanian EPA requirements for the Heybridge converter station and shore crossing.

This report has been prepared by Landform Architects for the Commonwealth and Victorian jurisdictions to address all jurisdictions as part of the EIS/EES being prepared for the project.

1.1 PURPOSE OF THIS REPORT

This report has assessed the potential landscape and visual impacts associated with the construction and operation of the project in Victoria. The focus of this assessment has been the impacts on landscape character, significant or valued landscapes and sensitive viewing locations identified in relevant legislation and guidelines.

Environmental Performance Requirements (EPRs) have been prepared to manage visual impacts where practicable to meet the EES objectives.

The potential landscape and visual impacts associated with the construction and operation of the project in Tasmania have been undertaken separately.

1.2 PROJECT OVERVIEW

The project is a proposed 1500 megawatt (MW) HVDC electricity interconnector between Heybridge in northwest Tasmania and the Latrobe Valley in Victoria (Figure 1-1). The project is proposed to provide a second link between the Tasmanian renewable energy resources and the Victorian electricity grids enabling efficient energy trade, transmission and distribution from a diverse range of generation sources to where it is most needed, and will increase energy capacity and security across the NEM.

Marinus Link Pty Ltd (MLPL) is the proponent for the project and is a wholly owned subsidiary of Tasmanian Networks Pty Ltd (TasNetworks). TasNetworks is owned by the State of Tasmania and owns, operates and maintains the electricity transmission and distribution network in Tasmania.

Tasmania has significant renewable energy resource potential, particularly hydroelectric power and wind energy. The potential size of the resource exceeds both the Tasmanian demand and the capacity of the existing Basslink interconnector between Tasmania and Victoria. The growth in renewable energy generation in mainland states and territories participating in the NEM, coupled with the retiring of baseload coal-fired generators, is reducing the availability of dispatchable generation that is available on demand.

Tasmania's existing and potential renewable resources are a valuable source of dispatchable generation that could benefit electricity supply in the NEM. The project will allow for the continued trading, transmission and distribution of electricity within the NEM. It will also manage the risk to Tasmania of a single interconnector across Bass Strait and complement existing and future interconnectors on mainland Australia. The project is expected to facilitate the reduction in greenhouse gas emissions at a state and national level.

Interconnectors are a key feature of the future energy landscape. They allow power to flow between different regions to enable the efficient transfer of electricity from renewable energy zones to where the electricity is needed. Interconnectors can increase the resilience of the NEM and make energy more secure, affordable and sustainable for customers. Interconnectors are common around the world including in Australia. They play a critical role in supporting Australia's transition to a clean energy future.



LEGEND

- Landfall
- Converter station
- HVDC subsea cable
- Underground HVDC cable
- Cable option not progressing



0 15 30 km
 SCALE 1:1,500,000
 PAGE SIZE: A4
 PROJECTION: GDA2020 MGA Zone 55

SOURCE
 Proposed route from Tetra Tech Coffey.
 Imagery from ESRI Online.

MARINUS LINK PTY LTD

MARINUS LINK
EIS/EES

FIGURE 1-1

Project Overview



1.3 ASSESSMENT CONTEXT

The onshore project components are located in Victorian coastal areas and valuable and productive hinterland landscapes, which include grazing, dairy, horticultural and forestry areas which are valued for their productivity and 'rural' amenity.

Although most of the project will be underground, there will be changes to the landscape through activities such as clearing trees and other vegetation to establish the project easement and above-ground components such as the converter stations and land-sea jointing facility. Some above-ground components are also proposed in similar or proposed development areas.

The landscapes and areas in which the project is proposed are landscapes that are valued by local communities, their visitors and tourists. This study will objectively assess the project's impacts on landscapes and views that may be unique, significant or protected.

2. ASSESSMENT GUIDELINES

This section outlines the relevant assessment guidelines for this landscape and visual assessment (LVIA) report and the linkages to other EIS/EES technical studies. A single consolidated EIS/EES is being prepared to address the requirements of all the Commonwealth and Victorian jurisdictions including the requirement for an EES. This report will use the term EIS/EES going forward. A detailed review of government policies was undertaken to identify key objectives and considerations for the project's landscape and visual impact assessment, which is included in chapter 6 of this report.

2.1 COMMONWEALTH

DCCEEW have published the following guidelines for the EIS: '*Guidelines for the Content of a Draft Environmental Impact Statement – Environment Protection and Biodiversity Conservation Act 1999 – Marinus Link underground and subsea electricity interconnector cable (EPBC 2021/9053)*'.

Chapter 5 of the Guidelines sets out the technical studies that are required to be undertaken as part of the EIS, and the key considerations for each of the technical studies. These do not include Landscape and Visual Impacts.

2.2 TASMANIA

The project's Tasmanian component is being assessed per the EIS guidelines issued by EPA Tasmania for the converter station and shore crossing (September 2022). This assessment is documented in a separate report (Landform Architects 2023).

2.3 VICTORIA

The EES Scoping Requirements issued by the Minister for Planning (February 2023) outline the specific matters to be assessed across a number of environmental and social disciplines relevant to the project, and to be documented in the EES for the project.

The EES Scoping Requirements inform the scope of the EES technical studies and define the EES evaluation objectives. The EES evaluation objectives identify the desired outcomes to be achieved and provide a framework for an integrated assessment of the environmental effects of a proposed project.

2.3.1 EES evaluation objective

The evaluation objective for landscape and visual impacts requires the project to:

Avoid and, where avoidance is not possible, minimise the potential adverse effects on landscape and visual amenity.

2.3.2 EES Scoping requirements

Section 4.6 of the EES scoping requirements state the key issues and considerations that are to be considered by the landscape and visual impact assessment.

Table 2-1 EES scoping requirements

Aspects to be assessed	Scoping Requirement	Relevant section in this report
Key Issues	<i>Potential effects on significant landscape values and landforms in the vicinity of the project, especially national parks, state parks or other reserves and areas identified for their landscape values, such as within South Gippsland and Latrobe Shire planning schemes and cultural landscapes that may have tangible or intangible cultural values.</i>	Chapter 6 identifies the location and proximity of significant landscape and areas such as national parks, state parks or other reserves recognised in the local planning schemes. Chapter 9 assessed the visual impact of the project on these areas. Cultural landscapes will be identified and addressed in other technical studies (see Table 2-2).
	<i>Potential for nearby residents or communities to experience significant effects to visual amenity from project infrastructure.</i>	Chapter 9 has assessed the project's visual impact on communities through viewing locations selected from the public realm. Sections 9.2.1 and 9.3.1 has assessed the impacts from townships that are near to the project alignment.
Existing Environment	<i>Characterise the landscape character, features and values of the project area and its environs.</i>	Chapters 6 and 7 summarises features in the areas surrounding the project that has supported the defining of landscape character and values.
	<i>Identify public and private view sheds to and from the project and characterise visual values of the area, including dark skies.</i>	Chapter 3 describes the key project features and activities, including lighting. Chapter 5 defines the extent of the study area for landscape and visual impact in the Public and Private Domains. Chapter 7 describes the features and uses within the study area that contribute to character and night skies.
	<i>Identify viewsheds in which the project site is visible, including from nearby residences (where permitted), public lookouts, tourist attractions, roads, and key vantage points.</i>	Chapter 5 defines the extent of the viewsheds for assessing the landscape and visual impact of the Project in the Public and Private Domains. This assessment uses Study Area in place of viewshed.
	<i>Identify existing built features within the landscape and their contribution to the existing landscape and visual setting relevant to the project.</i>	Chapter 8 identifies existing projects that may contribute to the cumulative visual impacts of the project. This chapter also identifies nearby projects that are proposed or approved and awaiting construction.
Likely effects	<i>Assess the landscape and visual effects of the project, including on public and private views. Use photomontages and other visual techniques to support the assessment.</i>	Chapter 9 assessed public viewing locations. Sections 9.2.1 and 9.3.1, have assessed the impacts from nearby townships along the project alignment.
	<i>Assess the potential for cumulative impacts in the context of existing built infrastructure, as well as proposed or approved developments.</i>	Chapter 8 identifies existing projects that may contribute to the cumulative visual impacts of the project. Cumulative impacts are assessed in Chapter 9 public domain views.
Mitigation	<i>Outline and evaluate any potential design and siting options that could avoid and minimise potential effects on landscape and visual amenity of neighbouring residences and communities and additional management strategies that may further minimise potential effects.</i>	Chapter 11 identifies options to mitigate the visual impacts of project features. These are supported by the project's impacts which are assessed in Chapter 9.
Performance	<i>Describe the framework for monitoring and evaluating the measures implemented to mitigate landscape and visual effects and contingencies.</i>	Measures to monitor the success of commitments to mitigate or manage effects are discussed in Chapter 12.

2.4 LINKAGES TO OTHER TECHNICAL STUDIES

This report is informed by or informs the technical studies outlined in Table 2-2.

Table 2-2 Related studies

Technical study	Relevance to this assessment
Aboriginal and Historical Cultural Heritage Impact Assessment (Technical Appendix J)	Provides an assessment of the project's potential effects on Aboriginal cultural heritage values. The Cultural Values Assessment will consider the potential visual impacts of the project on those values including cultural landscapes if they are identified.
Historical Heritage Impact Assessment (Technical Appendix J)	Provides an assessment of the project's potential effects on post-settlement cultural heritage values.
Land Use and Planning Impact Assessment (Technical Appendix S)	Provides an assessment of the project's potential effects on land use and how it aligns with policy. Information from the Land Use and Planning Impact Assessment has assisted in identifying relevant planning policy to be considered by this assessment, land use and sensitivity expectations, sensitive viewing locations and weighting of strategic landscape assessments.
Social Impact Assessment (Technical Appendix U)	Provides an assessment of the project's potential social and community impacts. Information from the Social Impact Assessment has assisted in the review of existing conditions, particularly sensitive areas and viewing locations, and community values.
Agricultural Impact Assessment (Technical Appendix K)	Provides an assessment of the project's impacts on agricultural land and businesses in the region. A key focus of the agricultural impact assessment is to minimise, avoid, reduce and offset impacts on agricultural activities. This has also assisted in reducing residual visual impacts of the project through the fragmentation of farming areas through easements and access tracks and vegetation removal along fencing lines and property boundaries. The agricultural impact assessment has also assisted in establishing landscape character and values.
Bushfire Impact Assessment (Technical Appendix M)	Provides an assessment of the project's potential effects on bushfire management. The Bushfire Impact Assessment has assisted in assessing the visual impact on views from the private domain and the recommendations for landscape mitigation.
Hydrology report prepared by Alluvium Consulting (Technical Appendix Q)	Provides an assessment of the project's potential effects on waterways and waterbodies. The Hydrology Impact Assessment has assisted in establishing landscape character and values.
Terrestrial Ecology (Technical Appendix V)	Provides an assessment of the impacts to native vegetation within the easement and areas disturbed by construction. Areas disturbed by construction. This assessment has considered the visual impacts that might be brought about by the removal of notable vegetation (trees) from significant or sensitive viewing locations. The identification of areas where this is likely to occur has been informed by the ecological report. The most notable change in views or visual impact for vegetation removal is typically limited to easements cut through treed areas creating a cleared "swathe". Most of the vegetation removal in treed areas is along the margins of existing access tracks or existing cleared easements.

3. PROJECT DESCRIPTION

This section will describe the key project elements in Victoria that are relevant to assessing LVIA of the project. The landscape and visual changes brought about by the project will be used to partly determine an appropriate methodology to assess the landscape and visual impacts of the project.

The project is proposed to be implemented as two 750 MW circuits to meet transmission network operation requirements in Tasmania and Victoria. Each 750 MW circuit will comprise two power cables and a fibre-optic communications cable bundled together in Bass Strait and laid in a horizontal arrangement on land. The two 750 MW circuits will be installed in two stages with the western circuit being laid first as part of stage one, and the eastern cable in stage two.

The key project components for each 750 MW circuit, from south to north, are:

- HVAC switching station and HVAC-HVDC converter station at Heybridge in Tasmania. This is where the project will connect to the North West Tasmania transmission network being augmented and upgraded by the North West Transmission Developments (NWTD).
- Shore crossing in Tasmania adjacent to the converter station.
- Subsea cable across Bass Strait from Heybridge in Tasmania to Waratah Bay in Victoria.
- Shore crossing at Waratah Bay approximately 3 km west of Sandy Point.
- Land-sea cable joint where the subsea cables will connect to the land cables in Victoria.
- Land cables in Victoria from the land-sea joint to the converter station site in the Driffield or Hazelwood areas.
- HVAC switching station and HVAC-HVDC converter station at Driffield or at Hazelwood, where the project will connect to the existing Victorian transmission network.

A transition station at Waratah Bay may also be required if there are different cable manufactures or substantially different cable technologies adopted for the land and subsea cables. The location of the transition station will also house the fibre optic terminal station in Victoria. However, regardless of whether a transition station is needed, a fibre optic terminal station will still be required in the same location.

Approximately 255 kilometres (km) of subsea HVDC cable will be laid across Bass Strait. The preferred technology for the project is two 750 megawatt (MW) symmetrical monopoles using ± 320 kV, cross-linked polyethylene insulated cables and voltage source converter technology. Each symmetrical monopole is proposed to comprise two identical size power cables and a fibre-optic communications cable bundled together. The cable bundles for each circuit will transition from approximately 300 m apart at the HDD (offshore) exit to 2 km apart in offshore waters.

In Victoria, the shore crossing is proposed to be located at Waratah Bay with the project alignment crossing at the Waratah Bay–Shallow Inlet Coastal Reserve. From the land-sea joint located behind the coastal dunes, the land cable will extend underground for approximately 90 km to the converter station. From Waratah Bay the cable will run northwest to the Tarwin River Valley and then travel to the north to the Strzelecki Ranges. The project alignment crosses the ranges between Dumbalk and Mirboo North before descending to the Latrobe Valley where it turns northeast to Hazelwood. The Victorian converter station will be at either a site south of Driffield or Hazelwood adjacent to the existing terminal station.

The land cables will be directly laid in trenches or installed in conduits in the trenches. A construction area of 20 to 36 m wide will be required for laying the land cables and construction of joint bays. Temporary roads for accessing the construction area and temporary laydown areas will also be required to support construction. Where possible, existing roads and tracks will be used for access, for example, farm access tracks or plantation forestry tracks.

Land cables will be installed in ducts under major roads, railways, major watercourses and substantial patches of native vegetation using trenchless construction methods (e.g., HDD), where geotechnical conditions permit. A larger area than the 36 m construction area will be required for the HDD crossings.

The assessment is focused on the Victorian section of the project. This report will inform the EIS/EES being prepared to assess the project's potential environmental effects in accordance with the legislative requirements of the Commonwealth and Victorian governments

Figure 3-1 below shows the Victorian components of the project to be considered in this assessment and their relationship to the project.

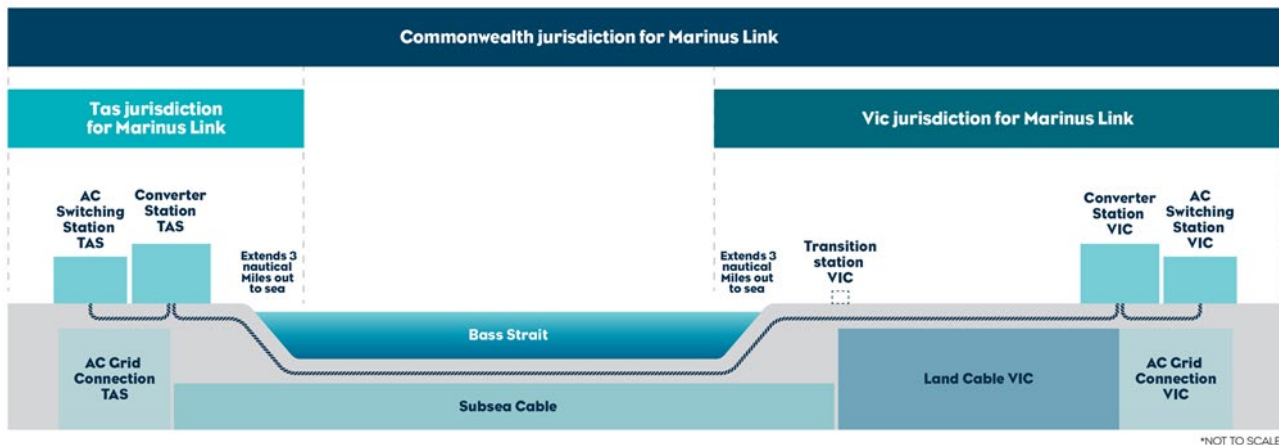


Figure 3-1 Project components considered under applicable jurisdictions (Marinus Link Pty Ltd 2022, Consultation Plan).

If approved, the project will be constructed over a four-to-seven-year period. Cabling activities for the first 750 MW stage are anticipated to be completed by 2030, with stage 2 to follow, with the final timing to be determined by market demand. The project will be designed for an operational life of at least 40 years.

Distinct aspects of the project relevant to landscape and visual impacts include:

- Transition station connecting the fibre-optic cable, and the sea and land cables.
- Cleared easements established for land cables between the land-sea joint to the converter station site near Driffield or Hazelwood; and
- HVAC-HVDC converter station and expansion of the *69Hazelwood Terminal Station in Victoria, where the project would connect to the existing Victorian transmission network.

The following description of the key features is based upon the project described in Volume 1, Chapter 6 – Project description of the EIS/EES.

3.1 Construction

The following summarises the key construction activities relevant to assessing the landscape and visual impacts of the project. A description of construction activities and requirements is provided in Volume 1, Chapter 6 – Project description of the EIS/EES.

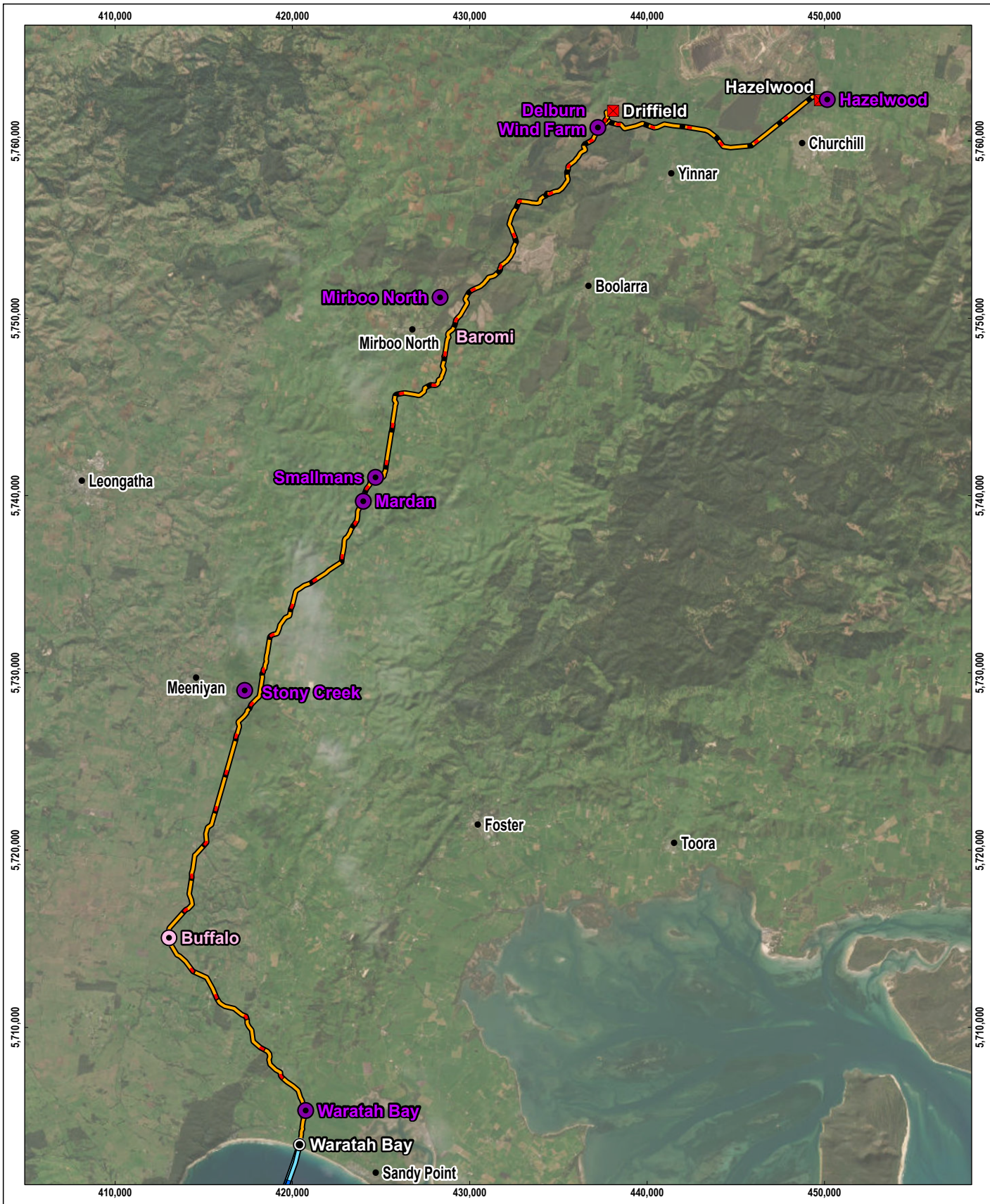
Construction of the project will require up to seven laydown areas located approximately 13 km apart. The laydown areas are on properties traversed by the proposed project alignment. The proposed laydown area at Delburn will be up to 2 ha in area. All others will be up to 1 ha. Provisional laydown areas at Buffalo and Baromi have been included as alternatives should any of the preferred areas not be available. The location of each of the nine identified laydown is listed in Table 3-1.

Table 3-1 Indicative laydown locations

Laydown area	Description	Area (m²)
Waratah Bay	Adjacent to Waratah Road	10,000
Buffalo (Provisional)	Adjacent to Harding Lawson Road	6,992
Stony Creek	Adjacent to Stoney Creek–Dollar Road (Stony Creek racecourse overflow carpark)	9,000
Mardan	Adjacent to Mardan Road	10,000
Smallmans	Adjacent to Smallmans Road	9,000
Mirboo North	Adjacent to Strzelecki Highway (Gippsland Water wastewater treatment farm)	9,375
Baromi (Provisional)	Adjacent to Old Darlimurla Road and Boolarra-Mirboo North Road	6,418
Delburn Wind Farm	Adjacent to Strzelecki Highway (Delburn Wind Farm construction compound and concrete batch plant)	19,280
Hazelwood	Adjacent to Tramway Road on proposed Hazelwood converter station site	9,375

Minor laydown areas to will also be required to support cable-pulling operations. These will be located at approximately every second cable joint pit within the construction corridor.

Figure 3-2 shows the proposed location of the proposed major laydown areas relative to the overall project.



- LEGEND**
- Potential laydown area
 - Provisional laydown area
 - Landfall
 - Proposed converter station
 - Proposed underground HVDC cable
 - Proposed HVDC subsea cable

SCALE 1:300,000
PAGE SIZE: A4
PROJECTION: GDA2020 MGA Zone 55

SOURCE
Proposed route and laydowns from Tetra Tech Coffey.
Imagery from ESRI Online.

FIGURE 3-2
Proposed laydown areas



3.1.1 Land cable construction

Land cable construction will include a combination of an open-cut trench and Horizontal Directional Drilling (HDD). Horizontal Drilling will be used in areas of high environmental sensitivity, road and rail crossing to reduce disturbance to properties, land use and farming activities.

A construction corridor between 20 and 36 m wide will be required alongside the permanent easement to lay land cables and the construction of joint bays. Temporary roads and laydown areas will also be required to support construction. Where possible, existing roads and tracks such as farm access tracks or plantation forestry tracks will be utilised, minimising disturbance areas and visual impacts.

The key construction activities for land cables are:

- establishing laydown areas, site offices and amenities.
- site establishment e.g., constructing site entries and gates, access roads and tracks to the construction corridor, weed and pathogen wash-down facilities, and stock-proof fencing, where required and agreed with the landholder.
- topsoil stripping and stockpiling.
- constructing haul roads along the construction working corridor.
- HDD and duct installation at road, watercourse, and third-party infrastructure crossings.
- excavation of trenches and stockpiling of subsoil separate from topsoil.
- installation of conduits and thermal backfill. Imported thermal backfill will be required where the native soil does not have the required heat-dissipating properties.
- backfilling trenches with subsoil and topsoil to reinstate soil horizons and reinstatement of the construction corridor except at cable joint pits and where equipment (e.g., cable puller) is required to assist cable installation, e.g., at bends and HDD crossings.
- construction (in-situ) or installation (pre-cast modules) of cable joint pits.
- pulling of land cables through the conduits between adjacent cable joint pits.
- cable jointing.
- backfilling and reinstatement of cable joint pit workspaces.

3.1.2 Other disturbance areas

The indicative area of disturbance (AoD) for construction activities is as follows:

- up to 16ha at the converter station site (6ha for primary infrastructure, plus additional area for temporary laydown, stormwater management, bushfire protection zone, landscaping, etc.).
- a HDD drill pad up to 100 m by 100 m will be required for both circuits. The drill pad will be located in farming land behind the coastal reserve.
- transition station construction footprint of 75 m by 50 m.
- up to 10 m wide area for indicative access tracks to allow for drains, batters, or cuttings where required.
- HDD drill pads (entry and exit) up to 60 m by 60 m will be required where HDD is used to cross major watercourses, major roads, and railways, and avoid vegetation and major third-party infrastructure crossings.

It is expected that at the commencement of construction, the contractor will begin with constructing a major laydown area and establishing the fencing and access requirements for the first section of works. Then topsoil stripping will be undertaken.

Site establishment will involve:

- constructing site entries, gates and required signage.
- constructing access roads and tracks to the construction right of way
- erecting stock-proof fencing along each side of the construction right of way, where required and agreed with the relevant landowner.
- crossing points will be established where necessary to enable dairy cows to travel to and from milking sheds and for stock to access water troughs unless alternative watering arrangements are agreed with the landowner.
- an estimated five days are required to erect fences between adjacent cable joint pits. Temporary fencing/safety barriers will be installed where necessary to protect workers, landowners, and their contractors.
- constructing weed and pathogen washdown facilities at locations identified in risk assessments.

3.1.3 Reinstatement and rehabilitation

Unless required otherwise (e.g., for stage 2 construction), all temporary disturbance areas will be rehabilitated to a level matching the prior use or as agreed with the landowner. In addition, surplus materials from hardstands, haul roads, and access tracks will be offered to landowners for use on their properties (if appropriate) or disposed of appropriately.

Temporary fences will be removed once the vegetation has been established and rehabilitation assessed as successful.

Access tracks will be removed unless otherwise agreed with the landowner.

3.2 OPERATION

The following summarises the key project components that will be in place during the operation of the project. A detailed description of the project is provided in Volume 1, Chapter 6 – Project description of the EES.

3.2.1 Sub-Sea Cables

Approximately 255 km of subsea HVDC cable pairs will be laid across Bass Strait. Each pair will be identical in size and bundled with a fibre-optic communications cable. The cable bundles for each circuit will transition from approximately 300 m apart at the HDD (offshore) exit to 2 km apart in offshore waters.

The Victorian subsea cable will land near Waratah Bay in southeast Victoria. The shore crossings will be constructed through horizontal directional drilling (HDD) from within the converter station site extending offshore to a water depth of approximately 10 m, or 1.0 km offshore. From water depth where the cables would then be trenched, where geotechnical conditions permit.

3.2.2 Land Cables

The land cables will comprise two underground 750 mW HVDC circuits (1500 mW total) and a fibre-optic cable. Each circuit would be constructed in trenches up to 1.0 m wide and 1.5 m deep. Both circuits would be located in a 20 m wide cleared easement.

Land cables will be between 800 m to 1.2km in length. Cables will be joined at cable joint pits comprising a concrete pit approximately 12-14m long by 2.5 m wide by 2.5 m deep. Each pit will be buried 0.5 m below the surface. The cable joint pits for each stage will be located side-by-side wherever possible or staggered along the alignment if necessary. Cable joint pits will also be located adjacent to boundary fences or other features to reduce land use impacts where practicable.



Figure 3-3 Example of a rehabilitated easement

Following the completion of construction works, the construction corridor will be returned to the previous land use or as agreed with the landowner, with some restrictions on use to avoid impacts to project infrastructure (e.g., no deep ripping of soils).

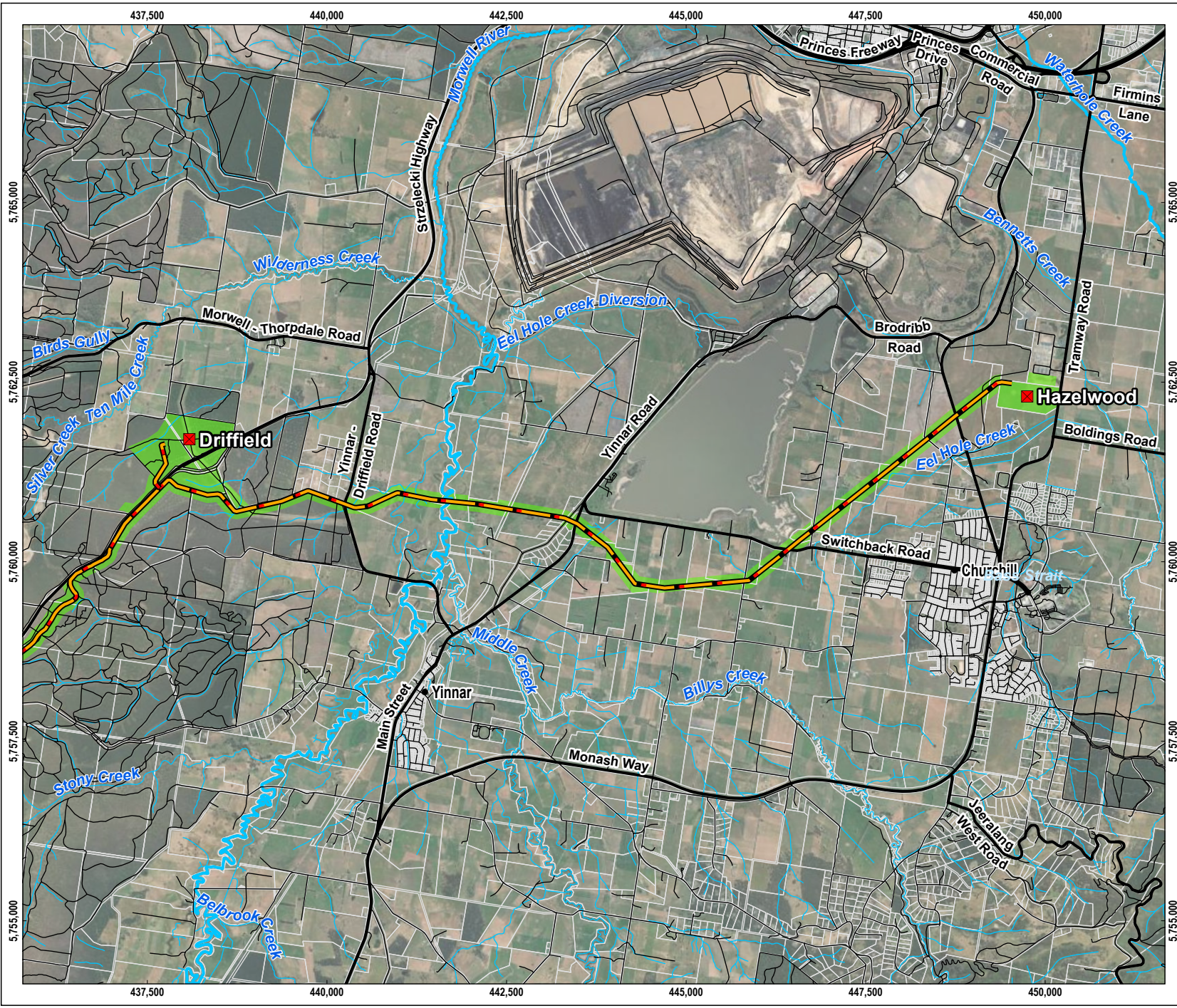
The above-ground changes relevant to landscape and visual impacts will be limited to clearing trees and shrubs within the easement and signage along fence lines and property boundaries.

3.2.3 Converter Station

Two options are being investigated for the Victorian converter station, adjacent to the Hazelwood–Cranbourne/Rowville 500 kV transmission lines in the Latrobe Valley area. Option 1 is located on privately owned land in a HVP Plantation area west of Driffield and the Strzelecki Highway. Option 2 is in farmland adjacent to the southern boundary of the Hazelwood terminal station and Tramway Road.

The Hazelwood site will require approximately 12 km of additional land cable compared to the Driffield site. Only one of the converter stations will be constructed.

The location of the converter station options are shown in Figure 3-4.



LEGEND

- Proposed converter station
- Proposed underground HVDC cable
- Survey area
- Major road
- Minor road
- Major watercourse
- Minor watercourse
- Cadastre

SOURCE

Proposed routes from Tetra Tech Coffey.
 Cadastre, roads and watercourses from VICMAP.
 Imagery from ESRI Online.



0 0.75 1.5 km
SCALE 1:75,000
 PAGE SIZE: A4
 PROJECTION: GDA2020 MGA Zone 55

MARINUS LINK PTY LTD
 MARINUS LINK
 LANDSCAPE AND VISUAL IMPACT ASSESSMENT

FIGURE 3-4

Victorian converter station location options



3.2.4 Converter Station Layouts

Should the Driffield converter station be preferred, it will be constructed adjacent to the existing Hazelwood–Cranbourne and Hazelwood–Rowville 500 kV transmission lines. Should the Hazelwood converter station be preferred, it will be constructed to the south the existing terminal station at Hazelwood and will also connect to the Hazelwood–Cranbourne and Hazelwood–Rowville 500 kV transmission lines.

The general site layout for the Driffield converter station is shown in Figure 3-5. Both locations will require similar components. The layout for each site will alter slightly to suit site access, topography and connection to the grid.

The key components and equipment relevant to landscape and visual impact are summarised below:

- overhead steel lattice gantries.
- AC switching station and air-insulated switchgear (AIS).
- transformers and associated bunds.
- enclosed building containing:
 - HVAC phase valve reactors.
 - Converter modules and valves.
 - HVDC land cable terminations.
- enclosed building containing indoor pumps and outdoor cooling fans.
- diesel generator and storage tanks.
- two-storey control building containing:
 - system control, protection, and data acquisition equipment,
 - UPS systems and batteries,
 - fire suppression systems,
 - control room and amenities.
- spare parts buildings, workshop, and storage
- telecoms building.
- firefighting systems, including 1,000,000 L (estimated) fire water tank.
- weldmesh security fencing up to 3.25 m high, with barbed wire topper.
- Closed Circuit Television (CCTV).
- automated security lighting.

Building materials will likely comprise corrugated colour-bond cladding, or precast concrete tilt panels for acoustic attenuation.

3.2.5 Transition station and fibre optic terminal station

A transition station connecting the subsea and land cables will be required should different cable manufacturers or cable technologies be selected. The transition station will also provide an additional access point facilitating fault finding in case of a cable failure.

The transition station site will be located in farming land to the southwest of Waratah Road. Access to the site will be from Waratah Road via an unmade government road.

The fibre optic (FO) terminal station will be a standalone building, approximately the size of a shipping container. It is assumed that the station will be located within the site of the proposed transition station. Regardless of whether or not a transition station is needed, the transition station communications buildings will still be required for the fibre optic cable.

The location for the transition station is shown in Figure 3-6.



Figure 3-6 Transition station location (Source Jacobs DWG No: IS360300_VIC_HVDC_COST_INFO_014 Sheet 3)

The transition station will be located in a fenced compound approximately 75 m by 50 m. The transition station will comprise:

- 4 x 40-foot shipping containers, approximately 3.5 m high
- 2 x communications buildings
- parking bays
- hardstands and laydown areas
- perimeter fencing and access gates; and
- CCTV.

Figure 3-7 shows the general layout of the transition station.

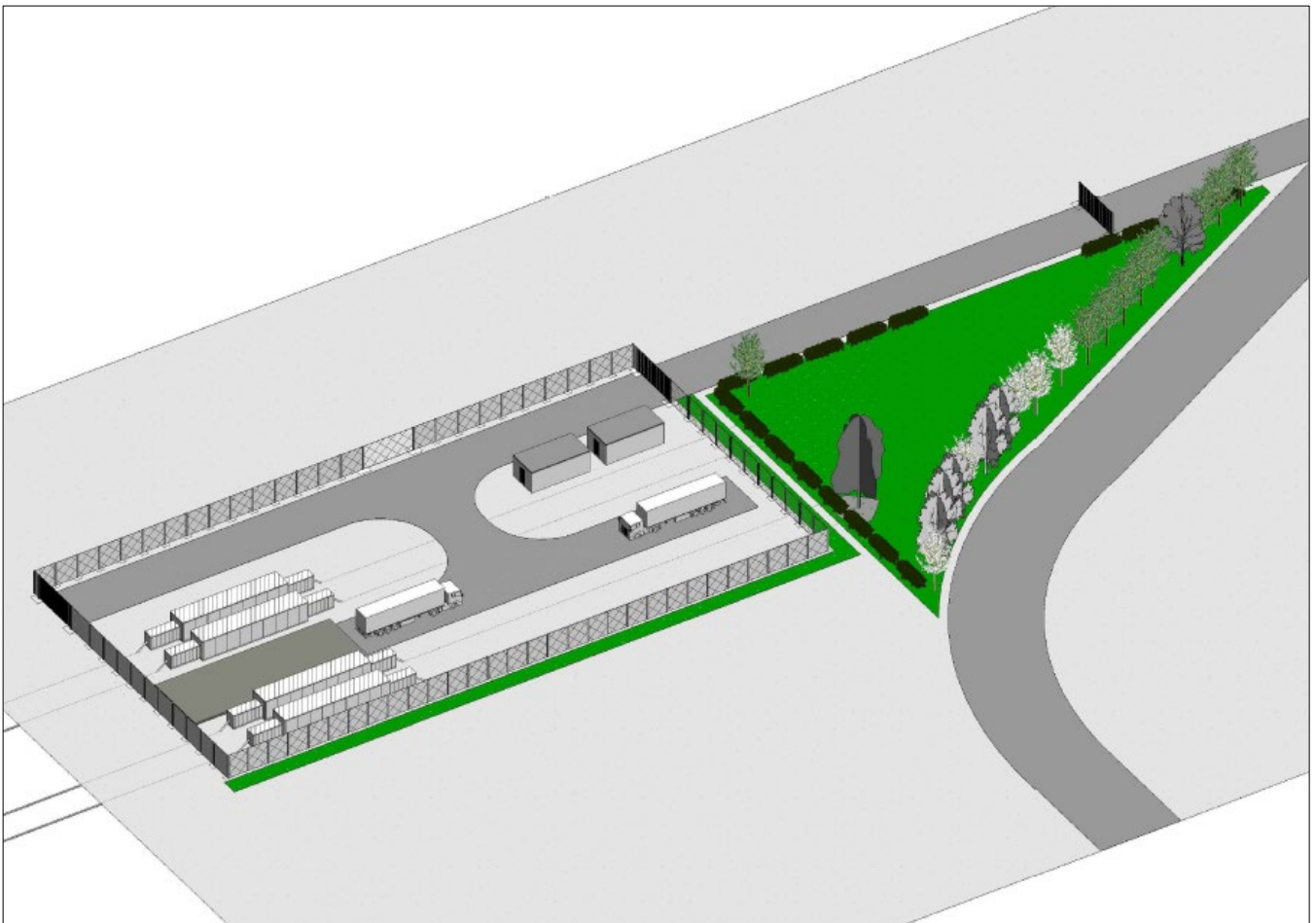


Figure 3-7 Transition Station Site Layout Axonometric View (Source Jacobs DWG No: IS360300_VIC_HVDC_COST_INFO_014 Sheet 2 of 3)

The fibre optic (FO) terminal station will be a standalone building, approximately the size of a shipping container and will include power, light, heating, cooling, ventilation, air conditioning, fire detection and suppression, backup generator, and Uninterruptible Power Supply.

As stated above, the overall dimensions of the FO terminal station will be similar to a shipping container.

3.3 Operational Lighting

Above-ground features where lighting may be required are limited to the transition station, located in farming land near Waratah Bay and the Converter Station towards the Project's northern end. Operational lighting is limited to on-demand or motion-activated, automated security lighting in these

areas. All other project features are below ground and do not require lighting. Therefore, the impact of lighting or Dark Skies has not been considered further.

3.4 Decommissioning

The operational lifespan of the project is a minimum of 40 years. At this time the project will be either decommissioned or upgraded to extend its operational lifespan.

Decommissioning will be planned and carried out in accordance with regulatory and landowner or land manager requirements at the time. A decommissioning plan in accordance with approvals conditions will be prepared prior to planned end of service and decommissioning of the project. The key objective of decommissioning is to leave a safe, stable and non-polluting environment and minimise impacts during the removal of infrastructure.

Decommissioning activities required to meet the objective will include, as a minimum, the removal of above-ground buildings and structures. Remediation of any contamination and reinstatement and rehabilitation of the site will be undertaken to provide a self-supporting landform suitable for the end land use.

Decommissioning activities may include recovery of land and subsea cables and removal of land cable joint pits. Recovery of land cables would involve opening the cable joint pits and pulling the land cables out of the conduits, spoiling them onto cable drums and transporting them to metal recyclers for recovery of component materials. The conduits and shore crossing ducts would be left in-situ as removal would cause significant environmental impact.

This assessment has considered that all above-ground infrastructure will be removed, and project land will be returned to the current setting or better as agreed with the landholder. The visual impact of decommissioning activity would be limited to the transition station at Waratah Bay and the preferred converter station Location at Driffield or Hazelwood. Decommissioning would also be relatively short and less obvious than the recent implosion of the chimneys at the Hazelwood Power Station.

The site will not be materially different from the existing setting, so there will be no discernible visual impact. For this reason, the landscape and visual impacts of decommissioning have not been assessed any further.

4. ASSESSMENT METHOD

The methodology used within this LVIA has been developed based on the review of key activities and features of the project during construction, operation and decommissioning that may contribute to a change in the landscape or views towards the project.

The project has been designed to reduce impacts on significant landscape values, landforms, communities, residents and landowners. This will be achieved by:

- Avoiding areas within the Public Conservation and Resource Zone. This zone includes significant landscapes such as national and state parks, scenic reserves, flora and fauna reserves and bushland areas.
- Limiting and avoiding direct impacts to areas that are identified by a Significant Landscape Overlay and areas within Environmental Significance Overlays that mention views and amenities and one of the objectives in the statement of significance.
- Avoiding direct impacts on areas within the various Heritage Overlays along the project alignment.

The avoidance and minimisation of direct impacts are reflected in the horizontal alignment when compared to a more efficient or direct route from the transition station at Waratah Bay to the northern converter station locations.

Impacts on communities and residents have been managed and reduced by:

- Directly avoiding areas in the General Residential Zone, areas set aside specifically for residential purposes.
- Maximising setbacks to areas within the Township and Rural Living Zones.
- Locating above-ground infrastructure and construction laydown areas away from sensitivities uses, neighbouring dwellings and landholders
- Minimising the need for removal of vegetation;

In farming areas, impacts to landowners have been managed by locating the alignment to avoid to minimise construction and operational impacts to dwellings and farming operations. This is to be achieved by:

- maximising setbacks to individual dwellings in the Farming Zone where possible; and
- co-locating project features adjacent to similar existing or approved development.

During the desktop review, there appeared to be no neighbouring dwellings that the construction or operation of the project will significantly impact. This was tested and ground-truthed during the site visits. During the assessment, there were also no individual dwellings identified who raised concerns regarding significant visual impacts from their dwelling. For this reason, a targeted assessment of neighbouring dwellings has not been undertaken.

The assessment methodology is based on guidelines prepared in Australia and overseas, which include:

- *Environmental impact assessment practice note EIA-NO4, Roads and Maritime Services, NSW, December 2018* is an established guideline for determining landscape character and visual impact assessment for road projects in NSW. This Guideline assesses visual sensitivity, which is derived from the qualities of an area, and the magnitude of the change derived from the scale or prominence of the project in a matrix framework to assess the level of impact.
- *The Guidelines for Landscape and Visual Impact Assessment, Third Edition, Landscape Institute and Institute of Environmental Management and Assessment*

(2013) (UK Guidelines). The UK Guidelines, widely referred to internationally, combine scale, duration, and reversibility to evaluate magnitude. Viewer sensitivity and landscape character inform sensitivity. These factors are combined to assess the overall visual impact. The UK guidelines also discuss the benefit of theoretical mapping visibility or the area from which projects may be visible. These are referred to as the Zone of Theoretical Visibility (ZTV). The UK guidelines do not consider visual scale or prominence over distance. The UK Guidelines prefer professional judgement be employed in preference to the use of matrices.

- Similar to the UK Guidelines, the *Guidance Note for Landscape and Visual Assessment, AILA Queensland, June 2018* recognises that the “*Landscape and Visual Assessment (LVA) should be scoped to reflect the scale of the project*”.
- *New Zealand Institute of Landscape Architects, NZ (2010) Best Practice Note: Landscape Assessment and Sustainable Management 10.1*. Landscape characterisation is a process of interpreting how attributes such as geomorphology, natural ecosystems, vegetation cover and land-use history come together to distinguish landscapes. The NZ Guidelines recognise that landscapes are dynamic and continually changing and that landscape assessment should reflect project scale. Further, the NZ Guidelines seek to manage the direction and consequences of change and how to sustain landscape values and attributes over time instead of ‘freezing’ a landscape in a particular state.

The methodology of these guidelines and others have overlapping similarities. One point of divergence is the use of matrices, which are still in the NSW Guideline but are not recommended in the UK guidelines. The reasoning for this is set out in section 3.34 of those guidelines. Matrices are not used in this LVIA.

The methodology used to determine the level of visual impact is set out below.

4.1 Study area

The study area is the area that may be visually affected by project features. The extent of the study area is not the same as the extent of visibility, as it may be possible to see project features from areas outside the study area. The study area is where the proposed development could create a recognisable impact.

The extent of the study area for the public domain is established at a distance where the tallest components along the proposed project alignment will occupy less than five per cent of the “Normal” vertical field of view or 0.5° in the vertical plane.

Further detail is provided in Chapter 5.

4.2 LANDSCAPE CHARACTER AND VIEWER SENSITIVITY

Landscape character units are based on physical and natural attributes within the study area. Characteristics that assist in defining the landscape units include geology, topography, vegetation, and drainage patterns as well as modifications to areas from a natural setting, land-use, and policy considerations.

Policy and guidelines implemented within the study area also provide guidance in recognising landscape character areas and their sensitivity to change.

4.3 POLICY REVIEW

A detailed review of government policies was undertaken to identify key objectives and considerations for the landscape and visual impact assessment of the project. The focus of this review was to

objectively characterise the landscape, features, and values of the project area of interest and its environs.

The review examined relevant legislation and policy to identify significant landscapes and landforms that are recognised by policy, residential areas and communities, prominent lookouts, roads, and tourist attractions. This review has assisted in developing an objective understanding of landscape character, features, and values through schedules to planning overlays that recognise landscapes and areas for the contributions to the environment, landscape and heritage values that are added to local planning schemes. A detailed review of policies relevant to this impact assessment is provided in Appendix B.

4.4 VIEWPOINT ASSESSMENT

The potential visual impact of the project was undertaken through views selected from locations within the public domain and from neighbouring residential properties. Further detail regarding the selection of views is provided below.

4.4.1 Publicly Accessible locations

Viewpoints included in the assessment have been selected from locations that are representative of the range of viewing angles, distances, and landscape character types within the study area, from places familiar to the local community and key users, and areas where the project will be visible from. This approach supports the EES scoping requirements, which seek to describe the potential impacts on landscape character, which is assessed through views from publicly accessible locations.

Each selected location's assessment of the overall visual impact is based on several criteria. Their relevance to the assessment of the overall visual impact from the public domain is set out below:

- **Visibility:** The visibility of the project elements can be affected by topography, vegetation, built form and infrastructure.
- **Distance:** Infrastructure visibility and dominance will decrease with distance. The ZVI provides an indication of visual dominance and potential impact based on distance.
- **Duration:** The duration of a view is also relevant and must be considered when assessing the overall visual impact. For example, a project will be more noticeable from locations where views are static or stationary due to the increased duration in which a project will be visible. Conversely, project visibility will be shorter in duration from views that are in transit, and therefore reduced. An example of a static view may include a private residence, reserve or recreation areas. Transitory views may include locations such as roadways, vegetated trails or public transport.
- **Landscape character and sensitivity:** The landscape character of an area is based upon visual features such as topography, vegetation and the use of the land, the naturalness of the area and planning provisions. Specific landscape studies and assessments within the study area may also influence sensitivity. Typically, a modified landscape prevalent within the study area or the region is less sensitive than one ostensibly natural.
- **Viewer numbers:** The overall visual impact level will decrease when fewer people can view the project. Conversely, the level of visual impact may also increase where the viewing location is a recognised key vantage point or tourist route where a greater number of people may view the change.

Viewer sensitivity is based on the nature or purpose of the viewing location. For example, the sensitivity of a person viewing a project from a recreation reserve, public lookout or trail will be higher than the same viewer travelling the local road network or from a town.

The overall visual impact is not assessed numerically or through a matrix, rather it is the examination of the qualitative aspects observed at each selected viewpoint, which is supported by the relevant quantitative (measurable) criteria listed above. This is shown in Figure 4-1.

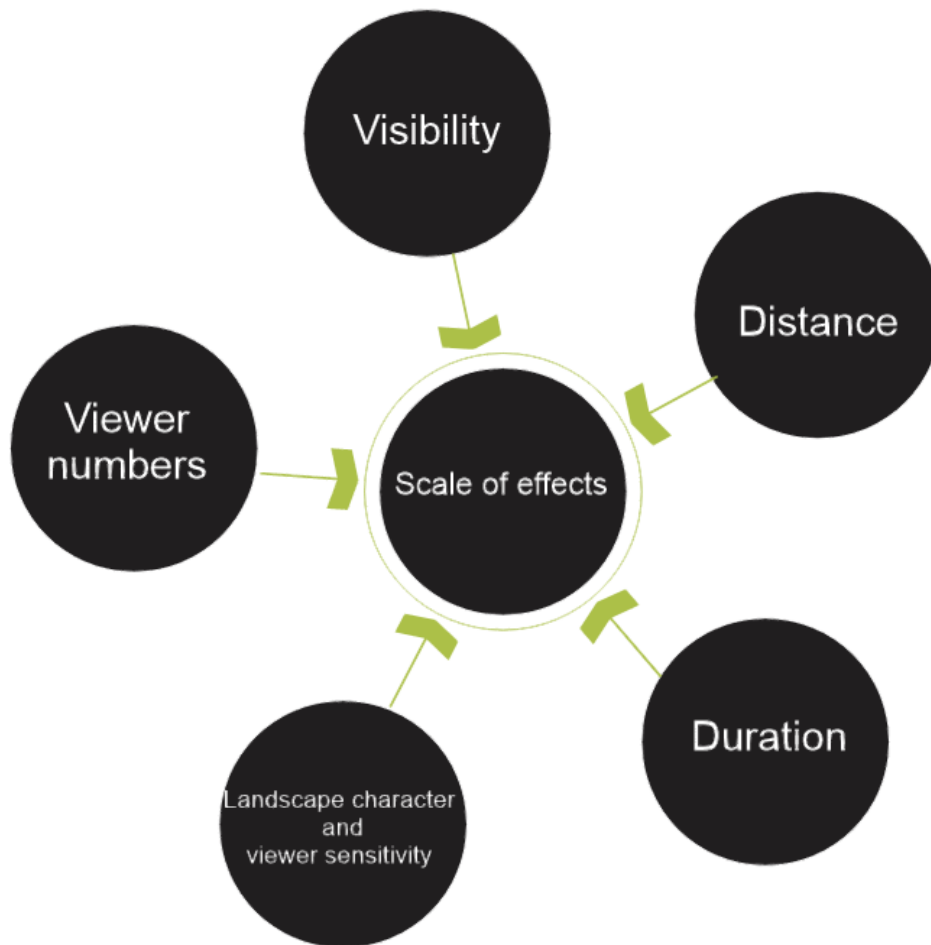


Figure 4-1 Visual impact – public realm

This quantitative and qualitative approach is supported by the UK Guidelines for *Landscape and Visual Impact Assessment, Third Edition* published by the Landscape Institute, Institute of Environmental Management and Assessment 2013 (GLVIA3).

The overall visual impact at each viewpoint will range from Nil to High. The definition for each scale is discussed in Section 4.5 below.

4.5 SCALE OF EFFECTS

The following table outlines the scale of effects used to assess the overall visual impact for each viewpoint from Nil, where the project is not visible, to High.

Table 4-1 Scale of effects

Overall visual impact	Definition
Nil visual impact	An overall assessment of Nil will be arrived at where the project will be screened by topography, vegetation, buildings and other structures or project features are at such a distance that they will no longer be a readily discernible feature in views.

Overall visual impact	Definition
Negligible visual impact	An overall assessment of Negligible is a minute effect barely discernible over ordinary day-to-day views. A 'negligible' level of visual impact would typically occur where the project will be at a distance that it would be a minute element in views, or will be filtered by vegetation or partially screened by features such as topography or buildings. An overall assessment of negligible may also be where the project is added to views that already include many similar features.
Low visual impact	An overall assessment of Low will be arrived at where the project is noticeable but will not cause significant adverse impacts. For example, a "low" level of visual impact will be assessed if the rating of several, but not all, assessment criteria (visibility, distance, viewer numbers and landscape sensitivity) is assessed as low. Examples of a low level of visual impact are where the project is visible in a highly modified landscape, few people will see the project, or where views are transient rather than stationary.
Moderate visual impact	An overall assessment of Moderate may occur where several criteria are higher than "low", or the visual effects would be mitigated/remedied from an initial rating of High.
High visual impact	An overall assessment of High will be arrived at where significant adverse effects cannot be avoided, remedied, or mitigated. For example, a highly sensitive landscape, viewed by many people, with the project in close proximity and largely visible, will lead to an assessment of a high level of visual impact.

4.6 CUMULATIVE VISUAL IMPACT

The EES scoping requirements require the LVIA to *Assess the potential for cumulative impacts in the context of existing built infrastructure, as well as proposed or approved developments.*

The UK Guidelines define cumulative visual impacts as the combined effect of changes brought about by a proposed development in conjunction with other similar developments in an area which may result in changes to the perceptions of the local community or a visitor to the region. The potential for cumulative visual impacts to occur is where there may be:

- Sequential views to multiple similar projects along roads within the study area; and
- Simultaneous views from publicly accessible viewpoints or private viewing locations may occur.

Chapter 8 identifies similar projects that are existing, approved, or credible future projects within or adjacent to the defined study area for this assessment. The visibility of these projects has been considered in the assessment of views from public and private domains.

The EIS guidelines and EES scoping requirements both include requirements for the assessment of cumulative impacts. Cumulative impacts result from incremental impacts caused by multiple projects occurring at similar times and within proximity to each other.

The approach for identifying projects for assessment of cumulative impacts considers:

- Temporal boundary: the timing of the relative construction, operation and decommissioning of other existing developments and/or approved developments that coincides (partially or entirely) with Marinus Link.
- Spatial boundary: the location, scale and nature of the other approved or committed projects expected to occur in the same area of influence as Marinus Link. The area of influence is defined at the spatial extent of the impacts a project is expected to have.
- Visual similarities between credible projects and Marinus Link.

4.7 MITIGATION OPTIONS

Mitigation measures can assist in reducing high visual impact at sensitive locations and visual receptors.

4.8 PHOTOMONTAGES

Photomontages can assist in the assessment by illustrating the scale of the project. The assessment of views and visual impact at each viewpoint is based partly on photomontages prepared from representative locations that demonstrate the range of distances, viewing angles and landscape character types within the study area to support observations made at each viewing location.

The change in views is based upon a 60° horizontal field of view, which provides a consistent reference for project visibility and prominence over varying distances. The horizontal field also represents the central cone of view in which symbol recognition and colour discrimination can occur. The vertical field of view is between 10 to 15°.

Each photomontage is accompanied by a wireframe view illustrating the technical alignment and registration of the model in views. In these views, registration markers such as poles, cylinders, boxes, or fences align points of reference in the landscape, such as a group of trees, existing structures, or edges of features such as planted hedgerows. The wireframe view showing topography demonstrates the vertical alignment of the model in view. These reference points allow the computer model and the photograph to be aligned and ensure that project features are accurately located within the photograph before compositing the project into the image.

Photomontages have been prepared to assist in the assessment of the visual impact of the project. These are discussed later in this report and are appended to this report (refer to Appendix A for A3 size photomontages).

It is recognised that the small photographs and the A3 photomontages included within this assessment, whilst technically accurate, are not perceptually accurate. The A3 images, which are annexed to this report (Appendix A), are clearer than the smaller images in the body of the assessment, as these are larger. However, A0 photomontages clearly indicate the actual visual impact – these are perceptually accurate.

4.8.1 Camera data

A 60 mm lens on a Nikon D850 digital camera has a picture angle of 33° and a horizontal angle of view of approximately 22°. ¹

Figure 4-2 shows the principles of photomontage construction and image overlap, which have been used to create the photomontages.

¹ <https://shotkit.com/field-of-view>.

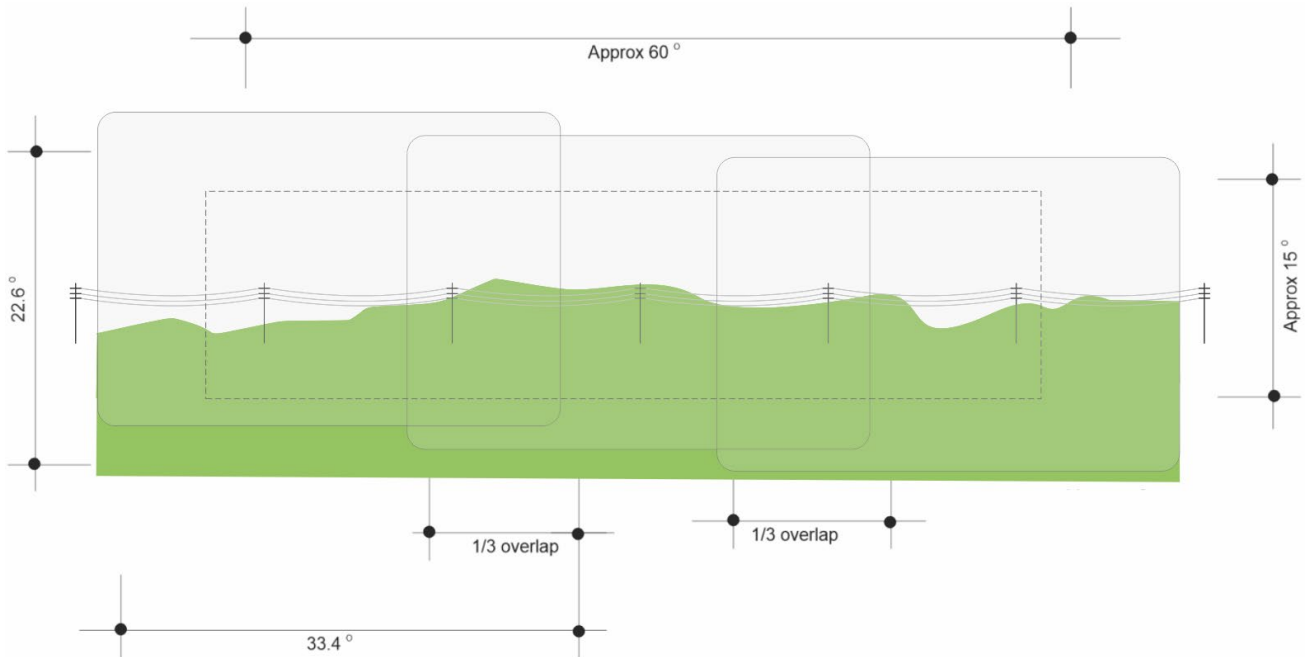


Figure 4-2 Photomontage construction

The camera is held at eye level, approximately 1.75 m above ground level. Three photographs overlapped 1/3 to create approximately the same image as the central cone of view of human vision, i.e., 50 to 70 horizontal and 15° vertical.

This relationship to the parameters of the human vision being 60° in the horizontal field of view and 15° in the vertical field are also shown. The relevance of this is discussed in Chapter 5.

4.8.2 GPS Co-ordinates

The Nikon D850 records the GPS coordinates, viewing direction and image field of view, which are embedded in the image metadata via a Solmeta GMAX GPS Geotagger.

GPS coordinates are also taken based on a separate handheld GPS, and the locations from which the photographs were taken are marked on a digital map within Memory Map or Google Earth Pro.

4.8.3 Photomontage development

Computer modelling of the project was prepared using the following software:

- Geotagger™ ;
- Autodesk AutoCAD 2017™ ;
- Autodesk 3D Studio Max 2016™;
- Adobe Photoshop CC™;
- Corel Draw™.

Cadastral data and project features are modelled within a computer program (3D Max). A virtual camera is set up in the model at the GPS coordinates for each photograph used within the panorama.

The digital model or wireframe view is then overlaid on the photographic panorama. Features and points within survey information such as topography, building locations or other infrastructure, are registered into the base photographs (or other predetermined points). For technical accuracy, these points must align. This verifies the location and apparent height and scale of the proposed development.

Wider panoramas are used to provide a greater number of reference points for the computer model. These wide-angle views are shown in the wireframe views where reference points were aligned outside of the final 60° view. In addition, if the panorama includes many project features, these are also included in the analysis. However, wide-angle views, whilst technically correct, do not represent a perceptually accurate representation of the change to a landscape.

Following the alignment of the background reference points, the wireframe is removed, leaving the project features only. The project features are rendered to match the lighting conditions at the time the photographs were taken or to increase contrast enhancing the visibility of project features.

The following datasets were used in preparing the photomontages:

- VicMap Contour data to 5.0 m resolution
 - VIC_LiDAR_20210219.dwg
 - Contours_DXF_0.5 m.dxf
- project design files:
 - 500kV_DRIFFIELD_HV_3D_georeferenced_GDA2020_mAHD_revA.dwg
 - 500kV_HAZELWOOD_HV_3D_georeferenced_GDA2020_mAHD.dwg
 - TRANSITION_STATION_HV_georeferenced_GDA2020_mAHD-revA.dwg
 - Driffield 3d strings rev A.dwg
 - Driffield 3d triangles rev A.dwg
 - Hazelwood 3d triangles rev A.dwg

4.9 ASSUMPTIONS AND LIMITATIONS

- Building heights for the converter halls have been assumed as outlined in the section 5 of this report.
- Stakeholder engagement has relied upon the conversations and outcomes from the MLPL community engagement activities, and feedback the Social Impact Assessment.

5. STUDY AREA

The EES scoping requirements direct that the landscape and visual impact assessment *identify viewsheds in which the project site is visible*. Viewsheds are referred to as the Study Area.

This chapter will define the study area for assessing the landscape and visual impact of the project which is undertaken in Chapter 9.

The study area defines the area or distance from the project where the key features may be a recognisable element within a view. This distance is established based on the height of the key project features determined in section 3 and the parameters of the human vision described below. It may be possible to see the project from areas beyond the defined study area. However, the project will be at a distance and visual scale, and the changes will not be either out of context or be an appreciable change in the view.

Zones of Visual Influence (ZVI) assist in considering the visible scale of project features across various distances from the project.

The extent of the study area and ZVI's have also been calculated based on the overall height of the tallest project components rather than its width. This is because the taller the object, generally, the greater the distance that the object will be a noticeable visual element. The width or length of a project is considered by offsetting the study area and zones of visual influence from the project footprint.

The parameters of human vision include the vertical and horizontal fields of view, as shown in Figure 5-1 below. These figures are based on data from '*Human Dimension and Interior Space*', Julius Panero & Martin Zellnik, *Witney Library of Design*, 1979. Similar data is provided in a more recent publication entitled '*The Measure of Man and Woman, Revised Edition*', Henry Dreyfuss Associates, John Wiley & Sons, 2012.

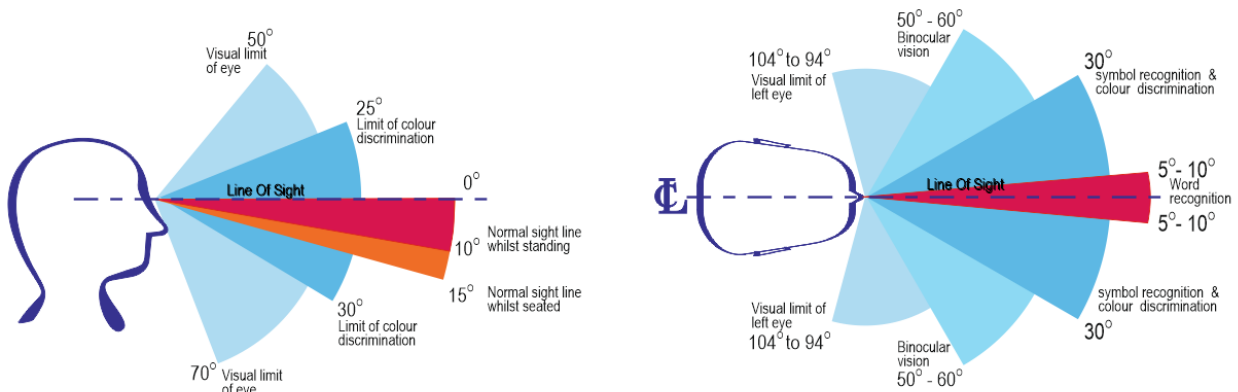


Figure 5-1 Determining the study area extent based on project infrastructure within the vertical field of view.

The extent of the study area is the distance at which the tallest component will take up less than 5 % of the vertical field of view. Typically, the field of view of a person is 10°, whereby 5 % of the vertical field of view is approximately equal to 0.5°.

Zones of Visual Influence (ZVI) assist in assessing the overall visual impact of the proposed project based on distance. The calculations can be used to define visual scale over varying distances. It must be recognised that zones of visual influence are one of several criteria for assessing visual impacts. For example, when a view location is closer to the converter station, the converter station will take up a greater percentage of the vertical field of view.

Table 5-1 defines the extent of the study area and the ZVI for the tallest and most visually conspicuous components of the project. The extent of the study area for the proposed converter stations will be a radius of up to 3.5 km. This has been established based on the converter halls, which have an assumed height of up to 30 m. Features proposed in the Waratah Bay transition station have been relied upon to determine the extent of the study area and ZVI for the transmission line. This is because the transmission line will be underground with limited to no above-ground elements. The tallest component in the transition station will be the containerised FO jointing huts up to 3.5 m in height. The extent of the study area for the proposed transmission line and transition station will be a radius of up to 450 m on either side of the project alignment.

Table 5-1 Zones of Visual Influence for the converter station

Vertical View angle	Zones of Visual Influence	Study area and ZVI Converter Stations	Study area and ZVI Transmission line
<0.5	Visually insignificant – Extent of the project study area The project will be a very small element in views, difficult to discern, and invisible in some lighting or weather circumstances.	<3.5 km	450 m
0.5-1.0	Discernible, but will not be dominant in views The project will be visible, however, will not be a dominant feature in views or the landscape.	1.7-3.5 km	200 – 450 m
1.0-2.5	Potentially noticeable and can dominate the landscape Where visible, the project has the potential to be apparent in views.	700 m-1.7 km	80-200 m
2.5-5.0	Highly visible and will usually dominate the landscape The project has the potential to be a dominant visual element in views. The degree of visual intrusion will depend on the context of the project within the landscape and factors such as foreground screening.	350 m – 700 m	40-80 m
>5.0	Will always be visually dominant in the landscape Will usually dominates views.	<350 m	40 m

Chapter 9 of this report has assessed the projects visual impact from public lookouts, tourist attractions, representative roads, and key vantage points from areas that are within or close to the study area. The study area and viewpoints have been arranged within four regional scale landscape character areas as follows:

- Section 9.1 considers areas and views from the coast and plains;
- Section 9.2 considers areas and views from the cleared farmland south;
- Section 9.3 considers areas and views from the rolling Farmland and Forests;
- Section 9.4 considers areas and views from the cleared farmland north.

Each regional landscape character area has been defined by landscape features, land-use and planning provisions described in Section 7.3.

6. LEGISLATION, POLICY, AND GUIDELINES

A detailed review of government policies was undertaken to identify key objectives for the landscape and visual impact of the project. This review focused on objectively characterising the surrounding landscape and the values placed on these areas.

The review examined relevant legislation and policy to identify significant landscapes and landforms that are recognised by policy, residential areas and communities, prominent lookouts, roads, and tourist attractions. This review has assisted in developing an objective understanding of landscape character, features, and values through schedules to planning overlays that recognise landscapes and areas for the contributions to the environment, landscape and heritage values that are added to local planning schemes. A detailed review and policies relevant to this impact assessment are provided in Appendix B. In addition, a summary of the key findings is provided below.

This review was not a technical review or assessment of the project against the planning scheme. This review has been undertaken by the Land Use and Planning Impact Assessment.

6.1 Summary of Findings

No Commonwealth or Victorian government legislation or policies are specifically relevant to landscape and visual impacts. However, planning, environmental, and heritage policies refer to landscape sensitivity and managing views.

All landscapes are valued. However, landscape character and values assigned to areas vary, as do the levels of protection. Areas and landscape features with statutory protections at the state and local levels are summarised below.

Areas with the most significant protection include areas designated as Public Conservation and Resource Zone (PCRZ) in the local planning schemes. Examples of such locations include the dune system to the north of Waratah Bay Beach, Stony Creek Water Frontage, Tarwin River East Brach Water Frontage, and Morwell River. These areas are valued for their natural appearance, recreational uses, and biodiversity values. A section of the project will follow an existing cleared easement and access track within an area known as the Darlimurla Plantation, an area that is also included in the PCRZ. This area has been highly modified through the management of timber plantations and forestry activities.

Settlements and residential areas include a greater number of people. The primary purpose of these areas is for living. These areas include land within the General Residential Zone (GRZ), Township Zones (TZ), and Rural Living Zones (RLZ). It is acknowledged that people live in the Farming Zone, but this is not recognised as the protection's primary purpose or focus, which is what this part of the review has sought to establish.

Most of the land within the study area is within the Farming Zone. The purpose of these zones is to protect the ongoing use of these areas for agriculture through encroachment from incompatible uses such as dwellings and lifestyle properties with higher amenity expectations of surrounding areas.

Overlays applied to landscapes and features in the study area that protect landscape character, views, and amenity. Specifically, these include Schedule 3 to the Significant Landscape Overlay of the South Gippsland Planning Scheme and Vegetation Protection Overlay, Design and Development Overlay and Heritage Overlays, referred to above.

The following overlays have informed the definition of landscape character described in chapter 7.2, which is referred to through this assessment.

Significant Landscape Overlays

Significant Landscape Overlay (Schedule 3 – Corner Inlet Amphitheatre) – South Gippsland Planning Scheme

Significant Landscape Overlay (Schedule 3 – Strzelecki Ranges) – Baw Baw Planning Scheme

Significant Landscape Overlay (Schedule 1 – Urban Buffer) – Latrobe Planning Scheme

Relevant overlays within the LVIA study area, and those adjacent are listed in Appendix B of this report.

Design Development Overlay

Design Development Overlay (Schedule 3 – Sandy Point Township) – South Gippsland Planning Scheme

Design Development Overlay (Schedule 4 – Waratah Bay Township) – South Gippsland Planning Scheme

Environmental Significance Overlays

Environmental Significance Overlay (Schedule 1 – Areas of Natural Significance) – South Gippsland Planning Scheme

Environmental Significance Overlay (Schedule 1 – Urban Buffer) – Latrobe Planning Scheme

Environmental Significance Overlay (Schedule 3 – Coastal Settlements – Non-Residential Zones) – South Gippsland Planning Scheme

Guidelines

A number of Guidelines and landscape studies apply to coastal and hinterland landscapes to the south of the Victoria Section.

Coastal Landscape Assessment Study

Coastal Landscape Assessment Study (CLAS) (Plansispere 2006) focuses on the Victoria coast and associated hinterland regions outside metropolitan Melbourne and recognises these areas' growth pressures and demands. The study sought to identify key areas, landscapes and their values and to provide recommendations to assist councils in managing impacts through development in coastal towns and their fringes.

For landscape character, the CLAS considers the coastal plains of Corner Inlet in which the project is proposed, as being of Regional Significance for the following reasons:

- *Visually significant as a collection of landscape Features – Mount Hoddle and the Welshpool Hills provide an amphitheatre setting for Corner Inlet and Wilsons Promontory*
- *Characterised by expansive views across coastal plains to Wilsons Promontory, it's looming shape dominates the scene*
- *Valued by the community and a bird habitat of international importance and for s plant lide historically significant relics of Aboriginal occupation*

Although the CLAS is not a reference or an incorporated document and therefore carries no statutory weight, it is however a background document referred to in Schedule 3 to the Significant Landscape Overlay to the South Gippsland Planning Scheme.

For this reason, the SWVLAS is considered in Chapter 9, which establishes landscape character and sensitivity.

Siting and Design Guidelines for Structures on the Victorian Coast

The Siting and Design Guidelines for Structures on The Victorian Coast, May 2020 (the Guidelines) provide a refresh to the 1997 guidelines prepared by Tract Consultants Pty Ltd and Chris Dance Land Design Pty Ltd.

The 2020 update provides guidelines for siting and design to balance public access and visitor experience in coastal areas and the pressures of population growth and climate change in vulnerable coastal landscapes. Chapter 8 of the Guidelines provides examples of areas and settings considered important and strategies to minimise impacts on these areas through development.

Similar to the CLAS, the Guidelines are not a reference or incorporated in the local planning schemes. The strategies set out in Chapter 8 to manage the visual impacts of development in sensitive areas have informed the development of Environmental Performance Requirements for project features adjacent to Waratah Bay. These are set-out in Chapter 11.

7. LANDSCAPE CHARACTER, FEATURES AND VALUES

The EES scoping requirements require the landscape and visual impact assessment to *Characterise the landscape character, features and values of the project area and its environs.*

This section examines the existing landscape and visual conditions within the visual study that are relevant to landscape and visual impacts. This review adds to the findings of the policy review undertaken in chapter 6, which has identified sensitive areas and landscapes through policy to help inform the definition of landscape character areas and sensitivity supported by physical and natural attributes of areas.

People's perceptions of landscape character and values vary significantly for local community members and individuals. Sensitivity ratings are based upon protections in the planning scheme, land use and the commensurate expectations on amenity and projects in similar landscapes. Impacts on local values have been considered and assessed by viewing locations selected within the study area from sensitive locations, key features or landmarks identified through community consultation and stakeholder engagement or views representative of the landscape characters areas defined in this report chapter.

7.1 LANDSCAPE FEATURES RELEVANT TO LANDSCAPE CHARACTER UNITS

Landscape Character Units can be defined partly through areas with similar visual characteristics, land use and planning provisions. Geophysical features include topography, which can influence views, creeks and drainage lines that may define a character or support recreational activities. Soils influence vegetation types, land use, and vegetation that may screen or filter views or contribute to seasonal change.

Features that have informed the identification of landscape character units and their sensitivity include geology, topography, vegetation, waterways and drainage patterns, and land use.

7.1.1 Geological units

Geological units assist in defining topographical features, soils, native vegetation, and resultant land use at a landscape or regional scale. Figure 7-1 shows the broad geological areas along the proposed project alignment.

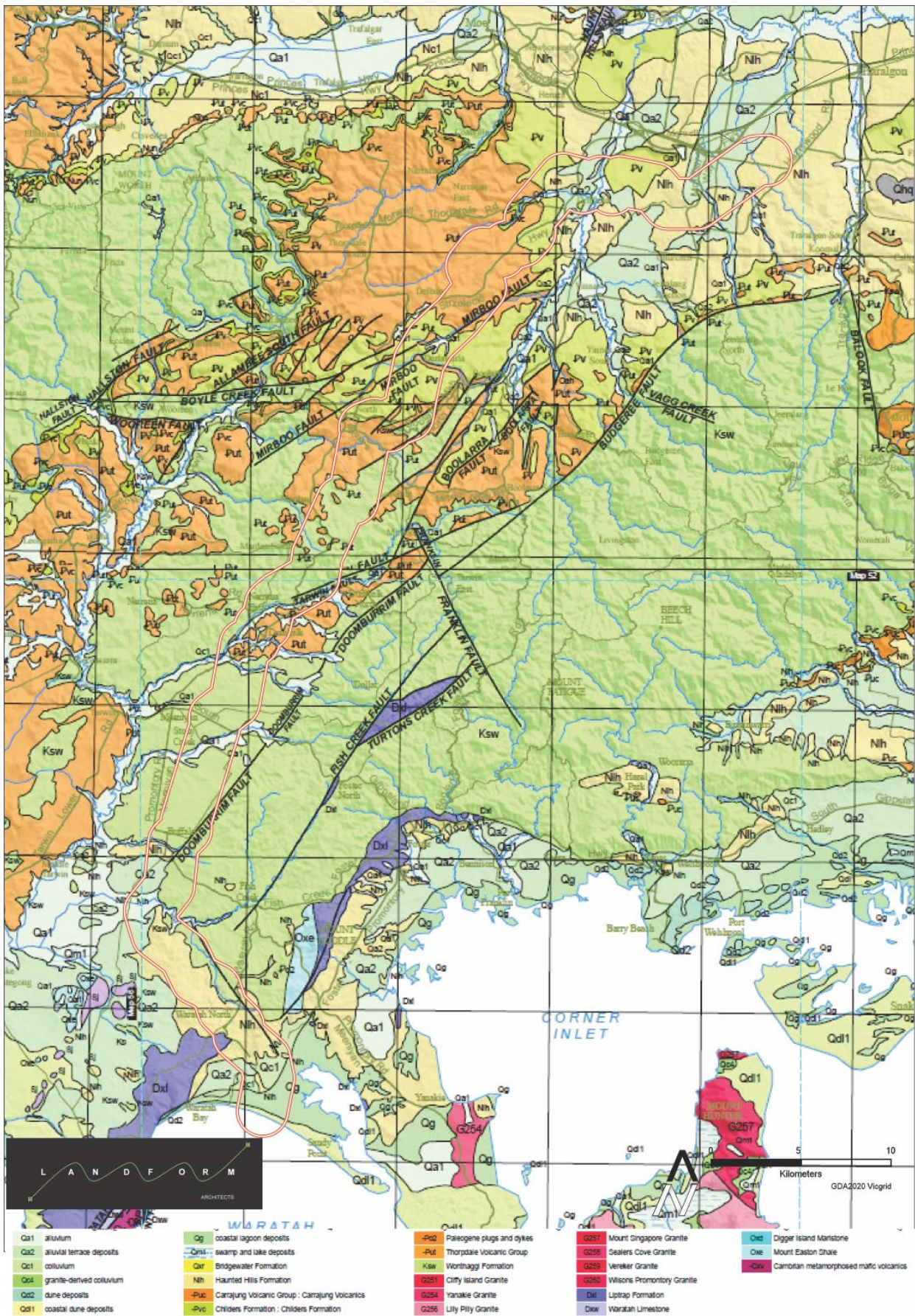


Figure 7-1 Geological Units (Source:Surface Geology of Victoria 1:250,000 Maps 51, 52, 56 and 57)

7.1.2 Topography

The landscape in the study area's south comprises a coastline with a steep dune system and flat open plains to the south of the Strzelecki ranges.

The project's central section traverses the gently undulating southern foothills of the Strzelecki ranges to the steep-sided hills toward Mirboo North and Darlimurla.

The connection to Hazelwood at the project's northern end returns to low-lying plains or the Morwell River valley.

Four regional scale landscape character areas to assist in examining the landscape and visual impact of the project. The rationale for determining these areas is described in Section 7.3, one criterion being the underlying topography. Figure 7-2 shows the topography of the Coast and Plains regional landscape area. The following figures demonstrate the topography of each of the three remaining regional scale landscape character areas.

Figure 7-3 shows the regional scale topography of the area defined as Cleared Farmland South. The project is set within a local valley, with low-lying to gently undulating topography.

Figure 7-4 shows the section of the project in the area defined as rolling Farmland and Forests within the elevated areas of the Great Dividing Range.

Figure 7-5 shows the topography of the northern part of the project to the east of the Great Dividing Range and the existing Hazelwood terminal station and across the cleared plains surrounding the Morwell River.

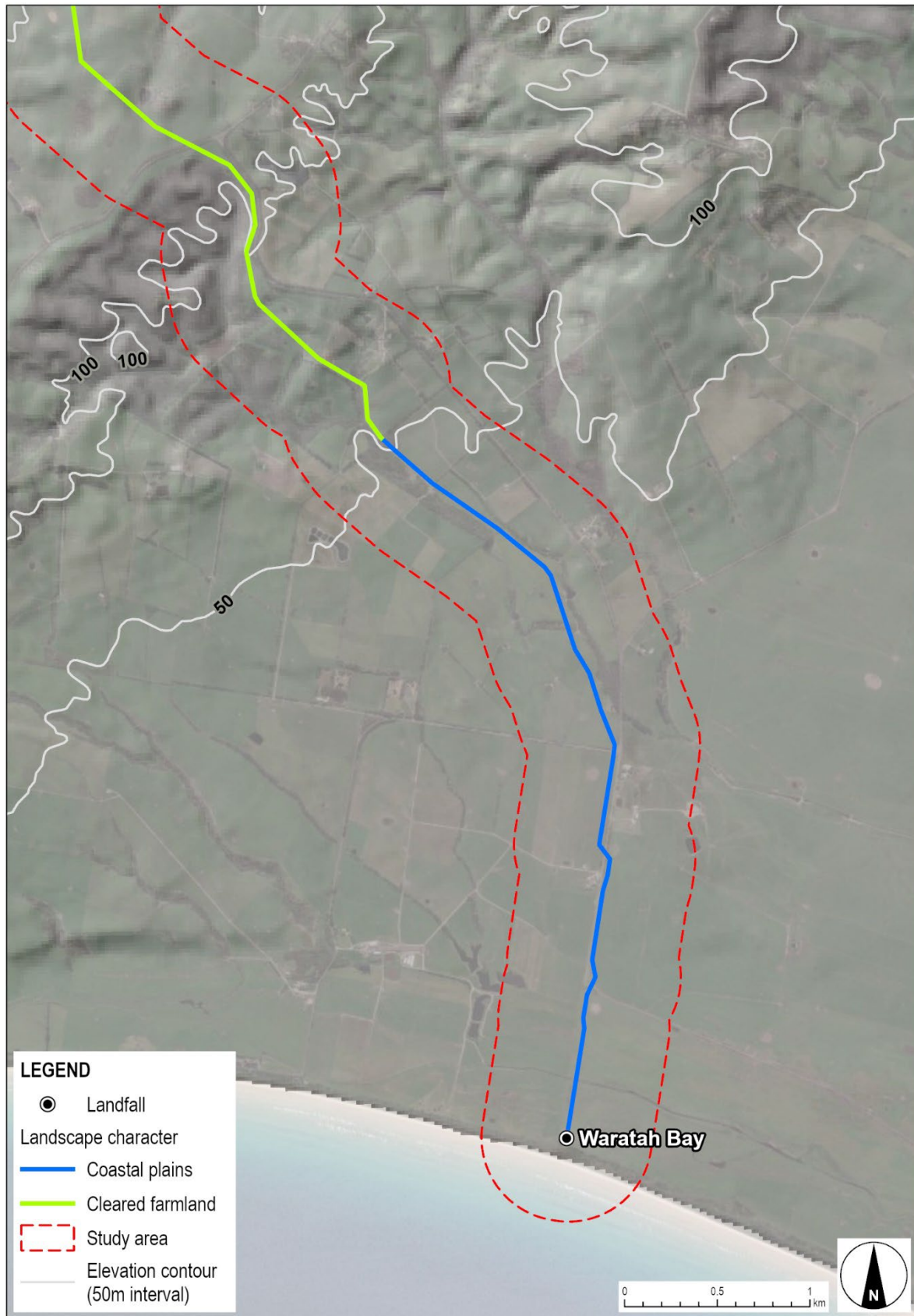


Figure 7-2 Topography within the Coast and Plains regional landscape area

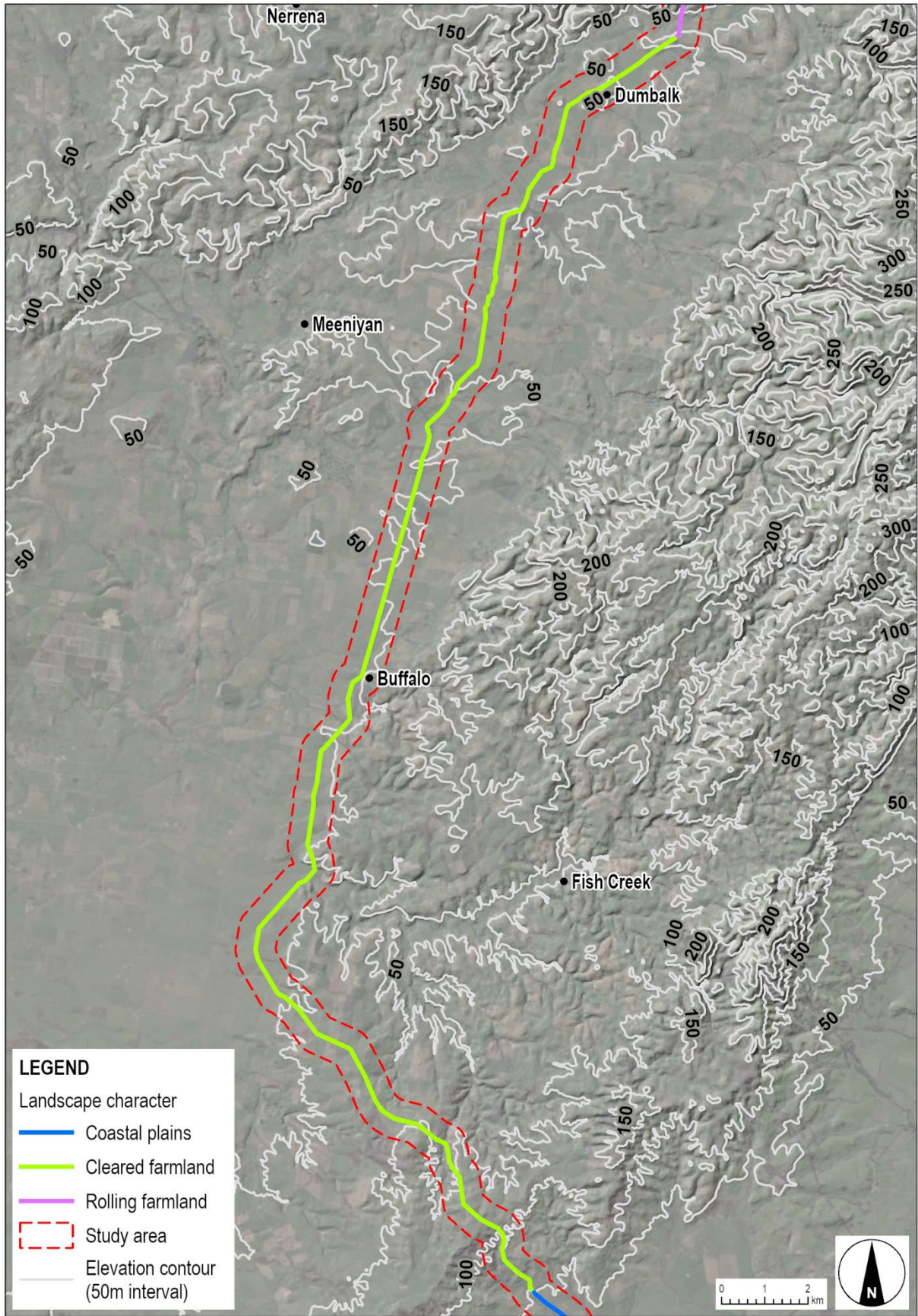


Figure 7-3 Topography within the Cleared Farmland South regional landscape area

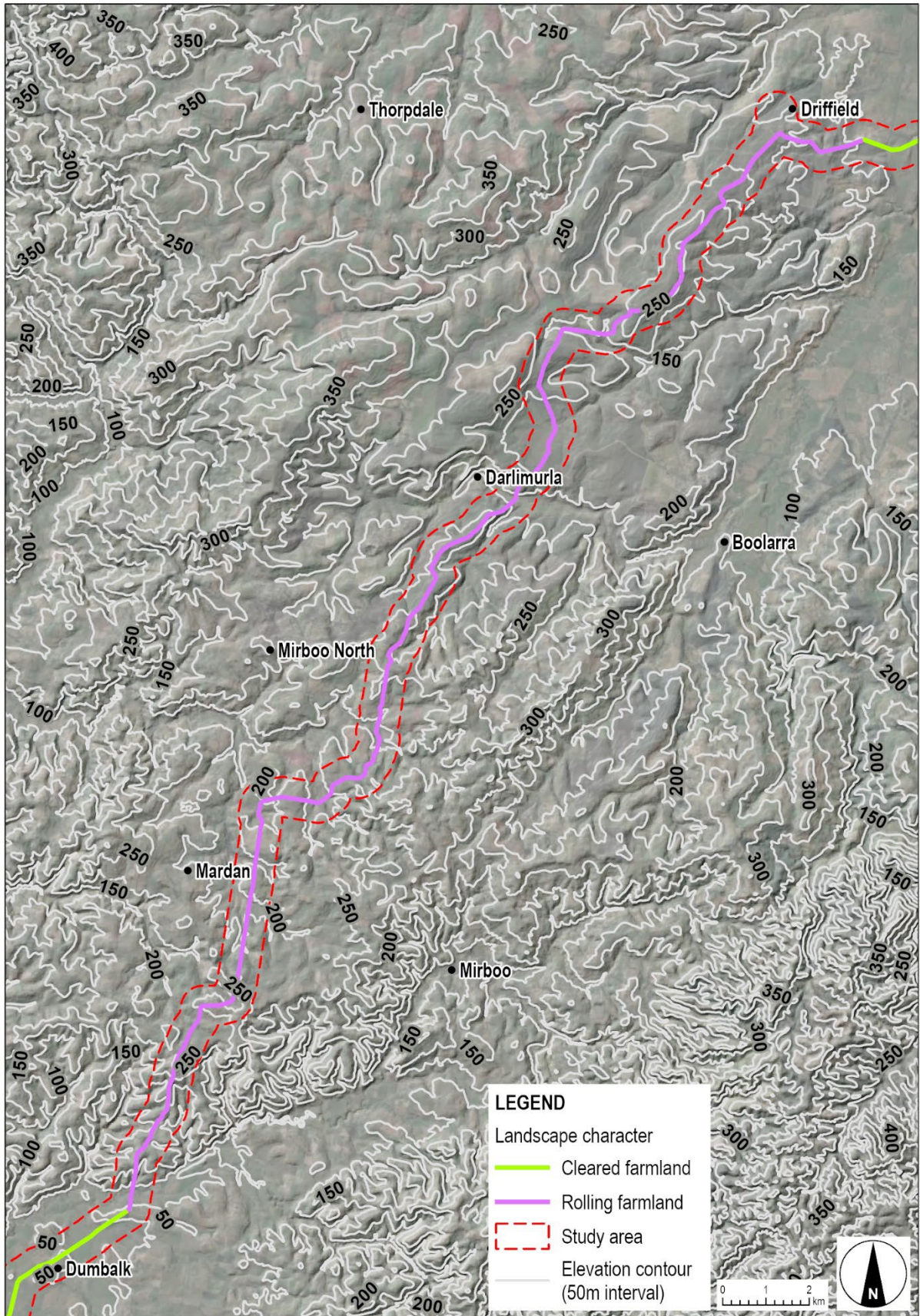


Figure 7-4 Topography within the Rolling Farmland and Forests regional landscape area

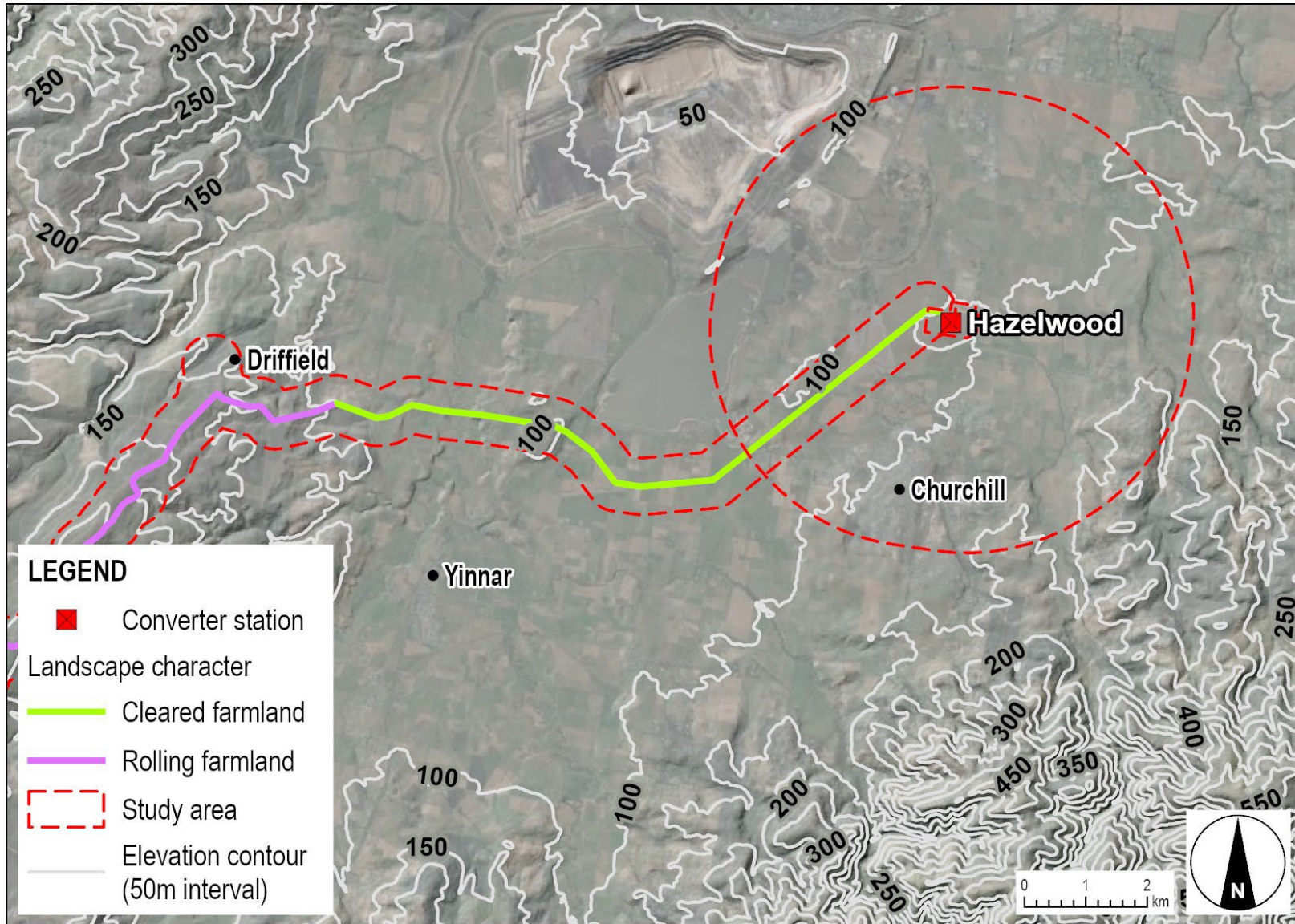


Figure 7-5 Topography within the Cleared Farmland north regional landscape area

7.1.3 Vegetation

Vegetation patterns in farming areas have been largely cleared of native vegetation and comprise large open areas of exotic pasture grasses and horticultural crops with windbreaks and hedgerows along property boundaries, fencelines and waterways. Part of the character of these areas is the often strong contrasts through seasonal variability of farming land and sharp visual contrasts along property boundaries.

The majority of vegetation within the study area and project alignment has been cleared of native vegetation for farming, forestry or settlement. Cultural plantings of cypress windbreaks shared across the southern and central part of the project area, provide screening, filtering, and framing of views from local roads. The following figures show vegetation patterns that support the definition of each of the four regional scale landscape character areas described in Section 7.3.

Figure 7-6 shows the regional scale vegetation patterns within the Coast and Plains study area.



Vegetation

Figure 7-6 Vegetation patterns within the Coast and Plains regional scale landscape character study area

Figure 7-7 below shows the regional scale vegetation patterns within the Cleared Farmland South study area.



Figure 7-7 Vegetation patterns within the Cleared Farmland South regional scale landscape character study area

Figure 7-8 below shows the regional scale vegetation patterns within the Rolling Farmland and Forests study area.

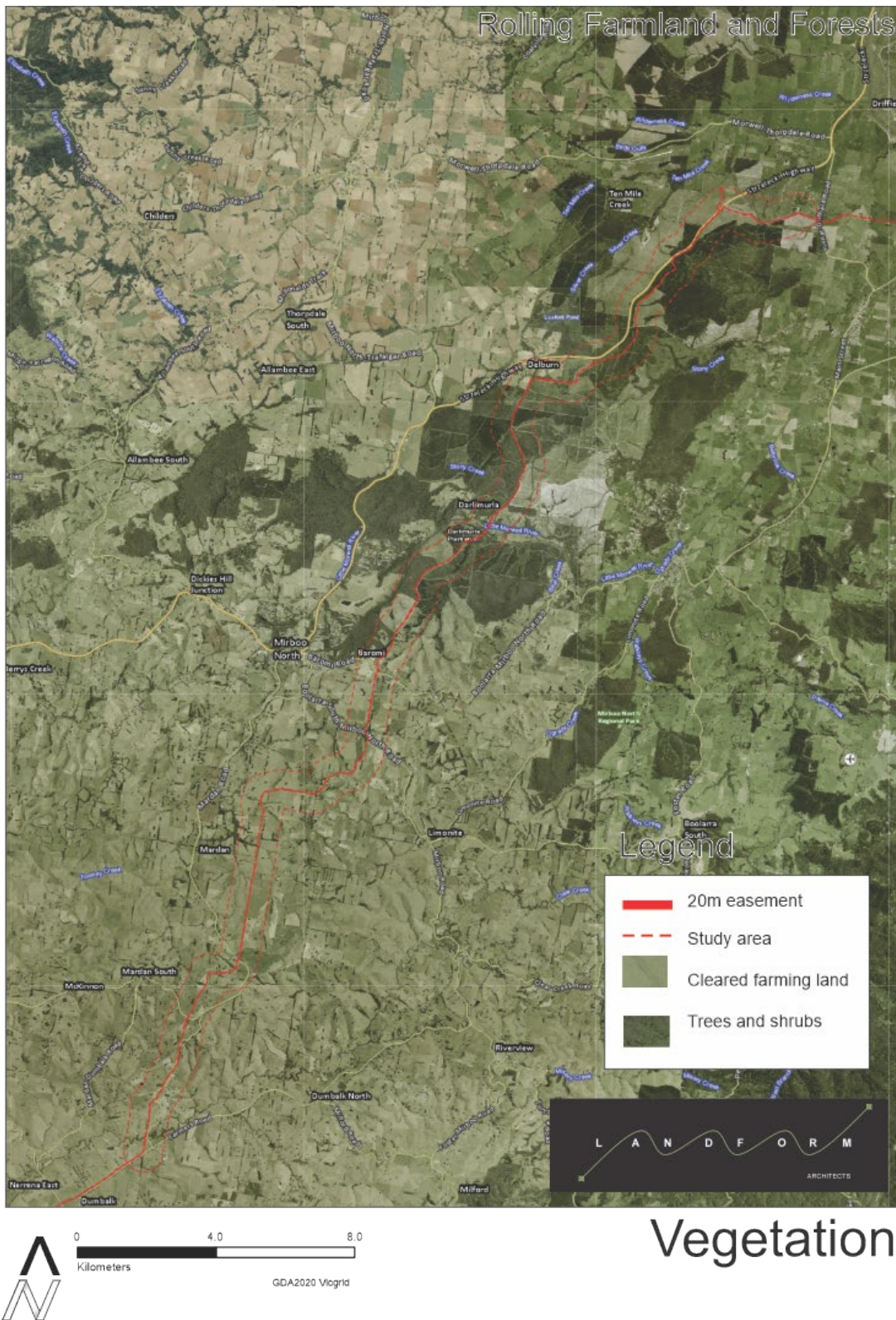
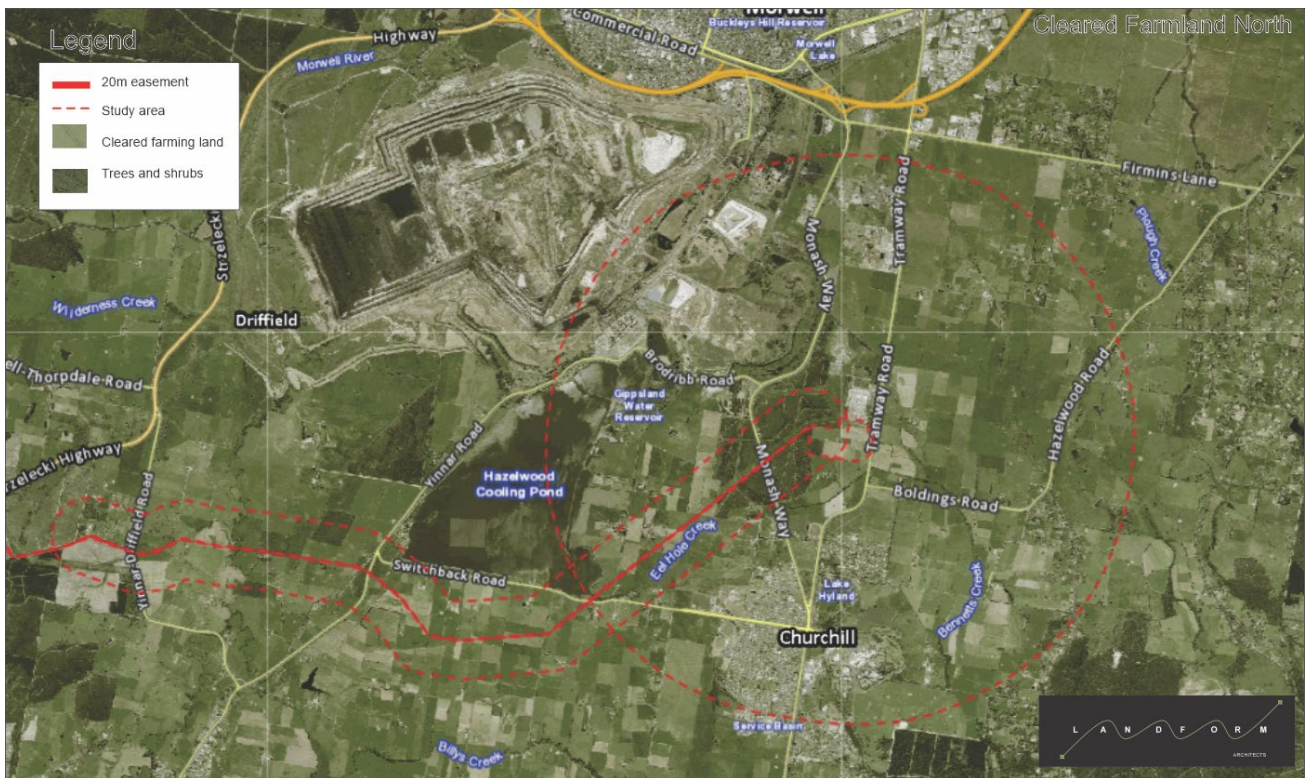


Figure 7-8 Vegetation patterns within the Rollings Farmland and Forests regional scale landscape character study area

Figure 7-9 below shows the regional scale vegetation patterns within the Cleared Farmland North study area.



Vegetation

Figure 7-9 Vegetation patterns within the Cleared Farmland North regional scale landscape character study area

7.1.4 Waterways and water bodies

Natural waterways in the study area include rivers, creeks, ephemeral wetlands and Bass Strait. These features include many un-named tributaries watercourses that support these waterways and contribute to localised character.

Rivers include Tarwin River East Branch, Little Morwell River, and Morwell River. Named waterways include but are not limited to Fish Creek, Stoney Creek and Berry’s Creek.

Managed waterways include reservoirs which sometimes support recreational activities such as picnicking, swimming, boating, and fishing. The Hazelwood Cooling Pond is the only managed waterway in proximity to the project.

There is no public access to Hazelwood cooling pond.

7.1.5 Land Use

Chapter 6 of this report identified zones within the study area relevant to assessing the project’s landscape and visual impacts. A technical review of the planning controls is undertaken within the Land Use and Planning Impact Assessment.

The majority of the land in the study area and project alignment is land within the Farming Zone. The predominant land uses comprise animal husbandry, cropping, horticulture or timber plantations.

The policy settings for land use are described in section 6 of this report and in the Land Use and Planning Impact Assessment. The overriding objective for land uses within the Farming Zone is for the ongoing and productive use of these areas for agriculture. Policy protects these areas from encroachment by incompatible uses such as dwellings and lifestyle properties that are more sensitive to changes through amenity.

It is recognised that many people find these areas appealing for their apparent natural values. However, an objective assessment of the land within these areas must consider that the majority of the landscape in agricultural areas has been modified through land-management practices. Protections of the landscapes are generally not toward amenity or aesthetics. This land use is also one that is not rare.

7.1.6 Conservation parks and reserves

The study area includes several national parks, state forests, conservation areas and reserves. Locals and visitors value these areas for their recreational, scientific, and environmental attributes. These areas are managed by stakeholders such as Parks Victoria and Department of Energy, Environment and Climate Action (DEECA), Landcare groups and volunteering organisations through to local councils.

National parks and state forests are within the Public Conservation and Resource Zone (PCRZ). Local parks and reserves are managed by the local council, which is in the Public Park and Recreation Zone (PPRZ). The preceding chapter of this report recognises that these areas are valued as much for natural features and ecological attributes as they are for their recreational values. National parks, state parks and state forests often share boundaries and characteristics such as topography, vegetation tracks and trails. From a visual and landscape perspective, there is limited ability to discern between areas of state forests, state parks and national parks other than signage located at key locations.

Smaller areas with similar landscape and visual features to national parks and state forests include bushland reserves, flora and fauna reserves, streamside reserves, lake reserves, and nature conservation reserves. These reserves typically comprise smaller land areas than the forests and parks described above and are islanded sites within farming areas. These areas are also recognised and protected for their environmental values.

The project alignment has been designed to avoid impacting on these areas directly. However, there may be locations where the project is visible either from or toward these areas. Where relevant, views from nearby reserves have been included in the assessment of public views undertaken in Chapter 9.

7.1.7 Townships

A greater number of dwellings and people are located in townships and localities than areas within the Farming Zone.

These areas include buildings, structures, and vegetation associated with housing, as well as commercial and industrial land uses. Vegetation in townships and localities often comprises ordered or semi-regular street trees and plantings in public areas hosting native and exotic trees. In addition, plantings in public areas are supported by vegetation in private gardens. These features limit views to the surrounding areas.

Named localities include former towns comprising clusters of dwellings often surrounded by farming land.

Townships within the study area include:

- Buffalo
- Stony Creek

- Dumbalk
- Mirboo North,

Other further removed townships include Sandy Point, Waratah Bay, Meeniyan, Boolarra, and Yinnar.

Localities within the study area include:

- Darlimurla
- Delburn
- Hazelwood North.

Larger townships of Traralgon and Moe, beyond the Study Area, towards the Projects contribute to light glow. From smaller townships within the Study Area, and listed above, there are many sources of light emanating from dwellings, streetlights, shop fronts, and vehicles.

7.1.8 Other documents

Siting and design guidelines for structures on the Victorian Coast, May 2020 seeks to protect Victoria's coastal landscapes' natural processes and amenity. Part of the outcomes seeks to guide development in the marine and coastal environment that is considerate of the natural and cultural values in response to climate change challenges and population growth. Of relevance to this assessment are Chapters 8- Views, chapter 10 - Local Character and Sense of Place and Chapter 15- Materials and Sustainability, which may guide the form and finish of above-ground elements associated with the above-ground transition station where the project makes landfall.

Chapter 8 seeks to guide development and built form to:

- *Minimise of the natural intrusions environment. into public views.*
- *Retain important public views to and from the water or along the coast.*
- *Enrich and frame existing public views to and from the coast.*
- *Locate structures so that they are visually unobtrusive from public areas of beach, foreshore and the water.*
- *Minimise and group vertical elements (poles, signs, communications towers).*

Chapter 10 – Local Character requires new development and built form to:

- *Consider the distinctive environmental, social and cultural features contributing to the character of place (geology, ecology and architecture).*
- *Design structures to fit and blend with the surrounding character and landscape.*
- *Avoid extreme contrasts in design, scale and shape.*
- *Avoid visual prominence in highly visible locations.*

Chapter 15, Materials and finishes, seeks to minimise intrusion and obviousness of new development and built form through the following:

- *Use materials sympathetic to the coastal environment.*
- *Use the local colours and textures for any new structure.*
- *Use durable materials, fittings and finishes developed specifically for a coastal environment.*
- *Use low-embodied energy, recycled and locally-sourced materials where possible.*

7.2 LANDSCAPE CHARACTER

Through examining policy, landscape features, and land uses within the study area, six landscape character types can be defined within the study area, a summary of which include:

- Landscape Character 1 – Coastal dunes and Beaches
- Landscape Character 2a – Townships
- Landscape Character 2b – Rural Residential
- Landscape Character 3a – Cleared flat farmland
- Landscape Character 3b – Cleared hilly farmland
- Landscape Character 4 – Plantations
- Landscape Character – 5 Waterbodies and waterway
- Landscape Character 6 National Parks, State Parks and State Forests.

Below is a description of the key features and attributes relevant to this assessment. Table 6 provides the sensitivity of each landscape unit established through recent and similar visual assessments across Victoria.

7.2.1 Landscape Character 1 – Coastal dunes and beaches

Coastal dunes and beaches describe the area toward the southern end of the project, where the sub-sea cable crosses under the dunes to join the land cables.

Figure 7-10 shows the access to Waratah Bay Shallow Inlet Coastal Reserve, an area that is protected by an SLO.



Figure 7-10 Waratah Bay Beach Access

Figure 7-11 shows the view looking southwest from Ned Neale's Lookout along the coastline.



Figure 7-11 Ned Neale's Lookout

Coastal areas are valued for their recreation and amenity benefits. As a result, several areas are recognised by an SLO in the South Gippsland Planning Scheme.

7.2.2 Landscape Character 2a – Townships

Townships are characterised by a cluster of residential dwellings around the main street with shops. Some townships have parks and reserves as well as community-orientated buildings.

Figure 7-12 shows the view looking west through the coastal town of Sandy Point.



Figure 7-12 Sandy Point Township

Vegetation within rural communities and townships are typically located within road reserves and private gardens.

Landscape and Viewer sensitivity considerations of Rural residential areas

Areas in the Townships Landscape Unit have a moderate sensitivity to visual change. This is partly due to the higher number of people and the constructed elements and features in views of surrounding areas. From many areas, views toward the surrounding landscape are usually screened or filtered by buildings and vegetation. The sensitivity of views from individual dwellings in these areas will be moderate.

7.2.3 Landscape Character 2b – Rural Residential

Rural Living or Rural Residential are areas of residential land uses outside of townships that are not inherently linked to agriculture or other rural industries.

Planning provisions apply directly to land within these areas while protecting the ongoing use of neighbouring uses such as land in the Farming Zone. The landscape and viewer sensitivity of these areas is moderate. The sensitivity of views from individual dwellings in these areas will be high. Figure 7-13 shows a rural residential area near Driffield toward the northern end of the project.



Figure 7-13 Rural Residential Example

These areas include many constructed elements, including dwellings, structures and sheds, transmission line towers, plantations, mining and quarrying activities, power infrastructure, and other interventions.

Landscape and Viewer sensitivity considerations of Rural residential areas

Residents value areas in Rural Living Zones for their ‘rural’ amenity and outlook. Planning provisions apply directly to land within these areas while protecting the ongoing use of neighbouring uses such as land in the Farming Zone. The landscape and viewer sensitivity of these areas is moderate. The sensitivity of views from individual dwellings in these areas will be high.

7.2.4 Landscape Character 3a – Cleared flat farmland

Landscape Character Unit 3a – Cleared flat farmland comprises large areas of cleared land within the Farming Zone. The primary purpose and use of these areas are cropping and grazing. The vegetation comprises broad areas of low-level crops, with taller vegetation located along property boundaries, fence lines, road reserves and water courses. Views across these landscapes are often expansive and take in a considerable distance. Large areas of the landscapes are subject to seasonal change. Figure 7-14 shows a view of cleared flat farmland west of the township of Buffalo.



Figure 7-14 Cleared Flat Farmland Example

Constructed elements include machinery, sheds, irrigation plant and equipment, and attached dwellings. In some areas, power lines along the local distribution network are located along roadsides and across farming areas.

7.2.5 Landscape Character 3b – Cleared hilly farmland

Landscape Character Unit 3b – Cleared hilly farmland comprising rolling to steep-sided hills cleared for farming purposes. Rolling hills toward the central areas of the study area are within the Farming Zone.

Figure 7-15 shows views across cleared hilly farmland to the south of Meeniyah-Mirboo North Road.



Figure 7-15 Cleared Hilly Farmland Example

Taller vegetation includes trees along property boundaries, fence lines, road reserves and water courses. Many areas within this landscape unit include scattered and retained trees. Views from this landscape unit are varied and have expansive views from elevated locations along the public road network, such as crests and hillsides, to lower elevations where topography and vegetation confine views to the local area.

Similar to Landscape Character Unit 3a, this landscape unit is also subject to seasonal change. Constructed elements include machinery, hay sheds, irrigation plant and equipment, and attached dwellings. In addition, some areas include larger structures associated with the processing and distribution of produce.

Landscape and Viewer sensitivity considerations of farming areas

The sensitivity of regional landscapes and areas in the Farmland Landscape Units are considered low. It is recognised that many people find these areas appealing for their apparent natural values. An objective assessment of the land within these areas must recognise that the majority of the landscape in agricultural areas has been modified from natural landscapes to create this character. Modifications include clearing the land and vegetation changes, subdivision patterns interpreted through roads and fences, and buildings and structures supporting farming activities. These landscapes are continually changing through activities associated with farming and new dwellings and structures in some areas.

7.2.6 Landscape Character 4 – Plantation

Landscape Character Unit 4 – Plantation forests, describes areas of managed timber plantations and forests. These areas are typically in Farming Zone. Vegetation is usually a single species comprising exotic species such as radiata pine or native eucalypts. Vegetated and natural areas such as national parks, state forests and conservation reserves are described in Landscape Character Unit 6. These areas have a higher sensitivity to change than managed plantations as they are not cleared periodically.

Figure 7-16 shows a view along an access track within the HVP Timber plantations to the east of Darlimurla.



Figure 7-16 Plantation Example

These areas are vegetated with regular or ordered plantings that limit views and can contrast against adjoining areas of native forests when viewed from a distance. The visual change in these landscapes includes growth and establishment of timbers and rapid change upon harvest.

Some recreational activities are permitted in these landscapes, such as mountain biking or trail riding, however, due to the managed nature of the plantations, underlying land-use zones and absence of overlays protecting landscape features, views or amenity, these areas are not considered to be sensitive.

Landscape and Viewer sensitivity considerations of Plantation forests

Plantation forests are established on land in the Farming Zone, and areas that are not sensitive to visual change. Commercial timber plantations are a dynamic landscape with trees being cleared as they mature, reducing their sensitivity to change. The recent panel decision for the *Delburn Wind Farm Panel Report*, February 2022 supports this rating and view.

7.2.7 Landscape Character 5 – Waterbodies and waterways

Several waterways, catchments and streams are located within the study area of the project.

Natural waterways include Tarwin River East Branch, Little Morwell River, and Morwell River. Named waterways include but are not limited to Fish Creek, Stoney Creek and Berry's Creek. Tributaries supporting waterways also contribute to localised character. These are more pronounced in the elevated areas toward the project's northern end.

The open waters of Bass Strait lie to the south of the transition station at Waratah Bay. Figure 7-17 shows the vegetated dunes, beach and open waters of Bass Strait near Waratah Bay.



Figure 7-17 Water Bodies and waterways example

The Hazelwood Cooling Pond is the only managed waterway near the project. While this feature was once used for recreational purposes, public access to Hazelwood cooling pond is no longer permitted.

Landscape and Viewer sensitivity considerations for Water bodies and waterways

The landscape and viewer sensitivity of water bodies and waterways is considered to be high. Natural waterways are valued for their natural features, amenity, and recreational uses. Although water bodies in the study area have been established for utility purposes, these areas are valued for their amenity, recreational, and tourism uses.

7.2.8 Landscape Character 6 – National Parks, State Parks, and State Forests

Landscape Character Unit 6 - National Park, State Parks, and State Forest includes areas generally within the land in Public Conservation and Resource Zone (PCRZ). These areas are often vegetated and hilly landscapes that include dramatic topographical features. These areas remain primarily intact as there were either challenging to clear or to improve for productive agriculture.

These areas are pristine, with little development or modifications other than access roads, trails, and telecommunications infrastructure.

There are locations where breaks in vegetation permit views across the landscape. These areas are limited to elevated lookouts or at bends in roads and switchbacks on steep climbs and descents.

These landscapes are valued for their amenity, biodiversity, and recreational values. Figure 7-19 shows an example of views from along a roadway within the National Park, State Parks, and State Forest areas.



Figure 7-18 National Parks, State Parks and State Forests Example

Landscape and Viewer sensitivity considerations for National Parks, State Parks, and State Forests

The landscape sensitivity of the National Parks and State Forests (Natural) Landscape Unit is considered high. These landscapes appear pristine or more natural than the Farmland landscape unit and are valued for amenity, recreation, and tourism uses.

7.2.9 Landscape and viewer sensitivity

Landscape sensitivity is, in part a measure of the ability of a landscape to absorb visual change based on the attributes of a particular landscape. The sensitivity of the previously described landscape units will depend upon several attributes, such as:

- **Location.** The sensitivity of a potential viewer varies according to location. For example, visitors to a national park where the landscape appears untouched or pristine will be more sensitive to the imposition of new or artificial elements within that landscape. The same viewer travelling along a rural highway, which contains existing examples of modifications and artificial elements, will be less sensitive to the presence of new elements. Changes or artificial elements are not confined to vertical structures or built form. They also include the removal of native vegetation and visibility of roads, tracks, fences, and other rural infrastructure, all of which decrease the sensitivity of a landscape to change further.
- **Rarity.** Landscapes that are considered rare or threatened are valued more highly by viewers.
- **Scenic Qualities.** Landscapes that are considered scenic are also those that are considered sensitive. They often contain dramatic topographical changes, the presence of water, coastlines, and other comparable features. The presence of modifications or artificial elements (including built form, roads, tracks, fences, and silos) and farming practices such as land clearing, cropping, and burning can decrease the sensitivity of a landscape’s scenic qualities.

Table 7-1 Landscape Character and sensitivity and value rating

Landscape Unit	Sensitivity and value
Landscape Unit 1 – Coastal dunes and beaches	Moderate to High - Coastal areas are valued for their recreation and amenity benefits. Some coastal areas have been modified by way of agriculture and urban areas, which lessens their sensitivity to visual change. Some of these areas are recognised by significant landscape overlays (SLOs).
Landscape Unit 2a – Townships	Moderate – Although there is an increase in population density and potential viewers, the sensitivity of these areas is reduced from high to moderate. This is due to the highly modified views, including built forms, roads, and urban

Landscape Unit	Sensitivity and value
	infrastructure. Views from these areas are typically screened by built forms and vegetation within road reserves and private allotments.
Landscape Unit 2b – Rural residential	Moderate-High – These areas are valued for their 'natural-appearing or rural landscape amenity. Although these areas are adjacent to farming areas, which are highly modified, the amenity of these areas are recognised through specific zoning that is distinct to townships and farming areas.
Landscape Unit 3a – Cleared flat farmland	Low – These areas are highly modified, are not rare, and are not topographically dramatic. These areas are extensively modified and include regular visual changes. Provisions within the planning scheme often provide greater protections for the use of these areas and the potential for offsite amenity impacts and impacts to these uses through encroachment from sensitive residential uses. It is recognised that these areas are often highly regarded in a local context.
Landscape Unit 3b – Cleared hilly farmland	Low to Moderate – Highly modified by way of clearing of native vegetation. The intersection of rolling hills and deeply incised valleys provides for a diversity of framing of views that are either closed and confined or reveal longer views across the valley floor and to the elevated hills in the distance. These areas are also highly modified, albeit less prevalent than flat farmland. Provisions within the planning scheme often provide greater protections for the use of these areas and the potential for offsite amenity impacts and impacts to these uses through encroachment from sensitive residential uses. It is recognised that these areas are often highly regarded in a local context.
Landscape Unit 4 – Plantation	Low – These areas may be considered attractive for some viewers when vegetation is established and mature. Plantings are often uniform in height and planting spacings, with regular vegetation appearing in rows. These areas constantly change through growth cycles culminating in rapid change through harvesting.
Landscape Unit 5 – Waterbodies and waterways	Moderate to High – Water bodies and waterways are considered to have a high sensitivity to visual change due to their scenic qualities, contemplative aspects, and intrinsic values. These areas are also often used for passive and active recreational pursuits
Landscape Unit 6 – National and State Parks	High – Landscapes in these areas appear pristine and are typically not extensively modified. However, these areas are considered highly sensitive to visual change due to their natural values, scenic qualities, and recreational pursuits.

7.3 REGIONAL LANDSCAPE CHARACTER

Through the above analysis of policy and existing landscape features, three broad regional scale landscape character areas are defined as follows:

- coast and plains;
- cleared flat farmland (south and north);
- rolling farmland and forests.

The relationship of these character areas to the project are shown in Figure 7-19.

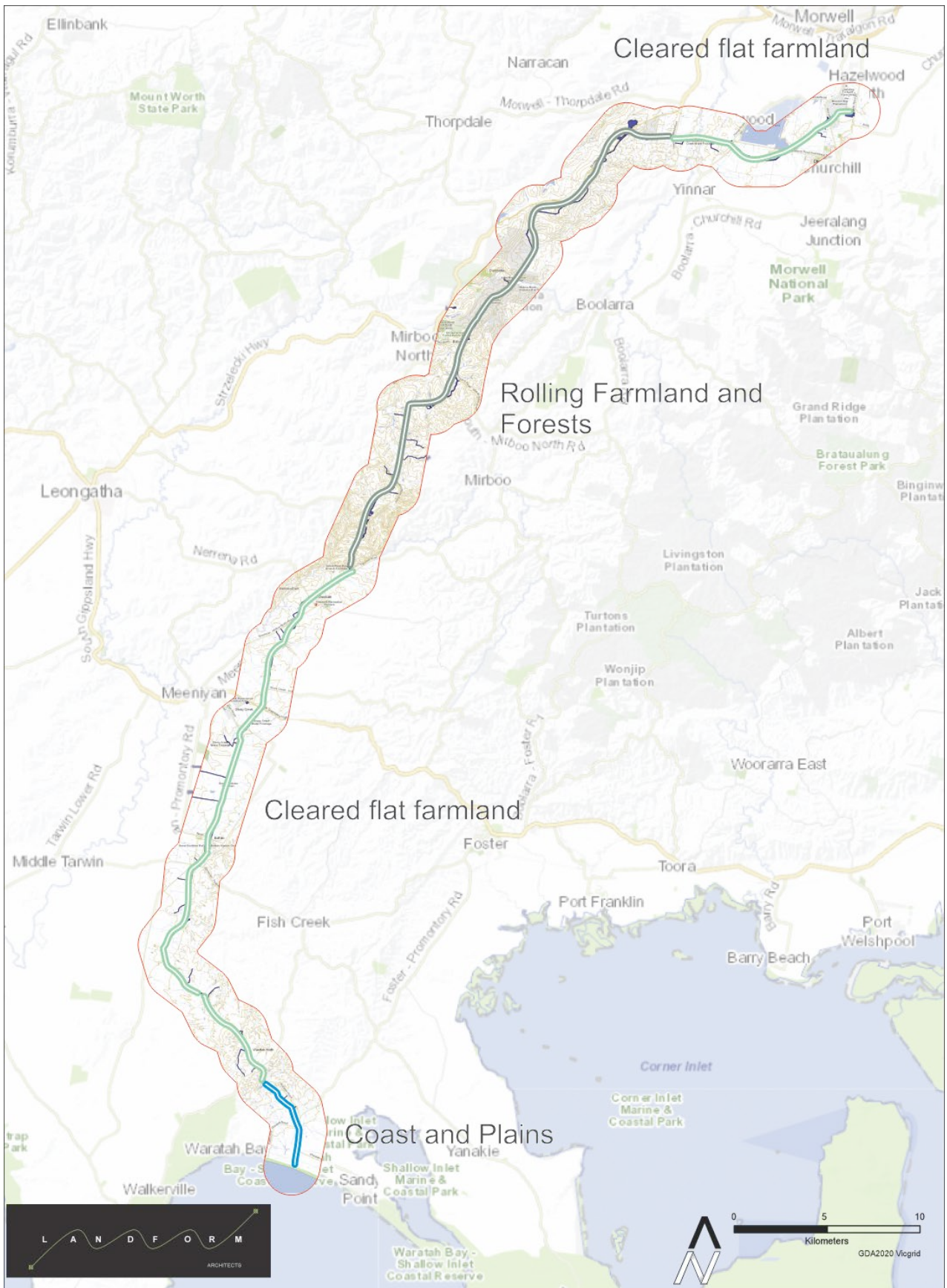


Figure 7-19 Regional scale landscape character

The features and visual characteristics of these areas are described below.

7.3.1 Coast and plains

The southern section of the study area includes the coast and plains regional landscape character. This includes the beach and small coastal townships of Waratah Bay and Sandy Point.

The landform is characterised by rolling hills that level out to low-lying areas near the coast. The landform consists of three distinct elements. Long flat sandy beaches backed by sand dunes, flat low lying floodplain areas and steep land lead to a plateau to the north of Waratah Bay township, including thick vegetation.

7.3.2 Cleared flat farmland

There are two sections of cleared flat farmland regional character. The southern cleared farmland section runs from the north of Waratah Bay through to Dumbalk township and includes the areas of Buffalo and Meeniyan. The northern cleared flat farmland regional character is located within Latrobe valley and includes the eastern edge of Driffield and the agricultural areas surrounding Yinnar and Hazelwood.

A large part of the area to the northeast of the project is within the area of land in the SUZ1 and includes many operating and recently closed coal mines and power stations. The extraction pits within these areas are open, partially rehabilitated, or fully rehabilitated, operating and transitioning power stations and the many overhead high voltage powerlines.

Vegetation patterns within the cleared flat farmland character areas are highly modified and dominated by large areas of cleared farming land. Settlement patterns are reinforced by planted windbreaks and shelter belts established along property boundaries, fence lines, dwellings, and some roadsides. Native vegetation is primarily found in road reserves, along creek lines and waterways.

7.3.3 Rolling farmland and forests

This landscape is dominated by cleared rolling hills from the north of the township of Dumbalk, running through Mirboo North and through to the forested hills of Darlimurla and Delburn.

Characteristics and features include rolling hills intersected by waterways, planted hedgerows and shelter belts.

Native or remnant vegetation is confined to elevated hillsides, road reserves and water courses. Most vegetation in this landscape comprises exotic species within farming areas, hedgerows, and shelterbelts.

Views are typically limited to the near or middle ground, with some areas with longer views from elevated roads and vegetation.

Within the plantation and forest areas in the northern section of this regional character vegetation is usually a single species comprising exotic species such as radiata pine or native eucalypts.

These areas are vegetated with regular or ordered plantings that limit views and can contrast against adjoining areas of native forests when viewed from a distance. The visual change in these landscapes includes growth and establishment of timbers and rapid change upon harvest.

8. CUMULATIVE IMPACT CONSIDERATIONS

The scoping requirements direct the landscape and visual impact assessment to *Assess the potential for cumulative impacts in the context of existing built infrastructure, as well as proposed or approved developments.*

The UK Guidelines define cumulative visual impacts as the combined effect of changes brought about by a proposed development in conjunction with other similar developments in an area which may result in changes to the perceptions of the local community or a visitor to the region. The potential for cumulative visual impacts to occur is where there may be:

- Sequential views to multiple similar projects along roads within the study area; and
- Simultaneous views from publicly accessible viewpoints or private viewing locations may occur.

This section identifies projects that have the potential to contribute to cumulative visual impacts.

The following chapter has assessed the project's visual impacts from public lookouts, tourist attractions, representative roads, and key vantage points. Where relevant, the visual impact assessed will also consider the impacts of the project added to views that may also include existing and approved projects identified below.

A review of credible projects has been undertaken within the study area for this assessment. Proposed and reasonably foreseeable projects were identified based on their potential to credibly contribute to cumulative impacts due to their temporal and spatial boundaries. Projects were identified based on publicly available information at the time of assessment. The projects considered for cumulative impact assessment in Victoria are:

- Existing generation and transmission
- Delburn Windfarm
- Hazelwood Mine Rehabilitation Project
- Wooreen Energy Storage System

The potential for cumulative impacts has been assessed through the examination of Public Viewpoints, which is undertaken in Chapter 9, and summarised in Chapter 12.

8.1 EXISTING GENERATION AND TRANSMISSION

cl

Figure 8-1 shows power stations and high-voltage transmission lines in the area towards the project's northern end. The proposed alignment of the underground transmission line and proposed converter station locations is superimposed.

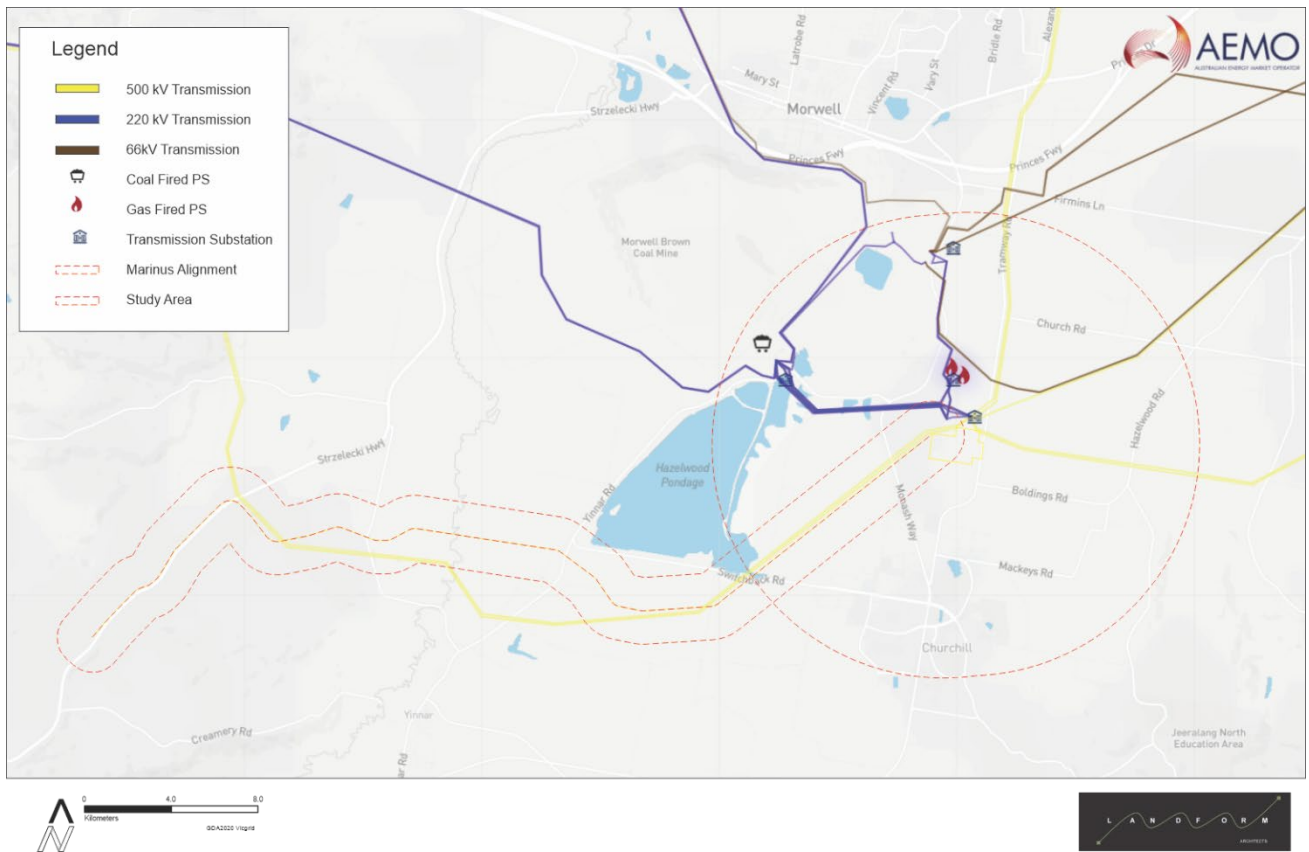


Figure 8-1 Electrical generation and transmission - Source AEMO

The proposed underground transmission line will be near the 500 kV Hazelwood to Cranbourne overhead transmission line between the Strzelecki Highway to the west and Tram Road to the East. The Jeerelang “A” Gas Fired Power Station, Jeerelang Terminal Station and Hazelwood terminal station will be adjacent to the proposed Hazelwood converter station.

The proposed Driffield converter station would be adjacent to the 500 kV Hazelwood to Cranbourne overhead transmission line west of the Strzelecki Highway.

8.2 DELBURN WIND FARM

The Delburn Wind Farm is a proposed wind energy project located in the Strzelecki Ranges (south of the Latrobe Valley). Turbines will be located in existing HVP plantations.

The Delburn Wind Farm includes up to 33 wind turbines, with an overall height of 250 m. Figure 8-2 shows the approved turbine layout of the Delburn Wind farm.

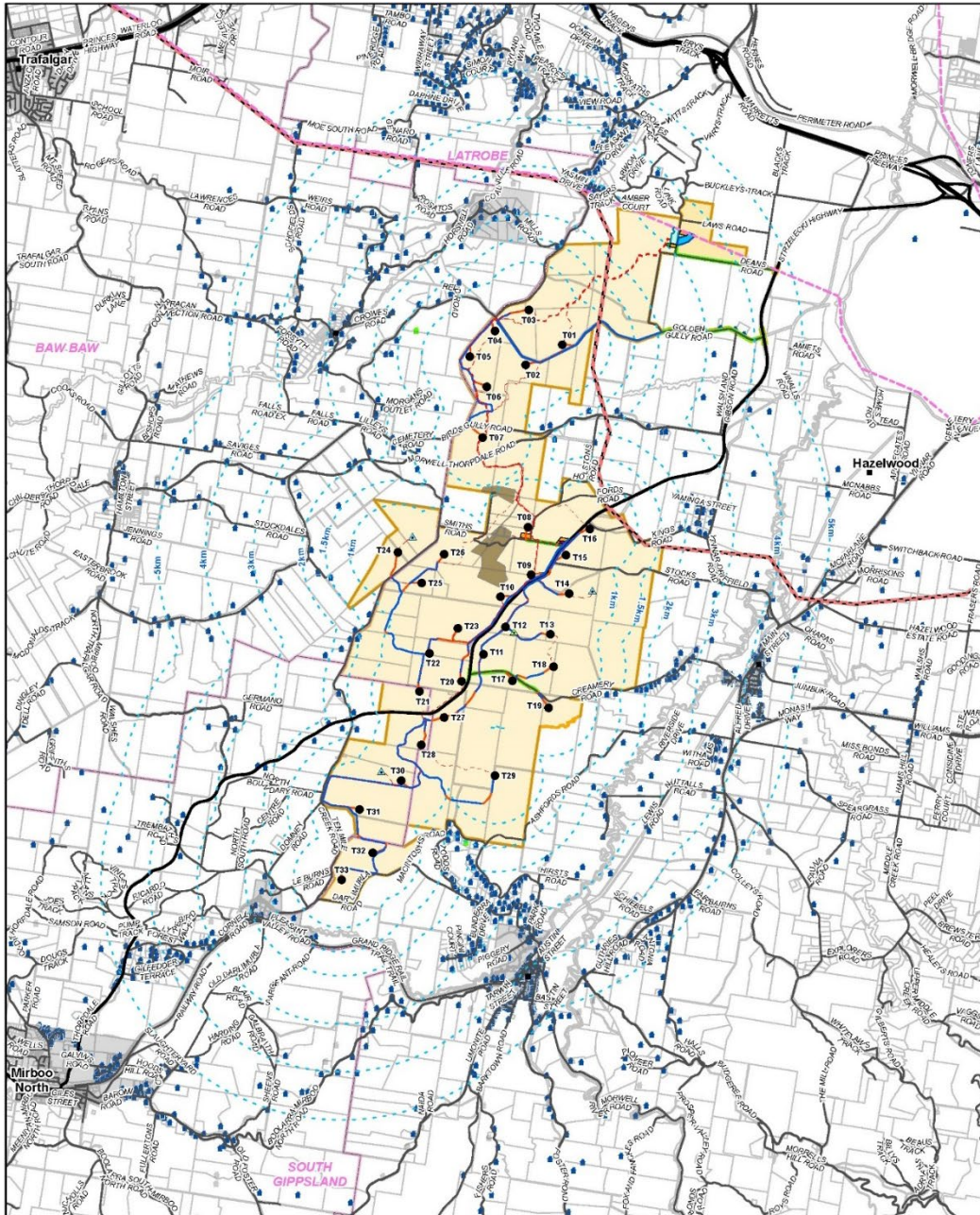


Figure 8-2 Delburn Wind Farm Layout (source: www.OSMI.com.au)

The proposed substation locations are located within a broader area, forming part of the approved Delburn Wind Farm.

The approved Delburn Wind Farm grid connection location is set back from the Strzelecki Highway and in an area with limited visibility from key publicly accessible sites.

The approved Delburn Wind Farm grid connection is approximately 5.5 km to the north proposed converter station at Driffield and approximately 11.5 km northwest of the proposed converter station location at Hazelwood. There will be limited locations where both projects will be visible in the same view (simultaneous visual impact) or from locations along the road network (sequential visual impact).

However, the project converter station at Driffield would be located in views that also include turbines in the approved Delburn Wind Farm.

8.3 HAZELWOOD REHABILITATION PROJECT

The Hazelwood Rehabilitation Project aims to rehabilitate the land disturbed by open-cut mining operations and deliver a safe, stable, sustainable, and non-polluting site.

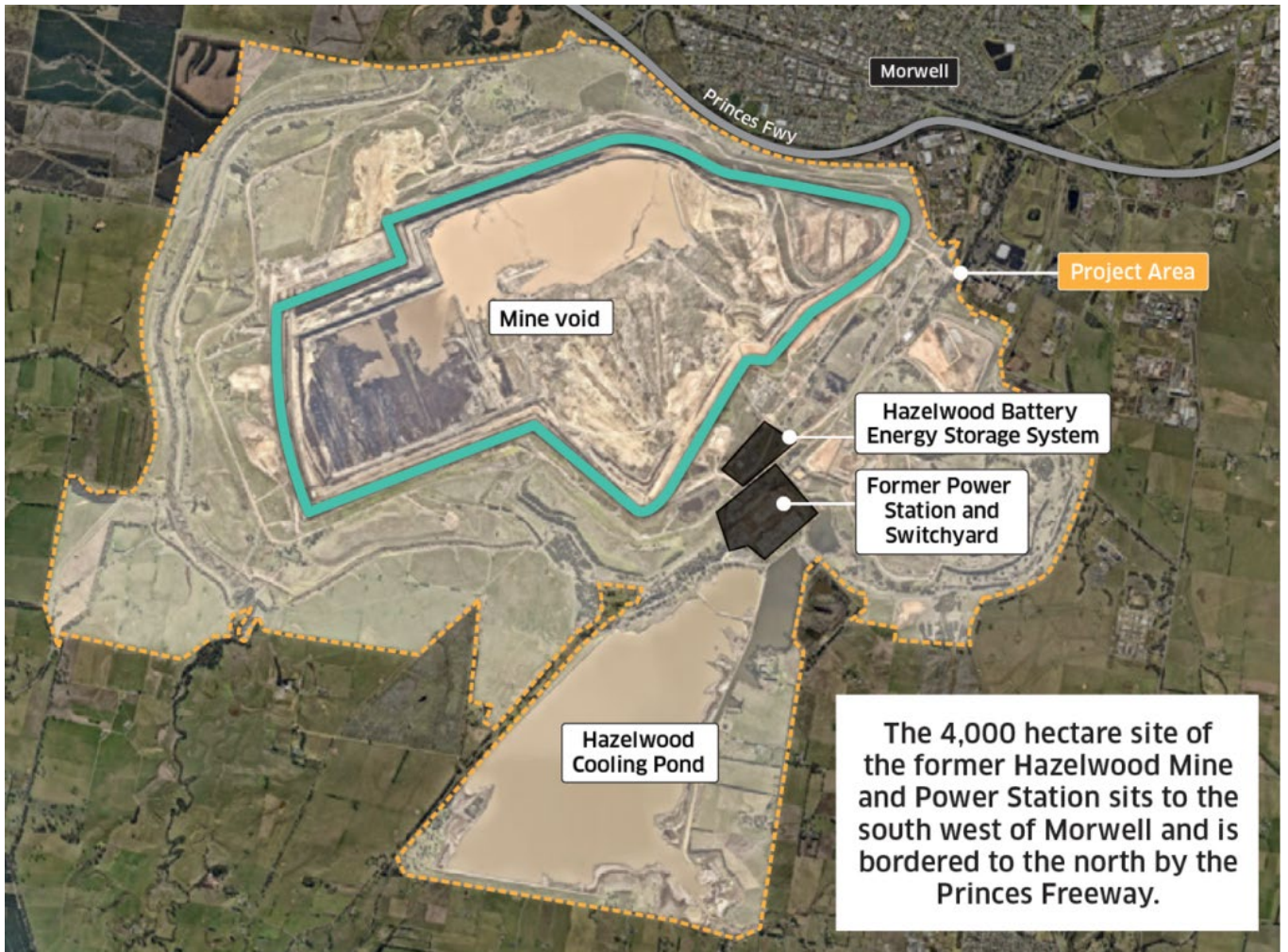


Figure 8-3 Hazelwood rehabilitation area

The Hazelwood Rehabilitation Project involves decommissioning remaining buildings, roads and infrastructure, earthworks to reprofile steep slopes, reinstating some water courses to a more natural alignment, and the proposed creation of a mine lake over time.

A full mine lake would help make the site safe and stable in the long term and provide significant potential economic, recreational and flood mitigation benefits to local communities and the region.

A range of potential water sources to create the mine lake has been identified. These options and the potential impacts of the proposed works are being considered through the preparation of an EES.

The EES is expected to be prepared during 2022 and 2023, through comprehensive technical studies and consultation with local communities, Traditional Owners, regional stakeholders, and regulators.

8.4 WOOREEN ENERGY STORAGE SYSTEM (WESS)

Energy Australia has committed to building a four-hour utility-scale battery of 350 MW capacity.

8.6 MITIGATION OF CUMULATIVE VISUAL IMPACTS

Cumulative visual impacts have been managed through the design of the project, by:

- Reducing visual clutter through structure placement and design where co-location of easements and infrastructure is to occur.
- Locating terminal stations away from key viewing locations or dwellings and settled areas

9. IMPACT ASSESSMENT – Public Viewpoints

The EES scoping requirements direct the LVIA to identify study areas in which project infrastructure could feature in views.

This chapter will assess the residual visual impacts of the project described in Chapter 3 of this report in views from public lookouts, tourist attractions, representative roads, and key vantage points in or close to the area of interest or from which the project can be seen. Where suitable, the assessment will also define and assess additional mitigation measures.

The assessment of impacts in public domain views has been undertaken from locations selected within the four regional landscape character areas defined in Section 7.3. These are:

- coast and plains;
- cleared farmland south;
- rolling Farmland and Forests;
- cleared farmland north.

Views from landscape character units have been selected to consider a range of viewing angles and distances.

Each viewpoint has been assessed on the quantitative criteria described in Section 4.5 Scale of Effects, which includes visibility, distance, viewer numbers and the qualitative aspects of the view. The overall visual impact is determined by considering each view's quantitative criteria and qualitative aspects.

A summary table (distance, duration, viewer numbers, and landscape sensitivity) is provided at the conclusion of each viewpoint. The summary table is to be read in conjunction with the qualitative analysis, which also considers landscape sensitivity, the nature of the viewing location, and mutable factors such as screening provided by local topography, vegetation, and buildings.

The results in the summary table are used to determine the overall visual impact, as they do not capture the key considerations that have contributed to the overall visual impact for each viewpoint.

Photomontages have been included at Viewpoint 3 along Waratah Road, adjacent to the transition station, Viewpoint 15 along the Strzelcki Highway, and adjacent to the proposed converter station at Driffield and, Viewpoint 18 located along Tramway Road, adjacent to the proposed converter station location at Hazelwood. All photomontages have been prepared following the methodology described in Section 4.8. These photomontages have also been relied upon as part of this assessment.

9.1 COAST AND PLAINS

This section includes the area from Waratah Bay - Shallow Inlet Coastal Reserve to the south to Fish Creek – Walkerville Road intersection to the North. Four viewpoints have been selected from locations in the public domain within the Coast and Plains landscape character area.

Viewpoints are by sensitivity and significance from significant and sensitive landscapes, townships and communities, public lookouts, tourist attractions, and representative roads. Several viewpoints included in this section are outside the study area for this section of the alignment. These viewpoints have been identified as being significant, sensitive or elevated locations that interest the community.

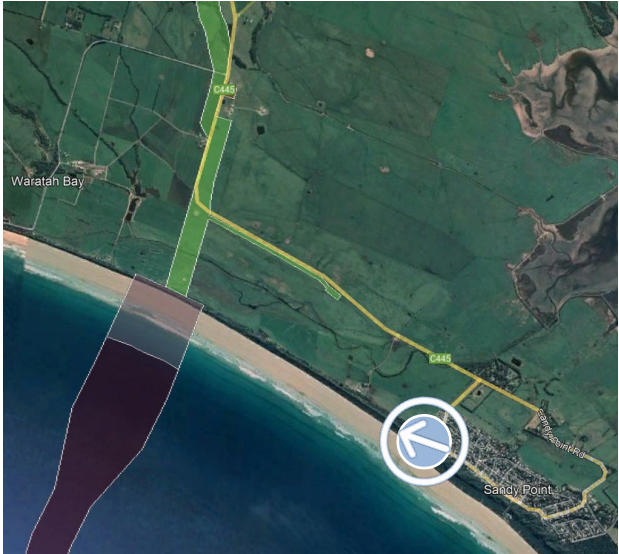
Figure 9-1 – Coast and Plains viewpoint location map

The proximity of each viewpoint to the project is provided in Table 9-1 below.

Table 9-1 Viewpoint Location Summary

Viewpoint	Distance to project	GPS Co-ordinates	Landscape Unit
VP1 – Ned Neale’s Lookout	2.8km W	55H 423009, 5702115	LCU 1 – Coastal dunes and beaches
VP2 – Waratah Bay Beach Carpark	Alignment - 1.4km E Transition station – 1.5 km NE	A - 55H 418966, 5703665 B - 55H 418969, 5703694 C - 55H 418992, 5703704	LCU 1 – Coastal dunes and beaches
VP3 – Waratah Road	Alignment - 30 m E Transition station - 130 m S	55H 420533, 5704323	LCU 3a – Cleared Flat Farmland
VP4 – Intersection of Waratah Road and Fish Creek-Walkerville Road	115 m SW	55H 418525, 5708816	LCU 3a – Cleared Flat Farmland

9.1.1 Viewpoint 1 – Ned Neale’s Lookout

Distance to project	2.8km NW	
Duration	Moderate	
Viewer type and numbers	Lookout - Moderate	
Landscape Character Unit	LCU 1 – Coastal dunes and beaches	
Sensitivity	Moderate-High	

Viewpoint 1 is located at Ned Neale’s Lookout in the Sandy Point township, approximately 2.8km east of the alignment.

Figure 9-2 shows the view looking south through west from Ned Neales Lookout toward the Project.

GPS Co-ordinates (55H 423009, 5702115)



Figure 9-2 – Viewpoint 1 – Existing view looking west toward the alignment

Views to the west are across Waratah Bay Beach toward Cape Liptrap seen in the view's background. The dune system is seen to the right screens views to the north, which include farming land.

Change in views

Construction of the project from this location will include the offshore cable laying works and Victorian shore crossing. The transition station if required, will be located to the north of the dune system and not visible.

The shore crossing will avoid the dunes and beach though being constructed using HDD, approximately 10 m below water level, and extending approximately 900 m offshore. Subsea cables will be installed in ducts inserted into the HDD boreholes.

Offshore works will include one cable lay vessel, one burial vessel, and up to five guard vessels.


Construction Impacts

Construction activity may be noticeable. However, the impacts on views and amenity of the nearby and surrounding areas due to distance will be **Low**, albeit temporary.

Residual Impacts

Following construction, there will be no visible features of the project. For these reasons, the overall visual impact following remediation will be **Nil**.

9.1.2 Viewpoint 2 – Waratah Bay Beach

Distance to project	1.4km E	
Duration	Moderate	
Viewer type and numbers	Lookout/Beach Access - Moderate	
Landscape Character Unit	LCU 1 – Coastal dunes and beaches	
Sensitivity	Moderate-High	

Viewpoint 2 is located at Waratah Bay Beach and Carpark, approximately 1.4 km west of the alignment.

The transition station, if required, will be approximately 1.6 km to the east.

Figure 9-3 shows the view looking east from the lookout platform on Waratah Beach.



Figure 9-3 – Viewpoint 2a – Existing view looking east toward the alignment (55H 418966, 5703665)

Views to the east include the dune system and Waratah Bay Beach. The ranges of Wilsons Promontory can be seen in the background.

Figure 9-4 shows the northeast view from a vegetation break along the beach access path.



Figure 9-4 – Viewpoint 2b – Existing view looking north-east toward the alignment (55H 418969, 5703694)

Views to the north from the beach access as it crosses over the dune system are across the cleared flat farmland of the plains.

Figure 9-5 shows the view looking northeast from the Waratah Bay Beach Carpark also toward the transition station location.



Figure 9-5 – Viewpoint 2c – Existing view looking north through east toward the alignment (55H 418992, 5703704)

Views to the north from the Waratah Beach Carpark are across cleared flat farmland. The edge of the dune system can be seen to the right of the image.

Change in views

Construction of the project from this location will include the offshore cable laying works and Victorian shore crossing. The transition station if required, will be located to the north of the dune system and not visible.

The shore crossing will be constructed using HDD, approximately 10 m below water level, extending approximately 900 m offshore. Subsea cables will be installed in ducts inserted into the HDD boreholes and not be visible. If required, the transition station will be approximately 1.6 km to the east

The transition station will be in a compound approximately 75 m by 50 m comprising perimeter fencing, 40-foot shipping containers approximately 3 m in height, communications buildings and parking.

Construction Impacts

Construction activity may be noticeable. However, the impacts on views and amenity of the nearby and surrounding areas due to distance will be **Low**, albeit temporary.

Residual Impacts

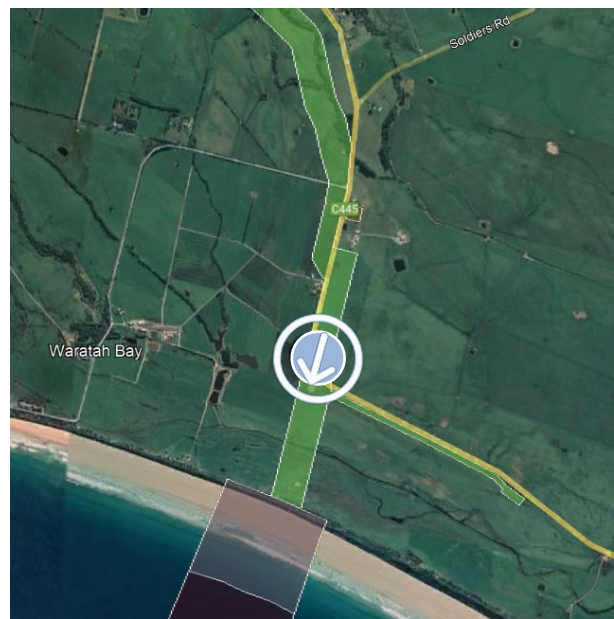
At a distance of approximately 1.6 km the transition station will be noticeable, however, it will not be a dominant feature in the view due to distance and the low profile of above-ground features. For these reasons, the overall visual impact following remediation will be **Negligible**.

9.1.3 Viewpoint 3 – Waratah Road

Distance to project	Alignment - 30 m E Transition station - 130 m S
Duration	Short
Viewer type and numbers	C Class Road Low-Moderate
Landscape Character Unit	LCU 3a – Cleared Flat Farmland
Sensitivity	Low

Viewpoint 3 is located on Waratah Road, approximately 30 m west of the alignment and approximately 130 m north of the transition station.

Figure 9-6 shows the view looking south toward the location of the transition station from Waratah Road.



GPS Co-ordinates (55H 420533, 5704323)



Figure 9-6 – Viewpoint 3 – Existing view looking south toward the transition station

Views to the south are across cleared flat farmland to the dune system on the northern edge of Waratah Bay Beach in the background of the view. The ranges of Wilson Promontory can be seen in the background to the left of the image.

Figure 9-7 shows the view looking north toward the alignment.



Figure 9-7 – Viewpoint 3 – Existing view looking north toward the alignment

Views to the north are over cleared flat farmland. Mt Nicholl can be seen in the background of the view to the right of the image.

Change in views

The transition station will be located in a compound approximately 75 m by 50 m, comprising perimeter fencing, communications buildings, fibre optic terminal station, and parking. Provisional features include 2 x 40-foot shipping containers approximately 3 m in height, which will be required should there be multiple cable suppliers. This will be a smaller facility within the footprint required for the transition station.

Figure 9-8 shows the view looking south toward the transition station location with the project features superimposed into the view. This includes the features described above.



Figure 9-8 - Viewpoint 3 - Photomontage looking south

Figure 9-9 shows an enlargement of the photomontage looking south toward the features in the transition station.



Figure 9-9 - Photomontage enlargement

Visual changes during construction will include site establishment of site entries and gates, access roads and tracks to the construction corridor, stock-proof fencing, topsoil stripping and stockpiling. Installation of conduits and thermal backfill, backfilling trenches with subsoil and topsoil to reinstate soil horizons and reinstatement of the construction corridor except at joint cable pits.

Following construction, the easement will be returned to seasonal pastures. While noticeable, it will not be a dominant element in the view and will be similar to existing fencing in the area.

The most noticeable visual changes associated with the transition will be the entrance gates and perimeter fencing. All other features will be screened by vegetation and the low rise seen to the east (image left) of the site entrance.

Construction Impacts

Construction activity will be noticeable due to the close proximity of the works. The impact on views and amenities of the nearby and surrounding areas will be **High**, albeit temporary.

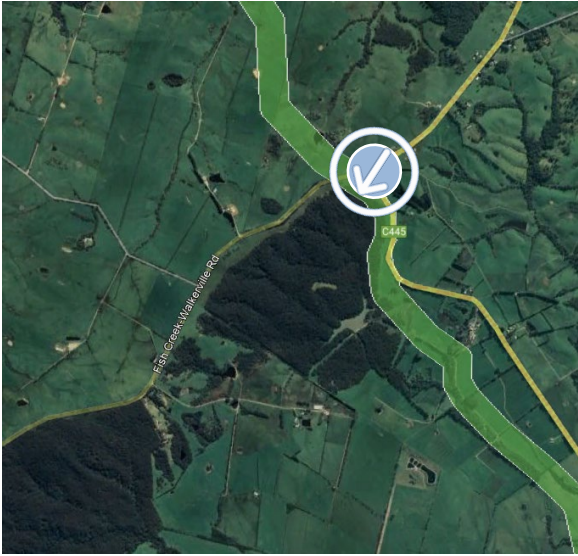
Residual impacts

Views to the south will include the transition station. The transition station will not be a noticeable element in the view. This is due to existing vegetation and topography external to the site. For these reasons, the overall visual impact following remediation will be **Low**.

Mitigation measures

The low-rise and existing vegetation are to be replicated to a better standard and within the project boundaries, achieving similar or improved levels of screening and filtering of views.

9.1.4 Viewpoint 4 – Intersection Fish Creek – Walkerville Road and Waratah Road

Distance to project	115 m SW	
Duration	Short	
Viewer type and numbers	C Class Road View – Low-Moderate	
Landscape Character Unit	LCU 3a – Cleared Flat Farmland	
Sensitivity	Low	

Viewpoint 4 is located at the intersection of Fish Creek-Walkerville Road and Waratah Road, approximately 115 m north-east of the alignment.

Figure 9-10 shows the view looking south-west from the intersection.

GPS Co-ordinates (55H 418525, 5708816)



Figure 9-10 – Viewpoint 4 – Existing view looking south-west toward the alignment

Views further to the south and east will be filtered or blocked by roadside vegetation. This view from a section of road with lower shrubbery.

Change in Views

Construction of the project from this location will include site establishments, such as constructing site entries and gates, access roads and tracks to the construction corridor, stock proof fencing, topsoil stripping and stockpiling. Installation of conduits and thermal backfill, backfilling trenches with subsoil and topsoil to reinstate soil horizons and reinstatement of the construction corridor except at cable joint pits. It is assumed that construction under the roadway will be undertaken through HDD, minimising impacts to the road and traffic. This will also avoid the need to clear roadside vegetation.

Following construction, the easement will be returned to seasonal pastures.

Construction Impacts

Construction activity will be noticeable due to the close proximity of the works. Views will be limited to transitory views for road users, short in duration and extent. The impacts on views and amenity will be **Low**, albeit temporary. HDD will also retain roadside vegetation which will partially screen or filter views toward the construction areas.

Residual Impacts

Views will be short in duration and over a landscape that has a low sensitivity to visual change. For these reasons the overall visual impact following remediation will be **Negligible**.

9.2 CLEARED FARMLAND SOUTH

This section includes the area from Fish Creek – Walkerville Road intersection to the south to Dumbalk Township to the north. The southern part of the project in this character area is located in farming land and away from roads and publicly accessible areas. Three viewpoints have been selected from locations in the public domain within the Cleared Farmland landscape character area.

Viewpoints have been arranged in order of sensitivity and significance from significant and sensitive landscapes, townships and communities, public lookouts, tourist attractions, and representative roads.

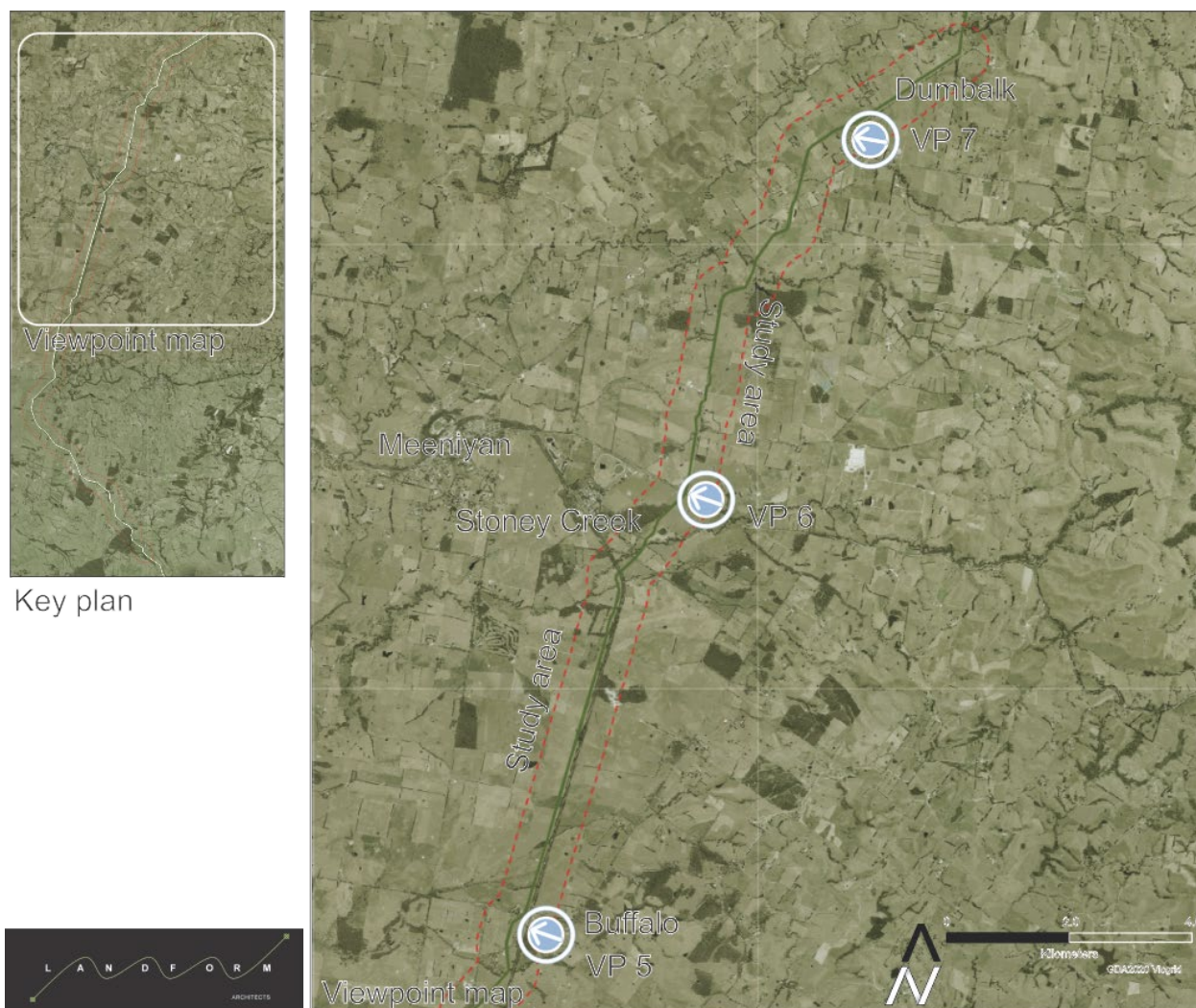


Figure 9-11 – Cleared Farmland viewpoint location map

Each viewpoint and its proximity to the project is provided in Table 9-2 below.

Table 9-2 Viewpoint Location Summary

Viewpoint	Distance to project	GPS Co-ordinates	Landscape Unit
VP5 – Buffalo Township	A – 230 m NW B – 140 m NW C – Within easement	A - 55H 415644, 5721337 B - 55H 415413, 5721249 C - 55H 415402, 5721414	LCU 2a - Township
VP6 – South Gippsland Highway	55 m NW	55H 418182, 5728689	LCU 3a – Cleared Flat Farmland
VP7 – Meeniyan-Mirboo North Road	170 m NW	55H 420198, 5733909	LCU 3b – Cleared Hilly Farmland

9.2.1 Viewpoint 5 – Buffalo township / Great Southern Rail Trail

Distance to project	A – 230 m NW B – 140 m NW C – Within easement	
Duration	Short	
Viewer type and numbers	Township - Moderate	
Landscape Character Unit	LCU 2a - Township	
Sensitivity	Moderate	

Viewpoint 5 is located within the Buffalo township, approximately 230 m southeast of the alignment.

Figure 9-12 shows the view looking west along Main Street within the Buffalo township.



Figure 9-12 – Viewpoint 5a – Existing view looking west toward the alignment (55H 415644, 5721337)

Views to the west from within the township of Buffalo include the general store, residential dwellings, and vegetation within allotments and along the roadside.

Figure 9-13 shows the view looking west toward the alignment from the Great Southern Rail Trail.



Figure 9-13 – Viewpoint 5b – Existing view looking west toward the alignment (55H 415413, 5721249)

Views to the west from the park alongside the Great Southern Rail Trail include vegetation along Moores Road and within the park. This section of the rail trail is from the old Buffalo Train Station platform, and park elements such as benches amenities and fencing.

Figure 9-14 shows the view looking north across the easement from the western edge of Buffalo township.



Figure 9-14 – Viewpoint 5c – Existing view looking north toward the alignment (55H 415402, 5721414)

Views to the north from Neals Road on the western edge of Buffalo Township are over cleared flat farmland. The Great Southern Rail Trail can be seen to the right of the image and has vegetation either side.

The easement will be located on the western side of this vegetation and visible from this location.

Vegetation along the rail trail will filter views to the easement from the trail.

Change in Views

Construction of the project from this location will include site establishment, such as constructing site entries and gates, access roads and tracks to the construction corridor, stock proof fencing, topsoil stripping and stockpiling. Installation of conduits and thermal backfill, backfilling trenches with subsoil and topsoil to reinstate soil horizons and reinstatement of the construction corridor except at cable joint pits.

Following construction, the easement will be returned to seasonal pastures.

Construction Impacts

Construction activity will be noticeable due to the close proximity of the works. Views will be limited to transitory views for road users, short in duration and extent. The impacts on views and amenity will be **Moderate**, albeit temporary.

Residual Impacts

Views within Buffalo township will be filtered or screened by existing vegetation and built form. For these reasons the overall visual impact following remediation from within the township will be **Nil**.

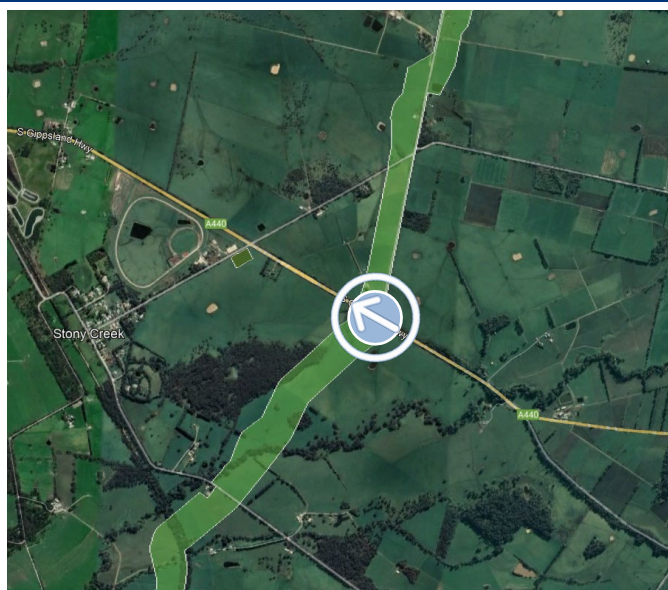
Following remediation, views to the north from the edge of Buffalo will include a cleared easement with farm fencing either side to the west of the vegetation along the Great Southern Rail Trail. While noticeable, the changes will not be visually dominant, nor will they contrast the existing visual setting and character of the areas. For these reasons, the overall visual impact following remediation will be **Negligible**.

9.2.2 Viewpoint 6 – South Gippsland Highway

Distance to project	55 m NW
Duration	Short
Viewer type and numbers	A Class Road - High
Landscape Character Unit	LCU 3a – Cleared Flat Farmland
Sensitivity	Low

Viewpoint 6 is located at the intersection of South Gippsland Highway and McKittericks Road, approximately 55 m south-east of the alignment.

Figure 9-15 shows the view looking west through north from the intersection.



GPS Co-ordinates (55H 418182, 5728689)



Figure 9-15 – Viewpoint 6 – Existing view looking west through north toward the alignment

Views to the west include roadside vegetation. Views to the north are across cleared flat farmland and include existing elements such as hay sheds and other farm infrastructure.

Change in Views

Construction of the project from this location will include site establishment, such as constructing site entries and gates, access roads and tracks to the construction corridor, stock proof fencing, topsoil stripping and stockpiling. Installation of conduits and thermal backfill, backfilling trenches with subsoil and topsoil to reinstate soil horizons and reinstatement of the construction corridor except at cable joint pits.

Following construction, the easement will be returned to seasonal pastures.

Construction Impacts

Construction activity will be noticeable due to the close proximity of the works. Views will be limited to transitory views for road users, short in duration and extent. The impacts on views and amenity will be **Moderate**, albeit temporary.

Residual Impacts

Views will be short in duration and over a landscape that has a low sensitivity to visual change. For these reasons the overall visual impact after remediation will be **Negligible**.

9.2.3 Viewpoint 7 – Meeniyen-Mirboo North Rd

<i>Distance to project</i>	170 m NW	
<i>Duration</i>	Short	
<i>Viewer type and numbers</i>	C Class Road Low-Moderate	
<i>Landscape Character Unit</i>	LCU 3b – Cleared Hilly Farmland	
<i>Sensitivity</i>	Low-Moderate	

Viewpoint 7 is located on Meeniyen-Mirboo North Road, approximately 1km southwest of Dumbalk township. The alignment will be approximately 170 m northwest.

Figure 9-16 shows the view looking northwest through northeast from Meeniyen-Mirboo North Road.

GPS Co-ordinates (55H 420198, 5733909)



Figure 9-16 – Viewpoint 7 – Existing view looking north-west through north-east toward the alignment

Views to the north and over cleared flat farmland, to rolling hills in the distance. The view includes scattered vegetation and wind break planting. The project will be located approximately 170 m away and will run through the cleared flat farmland in the foreground of the view.

Change in Views

Construction of the project from this location will include site establishment, such as constructing site entries and gates, access roads and tracks to the construction corridor, stock proof fencing, topsoil stripping and stockpiling. Installation of conduits and thermal backfill, backfilling trenches with subsoil and topsoil to reinstate soil horizons and reinstatement of the construction corridor except at cable joint pits.

Following construction, the easement will be returned to seasonal pastures.

Construction Impacts

Construction activity will be noticeable due to the close proximity of the works. Views will be limited to transitory views for road users, short in duration and extent. The impacts on views and amenity will be **Moderate**, albeit temporary.

Residual Impacts

Views will be short in duration and over a landscape that has a low sensitivity to visual change. For these reasons the overall visual impact after remediation will be **Negligible**.

9.3 ROLLING FARMLAND AND FORESTS

This section includes the area from Dumbalk Township to the south to Yinnar-Driffeild Road to the north. Eight viewpoints have been selected from locations in the public domain within the Rolling Farmland and Forests landscape character area.

Viewpoints are arranged in order of sensitivity and significance from significant and sensitive landscapes, townships and communities, public lookouts, tourist attractions, and representative roads.

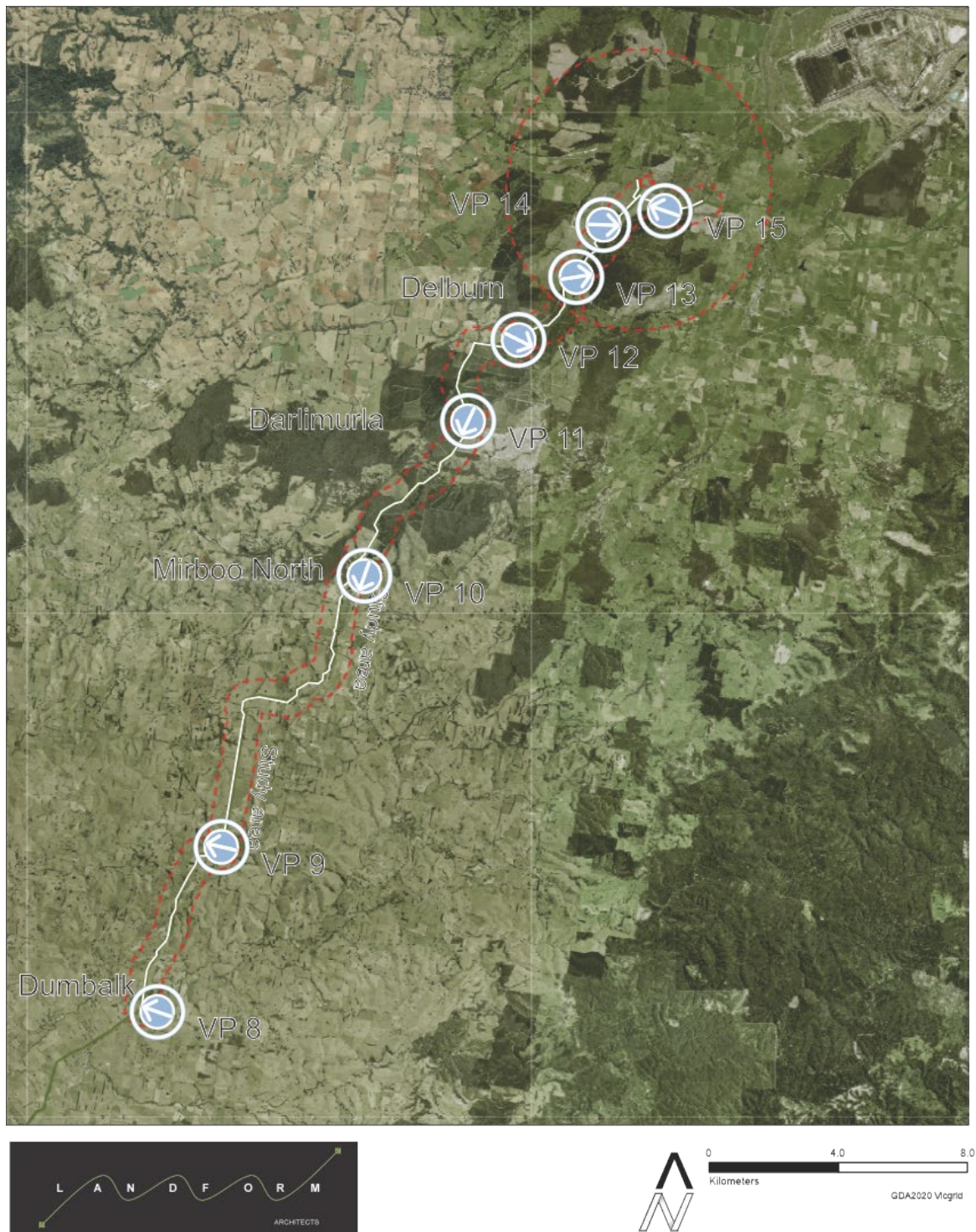


Figure 9-17 – Rolling farmland and forests viewpoint location map

Each viewpoint and its proximity to the project is provided in Table 9-3 below.

Table 9-3 Viewpoint Location Summary

Viewpoint	Distance to project	GPS Co-ordinates	Landscape Unit
VP8 – Dumbalk Township	A – 410 m NW B – 40 m NW	A – 55H 421076, 5734628 B – 55H 421162, 5735107	LCU2a - Township
VP9 – Meeniyah-Mirboo North Road	18m W	55H 423706, 5739104	LCU 3b – Cleared Hilly Farmland
VP10 – Boolarra-Mirboo North Road	20 m W	55H 428799, 5748869	LCU 3b – Cleared Hilly Farmland
VP11 – Grand Ridge Rail Trail	20 m SW	55H 431567, 5752564	LCU4 - Plantation
VP12 – Ten Mile Creek Road	20 m SE	55H 432779, 5756626	LCU4 - Plantation
VP13 – Creamery Road	25 m E	55H 435467, 5758004	LCU4 - Plantation
VP14 – Intersection of Strzelecki Highway and Smiths Road	Alignment – 40 m SE Construction Laydown Area – 40 m NW	55H 437253, 5760651	LCU4 - Plantation
VP15 – Strzelecki Highway	Alignment – 500 m SW Driffield converter station option – 555 m NW	55H 438286, 5761475	LCU4 - Plantation

9.3.1 Viewpoint 8 – Dumbalk Township

Distance to project	A – 410 m NW B – 40 m NW	
Duration	Moderate / Short	
Viewer type and numbers	C Class Road/ Township Viewpoint - Moderate	
Landscape Character Unit	A – LCU2a - Township B – LCU 3b – Cleared Hilly Farmland	
Sensitivity	A – Moderate B – Low-Moderate	

Viewpoint 8 is located within the Dumbalk township, approximately 410 m southeast of the alignment.

Figure 9-18 shows the view looking north from the main street of Dumbalk township.



Figure 9-18 – Viewpoint 8a – Existing view looking north toward the alignment (55H 421076, 5734628)

Views to the north from within the Dumbalk township include a small strip of shops on the western side and dwellings. Vegetation is located within the roadside and within properties. Views to the project are filtered and screened from within the township.

Figure 9-19 shows the view looking west through north from the northern edge of Dumbalk township.

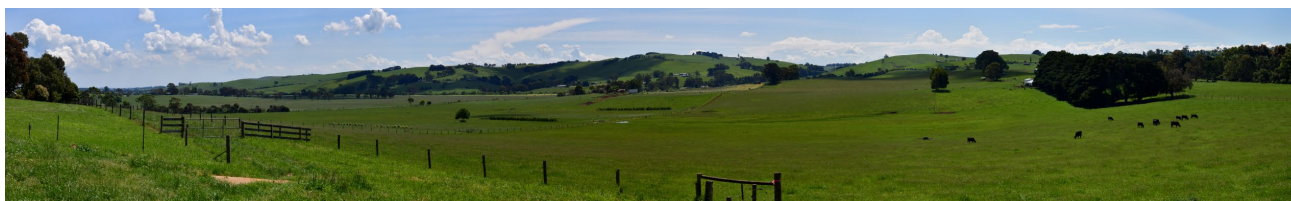


Figure 9-19 – Viewpoint 8b – Existing view looking west through north toward the alignment (55H 421162, 5735107)

Views to the north-east and north from the northern edge of Dumbalk are across cleared rolling hills. Vegetation includes scattered trees, windbreak planting and vegetation along creek lines.

Change in Views

Construction of the project from this location will include site establishment, such as constructing site entries and gates, access roads and tracks to the construction corridor, stock proof fencing, topsoil stripping and stockpiling. Installation of conduits and thermal backfill, backfilling trenches with subsoil and topsoil to reinstate soil horizons and reinstatement of the construction corridor except at cable joint pits.

Following construction, the easement will be returned to seasonal pastures.

Construction Impacts

Construction activity will be noticeable due to the close proximity of the works. Views will be limited to transitory views for road users, short in duration and extent. The impacts on views and amenity will be **Moderate**, albeit temporary.

Residual Impacts

Views from within Dumbalk township will be filtered or screened by existing vegetation and built form. For these reasons, the overall visual impact following remediation from within the township will be **Nil**.

Following remediation, views to the north from the northern edge of town will include a cleared easement with farm fencing on either side. While noticeable, the changes will not be visually dominant, nor will they contrast the existing visual setting and character of the areas. For these reasons, the overall visual impact following remediation will be **Negligible**.

9.3.2 Viewpoint 9 - Meeniyán-Mirboo North Rd

Distance to project	18m W	
Duration	Short	
Viewer type and numbers	C Class Road – Low-Moderate	
Landscape Character Unit	LCU 3b – Cleared Hilly Farmland	
Sensitivity	Low-Moderate	

Viewpoint 9 is located on Meeniyán-Mirboo North Road, approximately 120 m north of H Wallers Road. The alignment will be approximately 18 m west.

Figure 9-20 shows the view looking southwest through north from Meeniyán-Mirboo North Road.

GPS Co-ordinates (55H 423706, 5739104)



Figure 9-20 – Viewpoint 9 – Existing view looking south-west through north toward the alignment

Views to the southwest and north and over steep rolling cleared hills. Vegetation is located within the valleys and along roadsides. This view from a break in roadside vegetation allowing views in the direction of the project.

Change in Views

Construction of the project from this location will include site establishment, such as constructing site entries and gates, access roads and tracks to the construction corridor, stock proof fencing, topsoil stripping and stockpiling. Installation of conduits and thermal backfill, backfilling trenches with subsoil and topsoil to reinstate soil horizons and reinstatement of the construction corridor except at cable joint pits.

Following construction, the easement will be fenced and returned to seasonal pastures.

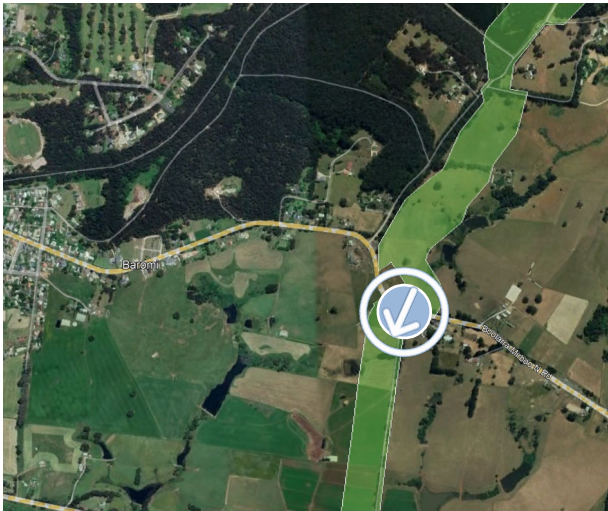
Construction Impacts

Construction activity will be noticeable due to the close proximity of the works. Views will be limited to transitory views for road users, short in duration and extent. The impacts on views and amenity will be **Moderate**, albeit temporary.

Residual Impacts

Views will be short in duration and over a landscape that has a low sensitivity to visual change. For these reasons the overall visual impact after remediation will be **Negligible**.

9.3.3 Viewpoint 10 – Boolarra-Mirboo North Road

Distance to project	20 m W	 <p>GPS Co-ordinates (55H 428799, 5748869)</p>
Duration	Short	
Viewer type and numbers	C Class Road Low-Moderate	
Landscape Character Unit	LCU 3b – Cleared Hilly Farmland	
Sensitivity	Low-Moderate	

Viewpoint 10 is located on Boolarra-Mirboo North Road, approximately 40 m east of the intersection with Fullertons Road where the project will cross Boolarra-Mirboo North Road.

The alignment will be approximately 20 m west.

The approved Delburn Wind Farm will be located 6 km northeast.

Figure 9-21 shows the view looking southwest through north-east from Boolarra-Mirboo North Road.

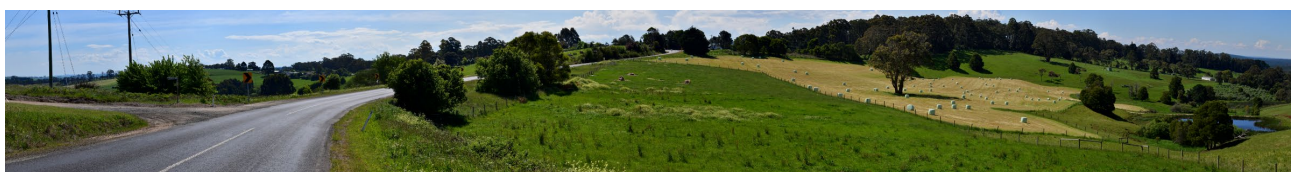


Figure 9-21 – Viewpoint 10 – Existing view looking south-west through north-east toward the alignment

Views to the north and northeast are over cleared rolling farmland with vegetated hills seen in the background. This view from a bend in the road is clear of roadside vegetation and allows for views of the project

Change in Views

Construction of the project from this location will include site establishment, such as constructing site entries and gates, access roads and tracks to the construction corridor, stock proof fencing, topsoil stripping and stockpiling. Installation of conduits and thermal backfill, backfilling trenches with subsoil and topsoil to reinstate soil horizons and reinstatement of the construction corridor except at cable joint pits.

Following construction, the easement will be returned to seasonal pastures.

Construction Impacts

Construction activity will be noticeable due to the close proximity of the works. Views will be limited to transitory views for road users, short in duration and extent. The impacts on views and amenity will be **Moderate**, albeit temporary.

Residual Impacts

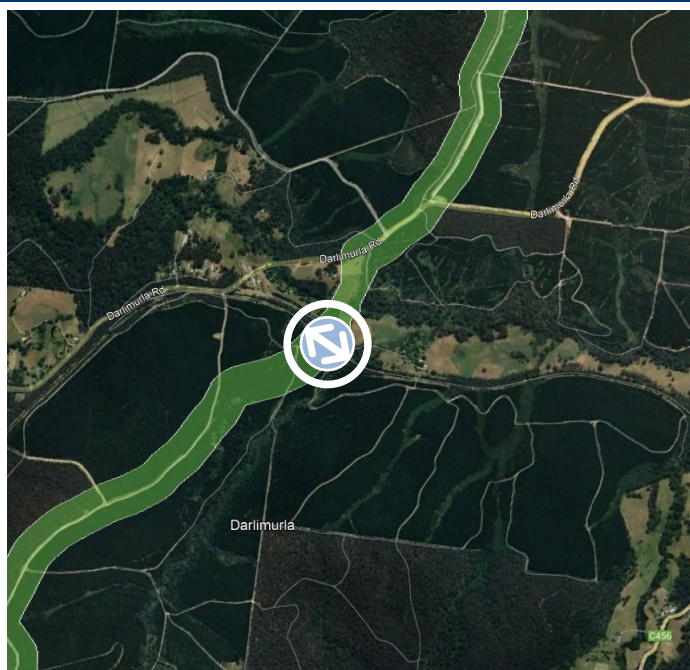
Views will be short in duration and over a landscape that has a low sensitivity to visual change. For these reasons the overall visual impact after remediation will be **Negligible**.

9.3.4 Viewpoint 11 – Grand Ridge Rail Trail

Distance to project	20 m SW
Duration	Short
Viewer type and numbers	Recreational walkers/Cyclist - Low
Landscape Character Unit	LCU 4 - Plantation
Landscape Sensitivity	Low

Viewpoint 11 is located on the Grand Ridge Rail Trail approximately 150 m northwest of the Neil Trease Bridge. The alignment will be approximately 20 m northwest. User sensitivity to visual changes are high.

Figure 9-22 shows the view looking northeast through to the south from the Grand Ridge Rail Trail.



GPS Co-ordinates (55H 431567, 5752564)

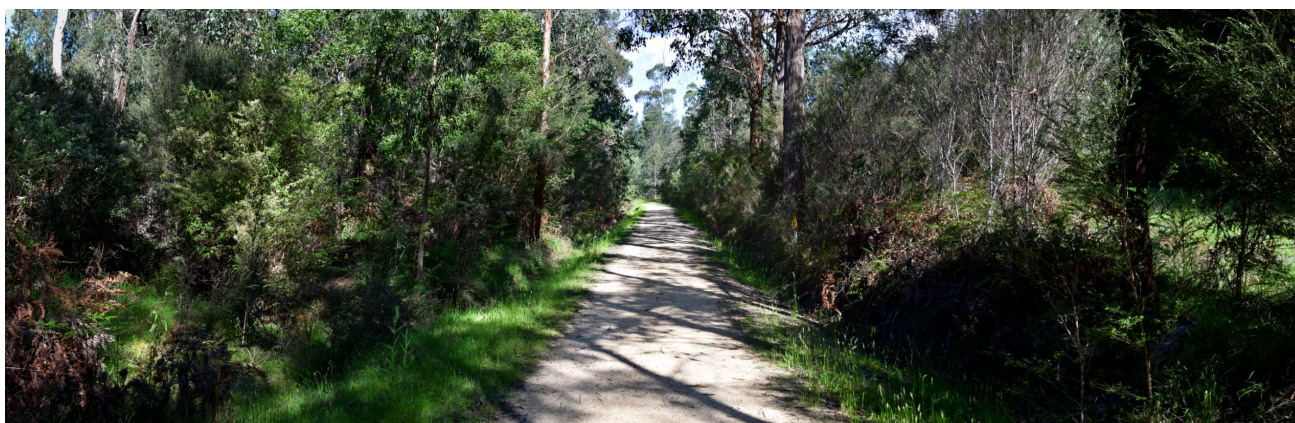


Figure 9-22 – Viewpoint 11 – Existing view looking north-east through south toward the alignment

Views along this section of the Grand Ridge Trail are generally confined to the trail due to existing vegetation. An existing Telstra easement runs along the southern side of the trail and is not an obvious feature except for several yellow signs.

Change in Views

Construction of the project from this location will include site establishment activities such as constructing site entries and gates, access roads and tracks to the construction corridor, stock proof fencing, topsoil stripping and stockpiling. Installation of conduits and thermal backfill, backfilling trenches with subsoil and topsoil to reinstate soil horizons and reinstatement of the construction corridor except at cable joint pits. It is assumed that construction under the rail trail will be undertaken using HDD. This will minimise impact on the rail trail and users while retaining vegetation along the trail margins.

The easement will be fenced following construction, with a short break in trailside vegetation.

Construction Impacts

Construction activity will be noticeable due to the close proximity of the works. Views will be limited to transitory views for road users, short in duration and extent. The impacts on views and amenity will be **High**, albeit temporary. HDD will also retain trailside vegetation, partially screening or filtering views toward the construction areas.

Residual Impacts

Views will be short in duration and in transit. For these reasons, the overall visual impact after remediation will be **Negligible**.

9.3.5 Viewpoint 12 – Ten Mile Creek Road

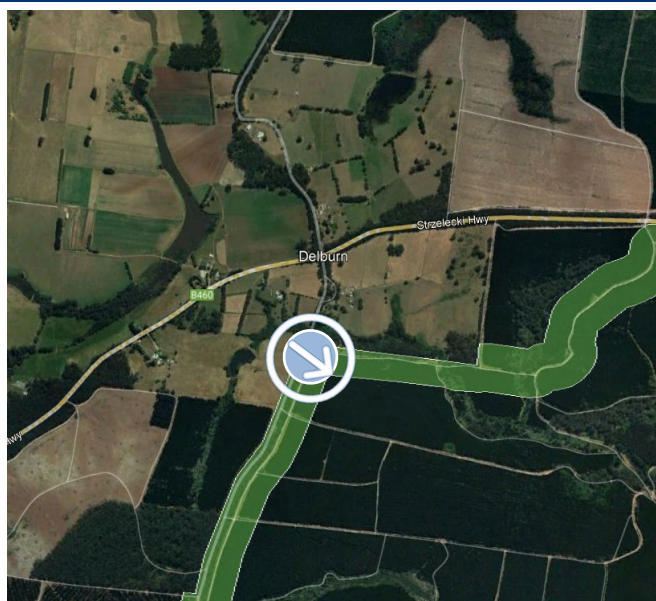
<i>Distance to project</i>	20 m SE
<i>Duration</i>	Short
<i>Viewer type and numbers</i>	Local Road - Low
<i>Landscape Character Unit</i>	LCU 4 – Plantation
<i>Sensitivity</i>	Low

Viewpoint 12 is located on Ten Mile Creek Road, approximately 400 m south of the intersection with Strzelecki Highway. The alignment will be located approximately 40 m southeast.

This is the location where the easement turns to head east.

Turbines in the approved Delburn Wind Farm will also be visible to the north.

Figure 9-23 shows the view looking east through south from the plantation access road adjacent to Ten Mile Creek Road.



GPS Co-ordinates (55H 432779, 5756626)



Figure 9-23 – Viewpoint 12 – Existing view looking east through south toward the alignment

This view is from the plantation track on the eastern side of roadside vegetation along Ten Mile Creek Road. Views from Ten Mile Creek Road will be filtered by the vegetation seen to the right of the image. The project will be located in the cleared easement alongside the plantation access tracks.

Change in Views

Construction of the project from this location will include site establishment tasks such as constructing site entries and gates, access roads and tracks to the construction corridor, stock proof fencing, topsoil stripping and stockpiling. Installation of conduits and thermal backfill, backfilling trenches with subsoil and topsoil to reinstate soil horizons and reinstatement of the construction corridor except at cable joint pits.

Following construction, plantation timbers will remain clear of the easement and wider than the existing setting.

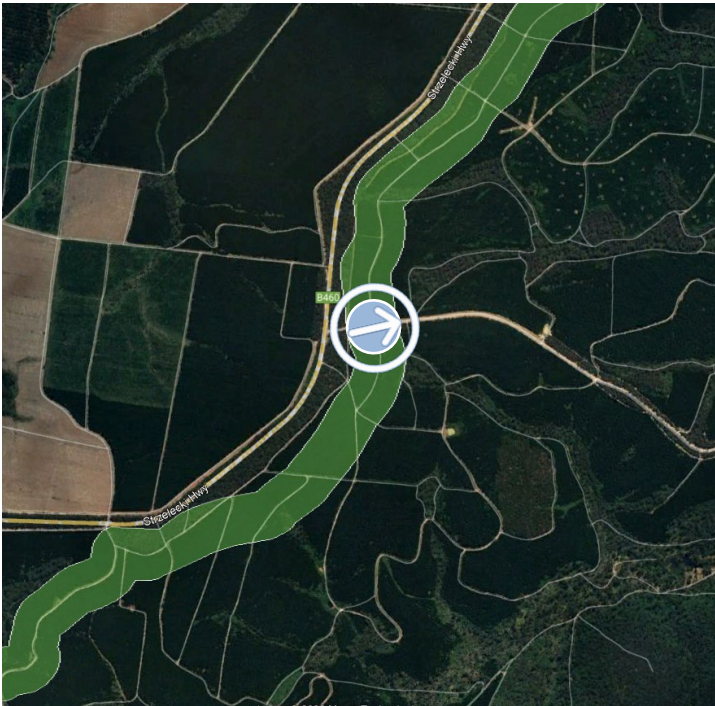
Construction Impacts

Construction activity will be noticeable due to the close proximity of the works. Views will be limited to transitory views for road users, short in duration and extent. The impacts on views and amenity will be **Moderate**, albeit temporary.

Residual Impacts

Following remediation, views will include a cleared easement alongside the plantation access tracks, similar to the existing setting. For these reasons the overall visual impact following remediation will be **Negligible**.

9.3.6 Viewpoint 13 – Creamery Road

Distance to project	25 m E	
Duration	Short	
Viewer type and numbers	Local Road – Low	
Landscape Character Unit	LCU4 – Plantation	
Sensitivity	Low	

Viewpoint 13 is located on Creamery Road approximately 170 m east of the intersection with Strzelecki Highway.

Creamery Road is a local access road that runs through this section of the plantation.

The alignment will cross Creamery Road approximately 25 m east.

Turbines in the approved Delburn Wind Farm may also be visible

Figure 9-24 shows the view looking east from Creamery Road.

GPS Co-ordinates (55H 435467, 5758004)



Figure 9-24 – Viewpoint 13 – Existing view looking east toward the alignment

Views to the east are across the plantation through to the Plains in the east.

Change in Views

Construction of the project from this location will include site establishment, such as constructing site entries and gates, access roads and tracks to the construction corridor, stock proof fencing, topsoil stripping and stockpiling. Installation of conduits and thermal backfill, backfilling trenches with subsoil and topsoil to reinstate soil horizons and reinstatement of the construction corridor except at cable joint pits.

Following construction, plantation timbers will remain clear of the easement and wider than the existing setting.

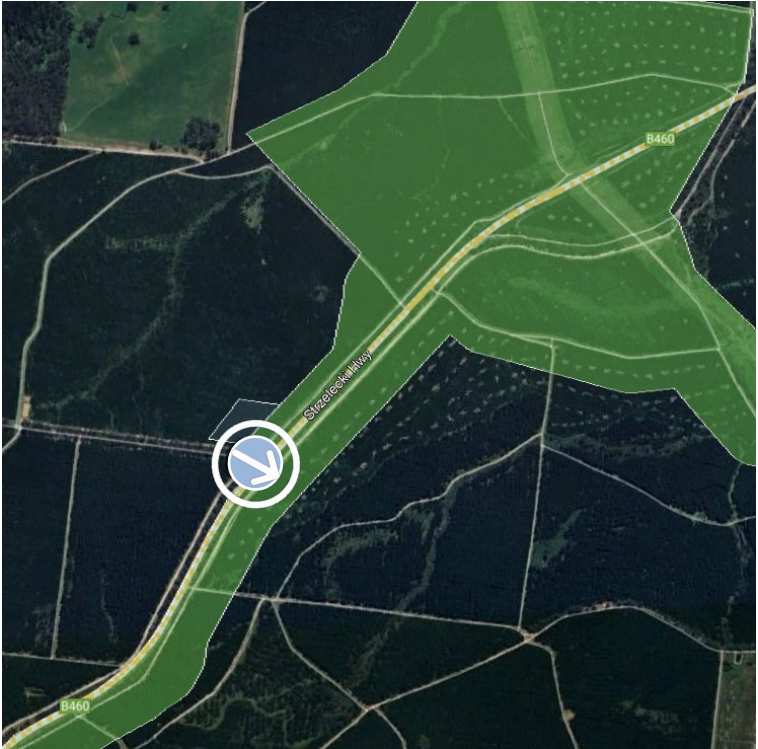
Construction Impacts

Construction activity will be noticeable due to the close proximity of the works. Views will be limited to transitory views for road users, short in duration and extent. The impacts on views and amenity will be **Moderate**, albeit temporary.

Residual Impacts

Following remediation views to the east and south will include a cleared easement within the plantation. This will not be too dissimilar to what is seen now through other sections of the plantation and will not be a dominant element in the view. Views will be short in duration and over a landscape that has a low sensitivity to visual change. For these reasons the overall visual impact following remediation will be **Negligible**.

9.3.7 Viewpoint 14 – Intersection of Strzelecki Highway and Smiths Road

Distance to project	Alignment – 40 m SE Construction Laydown Area – 40 m NW	
Duration	Short	
Viewer type and numbers	Highway – High	
Landscape Character Unit	LCU4 – Plantation	
Sensitivity	Low	

Viewpoint 14 is located at the intersection of Strzelecki Highway and a local access track Smiths Road.

The alignment will be approximately 40 m southeast. A construction laydown area will be approximately 40 m northwest.

Turbines in the approved Delburn Wind Farm will also be visible.

Figure 9-25 shows the view looking northwest through east from the intersection of Strzelecki Highway and Smiths Road.

GPS Co-ordinates (55H 437253, 5760651)



Figure 9-25 – Viewpoint 14 – Existing view looking north-west through east toward the alignment

Views to the northwest and east are across the Strzelecki Highway to the HPV plantations. This viewpoint is located within the approved Delburn Wind Farm site boundary. Turbines may be visible above plantation trees to the left and right of the image where breaks in roadside vegetation allows.

Change in Views

Construction of the project from this location will include site establishment, such as constructing site entries and gates, access roads and tracks to the construction corridor, stock proof fencing, topsoil stripping and stockpiling. Installation of conduits and thermal backfill, backfilling trenches with subsoil and topsoil to reinstate soil horizons and reinstatement of the construction corridor except at cable joint pits.

A laydown area will also be established in this locate to accommodate materials, equipment, parking, a site office, and amenities.

Construction activity will be noticeable. The impacts on views and amenity of the nearby and surrounding areas will be **High**, albeit temporary.

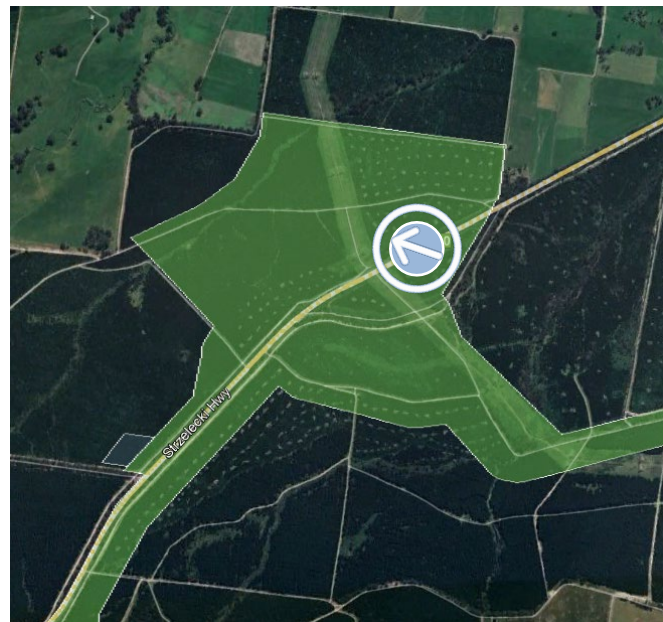
Residual Impacts

Following the construction and removal of the construction compound and laydown area, the area will be returned to its current use. The easement will be screened or filtered roadside vegetation on the eastern side of the Strzelecki Highway. Where visible, views will be short in duration and over a landscape that has a low sensitivity to visual change.

For these reasons the overall visual impact following remediation will be **Negligible**.

9.3.8 Viewpoint 15 – Strzelecki Highway

Distance to project	Alignment – 500 m SW Driffield converter station option – 555 m NW
Duration	Short
Viewer type and numbers	Highway – High
Landscape Character Unit	LCU4 – Plantation
Sensitivity	Low



GPS Co-ordinates (55H 438286, 5761475)

Viewpoint 15 is located on Strzelecki Highway approximately 425 m southwest of the intersection with Fords Road.

The alignment for the Hazelwood Option will be approximately 500 m southwest. The Driffield converter station option will be approximately 55 m northwest.

Figure 9-26 shows the view looking south through southwest from Strzelecki Highway.



Figure 9-26 – Viewpoint 15 – Existing view looking south through south-west toward the alignment

Figure 9-27 shows the existing view with the 250 m high turbines associated with the approved but not yet constructed Delburn Wind Farm. Although the turbines are not yet constructed, they are approved, therefore it is expected that they will be established during the operational life of the project, and visible from parts of the Strzelecki Highway.



Figure 9-27 – Viewpoint 15 – Approved Delburn Wind Farm

This viewpoint is located adjacent to the approved Delburn Wind Farm. Turbines will be visible above plantation trees to the left and right of the image.

Views to the south and southwest also include the constructed 500 kV high-voltage transmission easement which bisects the existing HPV plantation.

Change in views

The construction works at the Driffield converter station will include clearing of plantation timbers, installation of perimeter fencing and fire trails and access tracks, prior to installation of the switchyard and cut-in of existing 500 kV Hazelwood to Melbourne transmission lines.

Figure 9-28 below shows the proposed Driffield Converter station superimposed into the view with the approved Delburn Wind Farm turbines,



Figure 9-28 – Viewpoint 15 – Approved View with the project superimposed

Although the project will be visible, features and buildings associated with the converter station will be low in level, and a background element to the single circuit towers along the existing 500 kV Hazelwood to Rowville Transmission line.

Construction Impacts

Construction activity will be noticeable albeit short in duration and temporary. The impacts on views and amenity of the nearby and surrounding areas will be **Low**, because views are short in duration, and due to adjacent high voltage transmission lines with a backdrop of pine plantation which is also subject to rapid and highly noticeable change.

Residual Impacts

The converter station, switchyard, and connection to the existing 500 kV transmission line will be a noticeable element in the view. However, these views will be short in duration and over a landscape that has a low sensitivity to visual change. For these reasons the overall visual impact following remediation will be **Low**.

9.4 CLEARED FARMLAND NORTH

Three viewpoints have been selected from locations in the public domain within the Cleared Farmland landscape character area. This section includes the area from Yinnar-Driffeild Road to the west to Tramway Road to the east.

Viewpoints have been arranged in order of sensitivity and significance from significant and sensitive landscapes, townships and communities, public lookouts, tourist attractions, and representative roads.



Figure 9-29 – Cleared Farmland North viewpoint location map

Each viewpoint and its proximity to the project is provided in Table 9-4 below.

Table 9-4 Viewpoint Location Summary

Viewpoint	Distance to project	GPS Co-ordinates	Landscape Unit
VP16 – Yourongi Court	Alignment – 460 m S Driffeild converter station option – 2.0 km W	55H 440090, 5761340	LCU 2b – Rural Residential
VP17 – Monash Way	Alignment - 45 m SE Hazelwood converter station option – 1.0 km NE	55H 448740, 5762075	LCU3a - Cleared Flat Farmland

<i>Viewpoint</i>	Distance to project	GPS Co-ordinates	Landscape Unit
VP18 – Tramway Road	Hazelwood converter station option - 400 m NW	55H 450137, 5761934	LCU3a - Cleared Flat Farmland

9.4.1 Viewpoint 16 – Yourongi Court

Distance to project	Alignment – 460 m S Driffield converter station option – 2.0 km W	
Duration	Short	
Viewer type and numbers	Local Road – Low	
Landscape Character Unit	LCU2b – Rural Residential	
Sensitivity	Moderate-High	

Viewpoint 16 is located within a rural residential area on Yourongi Court.
 The alignment will be approximately 460 m south.
 The Driffield converter station option will be approximately 2.0 km west.
 Figure 9-30 shows the view looking south from the crest of the road in Yourongi Court.

GPS Co-ordinates (55H 440090, 5761340)

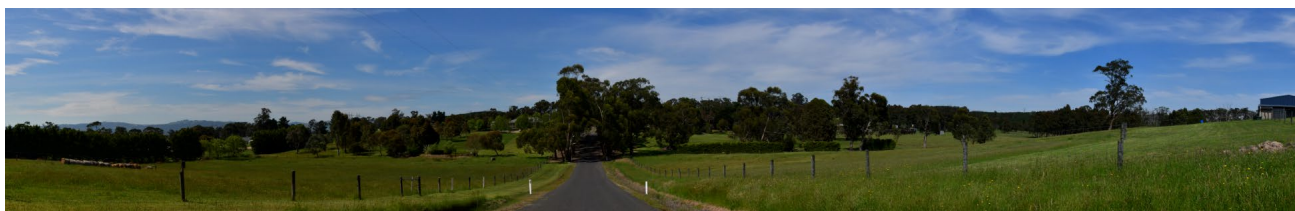


Figure 9-30 – Viewpoint 16 – Existing view looking south toward the alignment

Views to the south are across cleared rolling hills within the rural residential area, toward the vegetated hills and plantation areas to the south.

Figure 9-31 shows an enlargement of the view.

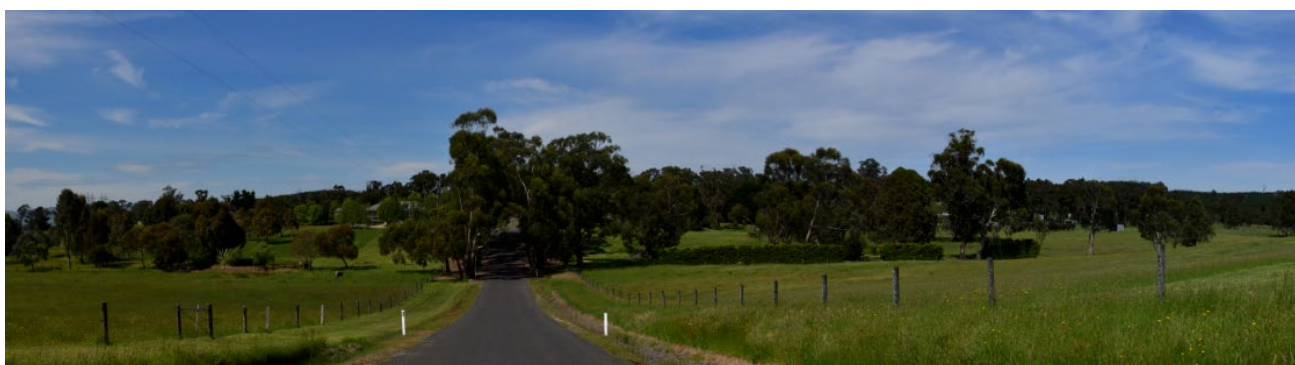


Figure 9-31 – Viewpoint 16 – Enlargement of the existing view

The project will be located in the plantation areas approximately 460 m to the south.

Change in views

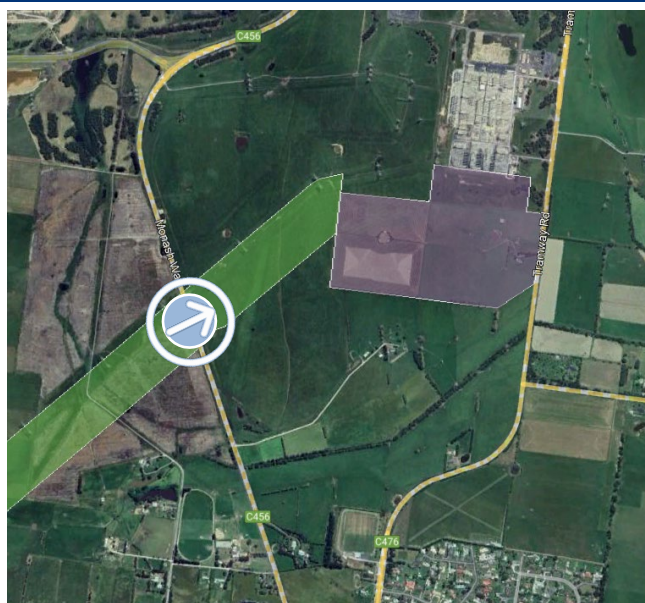
Construction activities will be partially filtered or screened by topography and existing vegetation. Therefore the visual impact in construction will be **Negligible**.

Residual Impacts

There will be no discernible change in views from this location following the construction of the project. Therefore the visual impact will be **Nil**.

9.4.2 Viewpoint 17 – Monash Way

Distance to project	Alignment - 45 m SE Hazelwood converter station option – 1.0 km NE
Duration	Short
Viewer type and numbers	C Class Road – Low-Moderate
Landscape Character Unit	LCU 3a – Cleared Flat Farmland
Sensitivity	Low



GPS Co-ordinates (55H 448740, 5762075)

Viewpoint 17 is located on Monash Way, approximately 1.1km northwest of Silcocks Road.

The alignment for the Hazelwood option will be approximately 45 m southeast. The Hazelwood converter station option will be approximately 1.0 km northeast.

Figure 9-30 shows the view looking northeast through southeast from Monash Way.



Figure 9-32 – Viewpoint 17 – Existing view looking north-east through south-east toward the alignment

Views include existing overhead high-voltage transmission infrastructure, including the 500 kV Hazelwood to Melbourne transmission line, Hazelwood terminal station. The Wooreen Energy Storage System is also proposed in proximity to this viewpoint.

The proposed WESS would be to the north (image left) of the existing Hazelwood terminal station.

Figure 9-33 shows an enlargement of the view looking east toward the existing Hazelwood terminal station. The proposed Hazelwood converter station as part of the project would be to the south (right) of the image.



Figure 9-33 – Viewpoint 17 Enlargement of the view looking east

Although the existing terminal station is visible, due largely to distance, the existing terminal station is not a dominant feature.

Change in views

Construction of the project from this location will include site establishment such as constructing site entries and gates, access roads and tracks to the construction corridor, stock proof fencing, topsoil stripping and stockpiling. Installation of conduits and thermal backfill, backfilling trenches with subsoil and topsoil to reinstate soil horizons and reinstatement of the construction corridor except at cable joint pits.

Construction activity will be noticeable. The impacts on views and amenity of the nearby and surrounding areas will be **Low**, albeit temporary.

Residual Impacts

The impact of the project transmission line easement will be negligible. Views will be short in duration over a landscape with a low sensitivity to visual change and one that includes many other constructed and obvious features.

The Hazelwood converter station will be approximately 1.1 km to the east, with features similar in scale and form to the existing Hazelwood terminal station. At this distance, the addition of the transition station to these views, will be a noticeable visual change for some viewers, however, for most, the change will be barely discernible. For these reasons the overall visual impact following remediation will be **Negligible**.

Although insufficient information is available to consider the WESS's potential visibility and cumulative impacts, the WESS is a battery storage facility, typically comprising infrastructure similar in profile to shipping containers, with an on-site substation up to 10 m in height.

At this distance, the features of the WESS will be low in level and background elements to the existing structures along the single-circuit overhead transmission line.

9.4.3 Viewpoint 18 – Tramway Road

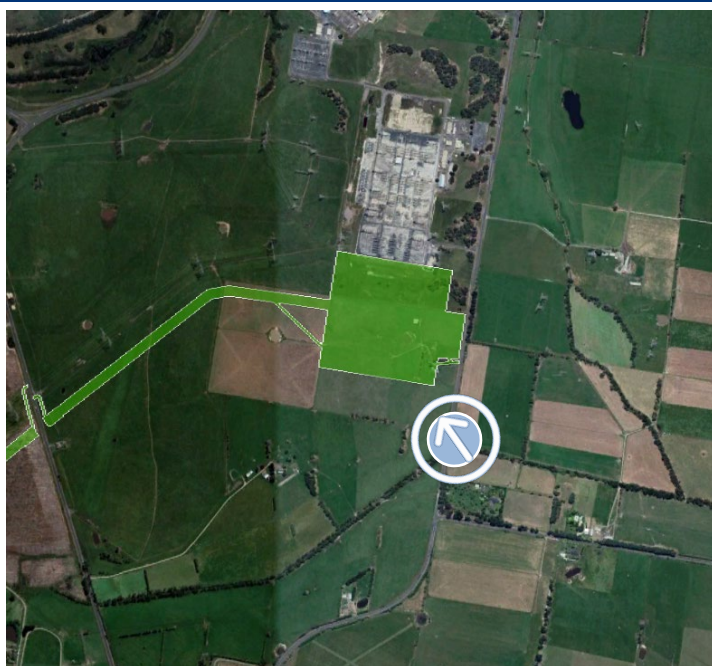
Distance to project	Hazelwood Converter station option - 400 m NW
Duration	Short
Viewer type and numbers	C Class Road – Low-Moderate
Landscape Character Unit	LCU 3a – Cleared Flat Farmland
Sensitivity	Low

Viewpoint 18 is located on Tramway Road, approximately 210 m north of Boldings Road.

The Hazelwood converter station option will be approximately 400 m northwest.

This view is north of an existing windbreak planting that runs perpendicular to Tramway Road which screens views from locations further to the south and the location of the proposed transition station.

Figure 9-30 shows the view looking west through north from Tramway Road.



GPS Co-ordinates (55H 450137, 5761934)



Figure 9-34 – Viewpoint 18 – Existing view looking west through north toward the alignment

The existing vegetation to the south of the proposed converter station and perpendicular to the roadway is visible to the left of the image.

Views to the west and northwest are over cleared farmland with Hazelwood terminal station and the 500 kV Hazelwood to Melbourne transmission line visible in the background.

Change in views

Construction of the project from this location will include site establishment including site entries and gates, access roads and tracks to the construction corridor, stock proof fencing, topsoil stripping and stockpiling.

Construction works at the Hazelwood converter station will include clearing of plantation timbers, and installation of perimeter fencing, fire trails and access tracks prior to installation of the switchyard and cut-in of existing 500 kV Hazelwood to Melbourne Transmission lines.

Construction activity will be noticeable. The impacts on views and amenity of the nearby and surrounding areas will be **High**, albeit temporary.

Figure 9-35 shows the same view seen in Figure 9-30 with the transition station superimposed into the view.



Figure 9-35 – Viewpoint 18 – Photomontage

Figure 9-36 shows an enlargement of the view, which includes the converter station buildings.



Figure 9-36 – Viewpoint 18 – Photomontage enlargement

The most noticeable change in views from this location will be the large sheds toward the site's southern end. The sheds will screen views of the proposed converter station and part of the existing transmission towers and terminal station in the background.

Residual Impacts

At a distance of approximately 400 m the Hazelwood converter station will be a noticeable element in the view, however, views will be confined to large sheds, similar in scale to others found elsewhere in surrounding farming land.

Views will be short in duration and over a landscape that has a low sensitivity to visual change. For these reasons the overall visual impact following remediation will be **Low**.

10. Mitigation Options

The EES scoping requirements direct the landscape and visual impact assessment to *Outline and evaluate any potential design and siting options that could avoid and minimise potential effects on landscape and visual amenity of neighbouring residences and communities and additional management strategies that may further minimise potential effects.*

In this setting, limited measures beyond those included in a Construction Environmental Management Plan (CEMP) can be employed to mitigate the visual impacts of construction works. Impacts relating to site presentation, condition of hoarding and screening, access and waste management are included in a CEMP. In most areas, construction works will be short in duration and will be completed before landscape screening is effective. The use of hoarding will be limited and used restrainfully as their presence can sometimes be more intrusive and suggest a more permanent nature of works rather than temporary construction activities such as those associated with the project alignment.

Following the rehabilitation of the project areas, the majority of the project will be underground, within a grassed easement located in farming land. Therefore confining the landscape and visual impacts to areas surrounding the transition station toward the south and one of the two converter station locations to the north (LV03). For these reasons, the following mitigation options are limited to these areas.

- It is recommended that the exterior colour of the converter station buildings be dark green or muted tones to minimise contrast with vegetation in surrounding farming areas, roadsides, and vegetated hills in the distance (LV01).
- Articulation of the façade through either materials or form to break up the monolithic façade (LV01).
- Landscape screening is installed along the boundary shared with Tramway Road, matching existing vegetation along the site's southern boundary (LV02).

Cumulative visual impacts have been managed through the design of the project by:

- Co-location of easements to reduce visual clutter and fragmentation of landscapes.
- Locating converter and terminal stations away from key viewing locations, dwellings and settled areas.

11. ENVIRONMENTAL PERFORMANCE REQUIREMENTS

Environmental Performance Requirements (EPRs) set out the environmental outcomes that must be achieved during the project's design, construction, operation and decommissioning.

Table 5 LVIA Environmental Performance Requirements

EPR ID	Environmental Performance Requirement	Project Phase
LV01	<p>Design converter station buildings to minimise visual impacts from public locations</p> <p>During the design of the converter station buildings, incorporate design outcomes to reduce the visual prominence of the buildings in views from the public roads. Design of the building facades will be documented in a Development Plan(s) and may include, but not be limited to:</p> <ul style="list-style-type: none"> ▪ Tapering of leading edges of the building and roofline. ▪ Articulation of building facades. ▪ Using colours such as dark greens, reflecting existing vegetation, or muted tones minimises contrast and prominence. 	Design
LV02	<p>Implement measures to establish and maintain a vegetative screen for public views of above ground components</p> <p>During the design of the converter station and transition station, develop measures to ensure a vegetative screen is established to shield views from public roads. Strategies to achieve this may include, but not be limited to:</p> <ul style="list-style-type: none"> ▪ Ensuring sufficient setbacks along the road frontages. ▪ Layered landscaping using endemic species. 	Design
LV03	<p>Design transitions station to minimise visual impacts from public locations</p> <p>During the design of the transition station, develop measures to provide screening from Waratah Road that is similar to, or better than that which is provided by existing vegetation and landforms. Strategies to achieve this may include, but not be limited to:</p> <ul style="list-style-type: none"> ▪ Retaining existing vegetation within the site. ▪ Including vegetation or landscaping within the site boundaries to screen or filter views of project features using endemic species. Locating perimeter fencing behind landscape plantings or landforms. 	Design
LV04	<p>Develop and implement measures to manage potential visual impacts in operation</p> <p>As part of the OEMP, develop and implement measures to minimise visual impacts during the operation. The measures should address:</p> <ul style="list-style-type: none"> ▪ Monitoring vegetation screening and landscaping with site boundaries for at least two years ensuring establishment and long term viability of landscaping. ▪ Replacement of any failed vegetation screens or landscaping with endemic species. 	Operation

12. CONCLUSION

This report has assessed the landscape and visual impacts of project features and activities against the EES scoping requirements for landscape and visual impacts. The EES evaluation objective for landscape and visual is:

Avoid and, where avoidance is not possible, minimise the potential adverse effects on landscape and visual amenity.

The scoping requirements outline the key issues to be considered by the landscape and visual impact assessment being the:

- *Potential effects on significant landscape values and landforms in the vicinity of the project, especially national parks, state parks or other reserves and areas identified for their landscape values, such as within South Gippsland and Latrobe Shire planning schemes.*
- *Potential for nearby residents or communities to experience significant effects to visual amenity from project infrastructure.*

Existing Setting

The land-use policy settings are described in Chapter 6 of this report and in the Land Use and Planning Impact Assessment.

The majority of the land in the study area and project alignment is within the Farming Zone. The predominant land uses comprise animal husbandry, cropping, horticulture or timber plantations.

It is recognised that many people find these areas appealing for their apparent natural values. However, the majority of the landscape in agricultural areas has been modified from a natural state, protections are not for amenity or aesthetic purposes, and this land use is not rare.

Project features will be located in areas subject to various schedules to the Significant Landscape Overlay and the Environmental Significance Overlay. These overlays, particularly SLO3 have been informed by documents such as the Coastal Landscape Assessment Study. Where relevant, these areas were identified as having a higher level of sensitivity to change than land which is in a land-use zone and occupied by the same uses, but without such protections.

Impact assessment key findings

The project's impacts have been assessed from 17 locations in the public domain.

The majority of the above-ground infrastructure will be located in farming areas, which has a low sensitivity to changes in views or the landscape.

The project avoids sensitive landscapes and areas of National Park or State Forests.

In sensitive coastal landscapes and areas protected by schedules to the Significant Landscape Overlay impacts are avoided or minimised by constructing the transmission line through HDD, which will minimise ground disturbance and vegetation removal. The majority of operational infrastructure will be below-ground.

There were no locations identified where the project's landscape and visual impacts will be greater than low. This is due partly to the following:

- Locating the majority of the project underground
- directly avoiding townships and communities or areas of residentially zoned land.
- minimising distances where the project will run parallel to major roads, highways, and tourist routes.

- In farming land, the easement has been designed to minimise vegetation along property boundaries and fencelines; and
- The easement has been located alongside existing tracks and cleared easements in forested areas.

For landholders, visual impacts have been reduced by:

- maximising setbacks to individual dwellings where possible.
- micro-siting of structures, and
- co-locating project features with existing transmission lines and similar elements.

Above-ground infrastructure will be limited to permanent features required at the terminal station adjacent Waratah Road, cable pits located along the easement and the preferred converter station to the north.

In coastal areas, permanent above-ground elements will be limited to the transition station at Waratah Bay, which will have limited to no visibility from publicly accessible locations.

Option one will be in an HVP timber plantation west of the Strzelecki Highway near Driffield or in farming land south of the existing Hazelwood terminal station. Both locations are to the south of the existing 500 kV Hazelwood to Melbourne single circuit transmission line. Both sites are in a location where views will be short in duration.

There were no locations identified along the proposed easement where a new easement is required to be cleared in elevated forestry or heavily vegetated areas that would be visible from low view angles or vantage points. In these areas, vegetation removal would be limited to locations along existing easement or tracks, and generally not discernible.

In sensitive areas, vegetation removal has been avoided through HDD. In farming areas, vegetation removal would be limited to planted wind breaks and hedgerows, and generally not discernible.

Cumulative Impact considerations

The Driffield site will be in a location that will be viewed from the Strzelecki Highway and in the context of turbines associated with the approved but not yet constructed Delburn Wind Farm. The Hazelwood site will be the project added to views that include similar infrastructure to the proposed converter station.

Cumulative visual impacts have been managed by:

- Reducing visual clutter through structure placement and design where co-location of easements and infrastructure is to occur.
- Locating terminal stations away from key viewing locations or dwellings and settled areas

This will limit the distance between features, thereby reducing the potential for sequential views along roadways and trails, simultaneous views from static locations and impacts through the fragmentation of landscapes.

The project's visual impacts are not greater than low, or can be managed through either the proposed mitigation measure set out in Chapter 10. EPR's are set out in chapter 11.

13. REFERENCES

Landscape Institute and Institute of Environmental Management and Assessment, 2017. Guidelines for Landscape and Visual Impact Assessment (GLVIA3), 3rd edition, 3 April 2013.

Environmental impact assessment practice note EIA-NO4, Roads and Maritime Services, NSW, December 2018 .

Guidance Note for Landscape and Visual Assessment, AILA Queensland, June 2018.

New Zealand Institute of Landscape Architects, NZ (2010) Best Practice Note: Landscape Assessment and Sustainable Management 10.1.

Landform Architects 2023. Marinus Link Tasmanian terrestrial and coastal processes Landscape and Visual Impact Assessment. Prepared for Tetra Tech Coffey. Victoria, Australia.

APPENDIX A: PHOTOMONTAGES

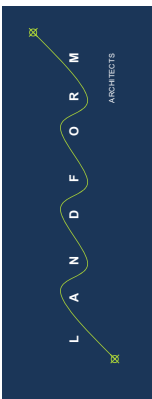
EXISTING VIEW



PANORAMA



WIREFRAME



E: hayden@landformarchitects.com.au
P: 0438 677 175



Project	Marinus Link
Project No:	P 2022 0019
Date:	15.02.2023
Photography Information	
LAYOUT	TRANSITION_STATION_HV_georeferenced_GDA2020_mAHD-revA.
CAMERA	NIKON D850
LENS	60mm
GPS	55H 420533, 5704323
DATE	9/11/2022



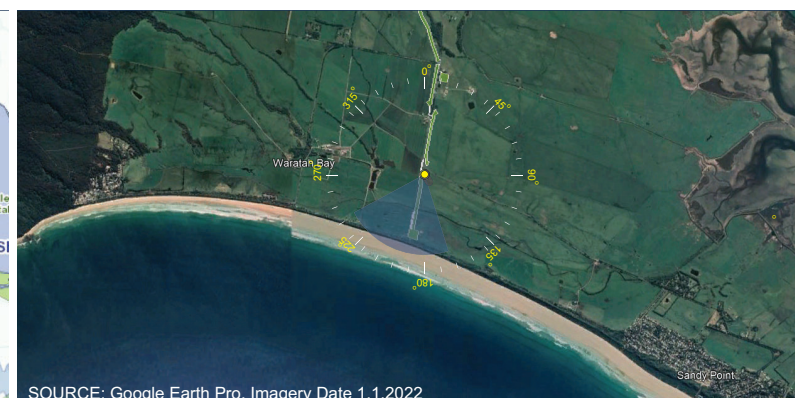
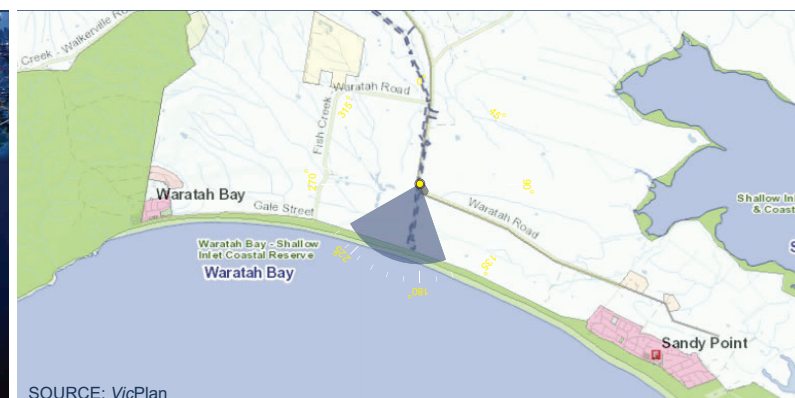
EXISTING VIEW



LANDFORM ARCHITECTS

E: hayden@landformarchitects.com.au
P: 0438 677 175

MARINUS LINK



Project	Marinus Link
Project No:	P 2022 0019
Date:	15.02.2023
Photography Information	
LAYOUT	TRANSITION_STATION_HV_georeferenced_GDA2020_mAHD-revA
CAMERA	NIKON D850
LENS	60mm
GPS	55H 420533, 5704323
DATE	9/11/2022

2



PHOTOMONTAGE



LANDFORM ARCHITECTS

E: hayden@landformarchitects.com.au
P: 0438 677 175

MARINUS
LINK



Project	Marinus Link
Project No:	P 2022 0019
Date:	15.02.2023
Photography Information	
LAYOUT	TRANSITION_STATION_HV_georeferenced_GDA2020_mAHD-revA
CAMERA	NIKON D850
LENS	60mm
GPS	55H 420533, 5704323
DATE	9/11/2022

3



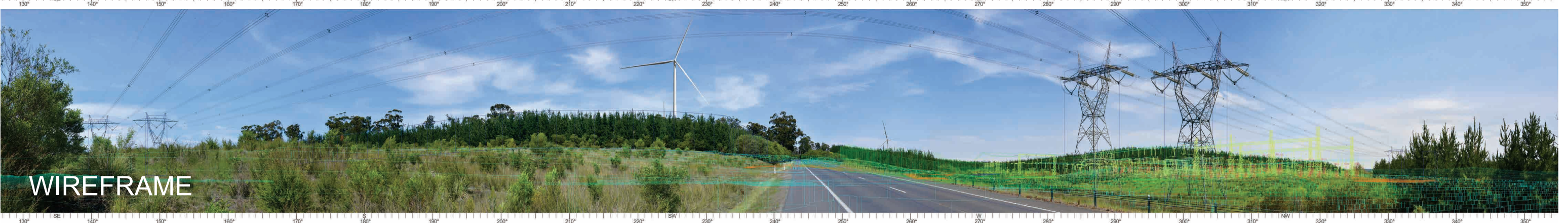
EXISTING VIEW



APPROVED VIEW - Delburn Wind Farm



PANORAMA - Marinus



WIREFRAME

LANDFORM ARCHITECTS

E: hayden@landformarchitects.com.au
P: 0438 677 175

MARINUS
LINK



Project	Marinus Link
Project No:	P 2022 0019
Date:	10.02.2023
Photography Information	
LAYOUT	500kV_HAZELWOOD_HV_3D_georeferenced_GDA2020_mAHD
CAMERA	NIKON D850
LENS	60mm
GPS	55H 438245E, 5761458N
DATE	9/11/2022

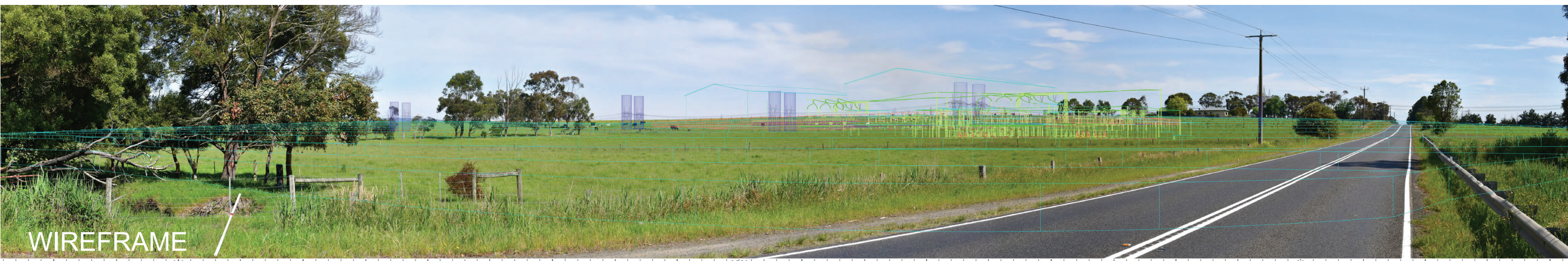
1



EXISTING VIEW



PANORAMA



WIREFRAME



LANDFORM ARCHITECTS

E: hayden@landformarchitects.com.au
P: 0438 677 175

MARINUS LINK



SOURCE: VicPlan



SOURCE: Google Earth Pro, Imagery Date 1.1.2022

Project | **Marinus Link**

Project No: P 2022 0019
Date: 12.12.2022

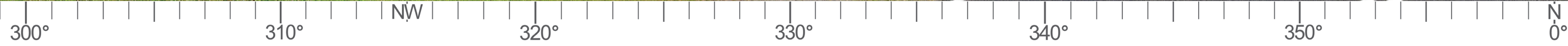
Photography Information

LAYOUT	500kV_HAZELWOOD_HV_3D_georeferenced_GDA2020_mAHD
CAMERA	NIKON D850
LENS	60mm
GPS	55H 450137E, 5761940N
DATE	9/11/2022

1



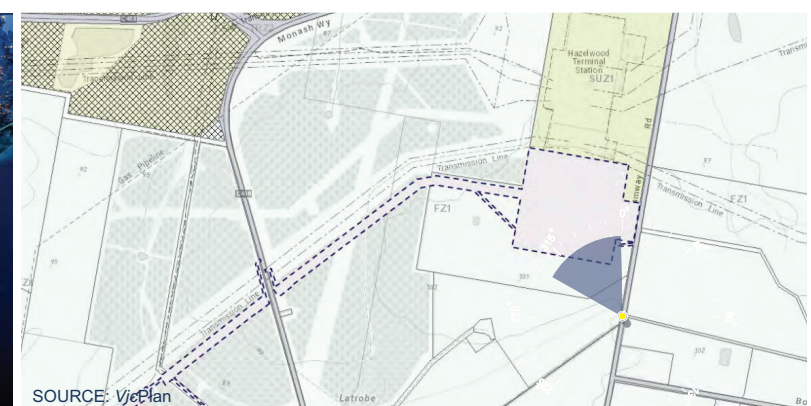
EXISTING VIEW



PHOTOMONTAGE

LANDFORM ARCHITECTS

E: hayden@landformarchitects.com.au
P: 0438 677 175



SOURCE: VicPlan



SOURCE: Google Earth Pro, Imagery Date 1.1.2022

Project | **Marinus Link**

Project No: P 2022 0019
Date: 12.12.2022

Photography Information

LAYOUT	500kV_HAZELWOOD_HV_3D_georeferenced_GDA2020_mAHD
CAMERA	NIKON D850
LENS	60mm
GPS	55H 450137E, 5761940N
DATE	9/11/2022

2

APPENDIX B: POLICY REVIEW

POLICY REVIEW

A review of relevant policy and local planning frameworks was undertaken to identify the policy context, opportunities, and constraints relevant to the assessment landscape and visual impacts.

PLANNING POLICY FRAMEWORK (PPF)

The PPF includes state and regional planning policy. The format of Victorian planning schemes is changing from the LPPF to the PPF and Municipal Planning Strategy.

State policy applies consistency across the whole of Victoria. Regional policy provides local content to the areas within each local government area. Within the PPF, state policy is denoted with an 'S', regional policy as 'R' and local policy as 'L'.

The PPF sets out broad policy objectives to ensure uniform and consistent application of the planning scheme. The following Clause is of relevance to the future landscape and visual assessment of the project.

12.05-2S Landscapes

Objective

To protect and enhance significant landscapes and open spaces that contribute to character, identity, and sustainable environments.

Strategies

- *Ensure significant landscape areas such as forests, the bays and coastlines are protected.*
- *Ensure development does not detract from the natural qualities of significant landscape areas.*
- *Improve the landscape qualities, open space linkages and environmental performance in significant landscapes and open spaces, including green wedges, conservation areas and non-urban areas.*
- *Recognise the natural landscape for its aesthetic value and as a fully functioning system.*
- *Ensure important natural features are protected and enhanced.*

12.05-2L-01 Coastal and hinterland landscapes

General Strategies

- *Ensure that development is subordinate to the natural, visual, and environmental landscape character and significance.*
- *Protect views of Mt Hoddle, the Welshpool Hills and the Corner Inlet Amphitheatre and other hinterland areas by avoiding development in these areas that is visually intrusive, particularly when viewed from the South Gippsland Highway, as well as from other key touring routes, lookouts, and residences.*
- *Discourage development on prominent ridgelines, particularly those close to the coast. Where development cannot be avoided in steep locations or prominent hill faces:*
 - *Site development in the lowest third of the visible slope wherever possible.*
 - *Set buildings and structures among existing vegetation or establish gardens with locally indigenous species.*

- *Design buildings to follow the contours or step down the site to minimise earthworks.*
- *Articulate buildings into separate elements and avoid visually dominant elevations.*
- *Encourage the planting of indigenous vegetation for rehabilitation works and landscaping around development.*
- *Retain existing shelterbelts and non-indigenous feature planting where they are features of the area and the species are non-invasive.*

Settlement edge strategies

- *Use existing landscape features, (for example topography, vegetation coverage, vistas) to define edges to settlements, protecting the surrounding landscape character.*
- *Scale the height and form of new development at the coastal edge of settlements to be sensitive to surrounding development, the surrounding landform, and the visual setting of the settlement, particularly when viewed from the foreshore.*
- *Support a hierarchy of built form within coastal settlements, with lower buildings adjacent to the foreshore and higher buildings away from the foreshore.*

Between settlement strategies

- *Retain the natural and undeveloped character of the coastal strip between settlements by:*
 - *Avoiding or siting and designing development.*
 - *Using colours and materials that minimise contrast with the surrounding landscape.*
- *Retain a dominant natural character, particularly near the coast, by:*
 - *Setting development back from the coast in flatter locations.*
 - *Avoiding loss of vegetation.*
 - *Minimising the visibility and impact of pedestrian and vehicular access paths and site servicing.*

Between settlement policy guidelines

- *Consider as relevant:*
 - *Whether the development is within 500 metres of the coast.*

Hinterland strategies

- *Design buildings to respond to the natural setting in relation to siting, materials, and colours to minimise visibility, particularly in prominent and highly visible locations and when viewed from main road corridors and key public use areas.*
- *In open rural areas, ensure buildings are set back long distances from roads and/or group buildings in the landscape among substantial landscaping of indigenous or non-invasive exotic/native feature planting (including existing shelterbelts).*
- *Maximise the undeveloped area of a lot and use permeable surfacing to support vegetation and minimise surface run-off.*
- *Retain trees that form part of a continuous canopy and encourage trees to be planted in a position where they will add to a continuous canopy.*

12.05-2L-02 Significant Landscape Character Areas

This policy applies to the land identified on the Landscape Character Area map.

Character Area 1.5 – Waratah Bay/Corner Inlet strategies

- *Protect the rural character and views that create a scenic ‘gateway’ to Wilsons Promontory, especially along Foster – Promontory Road, by restricting linear urban sprawl or the cluttering of built development.*
- *Ensure that long stretches of the coastal strip remain free of development of any kind.*
- *Reduce the visibility of buildings or structures, within the coastal strip, outside settlements.*
- *Manage development at the Corner Inlet coastal edge to retain intact natural coastal character by:*
 - *Restricting heights of dwellings.*
 - *Using colours that blend with the natural environment.*
 - *Clustering development at already developed centres (e.g., Port Welshpool).*
- *Contain linear residential expansion of Waratah Bay along access road and avoid exposure of built form above low dunes.*
- *Minimise clutter of built elements throughout hinterland areas to protect the rural character.*

Character Area 3.2 – Welshpool Hills and Mount Hoddle strategies

- *Limit development from locating on ridge tops and visually prominent hill faces, particularly slopes visible from the coast and coastal hinterland such as between Mount Hoddle and the municipal boundary with Wellington Shire.*
- *Encourage development to be tucked into the inland rolling topography and away from prominent viewing locations and skylines.*
- *Site large scale infrastructure out of the coastal study area wherever possible and away from prominent locations.*

LOCAL PLANNING POLICY FRAMEWORK

This section will review relevant sections of the planning schemes within each of the LGAs within the study area. This review will focus on sections that assist in defining landscape character or support the sensitivity of the land within the study area. The study area includes the South Gippsland and Latrobe LGAs.

The following sets out the clauses identified within the LGAs in the study area relevant to landscape character and visual impact.

South Gippsland 02.03-1 Settlement

Settlements in the Shire are highly dispersed, with Leongatha, Korumburra, Mirboo North, and Foster containing the majority of the permanent population. Housing growth is mostly occurring in settlements near the South Gippsland Highway particularly Leongatha, Korumburra, and Nyora. The growth is based on access to local employment and in metropolitan Melbourne, Wonthaggi and the Latrobe Valley combined with the relatively low property prices and the high amenity value of the settlements. Demand for holiday house growth is also expected to continue, mainly in the west of the Shire and in coastal settlements.

The Shire includes fully serviced, partly serviced and un-serviced settlements. Provision of necessary infrastructure is critical to being able to support housing growth.

Council seeks to:

- *Direct growth to settlements in accordance with their role and function as set out in the South Gippsland settlement hierarchy outlined in this clause.*
- *Support the provision of reticulated water, sewerage, and drainage improvements to settlements to protect community health and environmental values and to support population growth.*

District Towns – Mirboo North

District towns are key retail and service centre for a rural hinterland containing a localised range of retail, education, health, and recreation opportunities.

Foster is the principal town in the eastern half of the Shire. Foster's proximity to Wilsons Promontory has promoted the town to a leading role in the region's growing tourism industry. Foster is also well situated to benefit from the economic activity likely to be generated from the continuing development of port related activities around Corner Inlet. With its pristine environment and open farmed landscapes, Foster is an attractive location for retirement living and 'lifestyle change' residential growth.

Mirboo North is the principal township in the north of the municipality. Its local economy is supported by the servicing of the surrounding agricultural activities and rural population. Tourism is an increasingly important economic contributor and a basis upon which future growth may be promoted. It is important that growth complements the existing character of the township and ensures adequate protection from and management of bushfire hazards.

Council seeks to:

- *Promote District towns as service centres for the local community and surrounding rural areas.*
- *Consolidate Foster's role as the key commercial and community service provider to the eastern region of the municipality.*
- *Promote Mirboo North as a sustainable community and the principal town in the north of the Shire.*
- *Protect and enhance the distinctive village atmosphere and picturesque location within the Strzelecki Ranges in Mirboo North.*

Small Towns – Fish Creek, Loch, Meeniyan, Nyora, Poowong, and Toora

The small towns provide limited services to their rural hinterlands and rely on nearby larger towns to provide higher level services. They are desirable lifestyle locations with unique character set in picturesque locations.

Fish Creek is an attractive small town with a distinctively artistic and heritage character. The absence of reticulated sewerage means Fish Creek has limited potential for urban expansion. Some parts of the town are also subject to inundation.

Loch township has a moderate growth opportunity that should be supported, provided the essential compact 'village' character can be maintained. The heritage character and design of the built form provides a critical component to the overall image and identity of the township and underpins both its tourism role and village atmosphere.

Meeniyan provides retail, community and trades services to its residents and the smaller settlements in the surrounding district. Located at an important junction on the main route to Wilsons Promontory, Meeniyan's tourism role as 'Gateway to the Prom' is boosted by its arts, culture, and food attractions.

Nyora is the closest South Gippsland Shire town to metropolitan Melbourne. Nyora is seen as a desirable lifestyle location due to its rural character and proximity to major urban centres and is experiencing accelerating population growth. Planning for the town and new residential areas needs to accommodate new infrastructure and commercial and community services that support the community's social, and employment needs whilst respecting the town's rural character.

Poowong is located on a narrow ridgeline with panoramic views over the surrounding rural hills. Its role as a service township for the surrounding agricultural communities will continue. The town can support a limited level of population growth.

Toora is located between the foot of the Strzelecki Ranges and the coastal plain, with views across Corner Inlet. The commercial hub and majority of the town development is located off the South Gippsland Highway, contributing to the township's appeal. Numerous buildings in the main street have heritage value and the town have an attractive entry point to the Great Southern Rail Trail.

Council seeks to:

- *Support compact growth and development that respect existing character and landscape values, while also providing safe and attractive residential environments.*
- *Facilitate staged residential growth and land release so that the provision of physical, retail, commercial and community infrastructure occurs concurrently to development, strengthening the towns' roles in providing essential services to growing populations.*
- *Conserve and enhance heritage places for their contribution to the overall character of the towns.*
- *Strengthen the economic future of the towns, including in relation to tourism, employment, and industry as relevant.*

Coastal Villages –Sandy Bay, Waratah Bay

In addition to supplying a limited range of services and facilities to residents, Coastal Villages service holiday populations as well as significant retiree and partially absentee residents. The character of the Coastal Villages combined with their environmentally significant surrounds and landscapes, affords them a charming attractiveness.

Port Welshpool provides facilities for commercial and recreation fishing, and holiday visitors. Largely surrounded by Crown land, the settlement is within the Corner Inlet Amphitheatre Significant Landscape, adjacent to the Corner Inlet Ramsar wetlands and is affected by bushfire risk and inundation associated with sea level rise.

Walkerville is a Coastal Village adjoining and surrounded by the Cape Liptrap Coastal Park: The town has a mix of holiday and permanent residents. Absence of reticulated water or sewer are a development restriction.

Council seeks to:

- *Contain growth within settlement boundaries to protect the environmental, landscape and agricultural values between and surrounding the settlements.*
- *Balance growth and development with the associated impacts on vegetation, soil stability and water quality and the risks of climate change.*
- *Provide an attractive and safe residential environment and strengthen the economic future of each coastal village.*

Hamlets – Buffalo, Dumbalk, Stony Creek

The Hamlets are characterised by a cluster of housing on urban or small rural allotments with limited infrastructure and community services, and often no, or highly limited, retail services. Some

Hamlets have potential for small-scale tourism associated with local agricultural products, markets, the rail trail, rural landscapes, and natural environments.

Bena is a rural residential hilltop Hamlet located on the former railway line with limited recreation and community facilities.

Buffalo is a former railway Hamlet adjacent to the Great Southern Rail Trail with recreation and limited community facilities. Much of the town is susceptible to bushfire risk.

Located in a dairying area and relatively close to larger settlements, Dumbalk is a residential Hamlet that is serviced by a limited range of commercial and community facilities.

Historically a coal mining and railway settlement, Jumbunna is now a quiet Hamlet with Victorian-era character. Issues with potential contamination and location of shafts associated with the settlement's mining history is a constraint on development.

Kongwak is located in a foothill's dairying area, with part of the town susceptible to bushfire risk. It has relatively good community, recreation and tourist-attracting facilities including an historic former butter factory.

Mirboo is a low-density settlement located in a valley of the Strzelecki Ranges with the Tarwin River winding along its north and east boundaries. It has limited community facilities.

Port Franklin is a residential fishing and port Hamlet located adjacent to the Corner Inlet Ramsar wetlands and the Corner Inlet Marine and Coastal Park. Coastal climate change and susceptibility to inundation affect the fringes of the Hamlet.

Ruby is a former railway Hamlet with a small cluster of community facilities and rural residential houses in a rural zoning. It has access to services at Leongatha and Korumburra.

Stony Creek is a former railway Hamlet with numerous Victorian-era buildings adjacent to the Great Southern Rail Trail. Parts of the town are susceptible to bushfire risk.

Council seeks to:

- *Contain growth within the settlement boundary of each Hamlet to protect agricultural, landscape and environmental values and to reduce risks associated with environmental hazards.*
- *Provide an attractive and safe residential environment in each hamlet.*

Localities – Darlimurla, and others

Scattered across the Shire, the localities comprise clusters of housing located in rural areas on small rural allotments. They have minimal to no infrastructure or community facilities and are relatively isolated from higher level settlements. Some of the localities are affected by susceptibility to erosion, bushfire, or inundation. Some localities have potential for small-scale tourism associated with local agricultural products, rail trails, rural landscapes, and natural environments.

Council seeks to:

- *Contain growth within settlement boundaries to protect agricultural, environmental and landscape values, and to reduce risks associated with environmental hazards.*
- *Support small-scale tourism businesses that complement the natural environment, agricultural and landscape values of the region or are associated with proximity of the Great Southern Rail Trail.*

South Gippsland 02.03-2 Environmental and landscape values

Biodiversity

Since European Settlement, there has been a steady decline in biodiversity in Australia. South Gippsland Shire has mirrored this trend with only approximately 15 per cent of the native vegetation that existed prior to 1750 remaining (excluding Wilsons Promontory Bioregion). Much of the Shire's remaining native biodiversity is now found on private property and roadsides. The protection, enhancement and linking of remnant vegetation and animal species on private and public land is an important issue facing the community.

Council seeks to:

Protect sites of biological significance including on roadsides and private property.

Coastal and hinterland landscapes

Specific landscapes within the Shire have been determined to have either state or regional significance. These are the landscapes of Venus Bay Peninsula and Anderson Inlet, Venus Bay Dunes, Cape Liptrap and Waratah Bay, Corner Inlet Amphitheatre, Bunurong Coast and Hinterland, Tarwin Floodplain, and Welshpool Hills and Mount Hoddle.

Council seeks to:

- *Retain undeveloped breaks between settlements by focussing further development within existing township boundaries and avoiding ribbon development, particularly along the coastal strip and key touring routes.*
- *Ensure coastal development including at the edge of settlements responds to the landscape setting and character.*
- *Maintain locally significant views and vistas that contribute to the character of the coast and coastal hinterland region.*

South Gippsland 02.03-4 Natural Resource Management

Rural dwellings

The settlement and subdivision history of the Shire has left a legacy of small lots scattered amongst larger farming lots. These lots are often isolated, or in strips along roadsides and surrounded by agricultural uses. Multi-lot farms (tenements) are the most common structure of land tenure in the Shire, with commercially viable production areas being formed by the aggregation of smaller lots.

The Shire's significant environmental and landscape assets make the area attractive for rural residential lifestyles. The northern and western areas of the Shire are particularly popular for rural living. There is a significant level of ad hoc rural lifestyle development already in the rural areas of the Shire. The conversion of agricultural land into rural residential land use activities results in a net loss to agriculture due to permanent land use changes. There is also a need to avoid landscape and servicing issues arising from the development of dwellings not reasonably connected to agricultural activities.

Council seeks to:

- *Avoid the development of dwellings on rural land that may prejudice existing agricultural activities on surrounding land.*
- *Maintain agricultural land in agricultural use for the cost-effective production of food and raw materials.*

- *Maintain cost-effective servicing of towns and communities across the Shire by avoiding the impacts of a dispersed population base.*

Rural subdivision

The rural areas of South Gippsland have experienced a high level of land fragmentation, arising from both historical settlement patterns and less stringent planning policies under earlier planning schemes. Left unchecked, further fragmentation through land subdivision could have considerable implications for the supply of affordable agricultural lots, agricultural production, landscape, and the servicing of populations in outlying areas.

As South Gippsland already has a considerable supply of a range of lot sizes, further subdivision for genuine agricultural reasons will rarely be necessary.

Council seeks to:

- *Limit the further fragmentation of rural land by subdivision.*
- *Ensure that lots resulting from subdivision are of a sufficient size to be of benefit to agricultural production.*
- *Encourage the consolidation of rural lots.*
- *Encourage the restructuring of old and inappropriate subdivisions including old Crown Townships.*
- *Limit the cumulative impact of house lot excisions, including serial small lot subdivisions.*

South Gippsland 02.03-5 Built environment and heritage

The protection of settlement character and landscape and environmental values through the design and siting of development is necessary to maintain the Shire's desirability as a place to live, work and visit.

Council seeks to:

- *Promote sympathetically designed and located development that complements the built form character, environmental, topographical and landscape values of its location.*

South Gippsland 02.03-7 Economic Development

Tourism

Tourism is fast becoming a significant employer and generator of economic activity within the Shire. The region boasts Wilsons Promontory National Park and borders Phillip Island. The Shire's rural landscapes, spectacular coastal areas and numerous historically and culturally significant sites are major tourist attractions. The South Gippsland region provides a diverse range of recreational and tourism-related experiences such as festivals, Coal Creek Community Park and Museum, Grand Ridge Road scenic drive, the Great Southern Rail Trail and the Grand Ridge Rail Trail, boutique food and beverage outlets and the Nyora Speedway. Growth opportunities exist in eco-tourism while agricultural and farming activities can service the industry through the development of agri-tourism.

Council seeks to:

- *Protect the Shire's heritage assets, coastline, rural landscapes, and agricultural produce for their tourism value.*
- *Encourage the development of eco-tourism and agri-tourism, building on the Shire's natural assets and agricultural land use.*

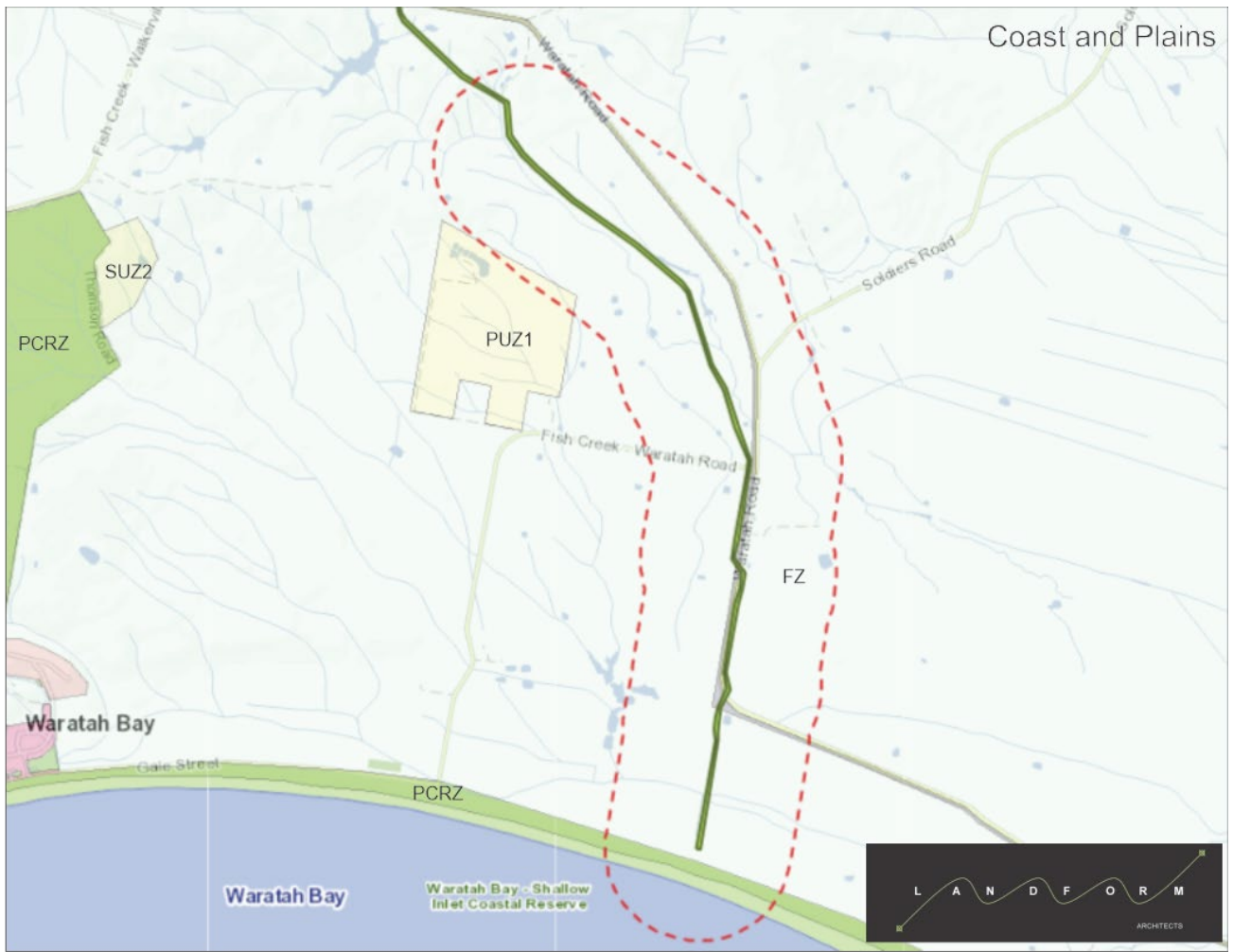
- *Encourage tourism use and development in association with the Great Southern Rail Trail and the Grand Ridge Rail Trail*

ZONES AND OVERLAYS

Land-use zones establish expectations regarding land use or development activity within the areas to which they apply. Land-use zones also seek to manage potential conflict such as amenity expectations between sensitive and non-sensitive uses, sensitive uses in relation to the project, future land use aspirations, character objectives or infrastructure.

Overlays provide strategies to protect features and values that are unique or specific to the area that they are applied. Overlays relevant to landscape character and sensitivity include Significant Landscape Overlays, Environmental Significance Overlays and Vegetation Protection Overlays. These overlays recognise environmental or landscape significance areas and guide the protection of these areas and the identified values. Schedules provide for specific values within the overlay and typically include a Statement of Significance. Design and development overlays guide constructed elements in the areas they apply.

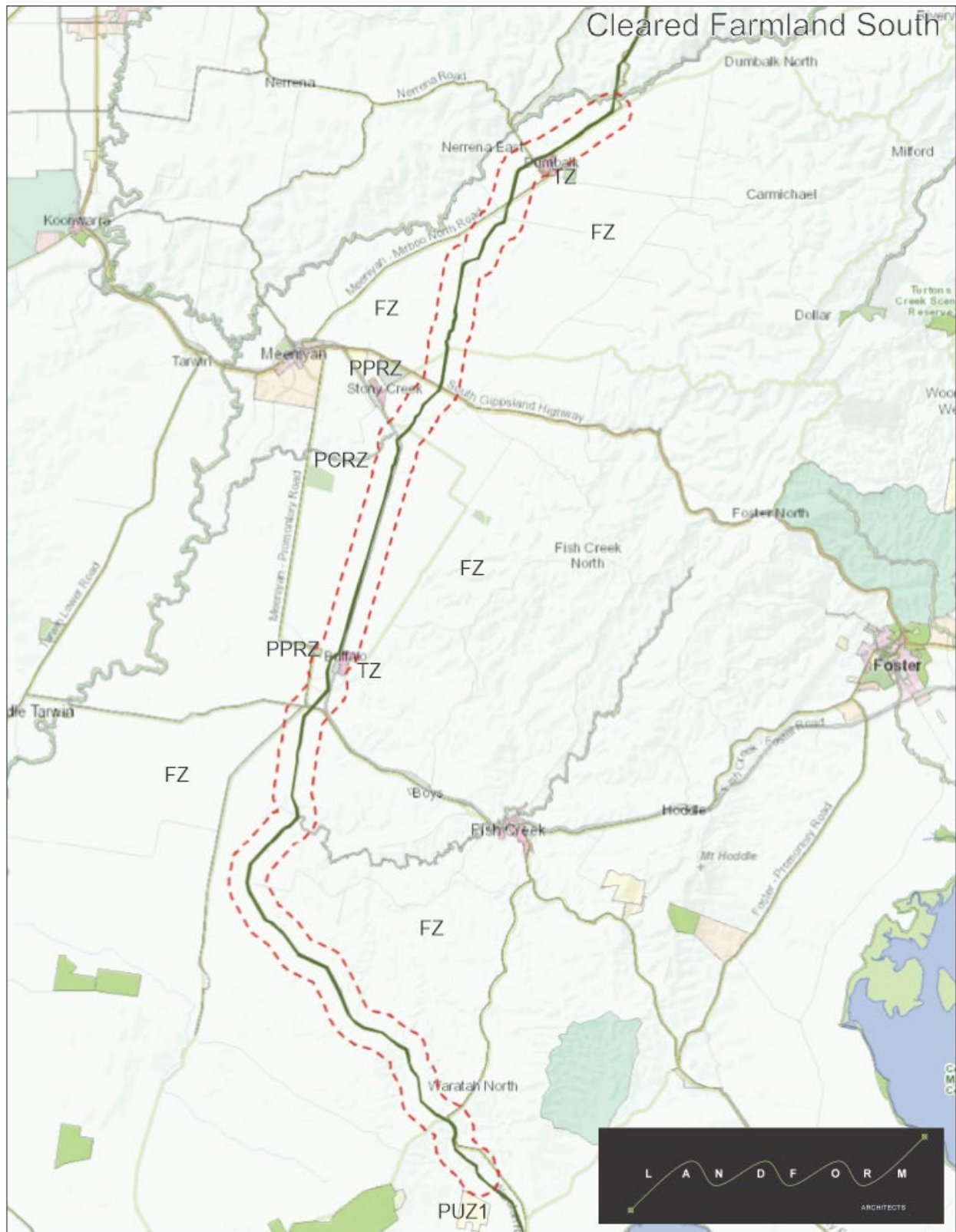
B 0-1 shows the land use zones within the Coast and Plains regional landscape character area. B 0-2 shows the land use zones within Cleared Farmland South regional landscape character area. B 0-3 shows the land use zones within Rolling Farmland and Forests regional landscape character area. B 0-4 shows the land use zones within Cleared Farmland North regional landscape character area.



Coast and Plains

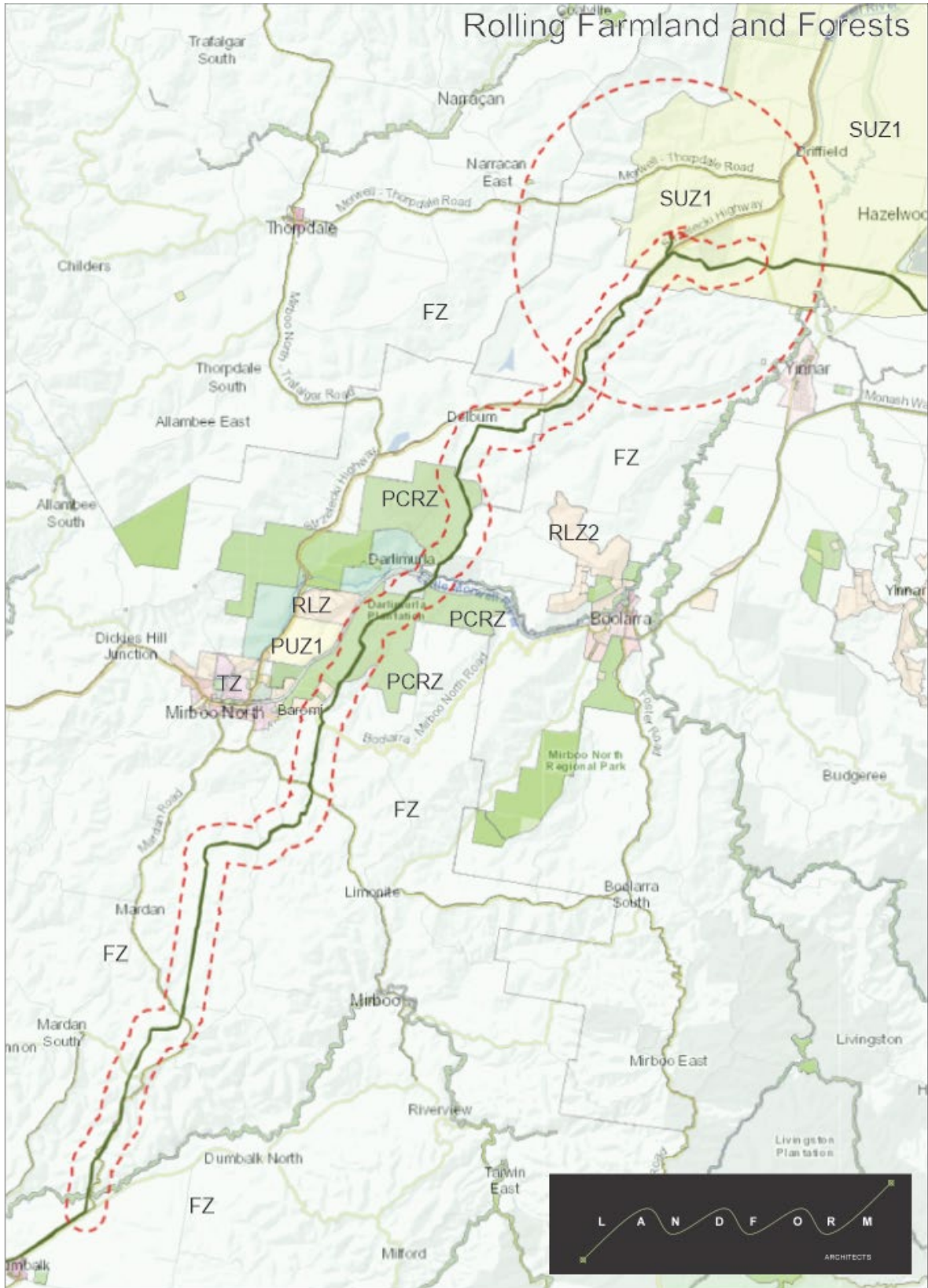
Land-use Zones

B 0-1 Coast and Plains - Land-use zones



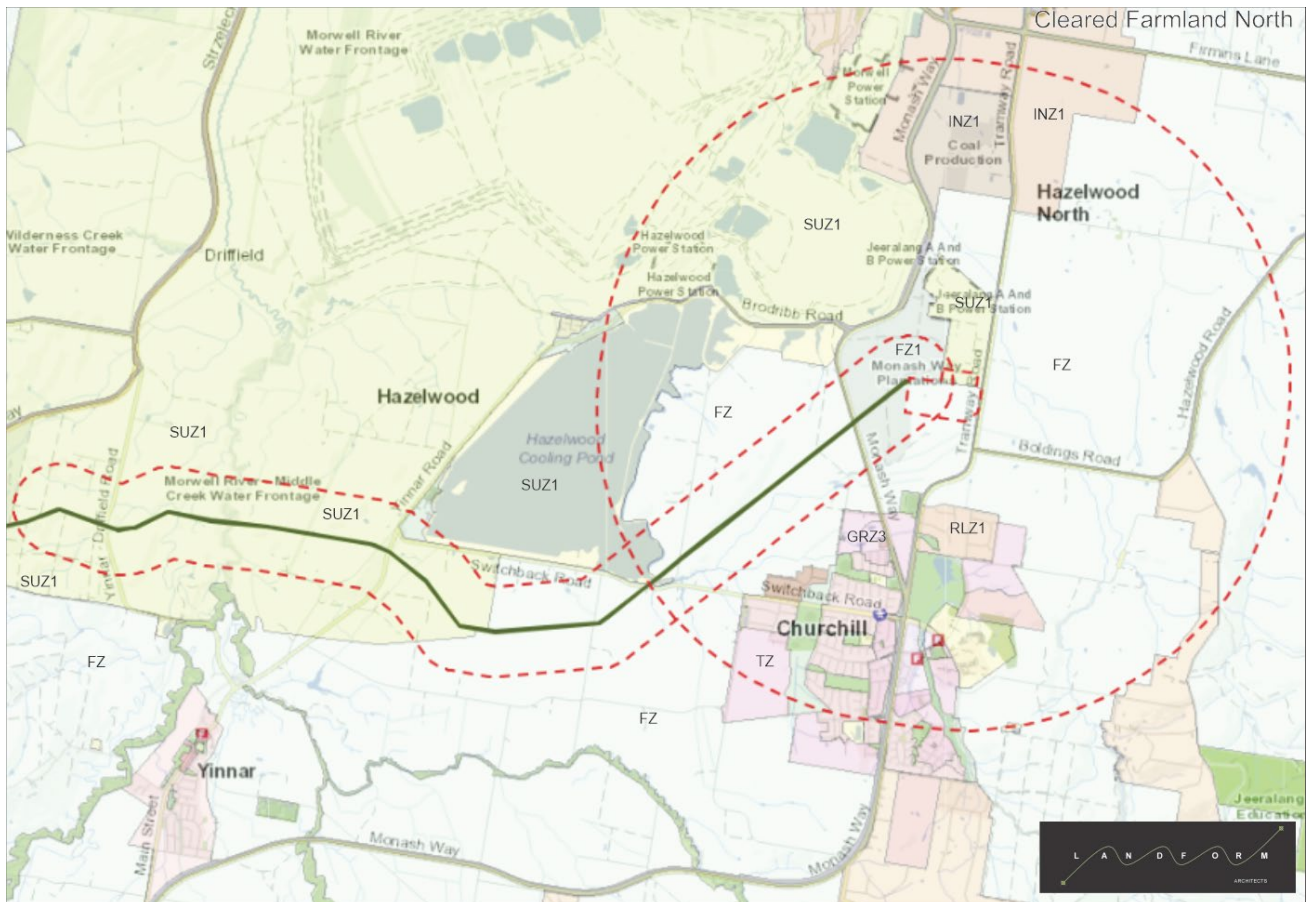
Land-use Zones

B 0-2 Cleared Farmland South - Land-use Zones



Land-use Zones

B 0-3 Rolling farmland and Forests Land-use Zones



Land-use Zones

B 0-4 Cleared Farmland North Land-use Zones

ZONING WITHIN THE STUDY AREA

Farming Zone (FZ)

The stated purpose of the Farming Zone is:

- To implement the Municipal Planning Strategy and the Planning Policy Framework.
- To provide for the use of land for agriculture.
- To encourage the retention of productive agricultural land.
- To ensure that non-agricultural uses, including dwellings, do not adversely affect the use of land for agriculture.
- To encourage the retention of employment and population to support rural communities.
- To encourage use and development of land based on comprehensive and sustainable land management practices and infrastructure provision.
- To provide for the use and development of land for the specific purposes identified in a schedule to this zone.

Decision Guidelines

Before deciding on an application to use or subdivide land, construct a building or construct or carry out works, in addition to the decision guidelines in Clause 65, the responsible authority must consider, as appropriate:

General issues

- *The Municipal Planning Strategy and the Planning Policy Framework.*
- *Any Regional Catchment Strategy and associated plan applying to the land.*
- *The capability of the land to accommodate the proposed use or development, including the disposal of effluent.*
- *How the use or development relates to sustainable land management.*
- *Whether the site is suitable for the use or development and whether the proposal is compatible with adjoining and nearby land uses.*
- *How the use and development makes use of existing infrastructure and services.*

Environmental issues

- *The impact of the proposal on the natural physical features and resources of the area, in particular on soil and water quality.*
- *The impact of the use or development on the flora and fauna on the site and its surrounds.*
- *The need to protect and enhance the biodiversity of the area, including the retention of vegetation and faunal habitat and the need to revegetate land including riparian buffers along waterways, gullies, ridgelines, property boundaries and saline discharge and recharge area.*
- *The location of on-site effluent disposal areas to minimise the impact of nutrient loads on waterways and native vegetation.*

Design and siting issues

- *The need to locate buildings in one area to avoid any adverse impacts on surrounding agricultural uses and to minimise the loss of productive agricultural land.*
- *The impact of the siting, design, height, bulk, colours and materials to be used, on the natural environment, major roads, vistas and water features and the measures to be undertaken to minimise any adverse impacts.*
- *The impact on the character and appearance of the area or features of architectural, historic or scientific significance or of natural scenic beauty or importance.*
- *The location and design of existing and proposed infrastructure including roads, gas, water, drainage, telecommunications and sewerage facilities.*
- *Whether the use and development will require traffic management measures.*
- *The need to locate and design buildings used for accommodation to avoid or reduce noise and shadow flicker impacts from the operation of a wind energy facility if it is located within one kilometre from the nearest title boundary of land subject to:*
 - *A permit for a wind energy facility; or*
 - *An application for a permit for a wind energy facility; or*
 - *An incorporated document approving a wind energy facility; or*
 - *A proposed wind energy facility for which an action has been taken under section 8(1), 8(2), 8(3) or 8(4) of the Environment Effects Act 1978.*

- *The need to locate and design buildings used for accommodation to avoid or reduce the impact from vehicular traffic, noise, blasting, dust and vibration from an existing or proposed extractive industry operation if it is located within 500 metres from the nearest title boundary of land on which a work authority has been applied for or granted under the Mineral Resources (Sustainable Development) Act 1990.*

Public Conservation and Resource Zone (PCRZ)

The stated purpose of the Public Conservation and Resource Zone is:

- *To implement the Municipal Planning Strategy and the Planning Policy Framework.*
- *To protect and conserve the natural environment and natural processes for their historic, scientific, landscape, habitat or cultural values.*
- *To provide facilities which assist in public education and interpretation of the natural environment with minimal degradation of the natural environment or natural processes.*
- *To provide for appropriate resource based uses.*

Decision Guidelines

Before deciding on an application to use or subdivide land, construct a building or construct or carry out works, in addition to the decision guidelines in Clause 65, the responsible authority must consider, as appropriate:

- *The Municipal Planning Strategy and the Planning Policy Framework.*
- *The comments of any public land manager or other relevant land manager having responsibility for the care or management of the land or adjacent land.*
- *Whether the development is appropriately located and designed, including in accordance with any relevant use, design or siting guidelines.*

Transport Zone (TPZ - Schedule 2)

The stated purpose of the Transport Zone is:

- *To implement the Municipal Planning Strategy and the Planning Policy Framework.*
- *To provide for an integrated and sustainable transport system.*
- *To identify transport land use and land required for transport services and facilities.*
- *To provide for the use and development of land that complements, or is consistent with, the transport system or public land reservation.*
- *To ensure the efficient and safe use of transport infrastructure and land comprising the transport system.*

Decision Guidelines

Before deciding on an application, in addition to the decision guidelines in Clause 65, the responsible authority must consider, as appropriate:

- *The Municipal Planning Strategy and the Planning Policy Framework.*
- *The effect of the proposal on the development, operation and safety of the transport system.*
- *Whether the development is appropriately located and designed, including in accordance with any relevant use, design or siting guidelines.*

Public Park and Recreation Zone (PPRZ)

The stated purpose of the Public Park and Recreation Zone is:

- *To implement the Municipal Planning Strategy and the Planning Policy Framework.*
- *To recognise areas for public recreation and open space.*
- *To protect and conserve areas of significance where appropriate.*
- *To provide for commercial uses where appropriate.*

Decision Guidelines

Before deciding on an application to use or subdivide land, construct a building or construct or carry out works, in addition to the decision guidelines in Clause 65, the responsible authority must consider, as appropriate:

- *The Municipal Planning Strategy and the Planning Policy Framework.*
- *The comments of any public land manager or other relevant land manager having responsibility for the care or management of the land or adjacent land.*
- *Whether the development is appropriately located and designed, including in accordance with any relevant use, design or siting guidelines.*

Special Use Zone (Schedule 1 – Brown Coal)

The stated purpose of the Special Use Zone is:

- *To provide for brown coal mining and associated uses*
- *To provide for electricity generation and associated uses*
- *To provide for interim and non-urban uses which protect brown coal resources and to discourage the use or development of land incompatible with future brown coal mining and industry*

Decision Guidelines

The following decision guidelines apply to an application for a permit under Clause 37.01, in addition to those specified in Clause 37.01 and elsewhere in the scheme which must be considered, as appropriate, by the responsible authority:

A use must not adversely affect the amenity of the neighbourhood, including through the:

- *Transport of materials, goods or commodities to or from the land.*
- *Appearance of any stored goods or materials.*
- *Emission of noise, artificial light, vibration, odour, fumes, smoke, vapour, steam, soot, ash, dust, waste water, waste products, grit or oil.*
- *The effect that use may have on nearby existing or proposed brown coal mining and sequential development of brown coal resources in the area, having regard to any comments or directions of the referral authorities.*
- *The effect that the use may have on land in residential zones having regard to any comments or directions of the referral authorities.*
- *The effect that the use may have on nearby existing or proposed uses for or associated with brown coal mining and electricity generation.*

- *The effect that nearby existing or proposed uses for or associated with brown coal mining and electricity generation may have on the proposed use.*
- *If an industry, utility installation (other than minor utility installation), or warehouse whether there is a demonstrated need or significant benefit in being located near uses for, or associated with brown coal mining and electricity generation.*
- *The drainage of the land.*
- *Measures to cope with fire, particularly in the vicinity of a brown coal mine.*
- *The availability of and connection to services.*
- *The effect of traffic to be generated on roads.*
- *The period for which the use may operate so that the use does not adversely affect the sequential development of brown coal resources in the area.*
- *The interim use of those parts of the land not required for the proposed use.*

Public Use Zone (PUZ - Schedule 1)

The stated purpose of the Public Use Zone is:

- *To implement the Municipal Planning Strategy and the Planning Policy Framework.*
- *To recognise public land use for public utility and community services and facilities.*
- *To provide for associated uses that are consistent with the intent of the public land reservation or purpose.*

Decision Guidelines

Before deciding on an application to use or subdivide land, construct a building or construct or carry out works, in addition to the decision guidelines in Clause 65, the responsible authority must consider, as appropriate:

- *The Municipal Planning Strategy and the Planning Policy Framework.*
- *The comments of any Minister or public land manager having responsibility for the care or management of the land or adjacent land.*
- *Whether the development is appropriately located and designed, including in accordance with any relevant use, design or siting guidelines.*

The predominant land use zone within the project route is land in the Farming Zone

The project route directly avoids sensitive land zones, including residential areas within the Township, General Residential, Low-Density Residential Zones. Most of the project proposed route avoids land within Public Conservation and Resource Zone and Public Park and Recreation Zone. These areas are within the study area and will have views toward the project.

OTHER ZONES WITHIN STUDY AREA

Township Zone (TZ)

The stated purpose of the Township Zone is:

- *To implement the Municipal Planning Strategy and the Planning Policy Framework.*

- *To provide for residential development and a range of commercial, industrial and other uses in small towns.*
- *To encourage development that respects the neighbourhood character of the area.*
- *To allow educational, recreational, religious, community and a limited range of other non-residential uses to serve local community needs in appropriate locations.*

Decision Guidelines

Before deciding on an application to use land or construct a building or construct or carry out works, in addition to the decision guidelines in Clause 65, the responsible authority must consider, as appropriate:

General

- *The Municipal Planning Strategy and the Planning Policy Framework.*
- *The objectives set out in a schedule to this zone.*
- *The protection and enhancement of the character of the town and surrounding area including the retention of vegetation.*
- *The availability and provision of utility services, including sewerage, water, drainage, electricity, gas and telecommunications.*
- *In the absence of reticulated sewerage, a Land Capability Assessment on the risks to human health and the environment of an on-site wastewater management system constructed, installed or altered on the lot in accordance with the requirements of the Environment Protection Regulations under the Environment Protection Act 2017.*
- *The design, height, setback and appearance of the proposed buildings and works including provision for solar access.*
- *The need for a verandah along the front or side of commercial buildings to provide shelter for pedestrians.*
- *Provision of car and bicycle parking and loading bay facilities and landscaping.*
- *The effect that existing uses on adjoining or nearby land may have on the proposed use.*
- *The scale and intensity of the use and development.*
- *The safety, efficiency and amenity effects of traffic to be generated by the proposal.*
- *The impact of overshadowing on existing rooftop solar energy systems on dwellings on adjoining lots in a General Residential Zone, Mixed Use Zone, Neighbourhood Residential Zone, Residential Growth Zone or Township Zone.*
- *Any other decision guidelines specified in a schedule to this zone.*

Use for industry and warehouse

Before deciding on an application to use land for an industry or warehouse, in addition to the decision guidelines in Clause 65, the responsible authority must consider, as appropriate:

- *The Municipal Planning Strategy and the Planning Policy Framework.*
- *The effect that existing uses on adjoining or nearby land may have on the proposed use.*
- *The design of buildings, including provision for solar access.*
- *The availability and provision of utility services.*
- *The effect of traffic to be generated by the use.*
- *The interim use of those parts of the land not required for the proposed use.*

- *Any other decision guidelines specified in a schedule to this zone.*

Low Density Residential Zone (LDRZ)

The stated purpose of the Low Density Residential Zone is:

- *To implement the Municipal Planning Strategy and the Planning Policy Framework.*
- *To provide for low-density residential development on lots which, in the absence of reticulated sewerage, can treat and retain all wastewater.*

Decision Guidelines

General

Before deciding on an application, in addition to the decision guidelines in Clause 65, the responsible authority must consider, as appropriate:

- *The Municipal Planning Strategy and the Planning Policy Framework.*

Subdivision

- *The protection and enhancement of the natural environment and character of the area including the retention of vegetation and faunal habitat and the need to plant vegetation along waterways, gullies, ridgelines and property boundaries.*
- *The availability and provision of utility services, including sewerage, water, drainage, electricity, gas and telecommunications.*
- *In the absence of reticulated sewerage:*
 - *The capability and suitability of the lot to treat and retain all wastewater as determined by a Land Capability Assessment on the risks to human health and the environment of an on-site wastewater management system constructed, installed, or altered on the lot in accordance with the requirements of the Environment Protection Regulations under the Environment Protection Act 2017.*
 - *The benefits of restricting the size of lots to generally no more than 2 hectares to enable lots to be efficiently maintained without the need for agricultural techniques and equipment.*
- *The relevant standards of Clauses 56.07-1 to 56.07-4.*

Rural Living Zone (RLZ)

Purpose

- *To implement the Municipal Planning Strategy and the Planning Policy Framework.*
- *To provide for residential use in a rural environment.*
- *To provide for agricultural land uses which do not adversely affect the amenity of surrounding land uses.*
- *To protect and enhance the natural resources, biodiversity and landscape and heritage values of the area.*
- *To encourage use and development of land based on comprehensive and sustainable land management practices and infrastructure provision.*

Decision Guidelines

Before deciding on an application to use or subdivide land, construct a building or construct or carry out works, in addition to the decision guidelines in Clause 65, the responsible authority must consider, as appropriate:

General issues

- *The Municipal Planning Strategy and the Planning Policy Framework.*
- *Any Regional Catchment Strategy and associated plan applying to the land.*
- *The capability of the land to accommodate the proposed use or development.*
- *Whether the site is suitable for the use or development and whether the proposal is compatible with adjoining and nearby land uses.*
- *The potential for accommodation to be adversely affected by vehicular traffic, noise, blasting, dust and vibration from an existing or proposed extractive industry operation if it is located within 500 metres from the nearest title boundary of land on which a work authority has been applied for or granted under the Mineral Resources (Sustainable Development) Act 1990.*

Environmental issues

- *The impact on the natural physical features and resources of the area and in particular any impact caused by the proposal on soil and water quality and by the emission of noise, dust and odours.*
- *The impact of the use or development on the flora, fauna and landscape features of the locality.*
- *The need to protect and enhance the biodiversity of the area, including the need to retain vegetation and faunal habitat and the need to revegetate land including riparian buffers along waterways, gullies, ridgelines, property boundaries and saline discharge and recharge area.*
- *The location of on-site effluent disposal areas to minimise the impact of nutrient loads on waterways and native vegetation.*

Design and siting issues

- *The impact of the siting, design, height, bulk, colours and materials to be used, on the natural environment, major roads, vistas and water features and the measures to be undertaken to minimise any adverse impacts.*
- *The impact on the character and appearance of the area or features of architectural, historic or scientific significance or of natural scenic beauty or importance.*
- *The location and design of existing and proposed infrastructure including roads, gas, water, drainage, telecommunications and sewerage facilities.*
- *Whether the use or development will require traffic management measures.*
- *The need to locate and design buildings used for accommodation to avoid or reduce the impact from vehicular traffic, noise, blasting, dust and vibration from an existing or proposed extractive industry operation if it is located within 500 metres from the nearest title boundary of land on which a work authority has been applied for or granted under the Mineral Resources (Sustainable Development) Act 1990.*

OVERLAYS

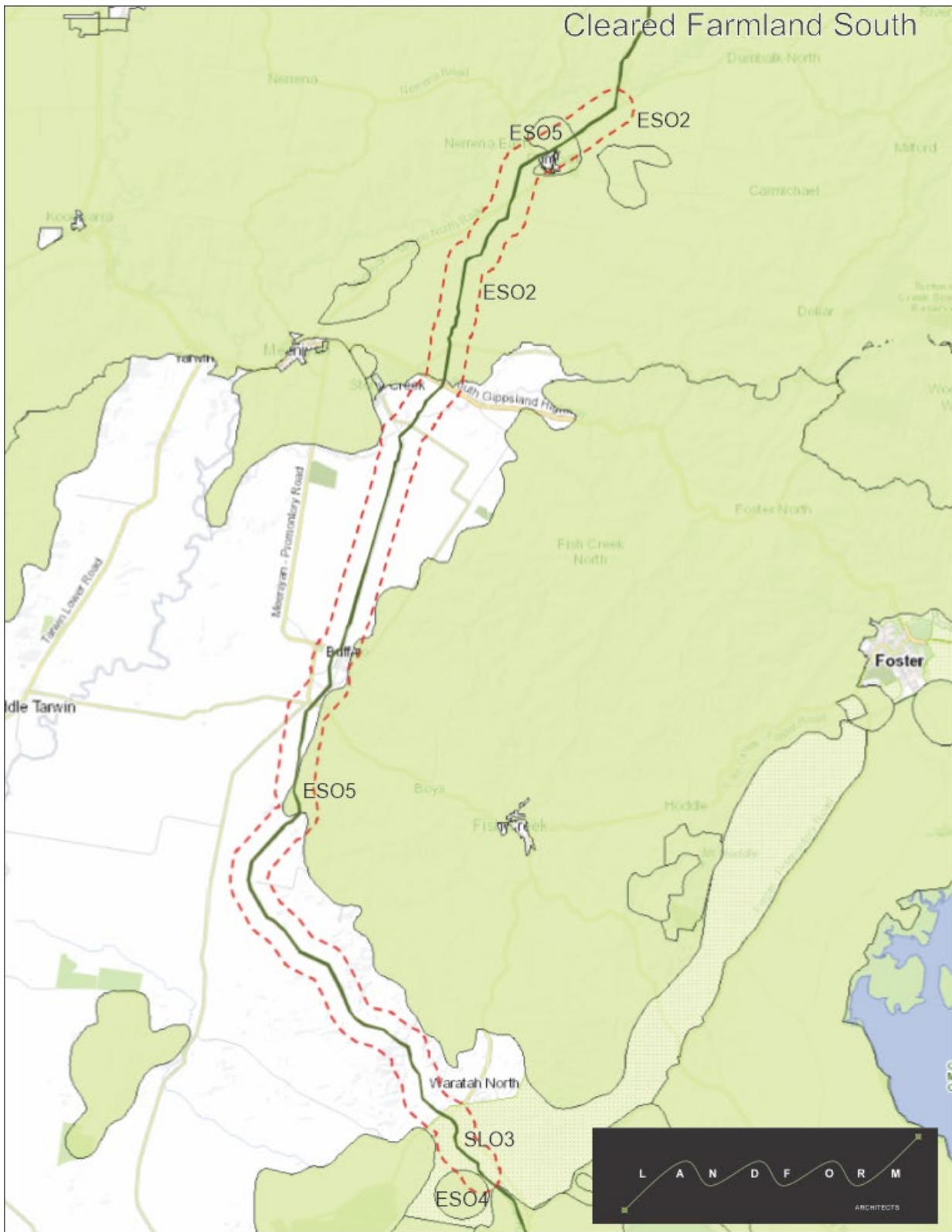
Overlays guide the protection of features and values for the areas to which they are applied. Overlays relevant to landscape character and sensitivity include Significant Landscape Overlays, Environmental Significance Overlays and Vegetation Protection Overlays, which protect identified features and values. Design and Development Overlay also guide constructed elements in certain areas.

B 0-5 shows the land use zones within the Coast and Plains regional landscape character area. B 0-6 shows the land use zones within Cleared Farmland South regional landscape character area. B 0-7 shows the land use zones within Rolling Farmland and Forests regional landscape character area. B 0-8 shows the land use zones within Cleared Farmland North regional landscape character area.



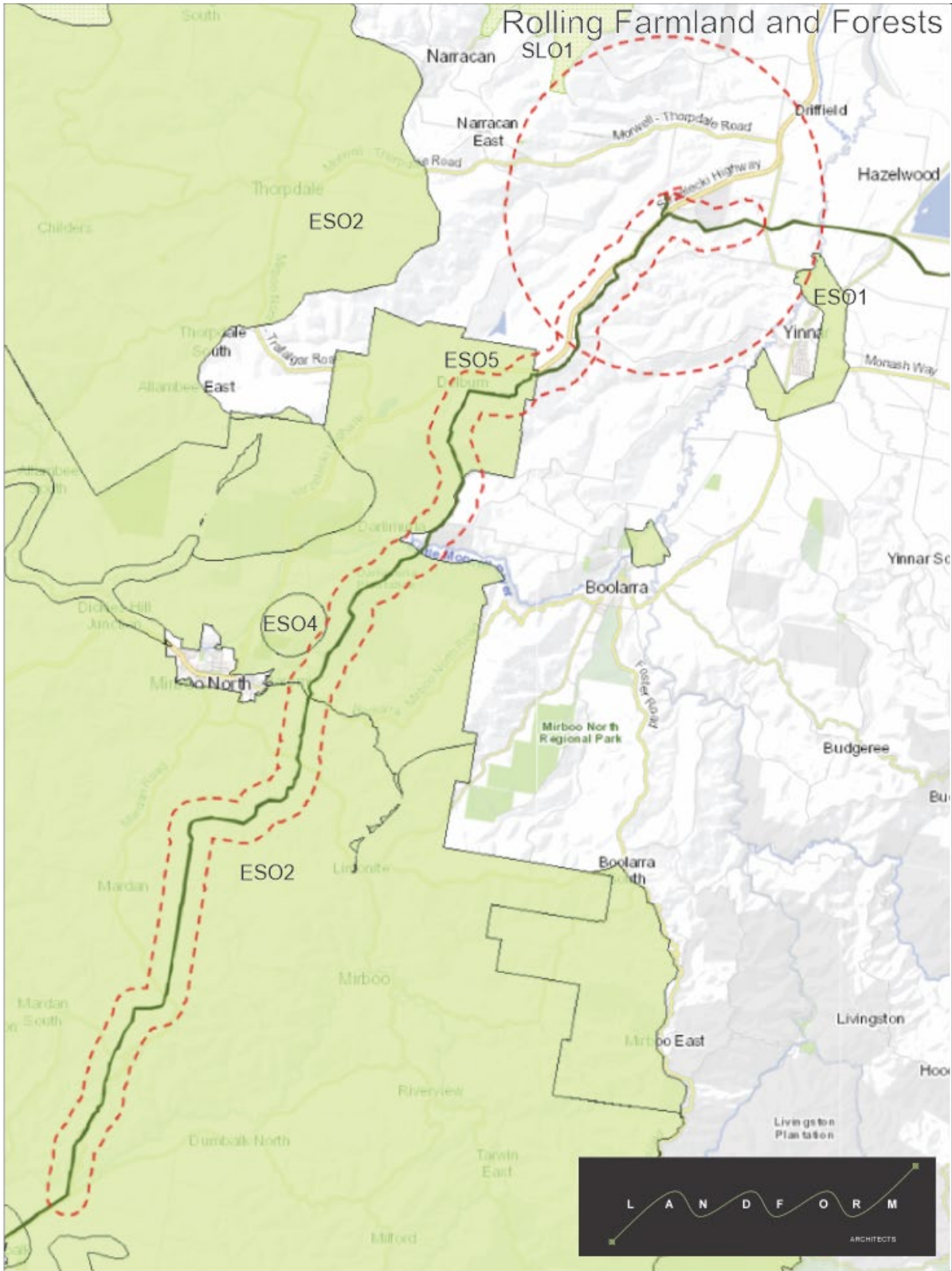
Overlays

B 0-5 Coast and Plains - Overlays



Overlays

B 0-6 Cleared Farmland South - Overlays



Overlays

B 0-7 Rolling Farmland and Forests - Overlays

- *To protect locally significant views and vistas that contribute to the character of the landscape, including open views to Wilsons Promontory, the Welshpool Hills and Mt Hoddle.*
- *To protect the rural character and views that create a scenic 'gateway' to Wilsons Promontory (especially along Foster – Promontory Road).*
- *To ensure that development in and around settlements does not impact on the characteristics of the landscape, including key views and viewing opportunities.*
- *To manage development at the coastal edge of settlements so that the intact, natural, coastal character is the dominant feature of the landscape i.e., the Corner Inlet mangrove coastal edge of Port Albert and Port Welshpool and the Waratah Bay dunal coastal edge of Waratah Bay and Sandy Point.*
- *To ensure buildings and structures sit within, rather than dominate the landscape.*
- *To ensure that long stretches of the coastal strip remain free of development of any kind.*
- *To reduce the visibility of buildings or structures, within the coastal strip, outside settlements.*
- *To retain the open, rural character of the hinterland landscape.*
- *To minimise the visual intrusion of infrastructure and signage, particularly between settlements.*
- *To protect landscape character and attributes that are consistent with the Aboriginal cultural heritage values of the area.*
- *To recognise, and protect, the landscape of the Corner Inlet Amphitheatre as a place of significant Aboriginal cultural heritage value.*

Decision guidelines

The following decision guidelines apply to an application for a permit under Clause 42.03, in addition to those specified in Clause 42.03 and elsewhere in the scheme which must be considered, as appropriate, by the responsible authority:

- *Whether buildings are sited and designed to maximise retention of existing vegetation throughout the landscape, and whether the proposal provides for the planting of new indigenous coastal vegetation wherever possible.*
- *Whether landscaping around buildings uses indigenous species (e.g., Eucalyptus or Melaleuca spp.) or non-invasive exotic / native feature planting that is already a feature of the character (e.g., existing shelterbelts).*
- *In landscapes visible within 500 metres of Foster – Wilsons Promontory Road, whether the proposed development is sited to retain the open rural character and views to coastal landscape features.*
- *Whether ridgetops and visually prominent hill faces are largely kept free from development, particularly slopes visible from the coast and coastal hinterland such as between Mount Hoddle and Yarram*
- *Along the South Gippsland Highway, whether buildings are sufficiently set back to avoid intrusion into views to Corner Inlet, Wilsons Promontory, and the Welshpool Hills.*
- *Whether the proposed development is kept below the dominant tree canopy height.*
- *The sparse location of buildings and structures outside of settlements, to avoid the loss of existing vegetation.*
- *Whether the proposed development reduces visual intrusion by utilising low scale building forms, tucked into the landscape, with the use of materials and colours that occur in the local area.*

- *In coastal locations, whether the proposed development utilises materials and colours that minimise contrast with the surrounding landscape and whether the visibility of buildings and structures is minimised when viewed from a distance, including from offshore.*
- *In flatter locations (e.g., adjoining Shallow Inlet) whether the proposed development is substantially set back to minimise visual intrusion and to retain a dominant natural character within 500 metres of the edge of the coast.*
- *In steep or hilly locations, whether the proposed development is designed to follow the contours or step down the site, to minimise need for earthworks on the site and whether buildings are articulated into separate elements to avoid visually dominant elevations.*
- *Whether the proposal includes the use of permeable surfacing for all unbuilt areas to minimise surface run-off and to support vegetation.*
- *Whether the proposal includes the use of vegetation for screening and to delineate property boundaries, instead of fencing. If fencing is necessary, the proposal should include open style fencing of a type traditionally used in rural areas i.e., post and wire.*
- *Whether the proposal contributes to the retention of the character of large open rural areas offering scenic views by siting developments back from roads, amongst vegetation and low in the topography.*

South Gippsland ESO (Schedule 1 – Areas of Natural Significance)

Statement of environmental significance

South Gippsland contains a number of areas of natural significance including numerous Flora and Fauna Reserves. There are also important sites within the various National, State and Coastal Parks and other reserves throughout the Shire as well as along roadside reserves and on privately owned land. The clearing of native vegetation and the introduction of weeds and vermin remain important issues.

Environmental objective to be achieved

- *To preserve and enhance existing indigenous flora and fauna.*
- *To conserve areas of wildlife habitats and allow for the generation and regeneration of habitats.*
- *To conserve areas of high environmental and landscape quality, ensuring development minimises adverse environmental impact.*
- *To ensure that development reinforces existing flora through the revegetation of valleys and drainage lines.*
- *To protect the views of identified significant vistas.*

Decision guidelines

- *The purpose of the overlay.*
- *The conservation and enhancement of the area.*
- *The preservation of and the impact on the natural environment and the need for preventing erosion.*
- *The need to retain a buffer strip of native vegetation adjacent to roads, coastal areas, watercourses, and property boundaries.*
- *The need to protect the scenic quality and visual integrity of the landscape.*
- *The management of vegetation necessary to minimise fire hazard.*

- *The importance of retaining any vegetation unique to the area concerned.*
- *The importance of retaining any habitats which support local native fauna.*
- *Any alternative method of constructing or carrying out of the development or works.*
- *Any relevant reports and recommendations of the Land Conservation Council.*
- *The views of the Department of Natural Resources and Environment in respect to:*
 - *Subdivision applications of greater than four lots or any subdivision application which may have adverse environmental effects.*
 - *Applications which immediately abut Crown Land.*
 - *Applications which in the opinion of the responsible authority, may have an adverse impact, including visual impacts, on Crown Land.*
 - *Applications which in the opinion of the responsible authority may adversely affect coastal processes and dune systems (including tertiary systems).*
 - *Applications which in the opinion of the responsible authority may adversely affect on flooding.*
 - *Applications which in the opinion of the responsible authority may cause or otherwise cause erosion, land degradation, or affect land stability on either the subject land or on adjoining land.*
 - *Applications which in the opinion of the responsible authority may adversely affect wildlife habitat and sites of biological or zoological significance.*

South Gippsland ESO (Schedule 3 – Coastal Settlements – Non-Residential Zones)

Statement of environmental significance

South Gippsland contains some of Victoria's most significant coastal areas. Wilsons Promontory, Corner Inlet, Waratah Bay, Shallow Inlet, Walkerville, Cape Liptrap, Venus Bay, and Andersons Inlet are all important coastal areas. They are important for their environmental, economic, recreational, cultural, heritage values and rugged appeal. While obviously of immense interest, it is important that the coast is protected from inappropriate development and mismanagement of both coastal and inland areas.

Environmental objective to be achieved

- *To protect and enhance the natural beauty of the coastal area.*
- *To protect and enhance the environmental quality of the coastal area.*
- *To minimise the risk of erosion, pollution, and destruction of the environment through poorly managed development.*
- *To ensure that development adjacent to coastal areas is compatible with the environment and does not result in adverse impacts on coastal processes.*

Decision guidelines

Before deciding on an application, the responsible authority must consider:

- *The purpose of the overlay.*
- *The maintenance and improvement of the stability of the coastal dunes and coastlines.*
- *The preservation of any existing natural vegetation.*
- *The conservation of any areas of environmental importance or significance.*

- *The intensity of human activity which the landscapes and the environment the area can sustain.*
- *The existing use and possible development of the land and nearby land.*
- *The effect of development on the use and development of other land which has a common means of drainage.*
- *Whether the development of the land will be detrimental to the natural environment.*
- *The availability of water, sewerage, drainage, electricity, and other services.*
- *Whether or not the site is large enough to enable the adequate disposal and treatment of effluent through a septic tank system.*
- *The siting, colour and design of buildings and works.*
- *The protection of the area for its recreational value.*
- *The risk of fire.*
- *Any relevant coastal study adopted by the Shire of South Gippsland.*
- *The views of the Department of Environment, Land, Water, and Planning in respect to:*
 - *Subdivision applications of greater than four lots or any subdivision application which may have adverse environmental effects.*
 - *Applications which immediately abut Crown Land.*
 - *Applications which in the opinion of the responsible authority, may have adverse impact, on Crown Land.*
 - *Applications which in the opinion of the responsible authority may adversely affect coastal processes, dune systems (including tertiary systems), have possible effect on aquatic habitat and flora and fauna habitat.*
 - *Applications which in the opinion of the responsible authority may cause or otherwise cause erosion, land degradation, or affect land stability on either the subject land or on adjoining land.*
 - *Applications which in the opinion of the responsible authority may adversely affect wildlife habitat and sites of biological or zoological significance.*

South Gippsland DDO (Schedule 3 – Sandy Point)

DESIGN OBJECTIVES

Built Form / Landscape Character

- *To protect and manage the coastal village character of Sandy Point.*
- *To maintain the predominance of modest, minimal impact housing and the well-vegetated character of allotments.*
- *To encourage single storey development, and recessive second storey development that is respectful of the typical built form and the coastal landscape setting.*
- *To encourage building heights which do not protrude above the existing tree canopy.*
- *To discourage boundary fencing forward of building frontages unless this is a timber post and wire fence.*
- *To minimise the dominance of car parking structures and outbuildings on views from the street and other sensitive viewing locations.*

Siting and setbacks

- *To ensure that new development is sited and designed so as to be screened by and nestled within the landscaped setting.*
- *To ensure that new development is appropriately set back from sensitive environmental boundaries.*

Site Coverage

- *To minimise building site coverage and the use of impervious paving materials, in order to preserve the spacious landscape setting of the area.*
- *Landscaping and Environment*
- *To preserve the pattern of well vegetated and generous front setbacks that screen and soften the appearance of development from the street.*
- *To encourage informal driveways and crossovers and the use of permeable materials (e.g., gravel, permeable paving) to minimise the visual impact on the street and property frontages.*
- *To protect and maintain areas of indigenous and native vegetation where possible in new development.*
- *To encourage the planting of indigenous vegetation in new landscaping.*
- *To encourage the integration of best practice water sensitive urban design into the landscape treatments of new development.*

Materials and design detail

- *To ensure that buildings demonstrate a high standard of design and utilise materials, colours and finishes that are in keeping with the natural environment.*

DECISION GUIDELINES

Before deciding on an application, the responsible authority must consider:

- *The design objectives of this schedule.*
- *Whether the proposal will assist in achieving the Vision, Objectives and Strategies for Sandy Point contained in Clause 21.04.*
- *Whether the location, bulk or scale of the buildings or works will be in keeping with the predominant character and/or enhance the appearance of the area.*
- *The visual prominence of buildings and other structures within the landscape, particularly above the vegetation line.*
- *Whether the additional height of a development is required to achieve an exceptional or innovative design outcome that cannot otherwise be achieved and is able to be substantially screened by the existing and proposed new vegetation and the landform.*
- *Whether opportunities exist to avoid a building being visually obtrusive by the use of alternative building designs, including split level and staggered building forms that follow the natural slope of the land and reduce the need for site excavation and filling.*
- *Whether any encroachment of buildings within the minimum setbacks stipulated in this Clause can demonstrate that the development will result in a preferred environmental and design outcome while being consistent with the township and landscape character.*
- *The impacts of any buildings or works on any prominent ridgelines or locations when viewed from a public place.*
- *Whether car parking structures, outbuildings and driveways are sited such that the visual impact of these structures and works are minimized.*

- *Whether buildings and structures are sited to incorporate space for the planting of substantial vegetation, including canopy trees.*
- *The preservation of any existing natural vegetation, particularly indigenous vegetation.*
- *Whether the landscaping will be integrated with the design of the development to screen buildings and structures and complement the landscaping of any adjoining public realm.*
- *Whether the siting, colour and design of buildings and works will be in keeping with the character and/or enhance the appearance of the area.*
- *The effect of any proposed subdivision or development on the environmental and landscape values of the site and of the local area.*

A permit is required for all other buildings and works.

South Gippsland DDO (Schedule 4 – Waratah Bay)

DESIGN OBJECTIVES

Built Form / Landscape Character

All Areas

- *To protect and manage the coastal hamlet character and reinforce the identity of the two distinct residential areas of Waratah Bay.*
- *To maintain the predominance of modest, minimal impact housing and the well-vegetated character of allotments.*
- *To encourage single storey development and recessive second storey development that is respectful of the typical built form and the coastal landscape setting.*
- *To ensure that new development demonstrates a high standard of contemporary design and innovation and respects the low scale and the typical mass and form of the area.*
- *To discourage boundary fencing forward of building frontages unless this is a timber post and wire fence.*
- *To minimise the dominance of car parking structures and outbuildings associated with residential development on views from the street and other sensitive viewing locations.*

Township Zone

- *To maintain the predominant modest, minimal impact cottage style housing and well vegetated character of allotments.*

Low Density Residential Zone

- *To ensure that new development demonstrates a high standard of contemporary design and complements the coastal setting.*
- *To maintain the reclusive, well vegetated character of the area*
- *To encourage low-profile development in order to minimise visual impact on views toward the ridgeline from other parts of the hamlet.*

Siting and setbacks

- *To ensure that new development is sited and designed so as to be screened by and nestled within the landscaped setting.*
- *To ensure that new development is appropriately set back from sensitive environmental boundaries.*

- *To ensure that buildings and structures are strategically sited within the landscape in order to maintain the sense of isolation experienced from the beach.*

Views

- *To minimise the visual impact of development from key viewing locations, particularly town approaches and high points in the dunal landscape.*
- *To maintain and enhance the public views from the northern upper low density residential area across Waratah Bay and Bass Strait.*
- *To prevent the interruption of views toward the coast by inappropriate or poorly designed development or that which is sited in prominent locations.*

Site Coverage

- *To minimise building site coverage and the use of impervious paving materials, in order to preserve the spacious landscape setting of the area.*

Landscaping and Environment

- *To preserve the pattern of well vegetated and generous front setbacks that screen and soften the appearance of development from the street.*
- *To encourage informal driveways and crossovers and the use of permeable materials (e.g., gravel, permeable paving) to minimise the visual impact on the street and property frontages.*
- *To protect and maintain areas of indigenous, native, and non-weedy exotic vegetation where possible in new development.*
- *To encourage the planting of indigenous vegetation in new landscaping.*
- *To encourage the integration of best practice water sensitive urban design into the landscape treatments of new development.*

Materials and design detail

- *To ensure that buildings demonstrate a high standard of design and utilise materials, colours and finishes that are in keeping with the natural environment.*

DECISION GUIDELINES

Before deciding on an application, the responsible authority must consider:

- *The design objectives of this schedule.*
- *Whether the proposal will assist in achieving the Vision, Objectives and Strategies for Waratah Bay contained in Clause 21.04.*
- *Whether the location, bulk or scale of the buildings or works will be in keeping with the predominant character and/or enhance the appearance of the area.*
- *The visual prominence of buildings and other structures within the landscape, particularly above the vegetation line.*
- *Whether the additional height of a development is required to achieve an exceptional or innovative design outcome that cannot otherwise be achieved and is able to be substantially screened by the existing and proposed new vegetation and the landform.*
- *Whether opportunities exist to avoid a building being visually obtrusive such as along a ridgeline by the use of alternative building designs, including split level and staggered building forms that follow the natural slope of the land and reduce the need for site excavation and filling.*

- *Whether any encroachment of buildings within the minimum setbacks stipulated in this Clause can demonstrate that the development will result in a preferred environmental and design outcome while being consistent with the township and landscape character.*
- *Whether car parking structures, outbuildings and driveways are sited such that the visual impact of these structures and works are minimized.*
- *Whether buildings and structures are sited to incorporate space for the planting of substantial vegetation, including canopy trees.*
- *The preservation of any existing natural vegetation, particularly indigenous vegetation.*
- *Whether the landscaping will be integrated with the design of the development to screen buildings and structures and complement the landscaping of any adjoining public realm.*
- *Whether the siting, colour and design of buildings and works will be in keeping with the character and/or enhance the appearance of the area.*
- *The effect of any proposed subdivision or development on the environmental and landscape values of the site and of the local area.*

A permit is required for all other buildings and works.

Baw Baw SLO (Schedule 1 – Strzelecki Ranges)

Statement of nature and key elements of landscape

The north face of the Strzelecki Ranges presents a landscape of diversity where cleared land, remnant vegetation and timber plantations co-exist. No dominant built development exists; houses and narrow roads climb from the valley floor and foothills adjoining the Princes Highway between Yarragon and Trafalgar.

Landscape character objectives to be achieved

- *To protect the natural beauty and landscape form of the Strzelecki Range.*
- *To protect the rural landscape from insensitively designed development.*
- *To maintain and protect the diversity of landscapes, native fauna, remnant vegetation and sites of historical, botanical and zoological significance.*
- *To recognise and protect the landscape and conservation features of the Strzelecki Ranges from visual intrusion and inappropriate development.*

Decision guidelines

The following decision guidelines apply to an application for a permit under Clause 42.03, in addition to those specified in Clause 42.03 and elsewhere in the scheme which must be considered, as appropriate, by the responsible authority:

- *How the proposal responds to the landscape character objectives of this schedule.*
- *How the proposed development impacts the environment, visual and aesthetic qualities.*
- *Whether the proposed development will penetrate the tree canopy and ridgelines.*
- *Whether the proposed development is of a high standard of architectural and landscape design that is sympathetic to the natural landscape.*
- *Whether the proposed development will utilise non-reflective materials maintained in muted colours that blend with the landscape on external surfaces, including roofs of all buildings but excluding solar panels, to reduce its visual impact.*
- *Whether sufficient provision has been made for the planting of canopy trees and other vegetation to meet the landscape character objectives.*

Latrobe ESO (Schedule 1 – Urban Buffer)

Statement of environmental significance

The coal industry is of national and State importance due to its use as the primary energy source for the electricity generating industry in Victoria. The impact on the environment is radical. Buffers protect those elements of the Coal Buffers Policy Area such as urban settlements from the impact of the radical change to the environment from the coal industry.

Environmental objective to be achieved

To ensure that development in the Gippsland Coalfields Policy Area provides mutual protection of urban amenity, coal resource development, the continued social and economic productive use of land and is compatible within a buffer area including reservations and for services ancillary to a Brown Coal Open Cut outside the buffer area.

Decision guidelines

The following decision guidelines apply to an application for a permit under Clause 42.01, in addition to those specified in Clause 42.01 and elsewhere in the scheme which must be considered, as appropriate, by the responsible authority:

Buildings and works

- *The movement of pedestrians and cyclist, and vehicles providing for supplies, waste removal, emergency services and public transport.*
- *The provision of car parking.*
- *The streetscape, including the conservation of buildings, the design of verandahs, access from the street front, protecting active frontages to pedestrian areas, the treatment of the fronts and backs of buildings and their appurtenances, including outdoor advertising structures, illumination of buildings or their immediate spaces and landscaping of land adjoining a road.*
- *Defining the responsibility for the maintenance of buildings, landscaping and paved areas.*
- *The availability of and connection to services.*
- *Any natural or cultural values on or near the land.*
- *Interface with non-industrial areas.*
- *Outdoor storage, lighting and storm water discharge.*
- *The designs of buildings to provide for solar access.*
- *If an industrial or warehouse development, the effect on nearby existing or proposed residential areas or other uses which are sensitive to industrial off-site effects, having regard to any comments or directions of the referral authorities.*
- *All buildings and works must be maintained in good order and appearance to the satisfaction of the responsible authority.*

Subdivision

- *The effect the subdivision will have on the potential of the area to accommodate the uses, which will maintain or enhance its competitive strengths.*
- *Any natural or cultural values on or near the land.*
- *The interface with adjoining zones, especially the relationship with residential areas.*
- *The drainage of the land.*
- *The availability of and connection to services.*

- *The effect of traffic to be generated on roads.*
- *The responsible authority must notify and consider the views of any Mining Licence holder who may be affected.*

OTHER DOCUMENTS

Coastal Spaces Landscape Assessment Study – State Overview Report (September 2006)

Siting and Design Guidelines for Structures on the Victorian Coast (May 2020)