

Planning Panels Victoria

Kentbruck Green Power Hub Project

Inquiry and Advisory Committee Report

8 October 2025

The Inquiry and Advisory Committee acknowledges the Traditional Owners of the land and pays respects to Elders past and present. The Gunditjmara are the original custodians of the Country on which the Project is located.

Environment Effects Act 1978 - Inquiry report under section 9(1)

Planning and Environment Act 1987 - Advisory Committee report under section 151(1)

Kentbruck Green Power Hub Project

8 October 2025



Lisa Kendal, Chair



Michael Kirsch, Deputy Chair



Lachlan Wilkinson, Member



Ken Joyner, Member

Contents

	Page
Executive Summary	14
PART A: INTRODUCTION AND BACKGROUND	20
1 The Inquiry and Advisory Committee process	21
1.1 Background	21
1.2 The Inquiry and Advisory Committee’s role	21
1.3 Scoping Requirements	22
1.4 Exhibition and submissions	23
1.5 The IAC’s approach and procedural issues	24
1.6 This Report	26
1.7 Acknowledgements.....	27
2 Kentbruck Green Power Hub Project	28
2.1 The Proponent	28
2.2 Project area	28
2.3 Project description	30
2.4 Project benefits.....	37
2.5 Project approvals.....	38
3 Environment Effects Statement	40
3.1 EES documentation	40
3.2 Environmental Management Framework.....	42
3.3 Draft Glenelg Planning Scheme Amendment C116gelg.....	42
PART B: ENVIRONMENTAL EFFECTS	43
4 Flora	44
4.1 Introduction	44
4.2 What did the EES say?.....	45
4.3 Native vegetation	48
4.4 Overall conclusions on flora effects.....	57
5 Fauna	58
5.1 Introduction	58
5.2 Southern Bent-wing Bat.....	60
5.3 Brolgas	72
5.4 Australasian Bittern	85
5.5 Impacts on other birds.....	94
5.6 Mammals, reptiles and aquatic fauna.....	103
5.7 Bird and Bat Adaptive Management Plan	105
5.8 Independent Environmental Auditor	107
5.9 Ecologically sensitive area	108
5.10 Overall conclusions on fauna effects.....	109
6 Matters of National Environmental Significance	110
6.1 Introduction	110

6.2	Listed threatened species and ecological communities.....	112
6.3	Listed migratory species	114
6.4	Glenelg Estuary and Discovery Bay Ramsar Site	115
6.5	Overall conclusions on effects on MNES.....	120
7	Surface Water, Groundwater and Groundwater Dependent Ecosystems	121
7.1	Introduction	121
7.2	Surface water	122
7.3	Groundwater and Groundwater Dependent Ecosystems	125
7.4	Overall conclusions on surface water, groundwater and Groundwater Dependent Ecosystem effects	128
8	Contamination and acid sulfate soils	129
8.1	Introduction	129
8.2	Contamination	129
8.3	Acid sulfate soils.....	131
8.4	Overall conclusions on contamination and acid sulfate soil effects	132
9	Cultural Heritage	133
9.1	Introduction	133
9.2	Aboriginal cultural heritage	133
9.3	Historic cultural heritage.....	136
9.4	Overall conclusions on cultural heritage effects	137
10	Landscape character and visual amenity	138
10.1	Introduction	138
10.2	The landscape character and visual impact assessment methodology	139
10.3	Specific areas, sites and issues	143
10.4	Overall conclusions on landscape character and visual amenity effects	164
11	Air quality	165
11.1	Introduction	165
11.2	Air quality.....	165
11.3	Overall conclusions on air quality effects	167
12	Noise and vibration	168
12.1	Introduction	168
12.2	What did the EES say?.....	169
12.3	Noise and vibration assessment and operational impacts	170
12.4	Construction noise and vibration.....	177
12.5	Overall conclusions on noise and vibration effects	180
13	Transport	181
13.1	Introduction	181
13.2	Transport	181
13.3	Overall conclusions on transport effects	185
14	Land use and planning.....	186
14.1	Introduction	186
14.2	Land use and planning effects.....	186
14.3	Overall conclusions on land use and planning effects.....	190

15	Socio-economic	191
15.1	Introduction	191
15.2	Social	192
15.3	Economic	201
15.4	Overall conclusions on socio-economic effects	205
16	Safety, hazard and risk	206
16.1	Introduction	206
16.2	Electromagnetic interference	207
16.3	Aviation	209
16.4	Bushfire	211
16.5	Overall conclusions on safety, hazard and risk effects	218
17	Other issues	219
17.1	Internal 275 kV transmission line options	219
17.2	Decommissioning	222
17.3	Renewable energy legislation and policy support	224
PART C:	APPROVALS AND INTEGRATED ASSESSMENT	228
18	Approvals	229
18.1	Draft Glenelg Planning Scheme Amendment C116gelg	229
18.2	Environmental Management Framework	232
18.3	National Parks Act 1975 and Forests Act 1958	234
18.4	Mineral Resources (Sustainable Development) Act 1990	237
18.5	Other statutory approvals	240
19	Integrated assessment	242
19.1	Introduction	242
19.2	Assessment against the legislative and policy framework	242
19.3	Ecologically sustainable development	247
19.4	Assessment against the evaluation objectives	249
19.5	Response to Terms of Reference	251
PART D:	APPENDICES	260
Appendix A	Terms of Reference	261
Appendix B	Submitters to the EES	271
Appendix C	Parties to the IAC Hearing	275
Appendix D	Document list	278
Appendix E	Strategic context	306
Appendix F	Recommended project documentation	313
F:1	Recommended Environmental Management Framework	313
F:2	Recommended Incorporated Document	416

List of Tables

	Page
Table 1	Draft evaluation objectives..... 22
Table 2	EES documentation 40
Table 3	Evidence on flora effects..... 44
Table 4	Recorded threatened species in the Project area..... 46
Table 5	Evidence on fauna effects..... 58
Table 6	IAC review of wind farm reports..... 80
Table 7	Impacts on other birds..... 94
Table 8	Evidence on MNES effects..... 111
Table 9	Likelihood of significant adverse impacts for threatened species and ecological communities 112
Table 10	Likelihood of significant adverse impacts for migratory species..... 114
Table 11	Summary of impact assessment for Ramsar Site..... 116
Table 12	Evidence on surface water and groundwater 121
Table 13	Evidence on cultural heritage..... 133
Table 14	Evidence on landscape and visual impacts..... 138
Table 15	Receptors with shadow flicker 162
Table 16	Evidence on noise and vibration effects 168
Table 17	Evidence on transport..... 181
Table 18	Evidence on land use and planning impacts..... 186
Table 19	Evidence on socio-economic effects 191
Table 20	Social impact ranking 193
Table 21	Evidence on safety, hazard and risk 207
Table 22	Evidence on renewable energy legislation and policy..... 224
Table 23	Evidence on land use and planning impacts..... 229
Table 23	Generation loss from low wind speed curtailment 243
Table 24	IAC’s assessment against the principles of ESD..... 248
Table 25	IAC’s assessment against the evaluation objectives..... 249
Table 26	IAC’s response to ToR Clause 35 251
Table 27	IAC’s response to ToR Clause 36 254
Table 28	IAC’s response to ToR Clause 36b..... 254
Table 29	Draft evaluation objectives and key legislation..... 306

List of Figures

	Page
Figure 1	Project area and land tenure..... 29
Figure 2	Wind farm details 30
Figure 3	Indicative turbine dimensions..... 31
Figure 4	Three internal transmission line options (showing the Proponent’s preferred central option in orange)..... 33
Figure 5	Transmission line details..... 34
Figure 6	Proponent’s preferred internal transmission line alignment 37
Figure 7	EES process and key approvals required..... 39
Figure 8	Distribution of Southern Bent-wing Bat..... 63
Figure 9	Percentage of SBWB calls recorded in relation to wind speed class 69
Figure 10	Brolga buffers based on Interim guidelines (with IAC notation) 83
Figure 11	Study areas used in the surface water and groundwater assessments 123
Figure 12	Landscape viewshed distances, designations and localities..... 140
Figure 13	Extent of SLO1..... 144
Figure 14	Photomontage view to the north from the Lake Mombeong lookout 148
Figure 15	Photomontage view to the northwest from the Swan Lake sand dunes 149
Figure 16	Updated noise contour map 171
Figure 17	Renewable energy zones..... 227

Glossary and abbreviations

Note: All legislation is Victorian unless indicated otherwise.

AQIA	EES Technical Appendix N (Air Quality Impact Assessment)
ARI	Arthur Rylah Institute for Environmental Research
AS 4970-2009	<i>Australian Standard 4970-2009 Protection of trees development sites AS 4970-2009</i>
AS 4970-2025	<i>Australian Standard 4970-2009 Second edition 2025 Protection of trees development sites AS 4970-2025</i>
ASS	acid sulfate soils
Assessor's Handbook	<i>Assessor's handbook - Applications to remove, lop or destroy native vegetation, Version 1.1, October 2018 (DELWP)</i>
BACI	before-after control-impact
Background Noise Monitoring Report	<i>Kentbruck Green Power Hub Background Noise Monitoring (Marshall Day Acoustics, 16 July 2024)</i>
BBAMP	Bird and Bat Adaptive Management Plan
BMCP	Brolga Monitoring and Compensation Plan
Bushfire Risk Assessment	EES Technical Appendix V (Bushfire Risk Assessment and Mitigation Plan)
CASA	Civil Aviation Safety Authority
CEMP	Construction Environmental Management Plan
CFA	Country Fire Authority
CFA Guidelines	<i>Design Guidelines and Model Requirements, Renewable Energy Facilities v4, CFA, August 2023</i>
CHMP	Cultural Heritage Management Plan
CIS	Capacity Investment Scheme
CNVMP	Construction Noise and Vibration Management Plan
Community Engagement Guide	<i>Guide to Community Engagement and Benefit Sharing in Renewable Energy Development in Victoria (DELWP, 2021)</i>
D[number]	tabled document [number]
dB	decibel
DCCEEW	Department of Climate Change, Energy, the Environment and Water (Cth)
DEECA	Department of Energy, Environment and Climate Action

DELWP	Department of Environment, Land, Water and Planning (former)
DEMP	Decommissioning Environmental Management Plan
Draft BBAMP	EES Technical Appendices AA (Draft Bird and Bat Adaptive Management Plan)
draft PSA	Draft Glenelg Planning Scheme Amendment C116gelg
Draft VTP	<i>Draft 2025 Victoria Transmission Plan</i> , VicGrid, 16 May 2025
DTP	Department of Transport and Planning
Ecological Character Description	<i>Ecological Character Description of the Glenelg Estuary and Discovery Bay Ramsar Site</i> (DELWP 2017)
EE Act	<i>Environment Effects Act 1978</i>
EES	Environment Effects Statement
EMF	Environmental Management Framework
EMI	electromagnetic interference
EP Act	<i>Environment Protection Act 2017</i>
EPA	Environment Protection Authority Victoria
EPA Publication 1834.1	EPA Publication 1834.1 <i>Civil construction, building and demolition guide</i> , 12 September 2023
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act 1999</i> (Cth)
EP Regulations	Environment Protection Regulations 2021, as amended by the Environment Protection Amendment (Wind Turbine Noise) Regulations 2022
ERS	Environmental Reference Standard
ESD	Ecologically Sustainable Development
ESO [number]	Environmental Significance Overlay Schedule [number]
FFG Act	<i>Flora and Fauna Guarantee Act 1988</i>
FFIA	EES Technical Appendix C (Flora and Fauna Existing Conditions and Impact Assessment)
GED	General Environmental Duty
GMTOAC	Gunditj Mirring Traditional Owners Aboriginal Corporation
GSWW	Great South West Walk
GTFP	Green Triangle Forest Products

HAA	High Amenity Area
HDD	horizontal directional drilling
IAC	Inquiry and Advisory Committee
Incorporated Document	Kentbruck Green Power Hub Project Incorporated Document
Interim Brolga Guidelines	Interim Guidelines for the Assessment, Avoidance, Mitigation and Offsetting of Potential Wind Farm Impacts on the Victorian Brolga Population 2011
ISP	2024 Integrated System Plan
kV	kilovolt
LUPIA	EES Technical Appendices Q (Land Use and Planning Impact Assessment)
LVIA Peer Review	<i>Peer review of Landscape and Visual Impact Assessment (Peter Haack Consulting, 19 February 2025)</i>
met mast	meteorological monitoring mast
Minister	Minister for Planning
MM-[number]	Mitigation Measure
MNES	Matters of National Environmental Significance
MRSD Act	<i>Mineral Resources (Sustainable Development) Act 1990</i>
m/s	metres per second
Native Vegetation Guidelines	<i>Guidelines for the removal, destruction or lopping of native vegetation, DELWP, 2017</i>
NVP	Native Vegetation Plan
nM	Nautical mile
Noise Protocol	<i>EPA Publication 1826.4 Noise limit and assessment protocol for the control of noise from commercial, industrial and trade premises and entertainment venues</i>
Noise Technical Guideline	<i>EPA-DTP Publication 3011 Wind Energy Facility Turbine Noise – Technical Guideline, December 2024</i>
Noise Verification Report	<i>Verification of Environmental (Predictive) Operational Noise Assessment – Wind Turbine Generators (Arup, 27 August 2025)</i>
NVA	EES Technical Appendix O (Environmental Noise and Vibration Assessment)
NVRR	Native Vegetation Removal Report
NZS 6808:2010	New Zealand Standard NZS 6808:2010 <i>Acoustics – Wind</i>

	<i>farm noise</i>
OD/OSOM	over-dimensional/oversize overmass
OEMP	Operational Environmental Management Plan
OLS	Obstacle Limitation Surface
PANS-OPS	Procedures for Air Navigation – Operations
PPRZ	Public Park and Recreation Zone
Project	Kentbruck Green Power Hub Project
Proponent	Neoen Australia Pty Ltd
PVA	Population Viability Analysis
QWPRR	Quarry Work Plan Requirements Report
Ramsar Site	Glenelg Estuary and Discovery Bay Ramsar Site
Renewable Energy Handbook	<i>Handbook for the development of renewable energy in Victoria: Guidance to avoid, minimise, mitigate and compensate for impacts on threatened bird and bat species, DEECA, 29 May 2025</i>
REZ	Renewable Energy Zone
RSA	rotor swept area
S[number]	submission [number]
SBWB	Southern Bent-wing Bat
SCO[number]	Specific Controls Overlay Schedule [number]
Scoping Requirements	<i>Scoping Requirements for Kentbruck Green Power Hub Environment Effects Statement January 2020</i>
SLO [number]	Significant Landscape Overlay Schedule [number]
TIA	EES Technical Appendix P (Transport Impact Assessment)
TMP	Traffic Management Plan
TN[number]	Technical Note [number]
ToR	Terms of Reference
TPZ	Tree Protection Zone
Updated BBAMP	Updated Draft Bird and Bat Adaptive Management Plan (D229)
VBA	Victorian Biodiversity Atlas
VNPA	Victorian National Parks Association
VTP	2025 Victoria Transmission Plan
VTP Guidelines	<i>Victorian Transmission Plan Guidelines, VicGrid, August 2024</i>

VTV

zones of theoretical visibility

Wind Energy Guidelines

*Planning Guidelines for Development Wind Energy
Facilities*, Department of Transport and Planning,
September 2023

Overview

Project summary

The Project	Kentbruck Green Power Hub Project
Brief description	Development of a 105 turbine wind energy facility (wind farm) that will generate up to 600 megawatts and a new 275 kilovolt underground transmission line through Cobboboonee National Park and Cobboboonee Forest Park connecting the wind farm to the electricity grid at the existing Heywood Terminal Station
Project location	The wind farm is located 30 kilometres north-west of Portland and three kilometres east of Nelson. It has a footprint of approximately 8,318 hectares
The Proponent	Neoen Australia Pty Ltd
Draft Planning Scheme Amendment	Draft Glenelg Planning Scheme Amendment C116gelg
Exhibition	28 January to 31 March 2025
Submissions	Number of Submissions: 214 (see Appendix B)

Inquiry and Advisory Committee process

Inquiry and Advisory Committee members	Lisa Kendal, Chair Michael Kirsch, Deputy Chair Lachlan Wilkinson, Member Ken Joyner, Member
Supported by	Planning Panels Victoria staff including Amy Selvaraj, Manager Major Projects and Georgia Brodrick, Project Officer
Directions Hearing	22 April 2025 - video conference and in person, Planning Panels Victoria
Panel Hearing	25 sitting days by video conference and in person: <ul style="list-style-type: none"> - 26 and 28 May and 7, 8, 9 and 10 July 2025 at Quest Portland, Portland - 10, 11, 12, 16, 17, 18, 19, 23, 24 and 26 June and 1, 2, 3, 14 and 24 July 2025 at Cliftons Event Centre, Melbourne
Site inspections	27 May 2025 - accompanied 25 and 29 May 2025 – unaccompanied
Parties to the Hearing	See Appendix C
Citation	Kentbruck Green Power Hub Project (EES) [2025] PPV
Date of this report	8 October 2025

Executive Summary

(i) The Project

The Kentbruck Green Power Hub Project (Project) involves the development of a 600 megawatt wind farm in south-western Victoria on Gunditjmara Country generally between Portland and Nelson. The Project is expected to produce approximately 2,000 gigawatt hours of renewable energy electricity and contribute to greenhouse gas emissions reduction of 2.4 million tonnes per year.

The Project consists of:

- 105 turbines up to 270 metres in height (approximately 175 metre hub height, 190 metre maximum rotor diameter and 60 metre blade tip height above ground level)
- a 26.6 kilometre 275 kilovolt transmission line connecting the wind farm to the Heywood Terminal Station
- substations, internal transmission lines/powerlines (mostly underground), an onsite quarry and other ancillary infrastructure.

The Project is located approximately 360 kilometres west of Melbourne within the Glenelg Shire in the Great South Coast Region. Nelson is the closest town approximately three kilometres west of the site.

The Project area, including the wind farm site and transmission corridor, covers approximately 8,350 hectares.

The wind farm site of approximately 8,318 hectares is on farming land mostly used for a commercial pine plantation and some grazing. The site is surrounded by large areas of public land with high biodiversity value including the Lower Glenelg National Park, Cobboboonee National Park, Discovery Bay Coastal Park, Cobboboonee Forest Park, Mount Richmond National Park, Glenelg River and the Glenelg Estuary and Discovery Bay Ramsar Site. The Great South West Walk is a 250 kilometre semi-remote hike which circumnavigates the Project area. The walk passes through the surrounding national and coastal parks and with sections along the coast and Glenelg River.

The transmission line will be constructed on private land, and through the Cobboboonee Forest Park and Cobboboonee National Park within the existing Boiler Swamp Road for approximately 17.6 kilometres.

Neoen Australia Pty Ltd is the Proponent for the Project.

(i) The Environment Effects Statement and key approvals

The Environment Effects Statement (EES) consists of:

- 20 main reports chapters and a summary report
- 27 technical reports.

The ESS includes an Environmental Management Framework and draft Glenelg Planning Scheme Amendment C116gelg, including an Incorporated Document and supporting material.

Key approvals are required under the:

- *Environment Protection and Biodiversity Conservation Act 1999* (C'th)
- *Planning and Environment 1987*

- *Aboriginal Heritage Act 2006*
- *Mineral Resources (Sustainable Development) Act 1990*
- *National Parks Act 1975*
- *Forests Act 1958.*

(ii) Submissions and issues

The EES was exhibited from Tuesday 28 January 2025 to Monday 31 March 2025. A total of 214 written submissions were received from government agencies and authorities, environmental and community groups, businesses and members of the community.

Opposing submissions raised issues relating to the broad range of potential environmental, social and economic impacts, with key issues related to:

- Project rationale and EES methodology
- the Project's location and proximity to significant ecosystems and natural areas
- flora and fauna, including:
 - avifauna, including risks of turbine collision, habitat loss and fragmentation
 - specific issues relating to Southern Bent-wing Bat, Brolga and Australasian Bittern
 - adequacy of the draft Bird and Bat Adaptive Management Plan
 - loss of native vegetation and approach to offsets
 - threatened flora and fauna
- landscape and visual amenity
- socio-economic impacts including workforce accommodation and tourism
- bushfire
- traffic.

Supporting submissions focussed on potential economic, employment and social benefits.

(iii) The Inquiry and Advisory Committee

The Minister appointed the Inquiry and Advisory Committee (IAC) on 26 November 2024 under the:

- *Environment Effects Act 1978* as an Inquiry
- *Planning and Environment Act 1987* as an Advisory Committee.

The EES forms the basis of the assessment of impacts on matters of national environmental significance under the *Environment Protection and Biodiversity Conservation Act 1999* (Cth), pursuant to the Bilateral Agreement between the Commonwealth and Victorian governments.

The IAC is not tasked with recommending whether the Project should be approved. Its task is to consider and report on the Project's potential environmental effects, their significance and acceptability. This Report provides an analysis of the EES, the draft Glenelg Planning Scheme Amendment C116gelg and an integrated assessment of the environmental, social and economic impacts of the Project, having regard to the draft evaluation objectives in the *Scoping Requirements for Kentbruck Green Power Hub Environment Effects Statement* January 2020 and relevant policy and legislation.

The IAC has considered the exhibited material, written submissions received in response to the exhibited material, evidence, submissions and other material provided to the IAC during the Hearing.

(iv) Assessment and findings**Climate change, renewable energy and biodiversity**

A key consideration for the IAC is balancing potentially competing policy objectives relating to climate change and renewable energy, and biodiversity protection.

There is strong legislative and policy support for:

- action on climate change, and legislated targets for greenhouse gas emissions reduction and renewable energy generation
- protection and enhancement of biodiversity, including protection of threatened species and ecological communities, and ecologically sustainable development.

The Project is consistent with climate change and renewable energy legislation and policy. It is expected to produce approximately 2,000 gigawatt hours of renewable electricity and emissions reduction of 2.4 million tonnes per year.

While the IAC was not presented with detailed information regarding embodied emissions associated with the Project it accepts the evidence that wind energy provides long-term emissions benefits. The IAC is satisfied the Project will contribute to:

- reducing the State's emissions
- building resilience in the State's energy infrastructure
- supporting transition to a net zero emissions economy.

In assessing whether, on balance, the impacts on are acceptable the IAC has considered whether the impacts are significant, and if residual effects following implementation of the proposed mitigation measures are acceptable. It has also considered whether the Project will result in net community benefit and ecologically sustainable development.

The Project is located in an ecologically sensitive location and, from a biodiversity perspective, is not an ideal location for a wind farm. The Project introduces significant risks and will require active management to address those risks and ensure effects are acceptable. The IAC has paid particular attention to the adequacy of actions proposed to avoid, minimise and offset specific flora and fauna impacts. Subject to its recommendations, however, the IAC is satisfied that the potential adverse biodiversity effects can be appropriately managed and are acceptable.

There is some uncertainty about the level of risk associated with flight movements for Brolga, Australasian Bittern and other threatened birds. Accordingly, the IAC has adopted a precautionary approach and recommends removing turbines (numbers 12, 34, 35, 42 and 112) to protect flight movements for Brolga, Australasian Bittern and other threatened birds. In the context of the EES assessment and the information presented in evidence and submissions, the IAC considers this a proportionate response to the level of risk and uncertainty.

The IAC has made provision for the width of this avifauna movement corridor to be reviewed following pre-commissioning monitoring. If monitoring demonstrates with a high level of confidence that the risk to Brolga is low, the Minister may agree to reduce the corridor width and implement appropriate management measures in consultation with the Department of Energy, Environment and Climate Action.

The IAC considered whether this monitoring should be before construction or commissioning. It is satisfied with pre-commissioning monitoring, as the recommendation only involves a small number of turbines and this is unlikely to affect the balance of the Project proceeding to design

and construction if the Project is approved. The IAC notes the Proponent could choose to undertake pre-commissioning monitoring any time before commissioning.

The IAC also recommends additional curtailment measures to ensure impacts on the Southern Bent-wing Bat and avifauna are acceptable.

The IAC finds likely effects on matters of national environmental significance are not significant, other than for the Australasian Bittern. Subject to its recommendations the IAC is satisfied effects are acceptable and do not preclude the Project being approved.

In relation to other biodiversity issues, the IAC:

- recommends the southern internal transmission line option be adopted, or alternatively the central option may be acceptable subject to undergrounding all or part of the central option based on further analysis that demonstrates the impacts on birds is acceptable.
- concludes that, subject to its recommendations, potential impacts of the underground transmission line on Cobboboonee National and Forest Parks will not be significant and are acceptable.

The IAC understands its recommendation to remove some turbines and implement management measures including curtailment may create some uncertainty about the Project's renewable energy outputs and potentially overall viability of the Project. Ultimately this is a matter for the Proponent to consider.

Other issues

Regarding landscape and visual impacts, the IAC found for the majority of specific areas and sites that impacts would not be significant and, subject to the mitigation measures, are acceptable.

For parts of the ocean beach foreshore, Great South West Walk and Lake Mombeong, which have high sensitivity to visual impact, the IAC found that if considered individually impacts are significant, cannot be effectively mitigated and are unacceptable. In the context of an integrated assessment of the Project including its broader benefits, however, the impacts are acceptable.

Residual impacts can be partly offset through strengthened mitigation measures including planting and new/updated visitor infrastructure. The IAC recommends a package of mitigations and offsets be provided within any or all of the affected national and coastal parks, in consultation with Parks Victoria and as approved by the approval by the responsible authority.

Other landscape and visual impacts are acceptable, including lighting, shadow flicker and cumulative impacts.

In relation to other issues, the IAC is satisfied effects have been appropriately assessed and can be appropriately managed in relation to:

- Aboriginal cultural heritage, noting further investigations are necessary and underway
- historic cultural heritage
- catchment values and hydrology
- land use and socioeconomic values
- community amenity, safety, roads and transport.

Overall assessment

Overall the IAC has assessed the Project will have benefits in relation to climate change, renewable energy generation and economic benefits.

It has assessed some individual effects as significant and potentially unacceptable, however in the context of Project benefits it considers the effects can be offset or partially offset and the residual impacts acceptable. Specifically, this relates to:

- impacts on Australasian Bittern
- landscape and visual impacts on some parts of the southern beach foreshore, Great South West Walk and Lake Mombeong.

Subject to its recommendations the IAC finds the Project:

- strikes an acceptable balance between action on climate change and renewable energy generation, and biodiversity protection
- is consistent with and supports the purposes of the Glenelg Planning Scheme
- is consistent with legislation and policy relating to marine and coastal protection and national and coastal parks
- is supported by other legislation and policies
- will deliver net community benefit for current and future generations
- satisfies the objectives and principles of Ecologically Sustainable Development.

The IAC is satisfied the environmental effects of the Project can be acceptably managed through the recommended EMF, Incorporated Document and other recommendations to meet the draft evaluation objectives in the Scoping Requirements, and to be consistent with relevant legislation and policy.

The IAC is not aware of any matters that would preclude the grant of any relevant statutory approvals.

(v) Recommendations

If the Project proceeds, the IAC recommends:

Environment Management Framework

- 1. Approve the Environmental Management Framework included at Appendix F:1 of this Report, subject to reviewing it for consistency and to address any consequential changes resulting from other recommendations in this Report.**

Draft Glenelg Planning Scheme Amendment C116gelg

- 2. Approve draft Glenelg Planning Scheme Amendment C116gelg, subject to reviewing it for consistency and to address any consequential changes resulting from other recommendations in this Report and to:**
 - a) include the recommended Kentbruck Green Power Hub Project Incorporated Document at Appendix F:2**
 - b) modify the Specific Controls Overlay Schedule 10 mapping as identified by Mr Glossop (Document 88)**
 - c) modify the Schedule to Clause 72.01 to establish the Minister for Planning as responsible for enforcement under the Specific Controls Overlay**
 - d) include an instruction sheet and revised explanatory report as recommended by Mr Glossop (D88)**
 - e) update the Specific Controls Overlay Schedule number.**

Other recommendations

- 3. Remove the following turbines unless pre-commissioning monitoring demonstrates to the satisfaction of the Minister for Planning, in consultation with the Department of Energy, Environment and Climate Action, that the risk to:**
 - a) Broilgas is low: Turbines 12, 34, 35 and 42**
 - b) Australasian Bittern is low: Turbines 12, 34, 35, 42 and 112.**

- 4. Adopt the underground southern option for the internal 275 kilovolt transmission line or alternatively the central option, to the satisfaction of the responsible authority, subject to:**
 - a) undergrounding all or parts of the central option to address bird impacts as required in the recommended Incorporated Document**
 - b) considering other potential impacts arising from undergrounding all or part of the central option, including impacts on Aboriginal cultural heritage.**

PART A: INTRODUCTION AND BACKGROUND

1 The Inquiry and Advisory Committee process

1.1 Background

The Proponent (Neoen Australia Pty Ltd) referred the Kentbruck Green Power Hub Project (Project) to the Minister for Planning (Minister) under the *Environment Effects Act 1978* (EE Act) on 24 July 2019 seeking advice on whether an Environment Effects Statement (EES) was required. The Minister decided an EES was required on 25 August 2019 for the following reasons:

- potential significant environmental effects on:
 - biodiversity and ecological values within and near the project area including listed threatened communities and species (flora and fauna) under the *Flora and Fauna Guarantee Act 1988* (FFG Act) and *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (EPBC Act)
 - Aboriginal cultural heritage values
 - landscape values
 - surface water and groundwater and related environmental values
- other potential effects associated with acid sulfate soils (ASS), the local community and changes to amenity
- the need to assess potentially significant effects to ensure their extent and related uncertainties and acceptability are sufficiently investigated
- an EES would allow for a single integrated, rigorous and transparent assessment of effects, risks and acceptability to inform relevant statutory decision making.

A delegate for the Commonwealth Minister for the Environment and Water declared the Project a controlled action under the EPBC Act on 7 November 2019, due to potential significant impacts on matters of national environmental significance (MNES). The EES forms the basis of the assessment of environmental impacts under the EPBC Act, pursuant to the Bilateral Agreement between the Commonwealth and Victorian governments.

1.2 The Inquiry and Advisory Committee's role

The Minister appointed the Inquiry and Advisory Committee (IAC) on 26 November 2024 in accordance with:

- section 9(1) of the EE Act as an Inquiry
- part 7, section 151(1) of the *Planning and Environment Act 1987* as an Advisory Committee, to consider the draft Glenelg Planning Scheme Amendment C116gelg (draft PSA).

The IAC's Terms of Reference (ToR) set out the purpose and process for the IAC (see Appendix A).

The IAC's role is described in Clauses 4, 5 and 6 of its ToR as follows:

- Clause 4 requires the IAC as an inquiry under the EE Act to:
 - a. review and consider the environment effects statement (EES), the other exhibited documents, and submissions received in relation to the project, with a focus on matters where there is potential for significant environmental effects, in particular for biodiversity, Aboriginal cultural heritage, water, amenity and land-use;

- b. consider and report on the significance and acceptability of likely environmental effects of the project, having regard to relevant policy and legislation and relevant evaluation objectives in the EES scoping requirements;
 - c. consider and report on potential significant impacts on relevant matters of national environmental significance protected under the *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (EPBC Act), including the significance and acceptability of residual impacts;
 - d. identify any additional mitigation measures and/or project modifications beyond those identified in the EES the IAC considers necessary and effective to avoid, mitigate or manage the significant environmental effects of the project consistent with relevant policy and legislation; and
 - e. advise on how these modifications and measures should be implemented through the necessary approvals and consents for the project.
- Clause 5 requires the IAC as an Advisory Committee under the *Planning and Environment Act 1987* to:
 - a. review the draft planning scheme amendment (PSA) C116GELG, which has been prepared to apply a Specific Controls Overlay (SCO) and establish planning approval for the project under an incorporated document;
 - b. consider issues raised in public submissions received in relation to the draft PSA; and
 - c. recommend any changes to the draft PSA that it considers necessary.
 - Clause 6 requires the IAC to prepare a report of its findings and recommendations to the Minister on the environmental effects and draft PSA.

Table 27 in Chapter 19.5 includes details of what the IAC's report must contain, the IAC's response and where the information is contained in this Report.

1.3 Scoping Requirements

The matters to be investigated and documented in the EES are described in the *Scoping Requirements for Kentbruck Green Power Hub Environment Effects Statement January 2020* (Scoping Requirements).

The Scoping Requirements includes draft evaluation objectives (see Table 1).

Table 1 Draft evaluation objectives

Impact/effect	Draft evaluation objective
Biodiversity and habitat	To avoid or minimise potential adverse effects on biodiversity values within the project site and its environs, including native vegetation, listed species and ecological communities other protected species and habitat for these species.
Cultural heritage	To avoid or minimise adverse effects on Aboriginal and historic cultural heritage and associated values.
Catchment values and hydrology	To maintain the functions and values of aquatic environments, surface water and groundwater quality and stream flows and prevent adverse effects on protected beneficial uses.
Landscape and visual	To minimise and manage potential adverse effects on landscape and visual amenity.
Land use and socioeconomic	To avoid and minimise adverse effects on land use, social fabric of the community, local infrastructure, aviation safety and to neighbouring landowners during construction, operation and

	decommissioning of the project.
Community amenity, safety, roads and transport	To avoid and minimise adverse effects for community amenity and safety, with regard to construction noise, vibration, dust, traffic and transport, operational turbine noise and fire risk management.

Table 26 in Chapter 19.4 summarises the IAC’s assessment of impacts against the draft evaluation objectives.

1.4 Exhibition and submissions

The EES was exhibited from Tuesday 28 January 2025 to Monday 31 March 2025. Chapter 3 of this Report provides details of the exhibited EES documentation.

A total of 214 submissions were received, comprising:

- Submissions from 9 government authorities and agencies:
 - Department of Transport and Planning (DTP)
 - Department of Energy, Environment and Climate Action (DEECA)
 - Environment Protection Authority Victoria (EPA)
 - Country Fire Authority (CFA)
 - Parks Victoria
 - Glenelg Shire Council
 - Gunditj Mirring Traditional Owners Aboriginal Corporation (GMTOAC)
 - Gunditjmarra Aboriginal Corporation ICN 7202
 - Limestone Coast Landscape Board
- 12 from environment groups
- 5 from local community groups
- 188 from individual businesses and members of the community.

A full list of submitters is provided in Appendix B.

Key issues raised in submissions relate to:

- Project rationale and EES methodology
- the Project’s location and proximity to significant ecosystems and natural areas
- flora and fauna, including:
 - avifauna, including risks of turbine collision, habitat loss and fragmentation
 - specific issues relating to Southern Bent-wing Bat (SBWB), Brolga and Australasian Bittern
 - adequacy of the Bird and Bat Adaptive Management Plan (BBAMP)
 - loss of native vegetation and approach to offsets
 - threatened plants and animals
- landscape and visual amenity
- socio-economic impacts including housing and tourism
- bushfire risk including the Project’s potential to be a source of fire and impacts on bushfire management
- noise
- traffic.

Other issues related to Project benefit sharing, Aboriginal cultural heritage and extent of engagement with Traditional owners, aviation, air quality, land use, groundwater, surface water, and blade glint and shadow flicker.

Issues raised in submissions are considered in the IAC's assessment of Project effects in Part B of this Report.

1.5 The IAC's approach and procedural issues

(i) The IAC's task and approach

The IAC is not tasked with recommending whether the Project should be approved. Its task is to consider and report on the Project's potential environmental effects, their significance and acceptability. To that end, this Report provides an analysis of the EES including the draft PSA and an integrated assessment of the environmental, social and economic impacts of the Project, having regard to the draft evaluation objectives in the Scoping Requirements and relevant policy and legislation.

The IAC has considered the exhibited material, all written submissions received in response to the exhibited material, and evidence, submissions and other material provided to the IAC during the Hearing. All material put before the IAC has been considered, although not all of that material is specifically referenced in this Report.

(ii) Request for information

The IAC issued a Request for Information (RFI) (D23) at the Directions Hearing. The RFI directed the Proponent to provide further information about various matters based on the IAC's preliminary review of the EES and submissions.

The Proponent responded to the RFI through evidence, various written submissions and technical notes tabled during the Hearing (see Appendix D). Relevant documents are identified in the issue specific chapters below.

(iii) Site inspection

The IAC undertook an accompanied site inspection on 27 May 2025 in accordance with the itinerary and maps in D62, D196, and D197.

The IAC undertook various unaccompanied inspections prior to and during the Hearing. These inspections were confined to public places and included the sites listed in D119 and D120.

(iv) Hearings

A Directions Hearing was held in person and online on 22 April 2025. At the Directions Hearing the IAC explained its role, made various declarations, noted the submissions and information received, discussed various procedural issues and proposed directions relating to the main Hearing and site inspections. An audio recording was made available on the Engage Victoria website.

The main Hearing was held in person and online in Portland (weeks 1 and 6) and Melbourne (weeks 2, 3, 4, 5 and 7) over 21 days between 26 May and 16 July 2025. Audio recordings of the Hearing and tabled documents were made available on the Engage Victoria website.

(v) Nature Glenelg Trust submission

Mr Bachmann (founder and Managing Director of Nature Glenelg Trust (NGT)) and two NGT volunteers Dr Matthew Herring and Dr Emma Bennett presented submissions on behalf of NGT at the Hearing. These presenters have qualifications and experience in the topic areas relevant to the submissions of NGT.

The Proponent made extensive submissions relating to the status of the NGT presenters, and the weight the IAC should give the material in the context of procedural fairness. It said the NGT presenters were not independent, the information they presented was not tested and there was no opportunity for the Proponent's experts to consider and respond to the information.

The IAC agrees it is generally not acceptable to give equal weight to submissions and expert evidence, however some submitters have qualifications and considerable experience in specific topic areas.

The IAC has applied its own experience, knowledge and expertise in assessing the merits of the information presented to it and has been clear about the weight it has placed in the evidence and submissions in its assessment in Part B of this Report.

That said, the role of experts in a panel or inquiry process is clear.¹ If information is presented as evidence it may be given more weight due to the:

- independence of the person presenting the information
- duty of the expert to assist the panel or inquiry and not advocate for a party
- obligation to present written material in advance and be subject to cross examination.

The process of testing independent evidence can assist a panel or inquiry in forming a view about the reliability and credibility of the evidence. The IAC may have been able to place greater weight on the information provided by NGT presenters if they had participated in the process of cross-examining experts called by the Proponent or by calling experts relevant to their case.

It is worth noting parties have a right to be represented by whoever they chose.

(vi) DEECA independence and potential for conflict of interest

Throughout the IAC process some submitters raised concerns about the independence of DEECA and potential conflict of interest associated with the different and potentially conflicting responsibilities. In response to a direction from the IAC, DEECA advised (D39):

DEECA holds a range of responsibilities, including renewable energy policy, biodiversity conservation, public land management, and climate adaptation. In practice, DEECA's functions are conducted by a number of sub-groups that reflect particular disciplines.

DEECA's submission to the EES process includes input from multiple groups within DEECA, being the Regions, Environment, Climate Action and First Peoples (RECAFP) Group and the DEECA Energy Group. Each has participated in a manner consistent with the role and area of expertise. The submission is structured in a manner that advances material relevant to DEECA's different roles separately.

The fact that different parts of DEECA hold different policy responsibilities is neither unusual nor a conflict of interest in the context of the coordinated assessment and advisory process on foot which may, in time, inform a wide range of statutory assessments.

¹ [Planning Panels Victoria Practice Note 1: Expert Evidence](#)

DEECA explained the role it had played throughout preparation of the EES, including its role as a member of the Technical Reference Group. It said that at all stages its role was advisory, it did not endorse or approve the Project and its contributions should not be seen as supporting or opposing the Project.

DEECA engaged an advocate to represent it during the Hearing and it was clear which group of DEECA were making submissions about specific issues.

The IAC appreciates:

- the complexity of representing a government department with a range of policy responsibilities and functions
- DEECA's coordinated submissions and detailed responses to submitter concerns.

While the IAC understands the potential for confusion about DEECA's role and that of its various internal groups at different stages of the EES process, it has no concerns with DEECA's approach to participating in the IAC process. It accepts DEECA's submissions that:

- its submission on the EES was informed by technical advice from its subject matter specialists
- it has appropriately addressed its responsibilities through each of its independent functions
- the alleged conflict of interest either does not exist or is appropriately managed.

(vii) EPA

The EPA (S129) advised it did not intend to present at the Hearing and asked the IAC to provide any questions to it in writing. The IAC did not seek any further information from the EPA.

The EPA requested the opportunity to comment on the final draft EMF and Kentbruck Green Power Hub Project Incorporated Document (Incorporated Document) and provided its comments on the Day 3 version in D495.

1.6 This Report

Structure

This Report has four parts:

- Part A includes a summary of the IAC process, the Project and the EES
- Part B includes the IAC's assessment of environmental effects of the Project
- Part C includes the IAC's advice and recommendations in relation to Project approvals should the Project proceed, and its overall integrated assessment of the Project
- Part D includes the Appendices and IAC recommended Project documentation.

Project documentation

The Project documentation consists of the Environmental Management Framework (EMF) and the draft PSA.

The IAC directed the Proponent to circulate 'Day 1' versions of the Project documentation before the Hearing started and final day versions with its closing submissions. The Proponent circulated four versions of the Project documentation during the Hearing process as follows:

- Day 1 versions with changes in response to evidence and submissions - EMF (D158) and Incorporated Document (D159)

- Day 2 versions with its Part B submissions - EMF (D378) and Incorporated Document (D379)
- Day 3 versions with its closing submissions – EMF (D482) and Incorporated Document (D483)
- Day 4 versions responding to comments from parties on the Day 3 versions – EMF (D499) and Incorporated Document (500).

Parties were given the opportunity to provide written drafting comments on the Proponent’s Day 3 version of the Project documentation. Comments were received from:

- EPA (D495)
- DEECA (D496)
- Parks Victoria (D497)
- Mr Meredith (D498).

The Day 4 versions have been used as the base documents for the IACs recommendations and recommended Project documentation in Appendix F.

1.7 Acknowledgements

The IAC thanks all who participated in its process, through making submissions, presenting evidence and contributing to site visit inspections. The IAC appreciates the time people put into their submissions, and the way in which parties participated in the Hearing.

The IAC thanks the Proponent for its assistance in setting up and hosting the Hearing and document sharing platform, and for providing technical support to the IAC and parties. This ensured a smoothly run and efficient Hearing process.

The IAC particularly thanks the office of Planning Panels Victoria for its support and assistance throughout the process, with special acknowledgment to Amy Selvaraj (Manager, Major Projects), Georgia Brodrick (Project Officer), Sarah Vojinovic (Project Support Officer) and Lauren Sharpe (Principal Project Officer).

2 Kentbruck Green Power Hub Project

This Chapter provides a high-level overview of the key elements of the Project, as described in the exhibited EES, and provides context for the discussion of specific issues in Parts B and C of this Report. During the Hearing the Proponent provided additional and revised information about the Project. Where relevant, this information is discussed in Parts B and C.

Readers should refer to the relevant sections of the EES documentation and the Proponent's submissions for more specific or detailed information about the Project.

2.1 The Proponent

Neoen Australia Pty Ltd is the Proponent for the Project.

The Proponent sold its Victorian renewable energy operating assets and development pipeline, including the Project, to HMC Capital in 2024. The Proponent advised the sale had no implications for the EES process.

The IAC notes that if the Project is approved any conditions of approval would apply to the new owner.

2.2 Project area

(i) The location

The Project is located in south-western Victoria on Gunditjmara Country, generally between Portland and Nelson. It is approximately 360 kilometres west of Melbourne within Glenelg Shire in the Great South Coast Region. Nelson is the closest town approximately three kilometres west of the site.

The region hosts existing and approved wind farms, including those at Cape Bridgewater, Portland, Cape Nelson and Cape Sir William. The area has a strong and consistent wind resource, with average wind speeds of around 7-9 metres per second between 100 - 150 metres above ground level.

Figure 1 shows the Project location and surrounds.

(ii) The Project area, site and surrounds

The Project area, including the wind farm site and transmission corridor, covers approximately 8,350 hectares.

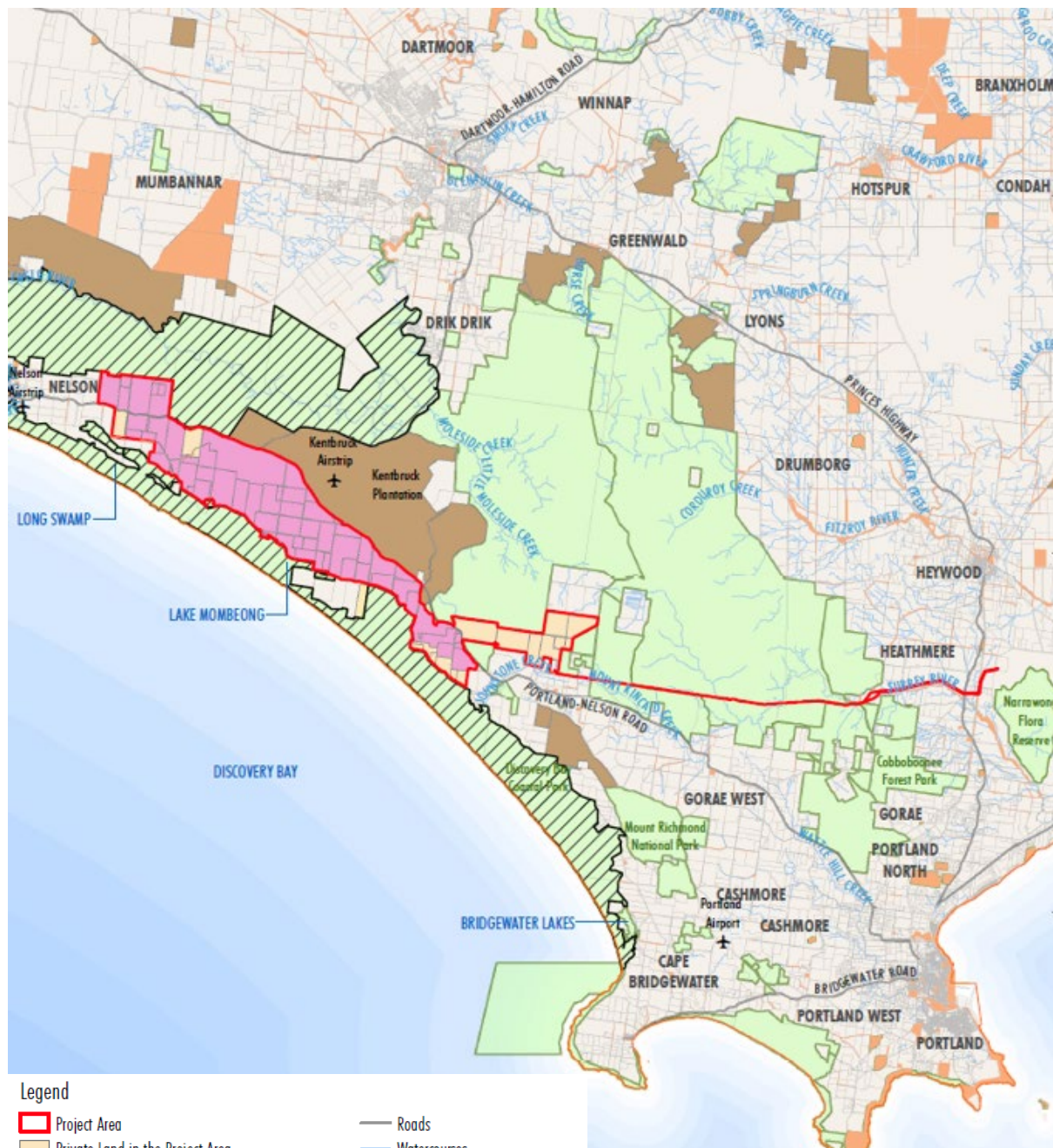
The wind farm site covers approximately 8,318 hectares. It is predominantly freehold land used for commercial radiata pine forestry (86 per cent) and the remainder (14 per cent) is used for grazing. Less than 0.1 per cent of the site is public land.

The wind farm site is surrounded by a broader area of public land that includes the Lower Glenelg National Park, Cobboboonee National Park, Discovery Bay Coastal Park and Cobboboonee Forest Park. The Mount Richmond National Park is to the southeast of the site. The Glenelg Estuary and Discovery Bay Ramsar Site (Ramsar Site) extends around much of the site to the south, west and north-west and was listed in 2018. The Glenelg River is located to the north and north-west of the site and flows to Oxbow Lake and the river mouth at Nelson. The Great South West

Walk (GSWW) is a 250 kilometre semi-remote hike which circumnavigates the Project area and passes through the surrounding national and coastal parks with sections along the coast and Glenelg River.

The pine plantation to the north of the Portland-Nelson Road, Kentbruck Plantation, is State owned and leased to Hancock Victorian Plantation.

Figure 1 Project area and land tenure



Source: EES Chapter 3, Figure 3.1

2.3 Project description

(i) The Project

The key elements of the Project are:

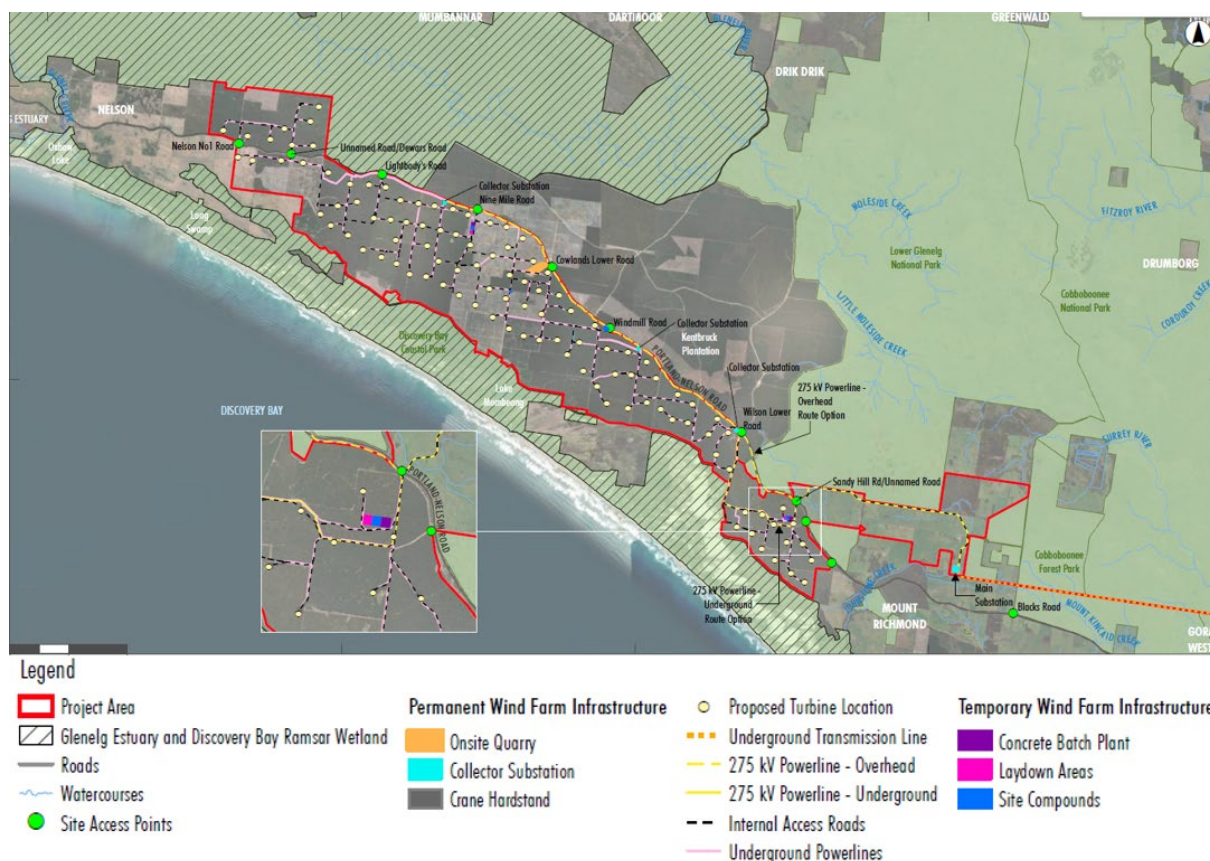
- a wind farm of up to 600 megawatts comprising up to 105 wind turbines and associated infrastructure
- a new 275 kilovolt (kV) underground transmission line, connecting the Project to the existing AusNet transmission network at the Heywood Terminal Station to the east.

The transmission line corridor covers an area up to 21 hectares, subject to future detailed design. The Project does not require any additional land for the Heywood Terminal Station connection. Once operational, the Project footprint will be approximately 342 hectares (4 per cent of the total Project area).

Construction of the wind farm is expected to take between two and 2.5 years (depending on whether a one or two stage approach is adopted), followed by electrical testing prior to wind farm energisation and operation.

Figure 2 shows the wind farm details, including indicative location of infrastructure.

Figure 2 Wind farm details



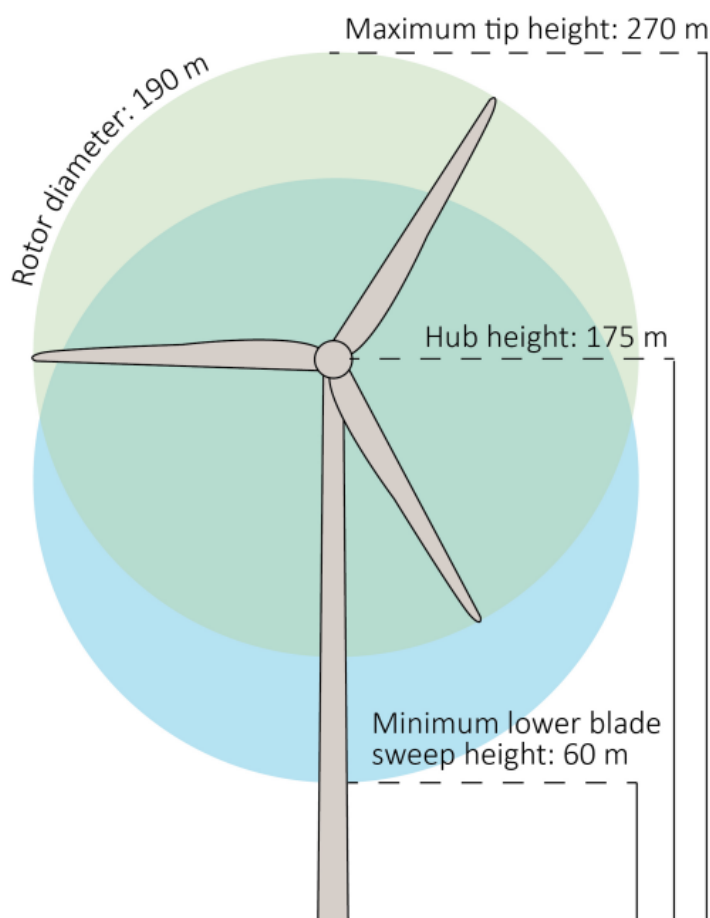
Source: EES chapter 3, Figure 3.2

(ii) Wind farm**Turbines**

The Project includes up to 105 wind turbines, with each turbine producing between 4 and 8 megawatts of peak power output. The total wind farm capacity will be approximately 600 megawatts with annual production of approximately 2,000 gigawatt hours of electricity.

The turbines will have an approximate hub height of 175 metres and maximum rotor diameter of 190 metres, with blade tip height extending from 60 metres above ground level to up to 270 metres above ground level (see Figure 3). The exact dimensions will be determined during detailed design of the Project depending on the selected turbine model. The turbines are proposed to start producing power when wind speeds reach 3.5 metres/second (m/s).

Figure 3 Indicative turbine dimensions



Source: EES chapter 3, plate 3.1

Each turbine will require a hardstand area of approximately 0.4 hectare at its base to provide for construction and maintenance. The turbine foundations will have a circular or polygonal footprint with a nominal diameter of 25 metres and depth of approximately 4 metres. Subject to detailed geotechnical assessment and design the turbines will have a concrete gravity slab or rock anchor foundation.

Additional construction laydown areas would be required within the site for delivery and temporary Project equipment during construction. The Incorporated Document provides for the turbine locations in an endorsed development plan to be moved (micro-sited) by up to 100 metres.

Internal electrical reticulation

The Project will require new electrical reticulation throughout the Project site, including underground and overhead cabling and electrical substations.

The site of the main substation that connects the wind farm to the Heywood Terminal Station is shown on Figure 4. It requires a footprint up to 3.3 hectares with a maximum height of approximately 40 metres. Up to three collector substations will be constructed within the site to provide for the distribution of electricity generated by the turbines, each with a footprint of approximately 1 hectare and a maximum height of approximately 35 metres. Indicative locations are shown on Figure 4.

The Project will require up to 190 kilometres of underground powerlines (33 kV or 66 kV) connecting the turbines to the collector substations and up to 27.8 kilometres of high voltage overhead and underground transmission lines (275 kV, subject to detailed design) connecting the collector substations to the main substation. The proposed alignments are shown in Figure 4, including two options for a section of the high voltage transmission line:

- an overhead transmission line located adjacent to Portland-Nelson Road (northern option)
- an underground transmission line running through the plantation to the south of the road (southern option).

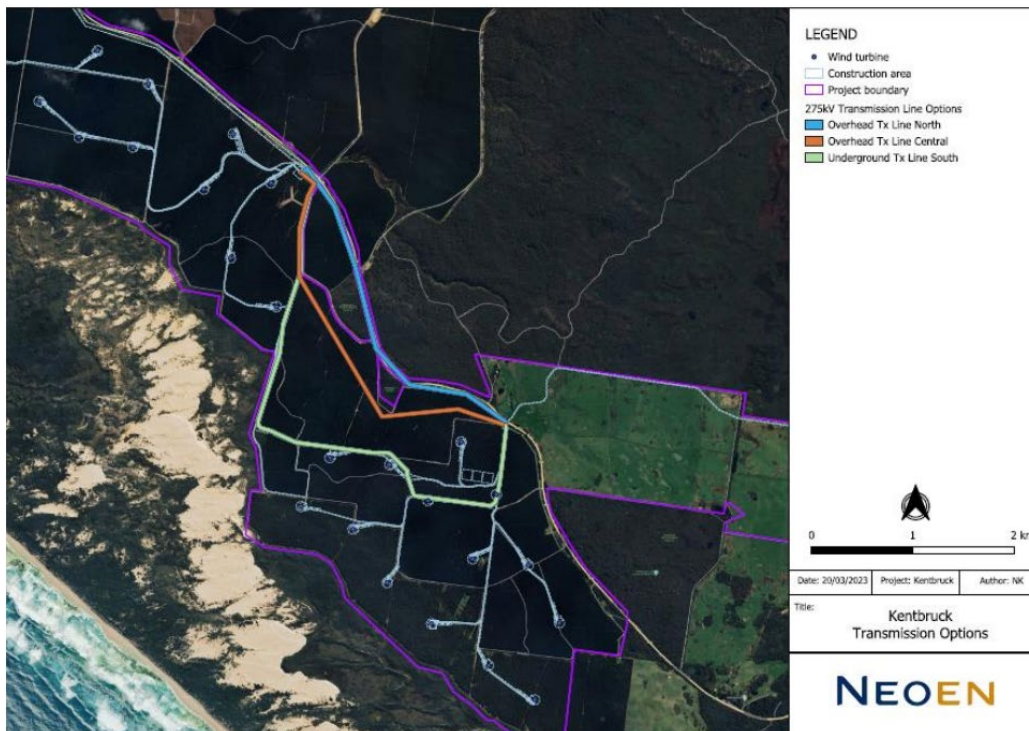
EES Chapter 3 indicated the Proponent preferred the shorter southern option but a final decision would be made during detailed design. In its Part A submission², the Proponent advised that following further assessment it preferred a new, third option (central option) with an overhead transmission line. The three options are shown at Figure 4 and are discussed in Chapter 17.1 of this Report.

Underground transmission line construction would involve the excavation of trenches to a depth of 0.8 metre to 1.2 metres, unless other construction methods such as horizontal directional drilling (HDD) are required.

The Project could require a transition station to provide for the high voltage transmission line to transition to an underground transmission line (or vice versa) depending on the options that are chosen. A transition station would have a footprint of approximately one hectare, and would be located near the southern-eastern corner of the wind farm site at the Portland-Nelson Road/Sandy Hill Road intersection.

² D52, Proponent – Part A submission

Figure 4 Three internal transmission line options (showing the Proponent's preferred central option in orange)



Source: D52, page 41, Figure 7

(iii) New underground transmission line

A new 275 kV underground transmission line is required to connect the wind farm to the Heywood Terminal Station. The transmission line route is approximately 26.6 kilometres (see Figure 5). It will bisect the Cobboboonee Forest Park and National Park for approximately 17.6 kilometres and is proposed to be constructed within the existing Boiler Swamp Road. The construction footprint along Boiler Swamp Road is 6.5 metres wide and mainly involves excavated trenches with three cable runs. Some sections will be constructed using HDD, including Surrey River crossings, potentially culvert crossings and to avoid listed native trees, Apple Jack (*Eucalyptus splendens*). The transmission line will not require any direct vegetation removal but has been assessed for encroachment into tree protection zones (TPZ) (discussed in Chapter 4).

Figure 5 Transmission line details

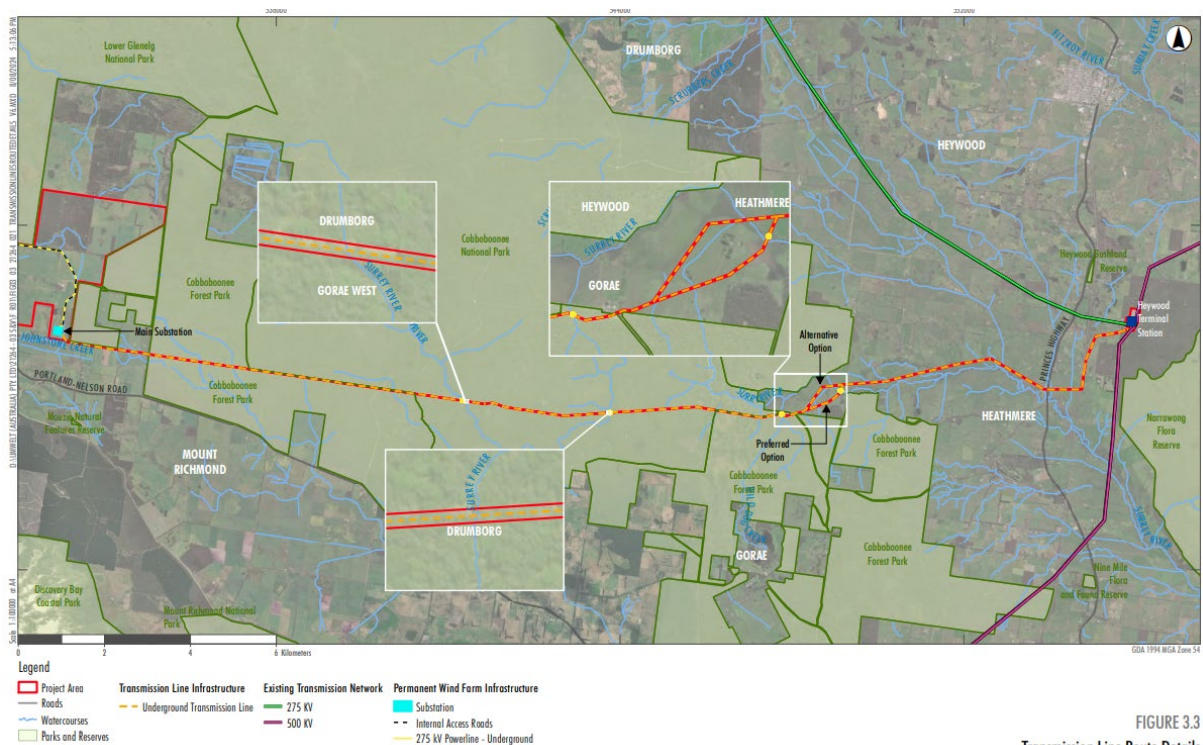


FIGURE 3.3
Transmission Line Route Details

Source: EES chapter 3, Figure 3.3

To the east of the Cobboboonee Forest Park, the underground transmission line will continue for 1.2 kilometres through agricultural land after where there are two route options (shown on Figure 5). The EES identifies the northern alignment as the preferred option, subject to geotechnical investigations during detailed design. These options are discussed in Chapter 17 of this Report.

The transmission line will then continue underground for a further 7.8 kilometres where it connects with the Heywood Terminal Station. This section of the line will be constructed using traditional open cut trenching within a 9 metre wide construction footprint.

(iv) Site access

Construction and operational access to the wind farm will be via Portland-Nelson Road, including ten entrance sites/intersections that would provide access to an existing network of roads within the site.

Nine of the entrances would be used for the delivery of components by oversize and overmass (OSOM) vehicles and would need to be widened. Internal roads will require various upgrades to be confirmed after the turbine model has been selected and its dimensions known.

(v) Onsite quarry

A new limestone quarry will be developed within the wind farm site adjacent to an existing quarry as shown in Figure 2. It will operate during construction and operation and provide material for hardstands and roads. The total quarry site area is approximately 18 hectares, including a nine hectare extraction area, 3.5 hectare overburden and product stockpile areas and one hectare of office and parking infrastructure. The remainder will be used for buffer areas. The maximum extraction depth is approximately 14 metres.

The quarry will require a new Work Authority and Work Plan under the *Mineral Resources (Sustainable Development) Act 1990* (MRSD Act) that is only intended to be available to supply material during the life of the Project, and the quarry would be rehabilitated when the Project is decommissioned. EES Technical Appendix W includes a Work Plan Requirements report.

(vi) Meteorological monitoring masts

The Project will involve installation of up to eight meteorological monitoring masts (met masts) to measure wind speed, wind direction and other meteorological conditions.

The met masts will be approximately 75 per cent of the hub height of the wind turbines. Sites for the met masts have not been proposed and will be determined during detailed Project design.

(vii) Permanent site compound

One or two permanent site compounds will be constructed for Project operation and maintenance. Each compound will include offices, sheds, carparking for up to 30 vehicles, and laydown areas, and have a footprint of approximately 0.35 hectare.

Indicative locations for site compounds are shown in Figure 2.

(viii) Temporary ancillary infrastructure

Temporary construction infrastructure will include:

- up to three concrete batching plants, potentially mobile plants (each with a one hectare construction footprint and accessed by internal roads)
- laydown areas used for temporary storage of wind farm and powerline/transmission line equipment and materials (each with a one hectare construction footprint and accessed by internal roads)
- up to six ancillary construction compounds housing temporary site offices, carparking, storage, amenities and a workshop (each with a one hectare footprint).

Indicative locations for this infrastructure are shown in Figure 2. These sites are subject to change during detailed Project design.

(ix) Offsite works

Project components from overseas are expected to be imported via the Port of Portland, although the Ports of Geelong and Melbourne are options. Components more than 4.4 metres in length (turbine blades and tower sections) will be transported from the Port of Portland to the Project area using the following roads: Madeira Packet Road, Cape Nelson Road, Malings Road, Bridgewater Road, Henty Highway, and Portland-Nelson Road. All other components will be transported directly to Portland-Nelson Road via Madeira Packet Road and Henty Highway.

The transmission line route will be accessed using the network of existing roads that intersect with Portland-Nelson Road. The Heywood Terminal Station would be accessed via the Henty/Princes Highway, Meaghers Road and Rifle Range Road.

Various road upgrades will be required, including three narrow points along the OSOM vehicle route and various road pavement widening and improvement works. The necessary works would be confirmed during detailed Project design and as part of the Traffic Management Plan (TMP).

(x) Pre-construction investigations and planning

Various pre-construction works will be undertaken, in accordance with the relevant provisions in the Incorporated Document. These include various geotechnical investigations and the preparation and approval of various management plans, including the Construction Environmental Management Plan (CEMP), Operational Environmental Management Plan (OEMP) and Decommissioning Environmental Management Plan (DEMP).

(xi) Construction timeframe and workforce

The Project will be constructed in either a single stage or over two stages. A single stage would occur over a two-year period with a peak of 350 workers. Two stage construction would occur over 2.5 years with a peak of 300 workers.

The average workforce would be 250 workers for single stage construction or 190 workers for two stage construction. Construction will be restricted to a 12 hour window from Monday to Saturday, except where there are unexpected risks to the Project and/or extenuating circumstances.

(xii) Decommissioning

The Project is expected to have an operational life of 25 to 30 years, after which the wind farm will either be decommissioned or upgraded with new turbines and ancillary infrastructure.

(xiii) Reference to Project components

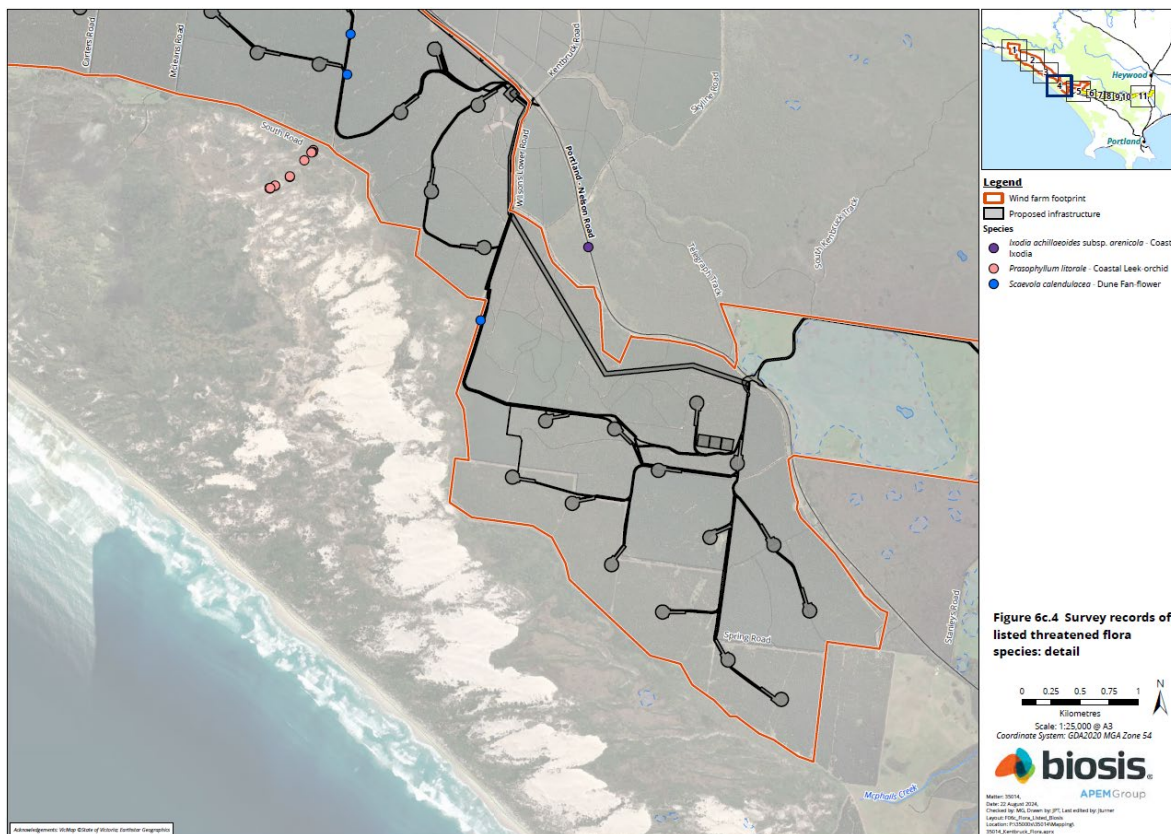
In response to a question from the IAC the Proponent clarified the 'parent documents' the IAC should rely on for its assessment:

- EES Chapter 3, Figures 3.2, 3.3 and 3.4, show the overall Project layout and proposed quarry footprint and layout
- EES Technical Appendix C (Flora and Fauna Existing Conditions an Impact Assessment), Figure 6c.4, shows the alignment of the central internal transmission line between Wilson Lower Road and Sandy Hill Road
- EES Technical Appendix O (Environmental Noise and Vibration Assessment) includes the correct turbine numbering and coordinates (subject to two transcription errors that were clarified).³

The indicative location of the wind farm (including the proposed turbine locations), the internal transmission line and new external underground transmission line are shown in Figure 2, Figure 5 and Figure 6.

³ D360, Technical Note 35

Figure 6 Proponent’s preferred internal transmission line alignment



Source: EES Technical Appendix C, Figure 6c.4

2.4 Project benefits

The EES describes anticipated Project benefits relating to environmental benefits associated with renewable energy production, energy security, climate change mitigation, and socio-economic and community benefits. Specific benefits are considered in the IAC’s assessment of Project effects in Part B of this Report.

The Project is expected to produce approximately 2,000 gigawatt-hours of renewable energy electricity and contribute to greenhouse gas emissions reductions of 2.4 million tonnes per year over at least 30 years.

The Project has potential to provide economic and social benefits associated with jobs and use of local service providers and businesses. It proposes a Shared Benefits Strategy that includes a:

- Community Enhancement Plan to fund community initiatives or programs through sponsorship or grants
- Neighbours Benefit Plan to provide financial benefits to landowners of residential dwellings within 3.5 kilometres of a turbine
- Aboriginal Participation Plan to ensure impacts on the Gunditjmara community and the GMTOAC can be appropriately and formally responded to and prioritised.

Given the proximity to sensitive ecosystems, the Project proposes to commit \$1 million each year to an ecological fund, focused on recovery actions for SBWB and other species.

The Proponent explained the Project had been selected as part of the first round of the Commonwealth government's Capacity Investment Scheme (CIS)⁴. The CIS is established under the Climate Change Act (C'th) to encourage investment in renewable energy generation and dispatchable energy project. As a successful tenderer the Proponent has entered contractual arrangements with the Commonwealth government for funding with obligations relating to First Nations and community benefits packages, supply chains and workers. The CIS commitments are separate to the EES process, however are discussed where relevant in other chapters of this Report.

2.5 Project approvals

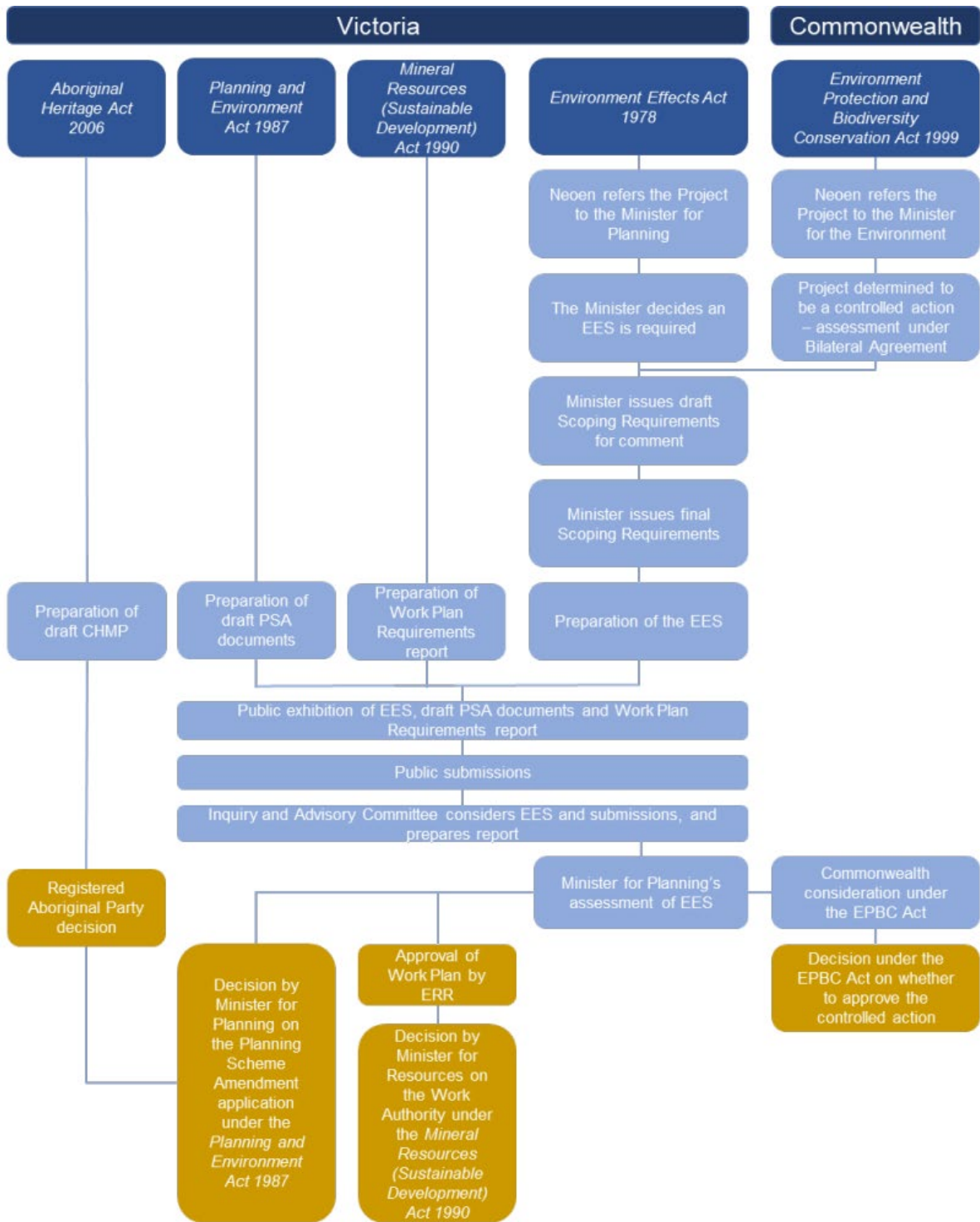
EES Chapter 5 explains the assessment and approvals framework.

Figure 7 shows the EES process and key approvals.

Key approvals are discussed in Chapter 18, and key relevant legislation, policy and strategy is summarised in Appendix E of this Report.

⁴ D133 Proponent Part B submission and D230 – TN25 Capacity Investment Scheme and the Victorian Transmission Plan

Figure 7 EES process and key approvals required



Source: EES Chapter 5, Figure 5.1

3 Environment Effects Statement

3.1 EES documentation

Table 2 sets out the EES documentation, including the:

- 20 EES main report chapters and separate summary report
- 27 Technical Appendices which assess the environmental effects of the Project.

Table 2 EES documentation

Main Report Chapters		
Chapter 1	Introduction	
Chapter 2	Project Rationale	
Chapter 3	Project Description	
Chapter 4	Project Development	
Chapter 5	Assessment and Approvals Framework	
Chapter 6	Community and Stakeholder Engagement	
Chapter 7	Biodiversity	
Chapter 8	Brolga	
Chapter 9	Surface Water, Groundwater, and Groundwater Dependent Ecosystems	
Chapter 10	Soil Contamination and Acid Sulfate Soils	
Chapter 11	Cultural Heritage	
Chapter 12	Landscape Character and Visual Amenity	
Chapter 13	Air Quality	
Chapter 14	Noise and Vibration	
Chapter 15	Transport	
Chapter 16	Land Use and Planning	
Chapter 17	Socio-Economic	
Chapter 18	Safety, Hazard and Risk	
Chapter 19	Environmental Management Framework	
Chapter 20	Conclusion	
EES Technical Appendices		Prepared by
Technical Appendix A	Transmission line options assessment (updated 5 March 2025)	Umwelt Environmental and Social Consultants
Technical Appendix B	Legislation and policy report (updated 31 January 2025)	Umwelt Environmental and Social Consultants

EES Technical Appendices		Prepared by
Technical Appendix C	Flora and fauna existing conditions and impact assessment (updated 19 February 2025)	Biosis
Technical Appendix D	Brolga impact assessment	Biosis
Technical Appendix E	Southern Bent-wing Bat impact assessment (updated 18 February 2025)	Biosis
Technical Appendix F	Surface water impact assessment	AECOM
Technical Appendix G	Groundwater impact assessment	AECOM
Technical Appendix H	Groundwater Dependent Ecosystem impact assessment	CDM Smith
Technical Appendix I	Environmental site Investigation	AECOM
Technical Appendix J	Aboriginal Cultural Heritage technical report	Andrew Long and Associates
Technical Appendix K	Historical heritage assessment	Biosis
Technical Appendix L	Landscape character and visual impact assessment	GBD Landscape Architecture
Technical Appendix M	Shadow flicker and blade glint assessment	GHD
Technical Appendix N	Air quality impact assessment	AECOM
Technical Appendix O	Environmental noise and vibration assessment	Marshall Day Acoustics
Technical Appendix P	Transport impact assessment	AECOM
Technical Appendix Q	Land use and Planning impact assessment (updated 5 March 2025)	Umwelt Environmental and Social Consultants
Technical Appendix R	Social impact assessment (updated 31 January 2025)	Umwelt Environmental and Social Consultants
Technical Appendix S	Economic impact assessment	Aurecon
Technical Appendix T	Aeronautical impact assessment	Chiron Aviation Consultants
Technical Appendix U	Electromagnetic interference assessment	GHD
Technical Appendix V	Bushfire risk assessment and mitigation plan	Fire Risk Consultants
Technical Appendix W	Quarry work plan requirements report (updated 31 January 2025)	not stated
Technical Appendix X	MNES report (updated 31 January 2025)	Umwelt Environmental and Social Consultants

EES Technical Appendices		Prepared by
Technical Appendix Y	Planning Scheme Amendment documents (updated 5 March 2025)	Umwelt Environmental and Social Consultants
Technical Appendix Z	Draft consent application under Section 27 of the National Parks Acts 1975 (updated 31 January 2025)	Umwelt Environmental and Social Consultants
Technical Appendix AA	Draft Bird and Bat Adaptive Management Plan	Biosis

The Proponent provided the following additional documents on 24 February 2025:

- *Verification of Environmental (Predictive) Operational Noise Assessment – Wind Turbine Generators* (Arup, 27 August 2025) (Noise Verification Report)
- *Kentbruck Green Power Hub Background Noise Monitoring* (Marshall Day Acoustics, 16 July 2024) (Background Noise Monitoring Report)
- *Peer review of Landscape and Visual Impact Assessment* (Peter Haack Consulting, 19 February 2025) (LVIA Peer Review).

Following confirmation from the GMTOAC, the Proponent also provided the IAC with a complete/unredacted copy on a confidential basis of EES Chapter 11 (Cultural heritage) and EES Technical Appendix J (Aboriginal Cultural Heritage Technical Report on 1 and 3 April 2025). The exhibited documents included some redactions as they contained sensitive cultural heritage information.

3.2 Environmental Management Framework

EES Chapter 19 (Environmental Management Framework) includes the proposed EMF and mitigation measures (MM-[number]). The mitigation measures are intended to mitigate, manage and monitor the potential environmental impacts of the Project. The mitigation measures build on the recommendations in the EES Technical Appendices. The EMF also provides a governance framework for implementing the mitigation measures, including roles and responsibilities for implementation, monitoring and reporting.

3.3 Draft Glenelg Planning Scheme Amendment C116gelg

EES Technical Appendix Y (Planning Scheme Amendment documents) includes the draft PSA, the Incorporated Document and supporting material. The draft PSA would provide planning approval for the Project by applying new Schedule 10 to the Specific Controls Overlay (SCO10) that provides for the construction and operation of the Project in accordance with requirements set out in the Incorporated Document.

The Incorporated Document includes provisions relating to:

- the preparation of development plans to the satisfaction of the Minister
- conditions that apply to the micro-siting of turbines
- the content of the EMF and its approval and endorsement by the Minister
- native vegetation offsets
- preparatory works.

PART B: ENVIRONMENTAL EFFECTS

4 Flora

4.1 Introduction

The relevant draft evaluation objective in the Scoping Requirements is:

To avoid or minimise potential adverse effects on biodiversity values within the project site and its environs, including native vegetation, listed species and ecological communities other protected species and habitat for these species.

Flora effects are assessed in:

- EES Chapter 7 (Biodiversity)
- EES Technical Appendix C (Flora and Fauna Existing Conditions and Impact Assessment) (FFIA), X (MNES Report) and Z (Draft consent application under Section 27 of the *National Parks Act 1975*).

The exhibited EMF includes the following mitigation measures:

- MM-BD01 Native vegetation
- MM-BD02 Offsets
- MM-BD03 Assessment of tree health along Boiler Swamp Road
- MM-BD04 Tree Protection Zones
- MM-BD05 Tree pruning
- MM-BD06 Weed and pest animal control
- MM-BD07 Boiler Swamp Road
- MM-BD08 Pre-clearance surveys
- MM-BD09 Rehabilitation of temporary disturbance areas
- MM-BD10 Flora and fauna management.

The exhibited Incorporated Document requires:

- before works commence, the location and extent of native vegetation to be removed must be shown on development plans (Clause 7.1(e))
- offsets for the removal of native vegetation must be provided in accordance with the *Guidelines for the removal, destruction or lopping of native vegetation*, DELWP, 2017 (Native Vegetation Guidelines) (Clause 7.11).

Table 3 lists the experts providing evidence on flora effects.

Table 3 Evidence on flora effects

Documents	Party	Expert	Firm	Area of expertise
D65, D146, D297	Proponent	Rob Galbraith	Galbraith and Associates	Arboriculture
D66, D149, D245	Proponent	Matthew Gibson	Biosis Pty Ltd	Ecology
D67	Proponent	Mark Venosta	Biosis Pty Ltd	Ecology
D84, D186	Proponent	Aaron Organ	Ecology and Heritage Partners	Ecology

The Proponent provided the following Technical Notes:

- D143 - TN15 – Offset Strategy, with attachments:

- D144 - Report of available native vegetation credits
- D145 - Preliminary assessment of biodiversity offset sites
- D279 – TN28 – Update on investigations of offset Blocks 6 and 7
- D388 – TN38 – Trees impact on Boiler Swamp Road.

Other key documents include:

- D192 – proponent Submission on Native vegetation, with attachments:
 - D193 – Native Vegetation Guidelines
 - D194 - Biodiversity assessment handbook - Permitted clearing of native vegetation – May 2015 - version 1.0 (DELWP)⁵
 - D195 - *Australian Standard 4970-2009 Protection of trees development sites AS 4970-2009* (AS 4970-2009)
- D252 – Assessor’s handbook - Applications to remove, lop or destroy native vegetation – Version 1.1 - October 2018 (DELWP) (Assessor’s Handbook)
- D471 - *Australian Standard 4970-2009 Second edition 2025, Protection of trees development sites AS 4970-2025* (AS 4970-2025)⁶.

The IAC has had regard to relevant policy and guidelines, including:

- FFG Act
- EPBC Act
- Glenelg Planning Scheme
- the guidelines and Assessor’s Handbook listed above
- *Protecting Victoria’s Environment – Biodiversity 2037* (DELWP, 2017)
- Glenelg Hopkins Regional Catchment Strategy 2021-2027
- Apple Jack (*Eucalyptus splendens*) Action statement (DEECA, June 2024).

4.2 What did the EES say?

The FFIA described the native flora values in the Project and surrounding areas. It noted that the Project is located predominantly in a highly modified environment, consisting of a commercial pine plantation and farmland, surrounded by several conservation reserves with high biodiversity value.

The FFIA methodology included:

- stakeholder and community consultation to understand existing conditions and inform assessment methodology
- desktop research and review of relevant databases to identify species recorded within a 10 kilometre buffer of the Project area
- vegetation and habitat mapping, prepared through field surveys, aerial imagery and publicly available vegetation mapping within the Project area, including a 100 metre buffer except where the construction footprint was intentionally narrow to avoid impacts, such as along Boiler Swamp Road
- flora surveys of the Project area carried out between May 2020 to October 2021 and for the transport route in 2023, including targeted surveys for threatened species during the appropriate time detection period, and additional surveys for Apple Jack in 2022
- identifying opportunities to avoid or minimise impacts of the Project

⁵ The Proponent provided the current version of the document in response to a question from the IAC (D252)

⁶ Updated standard released during the Hearing on 30 May 2025

- determining residual impacts and developing mitigation measures.

The FFIA explained that flora impacts were assessed in accordance with the Native Vegetation Guidelines, Assessor’s Handbook, AS 4970-2009 and Clause 52.17 (Native vegetation) of the Glenelg Planning Scheme. It described efforts taken to apply the three-step approach (avoid, minimise and offset) required by the Native Vegetation Guidelines. The approach included locating the wind farm in plantations and farmland, removing turbines, design refinements, using directional drilling for sections of transmission line infrastructure and best practice construction measures.

The Project area was assessed to include 14 Ecological Vegetation Classes and no threatened ecological communities. Table 4 describes FFG Act threatened species recorded during targeted surveys. No EPBC Act listed species were identified in the targeted surveys, however some are known to occur or be likely to occur in the Project area.

Table 4 Recorded threatened species in the Project area

Threatened flora species	Conservation status (FFG Act)	Recorded area, likely impacts and EES conclusions/recommendations
Small Sickle Greenhood (<i>Pterostylis lustra</i>)	Endangered	Transmission Line Recorded in Sedgy Riparian Woodland along the banks of the Surrey River within Cobboboonee National Park, where the underground transmission line crosses the river on Boiler Swamp Road (the eastern crossing only) The EES recommended impacts on these riparian areas be avoided by directional drilling
Dune Fan-flower (<i>Scaevola calendulacea</i>)	Endangered	Wind farm Recorded in several locations on road reserves within the plantation, including Johnsons Road, Portland–Nelson Road, Lake Mombeong Road, Dry Block Road, Carters Road, McLeans Road, Browns Road, and Wilsons Lower Road The EES concluded recorded locations are not impacted by the current wind farm design
Hairy Boronia (<i>Boronia Pilosa subsp. Torquate</i>)	Endangered	Transmission Line Recorded within Lowland Forest near Boiler Swamp Road, between the two Surrey River crossings The EES concluded this species is unlikely to be present within the regularly slashed and graded road verge
Rough Daisy-bush (<i>Olearia asterotricha</i>)	Endangered	Transmission Line Recorded within Lowland Forest adjacent to Boiler Swamp Road, between the two Surrey River Crossings The EES recommended these locations be marked and treated as no-go zones during construction
Apple Jack (<i>Eucalyptus splendens</i>)	Critically endangered	Transmission Line Recorded along Boiler Swamp Road through Cobboboonee National Park and Forest Park

Threatened flora species	Conservation status (FFG Act)	Recorded area, likely impacts and EES conclusions/recommendations
Western Peppermint (<i>Eucalyptus falciformis</i>)	Vulnerable	Wind farm and Transmission Line Recorded along Boiler Swamp Road through Cobboboonee Forest Park and Cobboboonee National Park, and in the eastern end of the wind farm site and near Heywood Terminal Station The EES concluded that Western Peppermint is relatively common within the local area
Wiry Bossiaea (<i>Bossiaea cordigera</i>)	Endangered	Transmission Line Recorded close to the road formation at several locations along Boiler Swamp Road The EES recommended these locations be marked and treated as no-go zones during construction
Tiny Violet (<i>Viola sieberiana s.s</i>)	Endangered	Wind farm and Transmission Line Recorded at two locations adjacent to Boiler Swamp Road in the western part of the Cobboboonee Forest Park, adjacent to Boiler Swamp Road (both locations were beyond the road formation) The EES recommended these locations be marked and treated as no-go zones during construction
Western Golden-tip (<i>Goodia medicaginea</i>)	Endangered	Wind farm Recorded within the road reserve along Johnsons Road, at the far western end of the Project Area The EES recommended these locations be marked and treated as no-go zones during construction

Source: Summarised from Table 7.7 EES Chapter 7 (Biodiversity)

The main flora impacts include removal of native vegetation during construction. This included a total assumed loss of 8.696 hectares of native vegetation and 228 large trees, including 83 Western Peppermint *Eucalyptus falciformis* (FFG Act: vulnerable) consisting of:

- 3.755 hectares of loss associated with the transmission line, including 2.906 hectares of assumed losses along Boiler Swamp Road due to encroachment in TPZs
- 0.021 hectares of loss associated with the transport route
- 4.920 hectares of loss associated with construction of the wind farm.

The design process prioritised avoidance of Apple Jack along Boiler Swamp Road (as described in EES Chapter 4). Trees along Boiler Swamp Road were deemed lost where there was more than 10 per cent encroachment into the TPZ (assessed in accordance with the Assessor's Handbook and AS 4970-2009). It determined that no Apple Jacks would be deemed lost due to TPZ encroachment.

The FFIA explained that AS 4970-2009 advised that directional drilling at a depth of 600 millimetres or more could be used to avoid impacts on roots within TPZs of eucalyptus trees. Root testing could be done along Boiler Swamp Road to determine the best method for trenching to minimise tree loss and potentially reduce offsets.

The FFIA concluded that suitable general and specific offsets were available and were proposed to be secured through purchasing offsets through the DEECA Native Vegetation Credit Register and land close to the Project area. The Native Vegetation Removal Report (NVR) scenario test (FFIA Appendix 9) assessed the following offset requirements based on the indicative design:

- 0.5360 units general offset amount
- 6.755 species units of habitat for Lax Twig-sedge *Baumea laxa*
- 2.824 species units of habitat for Oval-leaf *Logania ovata*
- 6.009 species units of habitat for Scented Spider-orchid *Caladenia fragrantissima*
- 2.542 Species Habitat Units for Hairy Boronia *Boronia pilosa subsp. torquata*
- 5.725 species units of habitat for Leafy Greenhood *Pterostylis cucullata subsp. Cucullata*.
- 228 large tree offsets.

4.3 Native vegetation

(i) The issues

The issues are whether:

- assessment of native vegetation losses is appropriate
- effects on native vegetation are acceptable
- suitable offsets can be provided.

(ii) Evidence and submissions

Native vegetation assessment

Both Mr Gibson and Mr Organ gave evidence that they were satisfied the Project was adequately designed and assessed in accordance with the Native Vegetation Guidelines, including appropriate consideration of the avoid, minimise and offset requirements.

Overall Mr Gibson considered the native vegetation impacts to be low, and he was satisfied adequate efforts had been made in the Project design to avoid and minimise native vegetation removal and habitat disturbance.

Mr Gibson said applications to remove native vegetation must comply with the Native Vegetation Guidelines and the Assessor's Handbook. He noted the Assessor's Handbook states assessments must be current (generally within five years for forest vegetation) and given the assessment work commenced in 2020 it is likely that some sites will need to be reassessed.

Further, he said:

- a detailed assessment should be undertaken for any additional or relocated Project infrastructure, if not included in previous assessments
- small changes are unlikely to alter the overall impact assessment, but will require assessment and quantification to satisfy policy requirements and inform any micro siting.

Regarding transport route impacts, Mr Gibson advised that changes to the Project at three transport routes would reduce the native vegetation impact by 0.244 hectares.

Both Mr Gibson and Mr Venosta preferred the southern (underground) internal transmission line option and suggested that undergrounding the central option would also result in a low impact option on native vegetation (discussed in Chapter 17.1).

Mr Organ was satisfied the FFIA was complete and accurate, and the Project design avoided high value remnant vegetation and large trees, noting:

The Native Vegetation Report [required by MM-BD01] will be updated to reflect minor refinements to the Project layout and anticipated reductions in vegetation loss from construction methods, including refined trenching alignments and intersection upgrades.⁷

Mr Organ's evidence described efforts made to avoid and minimise native vegetation loss including micro-siting infrastructure, directional drilling beneath sensitive features, establishing no-go zones, refined alignment and trenching practices and restricting construction activity.

The Proponent submitted that while there would be no direct removal of native vegetation within Cobboboonee National Park and Cobboboonee Forest Park from constructing the transmission line, there may be some encroachment of TPZs for protected species. This had been accounted for in assessing native vegetation loss, in accordance with the Native Vegetation Guidelines.

Mr Galbraith gave evidence that the transmission line can be constructed along Boiler Swamp Road without having an adverse impact on *"the longevity of virtually any tree"*, using open trenching as far as 1.5 metres from the centreline of the road. He said:

- there will be little or no root loss within 1.5 metres of the centreline of the road caused by open trenching and cable laying
- relatively simple tests (such as non-root destructive hydro-excavation) can determine whether significant root loss will result from open trenching.

Mr Galbraith suggested sample testing with *"hydro-trenching opposite a sample of approximately ten-twelve trees would be all that would be necessary to show beyond any reasonable doubt that the road is acting as an effective impediment to root growth. The trees chosen should be those with the largest proportional TPZ area encroachment envisaged from the proposed transmission line trenching"*.

Mr Galbraith provided an addendum report relating to dynamic cone penetration testing along Boiler Swamp Road to understand soil penetration resistance (and associated root penetration) that showed results were not conclusive.⁸ He provided a further addendum explaining the update to the Australian Standard AS 4970:2025 (Protection of trees on development sites) that was released during the Hearing (30 May 2025).⁹ He advised the updated standard did not change his conclusions.

Both Mr Gibson and Mr Organ endorsed Mr Galbraith's arboriculture evidence relating to tree impacts and agreed the assessment of assumed losses was conservative. Mr Gibson expected the actual losses along Boiler Swamp Road to be considerably lower than assessed as the tree root disturbance is likely to be lower. He recommended using a sampling process to confirm the likely impact and to refine native vegetation impact calculations.

DEECA supported use of construction techniques that avoid native vegetation removal.

DEECA advised that the Assessor's Handbook had been updated to account for changes to AS 4970:2025. It submitted that Mr Galbraith's advice was *"opinion evidence"*, and *"not site-specific"*

⁷ D186, Proponent – Technical Note 20 (RFI21)

⁸ Mr Galbraith explained dynamic cone penetration testing essentially consists of hammering a steel rod into the ground and measuring the resistance based on the number of blows per 100 millimetre penetration, with the purpose to gain knowledge of the soil penetration resistance (D65). The results were provided in Mr Galbraith's addendum (D146).

⁹ D297, Proponent – R Galbraith Evidence Statement Addendum

investigations based on an appropriate arborist's report upon which to frame its findings. The arboriculture evidence statement is not an arborist report that DEECA would accept as satisfying the Assessor's Handbook".¹⁰

DEECA submitted the evidence did not adequately assess potential impacts, based on the lack of field-based investigations, technical assessment and reconciliation with the FFIA. Further there was a discrepancy between the construction footprint in Mr Galbraith's evidence (1.5 metres along either side of the centreline of the road) and that proposed (6.5 metres not all along the centreline).

DEECA explained the information that would be required if the Proponent sought to reduce offset obligations by reclassifying trees previously assessed as lost.

Many submitters were concerned about native vegetation loss and habitat removal, including:

- objecting to any native vegetation loss
- concern about loss of old growth forests and protected flora.

NGT described the extent of remnant vegetation lost across the region and submitted the Cobboboonee National Park:

...forms part of one of the largest continuous areas of remnant vegetation within south-western Victoria and it consequently retains values that have been lost elsewhere.

NGT was concerned that mature trees and understorey plants would be damaged during construction due to access requirements and the need for large scale machinery, and uncertainty of the alignment and construction footprint.

Some submitters were concerned with potential impacts on Cobboboonee National and Forest Parks from the underground transmission line along Boiler Swamp Road.

Mr Turner submitted the spatial extent of clearing along Boiler Swamp Road was not clear through Cobboboonee National and Forest Parks. He raised issues relating to the potential for rocks to impact construction methodology and footprint, inconsistency with AS 4970: 2025, survey and mapping work not being fit for purpose, directional drilling locations not being accurate, risks associated with spoil management and access, cable joint boxes not being accurately assessed.

In response to submissions, the Proponent submitted the IAC should accept the extent of assessed native vegetation losses along Boiler Swamp Road was a conservative worst-case scenario. It relied on the evidence of highly experienced Mr Galbraith, stating it is highly unlikely there will be substantial root penetration in the 1.5 metre either side of the centreline of the road and many of the trees assumed to be lost will be retained. It noted that DEECA was satisfied the impacts could be appropriately managed. Further, as advised by DEECA, deep ripping up to 750 millimetres occurs periodically along the road, which would destroy any roots that had penetrated within that depth.

In its closing (reply) submissions (D484) the Proponent provided a detailed response to the issues raised by Mr Turner. It clarified that many of Mr Turner's concerns can be resolved during the Project development and detailed design phase.

¹⁰ D393, DEECA Hearing Submission

Threatened species and communities

Mr Gibson explained the flora assessment identified records of a large number of EPBC Act and FFG Act threatened species “*due to the high quality of the conservation reserves within the area, the range of vegetation types represented and the high biodiversity of nutrient poor ecosystems such as sand dunes, heathy woodlands and wet heathlands*”.¹¹ The 2019 revisions to the FFG Act resulted in numerous flora species being added to the FFG Act Threatened List during the assessment for the Project. Many of these were not included in the Scoping Requirements and were not listed when surveys were undertaken, and as a result were not all targeted in the field assessment program.

Mr Gibson’s evidence considered these additional species in terms of likelihood of occurrence and potential for impacts, and additional surveys were conducted:

- for species known or considered likely to be present, including Apple Jack (FFG Act: critically endangered) and Western Peppermint (*Eucalyptus falciformis*) (FFG Act: vulnerable)
- near the Heywood Terminal Station where trenching is proposed.

Mr Gibson explained that:

- Apple Jacks were listed as critically endangered under the FFG Act in 2021, and further survey work identified them along the full length of Boiler Swamp Road (and it is assumed they are widespread in the Coobboboonee Forest). Avoidance of Apple Jack root zones was prioritised in the design revisions undertaken and reflected in the EES, including micro-siting of the trench within the road corridor, and selecting locations for directional drilling.
- Western Peppermint was common and widespread in the region and species were recorded near Heywood Terminal Station and along Boiler Swamp Road. A total of 83 Western Peppermint trees are included as assumed losses due to TPZ impacts (greater than 10 per cent).
- Dune Fan-flower (*Scaevola calendulacea*) (FFG Act: endangered) was recorded in several locations on road reserves within the plantation. These locations are not impacted by the current Project design, and will need to be considered in terms of any design changes or micro-siting.
- Several threatened understorey species were recorded adjacent to Boiler Swamp Road. The pre-construction survey will identify and mark these to ensure they are protected during construction.

Mr Gibson said no threatened ecological communities would be subject to adverse residual impacts from the Project, provided mitigation measures are implemented. While there are five threatened ecological communities present in the investigation area, there are none in the Project area, noting that Coastal Moonah Woodland Community (FFG Act: threatened) was not recorded.

Mr Organ gave evidence he was generally satisfied the targeted field surveys were undertaken in accordance with nationally recognised standards, informed by up-to-date guidance and appropriately timed. In preparing his evidence he reviewed the Victorian Biodiversity Atlas (VBA) and the EPBC Act Protected Matters Search Tool and identified nine recorded species that were

¹¹ D66, M Gibson Expert Witness Statement, page 14

not identified in the FFIA. He considered it unlikely these would occur in the Project area and said there would be no implications for the Project.

Mr Organ advised the Project appropriately avoided impacts to Apple Jack along Boiler Swamp Road. He agreed that threatened ecological communities are not presented in the Project construction footprint. He recommended pre-construction surveys for Leafy Greenhood, noting it had been overlooked as an EPBC Act-listed species in the assessment, noting *“it appears that targeted surveys were undertaken but may not have been as intensive if it wasn’t treated as an EPBC Act-listed species”*.¹²

DEECA noted an application to take protected flora may be required under the FFG Act for the removal of native vegetation on public land. It said if impacts to Apple Jack (FFG Act: critically endangered) could not be avoided this may have implications for offset requirements and any applicable FFG Act permit.

NGT submitted there were limitations to the completeness of surveys of threatened flora that was undertaken over a 12 month period.

Offsets

The Proponent provided TN15 which detailed its offset strategy.¹³ In summary, it said the offset requirements for the Project are likely to be met through a combination of first party and third party offsets. The Proponent provided an offset report¹⁴ which identified potential offset sites in the event third party offsets are not available through the Native Vegetation Credit Register. While the potential offset sites are in various stages of investigation for eligibility/suitability and engagement with landholders, the offset report confirmed the requirements could likely be met with a combination of first and third party offsets.

Mr Gibson confirmed the native vegetation offset requirement, as represented in the FFIA. He noted further work was underway to inspect the potential offset sites and confirm they meet the eligibility criteria.

Mr Organ said the offset figures were based on a conservative assessment of potential impacts on trees, and he was confident the obligations could be met. He said the NVRR would need to be updated to account for recent changes to infrastructure layout.

While acknowledging it is likely offsets can be identified and secured, DEECA submitted it is a requirement of the Native Vegetation Guidelines to provide evidence an offset meets the requirements and can be secured.

DEECA submitted that:

- any change to the assessment of assumed losses of 228 trees and 8.696 hectares must be supported by an updated NVRR
- it supports efforts to further reduce native vegetation loss and inclusion of an offset reconciliation mechanism in the EMF.

¹² D84, Mr Organ Expert Witness Statement, page 31

¹³ D143, TN15 (Offset strategy)

¹⁴ D145, TN15 (Offset strategy), attachment: Report of available native vegetation credits

DEECA and experts agreed that it is appropriate to remove the offset requirement for Hairy Boronia (*Boronia pilosa subsp. Torquata*) (FFG Act: endangered) due to updated habitat mapping (which DEECA had approved).

Some submitters raised concerns about the appropriateness of offsets for native vegetation protection. Mr Gibson responded that offsets were State policy.

In closing the Proponent said it has sought to engage with DEECA regarding evidence of offsets on a confidential basis, however it can confirm that agreements have been entered into that will facilitate provision of offsets as required by the NVR in the EES.

Mitigation measures and Incorporated Document

Mr Gibson generally endorsed the mitigation measures relating to native vegetation, subject to qualifications in response to questions of cross examination.

DEECA proposed to move some content from the EMF to the Incorporated Document, including MM-BD02 (Offsets) parts of MM-BD07 relating to Boiler Swamp Road assessment of losses.¹⁵

The Proponent submitted there was limited difference between the Proponent and DEECA on how native vegetation should be addressed in the Project documentation. It accepted DEECA's suggestion to move the offset requirements from the EMF to the Incorporated Document and proposed amending the requirements to provide more flexibility in relation to third party offsets. It preferred to leave the other native vegetation mitigation measures in the EMF.

The Proponent suggested refinements to mitigation measures relating to native vegetation in response to the evidence and submissions, and proposed new MM-BS01 (Construction environmental management plan Boiler Swamp Road).

(iii) Discussion

Native vegetation assessment

The IAC is satisfied that:

- the native vegetation assessment has appropriately considered relevant legislation, policy and guidelines, including the Native Vegetation Guidelines
- adequate efforts have been made to avoid and minimise loss of native vegetation for the Project.

The Proponent has made significant efforts to avoid and minimise native vegetation loss. Given the size and extent of the Project, the IAC agrees with Mr Gibson the native vegetation impacts are low.

MM-BD01 (Native vegetation) provides for preparation of a Native Vegetation Plan (NVP) that will be based on a final NVR and Biodiversity Assessment Report (or equivalent). This responds to the need to ensure the native vegetation assessment is adequately current (as required by the Assessor's Handbook) and responds to any changes in finalising the Project design. This will identify potential further reductions in native vegetation loss, including along the transport route (as identified by Mr Gibson) and the updated calculation of losses required by the amended MM-

¹⁵ D462, DEECA comments on Day 2 EMF

BD06 (Boiler Swamp Road assessment of losses). The IAC has made minor changes to the drafting of MM-BD01 to clarify that the Biodiversity Assessment Report (or equivalent) will be updated.

The IAC is satisfied the impacts along Boiler Swamp Road have been appropriately assessed for this stage of the process. The IAC accepts that the assessment determines the maximum extent of vegetation that can be removed, no Apple Jack trees are expected to be lost, and assessment of losses is conservative.

The Day 4 EMF appropriately proposes mitigation measures to:

- assess tree health before construction commences, to provide a benchmark for assessing actual loss (MM-BD02)
- reassessing losses based on the proposed infrastructure and construction methods, informed by root investigations, and including a specific requirement to confirm no Apple Jacks will be impacted (MM-BD06)
- using the reassessed losses (MM-BD06) to inform an updated Biodiversity Assessment and NVRP (MM-BD01)
- protecting identified trees by marking TPZs and undertaking pruning if required in accordance with AS4970: 2025 (MM-BD03 and MM-BD04).

Critically MM-BD06 requires that the root investigation program must be approved by DEECA Regions and informed by an arborist. The IAC recommends a minor change to MM-BD06 to ensure the arborist is suitably qualified and experienced (given the significance of this professional assessment as provided for in AS4970:2025).

The Proponent has also introduced a new mitigation measure MM-BS01 to require a construction environmental management plan be prepared for Boiler Swamp Road, in consultation with DEECA and endorsed by the responsible authority. This will include details of the underground transmission line infrastructure and construction methods. Further matters relating to Boiler Swamp Road construction impacts on transport and bushfire management are discussed in Chapters 13 and 16.4 of this Report.

The IAC is generally satisfied the detailed issues raised by Mr Turner can be addressed during detailed design. The IAC appreciated Mr Turner's submissions and participation in the Hearing to ensure these matters were well explored.

The Proponent's proposed changes to the EMF will assist with resolving Mr Turner's concerns, with some matters being addressed during detailed design and others requiring management during construction. In relation to specific concerns:

- any variance to the tree data can be addressed by the mitigation measures MM-BD01 and MM-BD-06
- the IAC understands there will be around 20-22 joint boxes and there is flexibility in where they are placed to avoid impacts on native vegetation
- as noted by the Proponent in its closing (reply) submissions "*the cost of construction is a matter for, and a risk to be borne by, the Proponent*"¹⁶
- the consent application under section 27 of the *National Parks Act 1975* (National Parks Act) will need to reflect the updated native vegetation assessment.

¹⁶ D484, Proponent – closing (reply) submissions, page 60

The IAC has discussed matters relating to the internal transmission line options in Chapter 17.1 of this Report.

Threatened species and communities

While the area is rich in listed species due to the location, surrounding environment and national/coastal park setting, the Project is not likely to have significant effects on threatened flora species and no threatened communities will be significantly affected.

The IAC is satisfied the assessment and survey effort was appropriate, including the additional assessment and survey effort undertaken in response to listing of new species under the FFG Act since the assessment. The pre-clearance surveys required before removing native vegetation (MM-BD07) will ensure any listed species are identified, including the Leafy Greenhood and Dune Fan-Flower, as recommended by Mr Organ and Mr Gibson respectively. Importantly, MM-BD07 requires:

- surveys to be undertaken by an appropriately qualified and experienced ecologist and at an appropriate time of year for each species to maximise the probability of detection
- if any threatened flora species are recorded within the previously unsurveyed areas, these areas will be avoided, and subsequently addressed within the CEMP for the Project, including updating mapping.

The IAC accepts the evidence of Mr Organ that the impacts on threatened species are appropriately addressed through the mitigation measures and offset strategies. Permits may be required to take protected flora under the FFG Act.

The IAC is satisfied that adequate efforts have been made to assess and avoid critically endangered Apple Jacks at this stage of the process. As noted by DEECA, if impacts cannot be avoided there will be implications for offsets and an FFG Act permit that will be subject to a separate process.

Offsets

The IAC accepts that appropriate native vegetation offsets are likely to be secured, and must be demonstrated before construction commences. The updated final NVRR required by MM-BD01 will reflect the amended assessed native vegetation removal and capture any changes to offset requirements during detailed design and Project refinement.

The Day 4 version of the Incorporated Document includes appropriate native vegetation provisions (clauses 7.14 – 7.18) including:

- no more than 8.696 hectares of native vegetation be removed
- a NVP must be prepared in accordance with the EMF, in consultation with DEECA and endorsed by the Minister
- before construction, an offset must be secured in accordance with the endorsed NVP (MM-BD01) and Native Vegetation Guidelines, and a final offset strategy must be prepared
- before native vegetation is removed, evidence of the secured offset must be submitted to, approved and endorsed by the Minister.

The IAC is satisfied with the Proponent's proposed options for securing third party offsets (clause 17.7). Critically the provision requires that evidence must be provided demonstrating the offset has been secured before any native vegetation is removed.

It is appropriate for the final offset strategy (clause 17.6) to be developed in consultation with the relevant land managers and project stakeholders. The IAC recommends it should also:

- be agreed by DEECA
- include details of the agreed security agreement mechanism, in accordance with the Native Vegetation Guidelines.

The IAC's recommended Incorporated Document at Appendix F:2 reflects these changes.

As contemplated by the Assessor's Handbook, offsets may be reconciled following construction of the transmission line along Boiler Swamp Road. The EMF provides for this explicitly in relation to Boiler Swamp Road through MM-BD02 (Assessment of tree health along Boiler Swamp Road). The IAC is satisfied with this approach, particularly in the context of the conservative tree loss assessment. The proposed post-construction survey of between 24 – 30 months was not contested, and the IAC accepts this timeframe for assessment of tree health. The IAC recommends MM-BD02 be amended to require the surveys associated with the assessment of tree health along Boiler Swamp Road be undertaken to the satisfaction of DEECA.

Mitigation measures and Incorporated Document

The IAC has made minor drafting changes to the mitigation measures for clarity.

Subject to its recommended changes discussed in this Chapter and shown in Appendices F:1 and F:2, the IAC is satisfied the EMF and Incorporated Document will result in acceptable impacts on native vegetation.

(iv) Findings and recommendations

The IAC finds, subject to its recommendations:

- Together the FFIA and expert reports provide an appropriate assessment of impacts on native vegetation, and the mitigation measures provide for reassessment and update of the Biodiversity Assessment and NVRP following detailed design.
- Impacts on threatened flora species are acceptable and can be managed through implementation of the EMF. No impacts are expected on threatened flora communities.
- Offsets should be secured before works commence, and may be reduced through a formal reconciliation process, as relevant and approved by DEECA.

The IAC recommends:

Environmental Management Framework

Include the following changes:

- a) **Amend MM-BD01 (Native vegetation) to change the title to Native Vegetation Plan and to make it clear the Native Vegetation Removal Report and Biodiversity Assessment should be updated.**
- b) **Amend MM-BD02 (Assessment of tree health along Boiler Swamp Road) to require the surveys to be undertaken to the satisfaction of Department of Energy, Environment and Climate Action.**
- c) **Amend MM-BD06 (Boiler Swamp Road assessment of losses) to require root investigations be informed by a suitably qualified and experienced arborist and an updated Native Vegetation Removal Report.**

Incorporated Document

Include the following change:

- a) Amend Clause 7.16 to require the final offset strategy include details of the proposed security mechanism and to be agreed by Department of Energy.**

These changes are included at Appendices F:1 and F:2.

4.4 Overall conclusions on flora effects

Subject to applying its recommendations, the IAC is satisfied the Project is consistent with relevant policy and legislation and relevant draft evaluation objectives. The likely flora effects are not significant and the IAC is satisfied any effects are acceptable and do not preclude the Project being approved.

5 Fauna

5.1 Introduction

The relevant draft evaluation objective in the Scoping Requirements is:

To avoid or minimise potential adverse effects on biodiversity values within the project site and its environs, including native vegetation, listed species and ecological communities other protected species and habitat for these species.

Fauna effects are assessed in:

- EES Chapters 7 (Biodiversity) and 8 (Brolga)
- EES Technical Appendices AA (Draft Bird and Bat Adaptive Management Plan) (Draft BBAMP), C (Flora and Fauna Existing Conditions and Impact Assessment (FFIA)), D (Brolga Impact Assessment), E (Southern Bent-wing Bat Impact Assessment) and X (MNES Report).

The exhibited EMF includes the following mitigation measures:

- MM-BD08 Pre-clearance surveys
- MM-BD10 Flora and fauna management
- MM-BD11 Australasian Bittern
- MM-BD12 Bird and Bat Adaptive Management Plan
- MM-BD13 Southern Bent-wing Bat Management
- MM-BD14 Seasonal Nocturnal Low wind speed curtailment
- MM-BD15 Southern Bent-wing Bat Recovery and Funding
- MM-BD16 Improved powerline visibility
- MM-BR01 Construction during Brolga breeding season
- MM-BR02 Brolga Monitoring and Compensation Plan.

The exhibited Incorporated Document includes the following Clauses relevant to fauna:

- 7.8 - Requires approval of the EMF
- 7.19 – 7.24 - Requirements for the BBAMP
- 7.25 – 7.29 - Brolga Monitoring and Compensation Plan
- 7.30 - Australasian Bittern Offset Plan
- 7.31 - Ecology Fund.

Table 5 lists the experts providing evidence on fauna effects.

Table 5 Evidence on fauna effects

Documents	Party	Expert	Firm	Area of expertise
D66, D149, D245, D246, D263, D321, D384, D493	Proponent	Matthew Gibson	Biosis	Ecology
D67, D264, D385	Proponent	Mark Venosta	Biosis	Ecology
D84, D247, D383, D494	Proponent	Aaron Organ	Ecology and Heritage Partners	Ecology – independent peer review

Relevant technical notes include:

- D106 – TN5: RFI 10 - Dr Van Harten peer review
- D107 – TN6: RFI 23 - R Loyn peer review
- D111 – TN10: Mortality monitoring in a plantation setting (Symbolix)
- D142 – TN13: Substation works within Brolga breeding buffer
- D223 – TN16: Technology for monitoring detection and curtailment (including Attachment 1 (D224 IdentiFlight) and Attachment 2(D225 DHI Muse)
- D148 – TN17: RFI 14 and 15 – Southern Bent-wing Bat cost of curtailment
- D149 – TN18: RFIs 13, 17, 21, 22 – Matt Gibson (Ecology) responses
- D182 – TN18: RFI 13 – Figure 2 Distribution of Southern Bent-wing Bat and locations of known maternity caves (confidential)
- D150 – TN19: RFIs 16, 17, 22 – Mark Venosta (Ecology) responses
- D226 – TN22: RFIs 5, 9, 11, 12, 18, 19, 21, 22 and 24 – A Organ (Ecology) responses
- D227 - TN23: RFI 5 and 8 – Sensitive ecological receptors and SBWB
- D240 – TN26: Brolga submitter requests
- D279 – TN28: Update on investigations of offset Blocks 6 and 7
- D280 – TN29: RFI 23 – Brolga peer review comments (R Loyn).

After submissions on the EES had closed, the following documents were released by DEECA in March 2025 and tabled by the Proponent:

- D153 – Arthur Rylah Institute for Environmental Research (ARI) Technical Report 389: *Assessment, mitigation and monitoring of onshore wind turbine collision impacts on wildlife* (ARI and DEECA, 2025)
- D154 - *Foraging flights of the Southern Bent-wing Bat during two seasons* (DEECA, 2025).

On 24 May 2025, DEECA advised the IAC of the release of several documents prepared as part of a multi-year research and policy program under the Joint Ministers' Statement – *A better approach to managing biodiversity impacts of renewable energy projects*. While these were not specific to the Project, DEECA considered they were relevant to the assessment and accordingly brought forward their release. These documents were tabled as:

- D172 – *Estimating potential effectiveness of mitigations for onshore wind energy facilities using structured expert elicitation* (summary report) (DEECA, 2025)
- D173 - ARI Technical Report 394: *Estimating the potential effectiveness of wind farm mitigations using structured expert elicitation* (ARI and DEECA, 2025)
- D174 - *Comparison of pre and post construction wind farm survey results for birds and bats in Victorian wind energy facilities* (summary report) (DEECA, 2025)
- D175 – *Flight height patterns of a critically endangered insectivorous bat, impacted by wind turbine collision* (ush, Lumsden and Prowse, 2025)
- D210 - *Handbook for the development of renewable energy in Victoria: Guidance to avoid, minimise, mitigate and compensate for impacts on threatened bird and bat species* (DEECA, 29 May 2025) (Renewable Energy Handbook 2025).

Transitional arrangements in the Renewable Energy Handbook 2025 mean it does not apply to the Project. Consideration of other documents is explained as relevant in the chapters below.

Other key documents included:

- D229 – Updated Draft Bird and Bat Adaptive Management Plan (Updated BBAMP). This is an updated version of the Draft BBAMP provided in EES Technical Appendix AA of the EES.
- D266 – *Breeding home range movements of pre-fledged broilga chicks, Antigone rubicunda (Gruidae) in Victoria, Australia – Implications for wind farm planning and conservation* (Veltheim et al, 2019)
- D267 – *Partial migration of Broilgas (Antigone rubicunda) within a restricted range is revealed by Global Positioning System (GPS) tracking* (Veltheim et al, 2022)
- D332 – ARI Technical Report 302: *Investigation of existing post construction monitoring at Victorian wind farms to assess its utility in estimating mortality rates* (ARI and DELWP, 2019).

The IAC has had regard to relevant legislation, policy and guidelines, including:

- FFG Act
- EPBC Act
- Glenelg Planning Scheme
- *Protecting Victoria's Environment – Biodiversity 2037* (DELWP, 2017)
- Glenelg Hopkins Regional Catchment Strategy 2021-2027
- EPBC Significant Impact Guidelines 1.1 – Matters of national environmental significance
- D251 – *Environment Protection and Biodiversity Conservation Act 1999 Environmental Offsets Policy* (Commonwealth of Australia, 2012)
- D258 – *National Recovery Plan for the Australasian Bittern Botaurus poiciloptilus* (Commonwealth of Australia, 2022)
- D259 – *National Recovery Plan for the Southern Bent-wing Bat Miniopterus orianae bassanii* (DELWP, 2020)
- D260 – *Interim Guidelines for the Assessment, Avoidance, Mitigation and Offsetting of Potential Wind Farm Impacts on the Victorian Broilga Population* (Department of Sustainability and Environment, 2012) (Interim Broilga Guidelines)
- D261 – *Conservation Advice Australasian Bittern Botaurus poiciloptilus* (Threatened Species Scientific Committee, 2019)
- D262 – *Conservation Advice Miniopterus orianae bassanii Southern Bent-wing Bat* (Threatened Species Scientific Committee, 2021)
- D322 – *EPBC Act Policy Statement 3.21: Industry guidelines for avoiding, assessing and mitigating impacts on EPBC Act listed migratory shorebird species* (Commonwealth of Australia, 2017).

5.2 Southern Bent-wing Bat

(i) The issues

The issues are whether:

- the Project is likely to result in significant effects on the SBWB
- such effects are acceptable and will not compromise the recovery of the species.

(ii) What did the EES say?

The SBWB is listed as critically endangered under both the EPBC Act and the FFG Act. It has a distribution across south-east South Australia and south-west Victoria. The total population is estimated at 63,100 (40,000 in South Australia and 23,100 in Victoria).

The SBWB relies on caves for roosting and breeding. During the breeding season, most of the population congregates in two regularly used caves, near Naracoorte in South Australia and Warrnambool in Victoria (Figure 8). Breeding activity has also been observed annually since 2015 in a sea cave to the west of Portland and southeast of the Project area.¹⁷ This is now recognised as a third maternity cave. There may be limited migration of individuals between the Naracoorte and Warrnambool maternity caves, but interchange occurs between those sites and the Portland cave.

In the non-breeding season, SBWB individuals are distributed throughout the region, roosting in caves and rock crevices. There are known roost caves in the Lower Glenelg National Park and at Bat's Ridge, near Portland Airport.

Collisions between SBWB and wind turbines have been recorded at wind farms in south-west Victoria with 22 mortalities known to have occurred.

The SBWB surveys for the project involved two stages:

1. Preliminary surveys at 8 – 10 ground locations and on one met mast – November 2018 to April 2019.
2. Surveys involving four met masts and additional ground locations – December 2019 to December 2020. Bat detectors were placed on met masts at 1.5, 28, 56 and 84 metre intervals.

The surveys detected 12 species of bats, typical for south-western Victoria. Other than the SBWB, none of the other species were listed under the FFG Act or EPBC Act. For SBWB:

- Call activity reduced in late autumn (May) and early winter (June).
- Most SBWB calls (1,254 calls, 97 per cent of total) were recorded on the ground detectors (1.5 metres above ground), with 33 calls recorded at the lower (28 metre) detectors, 4 calls at the middle (56 metre) detector and 1 call at the upper (84 metre) detector.
- SBWB were detected throughout the plantation area. The detector with the highest numbers of recorded calls was in the west of the Project area, close to the southern edge of Lower Glenelg National Park, approximately 4 kilometres south of the Glenelg River.
- Bats were recorded soon after dark and were active throughout the night, until one or two hours before dawn. Call activity was generally highest in the first half of the night, with a peak in activity levels 1-2 hours after sunset noted at most ground detectors.
- Call activity peaked at wind speeds between 5 and 7 m/s. All detections were at wind speeds less than 9 m/s except for one detection at 10-11 m/s.
- Over 90 per cent of calls were recorded at temperatures above 10°C.
- Ninety per cent of calls were recorded when relative humidity was less than 90 per cent.

The Project does not entail substantive loss of any habitat for SBWB. Indirect impacts from construction and operational noise, traffic, lighting and hydrological impacts were considered

¹⁷ The general location of the cave was provided to the IAC in confidential TN18 (D182)

unlikely to affect the species as roost locations are well outside the Project area. The principal impact on the SBWB was considered to be the potential for collision with turbine rotors.

To mitigate collision impacts turbines have not been located within 5 kilometres of any roosting caves. The lower blade tip height of the turbines has also been raised to 60 metres above ground level. The EES concluded that the risk of SBWB collisions with turbines is low because of the relative rarity of flights below 60 metres.

Symbolix undertook a Population Viability Analysis (PVA) to investigate the potential effects of the Project on SBWB. It found that, even without wind farm mortalities, there is a substantial predicted decline in the Portland sub-population size, with declines of more than 50 per cent within the next ten years, and almost 100 per cent within 60 years. The PVA indicates that, if the number of wind farm mortalities is around 2 SBWB per annum, there is no discernible difference in the Portland sub-population outcomes after 30 years (the projected lifespan of the Project). However, SBWB mortality in the range of 50 SBWB per year would substantially shorten the predicted timeframe for extinction of the Portland sub-population.

The EES explains that curtailment is widely used to reduce the incidence of collisions. Curtailment involves stopping the rotors from turning below a determined wind speed (referred to as a 'cut-in' wind speed). To reduce impacts on the SBWB, the Draft BBAMP (Appendix AA) provides for programmed curtailment of turbines under the following conditions between September and November, and between February and March:

- Time: 30 minutes after sunset until 3 hours before sunrise
- Cut-in wind speed: 4.5 m/s
- Temperature: 10 degrees Celsius or higher
- Humidity: Not raining (relative humidity less than 95 per cent).

The Draft BBAMP also provides for carcass monitoring and increases in the curtailment speed if specified trigger levels are exceeded. Trigger 1 increases the curtailment speed to 6 m/s and Trigger 2 to 7.5 m/s.

With implementation of the above measures, the EES assessed the Project against the EPBC Significant Impact Guidelines 1.1 and concluded it was unlikely to have a significant impact on the SBWB.

The DTP Impact Assessment Unit commissioned an independent peer review of the EES by Dr Emmi van Harten (Appendix 8.2 of EES Technical Appendix E). In response, the Proponent incorporated revisions and iterative updates to Appendix E and the EES.

The exhibited Incorporated Document includes requirements for a \$1 Million annual ecology fund which focusses on SWBW recover actions, and must specify the actions (to be updated from time to time), including actions from the National Recovery Plan for SBWB.

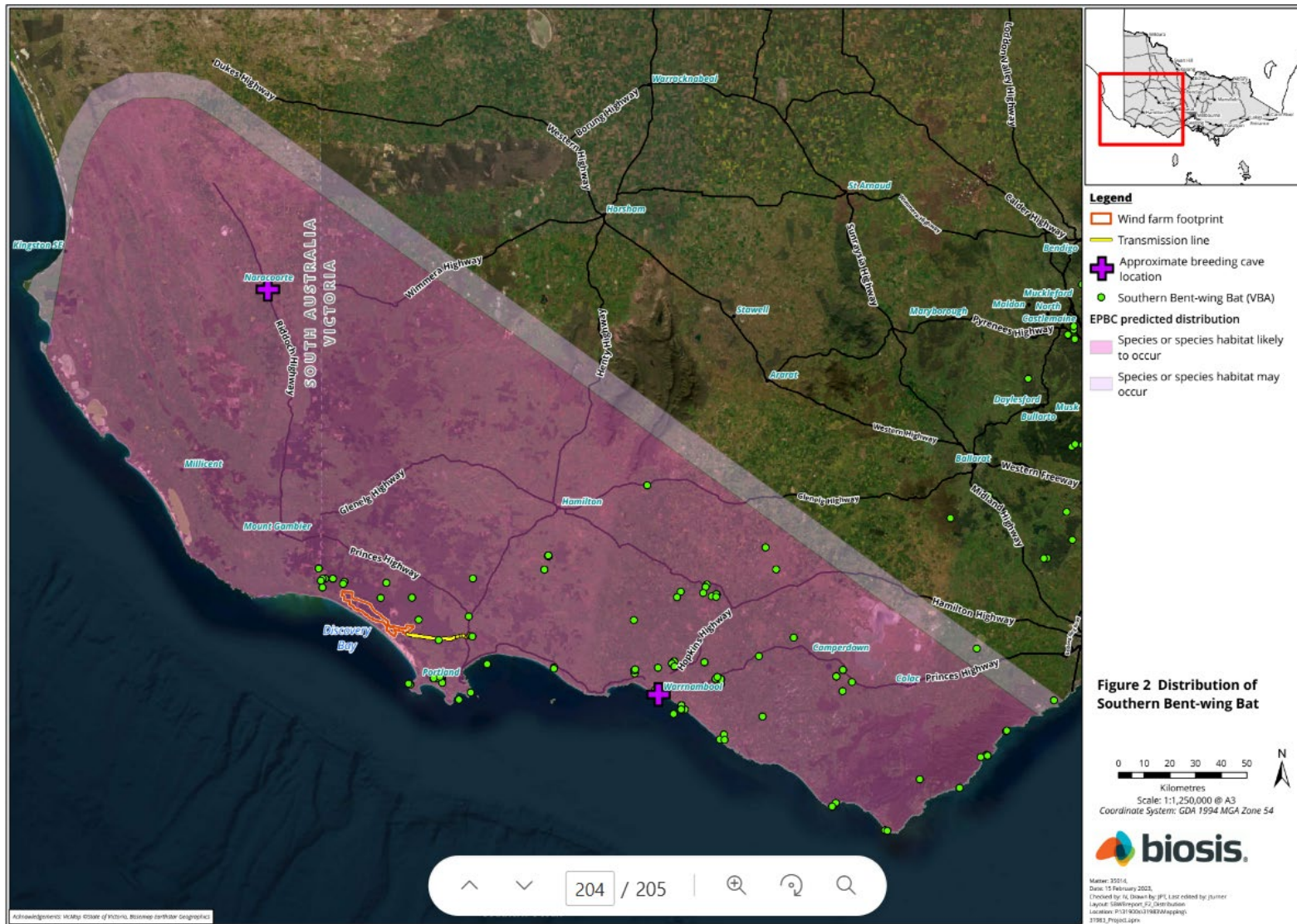


Figure 8 Distribution of Southern Bent-wing Bat

(iii) Evidence and submissions

The evidence and submissions were focused on the following key matters:

- extent of usage of the Project area by the SBWB
- flight height and resultant risk of collision with turbines
- adequacy of the proposed curtailment measures
- reliability of pre-construction monitoring
- ability to adequately monitor mortalities in a pine plantation
- acceptability of compensation measures.

Extent of usage of Project area

Mr Gibson (D66) and Mr Organ (D84) both agreed habitat on the Project area is likely to be sub-optimal, with lower rates of movement and foraging expected than in higher quality habitats such as native forest. The extensive flight activity surveys indicated bat activity within the wind farm layout is generally low and highly seasonal.

Mr Gibson considered this was supported by the recent DEECA tracking study (D154) that found SBWB do not regularly move into the Project area during Spring, when flights are more concentrated around the Portland maternity site. In Autumn, most of the tracked individuals appeared to fly north from the maternity cave, before heading east or west. While the work undertaken by DEECA was preliminary, Mr Gibson considered it indicated movement between roost areas was likely to be concentrated in native forest areas, potentially along the Glenelg River corridor to the north of rather than through the Project area.

Mr Organ (D84) agreed but noted the DEECA study only involved a small subset of the total population. No units were retrieved from bats roosting in the Lower Glenelg National Park, and therefore there is no information on where these bats were going to forage or what flight routes they took between Portland and this area.

This limitation was also noted by DEECA (D393). Data was collected over 3-4 weeks in September-October and February-March, and DEECA considered foraging behaviour and movement patterns may vary at different times of the year. DEECA submitted that the ARI research (D175) indicates SBWB utilise the full landscape and do not confine their movements to narrow corridors.

The SBWB National Recovery Team (Submitter 191) considered the Project's location elevated the risk of significant impact to the species (due to proximity to important cave roosts and other important locations). The Recovery Team emphasised the need for interchange between the Naracoorte and Portland caves for genetic diversity. The importance of interchange between the maternity site in Portland, the Naracoorte Bat Cave Maternity Site and the Starlight Cave in Warrnambool was also noted by the Australasian Cave and Karst Management Association (Submitter 144) and the Victorian Speleological Association (Submitter 182).

The SBWB National Recovery Team disagreed that SBWB will avoid pine plantations. They noted SBWB eat flying moths, who may not reproduce in these plantations in high numbers but nonetheless can be found in and above pine plantations.

Flight height of SBWB

Mr Gibson gave evidence that the SBWB is unlikely to regularly fly above 60 metres (within the RSA), with 97 per cent of calls recorded from ground-based detectors. Mr Organ referred to the Bush et.al. study (D175) which retrieved GPS data from 93 bats and found 99.7 per cent of flights

were below the lower blade tip height of 60 metres. Mr Organ considered this was consistent with the findings in the EES.

DEECA acknowledged the findings of the Bush et. al. study but noted there is some uncertainty as SBWB flights were higher in treed habitat. There remains a risk because the SBWB may fly within the rotor swept area (RSA), and this is reflected in current mortality estimates across Victoria. DEECA also considered the work did not account for seasonal variation in movement.

The SBWB Recovery Team questioned the conclusion in the EES that lower call activity at high detectors reflected reduced flight activity. Supporting comments made by Dr van Harten in her peer review (Appendix 8.2 of EES Technical Appendix E), the SBWB National Recovery Team argued this conclusion failed to reasonably address the different conditions of detectors at height, including high levels of noise and interference which can mask bat calls – particularly for a species such as the SBWB which is more difficult to identify.

Mr Organ (D84) did not agree. He considered the EES adequately discussed survey limitations, flight height uncertainty, and the limitations of acoustic monitoring, as requested by the peer reviewer. The limitations were fully described in section 3.5 of EES Technical Appendix E and the implications considered. Conservative assumptions were adopted in assessing collision risk.

Adequacy of curtailment measures

Mr Organ considered the proposed measures in the BBAMP for targeted low wind-speed curtailment during peak activity periods, ongoing acoustic monitoring, and an adaptive management framework to respond to emerging collision risk patterns, were sufficient to mitigate impacts on the SBWB.

Mr Gibson's evidence (D66) supported a cut-in wind speed of 4.5 m/s as:

- Most flight movements are expected to be below RSA, and therefore not at risk.
- Trials of low-wind speed curtailment at this speed in Victoria have shown a reduction in overall microbat collisions, although no trials have been conducted at windfarms with 60 metres of clearance below the RSA.
- The starting level speed of 4.5 m/s would eliminate risk to approximately 50 per cent of flights. This would be the base level of curtailment, with further curtailment undertaken in response to the outcomes of mortality and activity monitoring as part of the BBAMP.
- The starting level of low wind speed curtailment is a compromise between risk reduction and loss of energy generation.

The Victorian Speleological Association submitted the cut-in wind speed should be 7.5 m/s rather than the proposed 4.5m/s. The SBWB Recovery Team referred to a large international meta-analysis that estimated a cut-in wind speed of 5 m/s reduced insectivorous bat mortality by an average of 62 per cent. However, the Recovery Team considered the remaining mortality was unacceptably high for a critically endangered species relying on high survival rates to maintain populations. If the Project did proceed, the Recovery Team would only support a minimum cut-in wind speed of 7 m/s at all turbines as a baseline.

NGT (D420) submitted SBWB could avoid collision if wind farms had curtailment in place from November through to May annually, with a cut-in wind speed of 7 m/s from dusk till dawn. NGT noted technology could also assist, such as acoustically triggered curtailment.

NGT said 4.5 m/s was not internationally recognised as a significant curtailment strategy. The starting minimum benchmark is typically a cut-in speed of 5 m/s, with 7-7.5 m/s being ideal to

protect biodiversity. While curtailment at Cape Nelson had reduced bat mortalities by 54 per cent, NGT considered this was still unacceptably high for a critically endangered species.

Mr Gibson (D490) noted the Project presented a very different risk profile to the Portland Wind Energy Project which is very close to the Portland maternity cave and the important non-breeding roost caves in Bat's Ridge Wildlife Reserve. The lower blade tip height is also considerably greater for the Project.

Reliability of pre-construction monitoring

DEECA tabled D174 comparing pre and post construction bird and bat survey results at Victorian wind farms. Based on SBWB monitoring at three wind farms, the report concluded that neither the ground-based or 'at-height' pre-construction surveys were adequate for predicting collision risk. It suggested a precautionary approach to assessments is required, including considering species-complex calls and assuming that some SBWBs will fly in the RSA, even if they have not been detected during at height surveys.

DEECA also tabled *Assessment, mitigation and monitoring of onshore wind turbine collision impacts on wildlife* (D153). This did not find strong evidence for the effectiveness of pre-construction acoustic surveys in predicting bat collision risk. However, several studies have shown that post-construction acoustic activity recorded at turbines is a strong predictor of bat fatality rates.

The SBWB Recovery Team made similar comments and considered this put an increased importance on other planning considerations, such as applying the precautionary principle, and avoiding impacts by siting away from known high-risk locations that concentrate bat populations.

In answer to a question from the IAC, Mr Organ stated his opinion that the baseline bat monitoring undertaken for the Project was the most comprehensive he had seen, and he considered it addressed many of the deficiencies of pre-construction surveys referred to in the above studies.

Mortality monitoring

Mr Gibson (D66) noted the monitoring regime in the Draft BBAMP will include site-based trials and extensive consultation with regulators. This will determine a statistically robust monitoring regime to provide an acceptable mortality detection rate.

The SBWB Recovery Team (Submitter 191) submitted that post construction mortality monitoring is known to represent only a very small and uncertain proportion of mortality occurring, especially for the SBWB where carcasses are scavenged quickly. The review by Moloney et. al. (D332) of windfarm mortalities found the median time for a bat carcass to disappear was 4.9 days at one wind farm and 3 days at another. The international review by DEECA (D153) found mean persistence times for microbats were around 2 days.

DEECA submitted it was not aware of any wind farms that had undertaken mortality monitoring in a plantation setting or other densely forested locations in Victoria. DEECA considered this environment is likely to limit the effectiveness and reliability of ground-based mortality detection surveys due to mortalities from collisions likely landing in the tree canopy and remaining undetected during ground searches.

In response to submissions, the Proponent sought further advice from data science and analysis firm Symbolix on the monitoring approach (D111 – TN10). Symbolix considered the pulsed survey design proposed in the BBAMP was ideal for balancing the faster scavenge rate of bat carcasses

with the resource limitations of very frequent searches of large sites. Symbolix (D111) calculated that, for the proposed turbine size, a 100 m survey radius from turbines would cover 96.4 per cent of the bat fall zone. Symbolix advised it is possible to quantify the “*probability of a carcass being caught in a tree*” and the “*median time until a carcass falls from a tree having been caught*” prior to construction of the wind farm. If surveying the treed areas is not feasible, Symbolix noted it was statistically robust to only survey the cleared areas, as standard methods can account for irregularly-shaped search areas.

NGT considered mortality monitoring in Australia was inadequate and noted countries like Laos and Vietnam working to international (International Finance Corporation) guidelines might survey every turbine every week. Mr Gibson (D490) agreed, in general terms, there needs to be improved standards for mortality monitoring for Australian (including Victorian) wind farms. It noted the Proponent has committed to developing a comprehensive monitoring program for the Project. International guidelines (including the International Finance Corporation guidelines) would be considered in formulating the program.

Acceptability of proposed compensation measures

Several submitters considered impacts of the Project on SBWB were unacceptable and the Project should not proceed, regardless of any compensation package. For example, the Australian Speleological Federation (Submitter 178) questioned the value of research funding if the Project results in loss of the species.

The SBWB Recovery Team considered it was foreseeable the Project would cause further population decline and reduction in genetic diversity. The Recovery Team was unable to identify compensation measures that could directly negate these mortalities. The Recovery Team’s view was that compensation measures, which may improve habitat quality in the future, do not compensate for the impact of lost reproductive potential and genetic diversity.

Mr Organ (D226), however, considered the proposed Ecology Fund has the potential to support a suite of high-impact conservation actions identified in the SBWB Recovery Plan (D259), including:

- installation of microclimate control systems at key maternity caves such as Bat Cave (Naracoorte)
- long-term monitoring, predator control, and roost protection at critical cave sites
- acoustic and GPS telemetry studies to refine knowledge of foraging habitat and movement ecology across Victoria and South Australia
- surveillance for emerging threats such as White-nose Syndrome
- health monitoring to detect stressors and disease in maternity populations
- research into prey availability and insect biomass trends in known foraging habitats
- community education and landholder engagement to reduce human disturbance at important roosting and foraging locations.

The Proponent (D136) noted, by way of context for the proposed \$1m fund, that the entire estimated cost of for the Recovery Actions in the SBWB Recovery Plan (D259) is \$400k for Year 4 (which is understood to be around 2024) and \$410k for Year 5 (which is understood to be around 2025).

Mitigation measures

In response to submissions, the Proponent proposed moving MM-BD15 for funding of SBWB recovery from the EMF to the Incorporated Document. The name of the fund was changed to

Ecology Fund. Other changes set out greater detail on how the fund will operate and include a requirement for it to be managed by an independent body.

Revisions to the Incorporated Document added greater detail on the role of the Independent Environmental Auditor (IEA).

(iv) Discussion

In summary, the Proponent submitted that impacts on the SBWB will not be significant because:

- usage of the Project area by the SBWB is relatively low compared to nearby areas of native vegetation
- most flights will be below the RSA
- the risk to SBWB will be further reduced through seasonal curtailment
- the staged increase in turbine cut-in speed in response to mortalities will ensure the number of mortalities does not become unacceptable.

Extent of usage of Project area

The IAC accepts that usage of the Project area by SBWB may be lower than vegetated areas to the north. This is supported by the DEECA tracking study (D154) with some limitations. However, it is also clear from the baseline studies prepared for the EES and information provided by other submitters that SBWB do regularly use the Project area and are consequently at risk of collision. This was not contested by the Proponent.

Flight height of SBWB

The primary measure to reduce this risk is raising the RSA height to a minimum of 60 metres. While, as noted above, there are limitations to both the flight height survey for the EES and the GPS tracking work by Bush et. al. (D175), the IAC considers the consistency in findings between these two studies provides a high level of confidence that most flights by the SBWB will be below 60 metres.

Adequacy of curtailment measures

Given there will likely be some flights in the RSA, the IAC accepts that curtailment is an effective strategy to further minimise and prevent unacceptable impacts. Submitters were generally of the view curtailment should be applied on a seasonal basis. However, several submitters said a higher cut-in wind speed should apply, and proposed a minimum cut-in wind speed of 7 m/s.

Both submitters and the Proponent referred to the precautionary principle, which applies where there are threats of serious or irreversible environmental damage. The Proponent's experts agreed it applied to the SBWB in regard to threats from the Project.

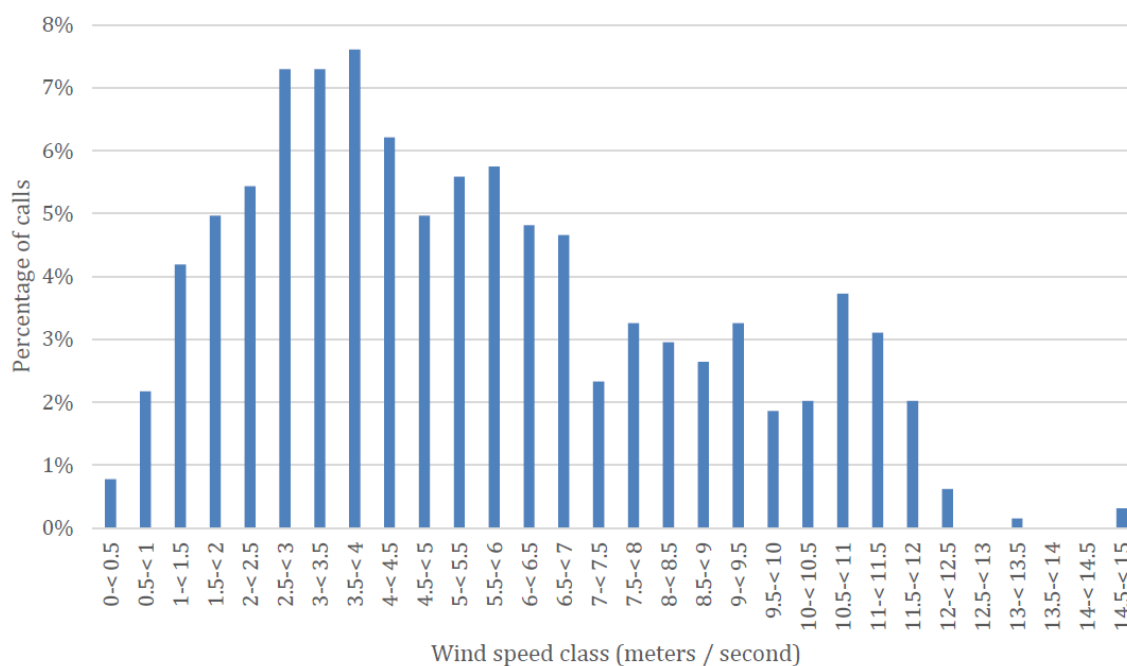
The Proponent (D244) submitted the precautionary principle does not mean the Project must be refused or deferred until there is 'certainty'. Rather, the principle requires appropriate precautionary measures be imposed, subject to those measures being proportionate to the threat and to the uncertainty. It relied on a Federal court judgement¹⁸ which said the measures "*should go no further, however, than what is appropriate and necessary to achieve the relevant objective*".

¹⁸ Bob Brown Foundation Inc v Minister for the Environment (No 2) [2022] FCA 873 (25 July 2022) at [30]-[32]

The IAC considers the objective in this case is to prevent a significant impact on the SBWB. The results of wind speed monitoring (Graph 1 in D66) show most flights occur below 7 m/s (see Figure 9). In contrast, approximately 50 per cent of flights occur below 4.5 m/s.

Considering these results and submissions from the SBWB Recovery Team and NGT that support a curtailment speed of 7 m/s, the IAC considers that curtailment based on a cut-in speed of 7 m/s is unlikely to result in a significant impact on the SBWB. The IAC is less confident this would be the case with a cut-in speed of 4.5 m/s as this would still potentially impact half of SBWB flights within the RSA.

Figure 9 Percentage of SBWB calls recorded in relation to wind speed class



Source: Mr Gibson Expert Witness Statement (D66), page 37

The Updated BBAMP deals with the uncertainty regarding the effectiveness of the 4.5 m/s cut-in speed by providing for a staged increase in response to trigger levels as follows:

- a single mortality results in the responsible turbine being curtailed to 6 m/s and a second mortality increases the cut-in speed to 7.5 m/s
- if carcasses or injured individuals of 10 or more SBWB are found across the wind farm in a 12 month rolling period, DEECA will be informed, and the wind farm operator will collaborate with DEECA to determine an “*appropriate course of action*”.

In principle, the IAC accepts these adaptive measures should prevent significant impacts on the SBWB, and notes they are summarised in MM-BD11. However as discussed below, the Updated BBAMP will need some refinement to effectively implement these measures.

Mortality monitoring

In the event of exceedance of a trigger level, the Updated BBAMP requires curtailment for the subsequent 12 months or a period determined in consultation with DEECA. In response to a question from the IAC, Mr Gibson advised the 12 month period was to allow for investigations to determine whether the mortality was a one-off event or reflected an ongoing risk. The risk to the SBWB is unlikely to change in 12 months. Rather than an arbitrary period of 12 months, the IAC accepts this rationale but considers curtailment should continue until the Minister, in consultation

with DEECA, is satisfied a reduction in the cut-in speed will not materially increase the risk to the SBWB. The onus should be on the wind farm operator to demonstrate a return to the previous cut-in speed is unlikely to cause further mortalities.

The cumulative mortality trigger in the Updated BBAMP across the wind farm of 10 mortalities or injured individuals applies to a rolling 12 month period. Based on the PVA in the EES, a mortality rate of 10 SBWB every 12 months would result in a 16 per cent probability of extinction of the Portland SBWB population over the life of the Project (compared to zero per cent without the Project). The IAC considers this represents an unacceptable increase in the risk of extinction for a critically endangered species.

Given the significance of the risk, the IAC considers a proportionate response to the cumulative trigger is curtailment of all or part of the wind farm. The area to be curtailed would depend on the distribution of mortalities across the wind farm. The default response should be curtailment of the whole wind farm unless the mortalities are restricted to one group of turbines or specific turbines. The process for determining the curtailment area should be set out in the BBAMP.

As with curtailment requirements for individual turbines, the IAC recommends exceedance of the cumulative mortality trigger should result in an increase in the cut-in speed to 6.0 m/s. This should apply until the Minister, in consultation with DEECA, is satisfied a reduction in the cut-in speed will not materially increase the risk to the SBWB. A further exceedance of the cumulative trigger during this period should result in an increase in the cut-in speed to 7.5 m/s for the relevant part of the wind farm.

The triggers in the Updated BBAMP are based on mortalities or injured individuals detected during monitoring or incidentally. The BBAMP recognises this will not represent the total number of animals killed *“because searches rarely detect all carcasses and because some carcasses will be removed by scavengers before they can be found during a search regime”*. The proportion of total animals killed that are detected is a critical issue. If this is low, actual mortalities could be considerably higher before those specified in the trigger levels and a significant impact could occur before remedial action is taken.

The IAC only supports an initial curtailment of 4.5 m/s if there is a high level of confidence that monitoring will identify most individuals killed or injured. This will depend on the searcher efficiency rate and the frequency of monitoring. The Updated BBAMP commits to the Project achieving a minimum 80 per cent searcher efficiency rate for detection of bird and bat carcasses. The IAC supports this requirement.

To improve searcher efficiency, the IAC recommends the BBAMP require:

- The use of trained detection dogs in searching for carcasses. DEECA (D153) note that trained detection dogs consistently detect significantly more carcasses than human searchers. This was also supported by Mr Organ.
- Fuel management around turbines as required by the CFA. In response to a question from the IAC, the CFA advised that fuel management could include pruning of pine trees. The reduction in canopy cover would likely result in fewer carcasses being caught in branches.

The Updated BBAMP proposes that operational carcass searches will be undertaken at least monthly. The option of pulse monitoring and increased monitoring frequency during particular seasons or periods due to migration, dispersal or seasonal foraging activity will be considered in consultation with DEECA and Department of Climate Change, Energy, the Environment and Water

(Cth) (DCCEEW). Noting carcass persistence for microbats appears to be 2 – 5 days, the IAC considers monthly, or even fortnightly, monitoring is not adequate. Carcass persistence trials are proposed in the Updated BBAMP and these should inform the frequency of monitoring.

The combination of searcher efficiency and monitoring frequency will determine the proportion of mortalities that are detected. The IAC recommends the BBAMP specifies a minimum benchmark (with confidence limits) for this proportion. This should be specified in the BBAMP and be approved by the Minister, in consultation with DEECA. As this matter was not discussed during the Hearing, the IAC does not propose a figure, but notes a proportion less than 50 per cent is unlikely to be acceptable.

If the benchmark in the BBAMP cannot be achieved, the IAC considers the initial wind cut-in speed for curtailment should be raised to 6 m/s, or to 7.5 m/s if expected performance is well below the level, consistent with the mortality triggers discussed above.

The changes recommended to the BBAMP in response to the matters discussed are summarised in Chapter 5.7 of this Report.

The Day 4 Incorporated Document requires monitoring under the BBAMP to continue for at least 5 years. The IAC considers a monitoring period of 5 years is inadequate given the inherent ecological risk of the Project setting and the need for ongoing assurance of its impacts. In addition, ecological conditions and SBWB flight movements could change over the Project life. The IAC recommends the Incorporated Document is revised to require monitoring for the life of Project. This is consistent with the Renewable Energy Handbook 2025, which recommends the operational life of the Project as the default monitoring period. However, if monitoring demonstrates a low risk to the SBWB, the frequency could reduce after 5 years. Any changes to the monitoring regime should be specified in the BBAMP and approved by the Minister, following consultation with DEECA.

In addition to mortality monitoring, the IAC considers that post-construction monitoring of bat activity at the turbine nacelle height should continue for at least two years, or a period determined by the Minister in consultation with DEECA. As stated above (refer to D153), post-construction acoustic activity recorded at turbines has been shown to be a strong predictor of bat fatality rates. The Renewable Energy Handbook 2025 notes that, when combined with weather data, this data can help to inform smart curtailment.

An objective for the Project of no net loss of SBWB is not appropriate for a critically endangered species given the extent of uncertainty. The Proponent should be required to demonstrate a net gain through the Ecology Fund, taking account of any mortalities.

To ensure accountability, the IAC recommends the Incorporated Document is revised to require the IEA assess each year whether the Proponent is achieving or is on a trajectory to achieve a net gain. If a net gain is not achieved, the IEA, in consultation with the wind farm operator and DEECA, should recommend to the Minister any changes to the BBAMP needed to achieve a net gain. Such changes should be consistent with the mitigation hierarchy. Reasonably practicable measures to avoid and mitigate impacts should be exhausted before further offsets are considered.

The IAC proposes changes to the mitigation measures and Incorporated Document to reflect these recommended measures, as shown in Appendices F:1 and F:2.

(v) Findings and recommendations

The IAC finds, subject to its recommendations:

- The Project is not likely to result in significant effects on the SBWB.
- Any effects are likely to be acceptable and the Project is not likely to compromise recovery of the species.

The IAC recommends:

Environmental Management Framework

Include the following changes:

- a) **Amend MM-BD11 (Southern Bent-wing Bat Management) to refine the drafting and add or amend the following requirements:**
 - include an objective to ensure the Project results in a net benefit for the Southern Bent-wing Bat
 - require post-construction monitoring of bat activity at the nacelle for at least two years
 - require use of trained detection dogs for mortality monitoring unless it can be demonstrated other methods will be more effective
 - require fuel management in the areas under pine canopy around turbines
 - include a cumulative impact trigger for the Southern Bent-wing Bat and a requirement that exceedance of the trigger results in staged curtailment across the whole wind farm unless the mortalities are restricted to one group of turbines. The process for determining the curtailment area must be set out in the Bird and Bat Adaptive Management Plan
 - specify a benchmark and confidence limits for the proportion of total mortalities or injuries detected through monitoring, and provide for an increase in the curtailment speed if this benchmark cannot be achieved
 - align monitoring requirements with the performance level.

Incorporated Document

Include the following changes:

- a) **Amend the Bird and Bat Adaptive Management Plan requirements to:**
 - include an objective to ensure the Project results in a net benefit to the Southern Bent-wing Bat
 - incorporate the recommendations in Chapter 5.7 this Report.

These changes are included at Appendices F:1 and F:2.

5.3 Brolgas**(i) The issues**

The issues are whether:

- the Project is likely to result in significant effects on Brolgas
- such effects are acceptable and will, as a minimum, have a net zero impact on the Victorian Brolga population.

(ii) What did the EES say?

The Brolga (*Antigone rubicunda*) is listed as endangered under the FFG Act. It is not listed under the EPBC Act. The Victorian population is estimated at 600–650 individuals, with 500–550 of these within the south-west and 50–100 in the north-east of the state.

Brolgas use wetlands for nesting, foraging and roosting, and breed between July and November. They will re-nest if they fail to successfully reproduce, can nest in summer, and the breeding season may extend into March if conditions are favourable. With the onset of summer, breeding pairs and their young move to flocking areas where they congregate from December to June.

The Interim Brolga Guidelines were used to assess the potential impacts of the Project on Brolgas and inform avoidance, mitigation and offsetting measures. The guidelines set out three levels of assessment:

- Level One is an initial risk assessment.
- Level Two aims to provide a comprehensive record of the location, nature and extent of Brolga habitats within the wind farm radius of investigation and assess the potential for impacts arising from collision risk, indirect disturbance and barrier effects.
- The Level Three objective is to avoid significant impacts on Brolga breeding and non-breeding habitat through design response and siting turbines away from these habitats, and to quantify residual risks.

All three levels were triggered.

The assessments confirmed the presence of 11 breeding pairs and assumed the presence of an additional 3 pairs within 3 kilometres of the Project area. Two additional breeding records from a local ornithologist were added in 2023. Records were concentrated in wetlands along the coast and in the east of the Project area.

No flocking areas were identified. The nearest known flocking area to the Project is Strathdownie (Kaladbro/Mingbool), approximately 50 to 70 kilometres north/north-west of the Project area.

The Interim Brolga Guidelines allow for site-specific turbine-free buffers to be used instead of the default 3.2 kilometre breeding habitat buffers if site-based data can be gathered to demonstrate the brolga breeding home ranges. Site-specific turbine-free buffers were applied at:

- three wetlands on farmland in the eastern section of the wind farm site
- a wetland within a blue gum plantation to the north-east of the wind farm site
- two wetlands on farmland near Heywood
- suitable habitat with likely breeding activity at Long Swamp and associated wetlands within the Ramsar Site and other suitable habitat within 3 kilometres of the wind farm site based on aerial photography interpretation
- the identified non-flocking roost at Swan Lake.

Movement corridors were identified during Biosis' field investigations where Brolgas were observed to be walking, foraging or flying. A 300 metre turbine-free disturbance buffer was applied to protect pathways known to be used by Brolgas and other birds to reduce the collision risk with turbines.

The transmission line between Cobboboonee Forest Park and the Heywood Terminal Station was reconfigured to be underground, removing the risk of collision with Brolgas that use nearby wetlands.

Construction works can potentially disturb Brolgas through increased noise, traffic, and artificial lighting. There will be no construction work within Brolga breeding buffers when Brolga pairs are present and engaging in breeding activity.

The effects of noise and disturbance from operational turbines on Brolgas have not been quantified. There are some reports of wind farm avoidance behaviour by other species of cranes. Turbines have been excluded from buffers around important Brolga habitat to minimise the potential for indirect impacts.

The Level Three assessment included collision risk modelling to quantify the risk of Brolgas colliding with turbines and transmission/powerlines. This indicated a low risk of turbine collisions (less than 0.21 collisions per year). A PVA indicated that a net zero impact on the south-west Victorian Brolga population, as required by the Interim Brolga Guidelines, could be achieved by increasing recruitment into the population by approximately one juvenile every two years.

A Compensation Plan will be prepared prior to Project construction proposing appropriate compensation strategies (see mitigation measure MM-BR02). The plan will include quantifiable measures of compensation, with a key focus on the restoration and management of wetlands to improve Brolga breeding success.

(iii) Evidence and submissions

The evidence and submissions were focused on the following key matters:

- disturbance to habitat
- adequacy of breeding buffers
- displacement and the adequacy of the disturbance buffer
- collision risk.

Disturbance to habitat

Mr Venosta (D67) gave evidence that 16 breeding pairs of Brolgas had been identified within 3 kilometres of the Project area. There will be no direct disturbance to this habitat. No Brolga flocking roost sites have been recorded within 10 kilometres of the Project area.

Mr Organ (D84) agreed with the findings in the EES regarding the extent of suitable and relative use of wetland breeding and surrounding foraging habitats for Brolga across the Project area and surrounds. He noted Birddata showed 6 recent records of Brolgas within a 10 kilometre radius with the nearest record from 2025 consisting of two individuals near the southern boundary of the Project area.

Mr Organ's opinion was that the final infrastructure layout had avoided areas of highest sensitivity for Brolga. Much of the Project Area, particularly the plantation-dominated sections, provides limited habitat value for breeding, foraging, or flocking. Mr Organ considered the design refinements and infrastructure placement were consistent with the mitigation hierarchy.

NGT (D420) submitted there was potential for disruption to the hydrological regime of seasonal or ephemeral wetlands across the site by the construction of the power lines and the many roads, tracks and pads to be constructed, reducing their suitability for Brolga breeding.

NGT and some other submitters were concerned about the wind farm causing a barrier to Brolga movements. The Victorian National Parks Association (VNPA) (D431) considered this could limit access to important wetlands and food sources, increase energy expenditure by forcing individuals to take longer routes and reduce gene exchange between populations.

Adequacy of breeding buffers

Several submitters noted the Interim Brolga Guidelines (D260) generally recommend a 3.2 kilometre radius turbine-free buffer from breeding sites. The guidelines allow a Proponent to propose reduced buffer areas providing they can be shown to meet the objectives set for breeding habitats. This requires site-specific investigations to show with a high level of confidence the size and shape of home ranges. Site-specific buffer distances should be agreed by DEECA. Submitters argued the site-specific investigations had not been completed.

Mr Venosta (D67) gave evidence that the EES used the latest science from a 2019 paper by Veltheim (D266) to determine Brolga breeding home ranges. He considered this site specific approach to determining home ranges was preferable for deriving turbine-free buffers around breeding sites, given the general applicability of Veltheim 2019 study's findings, field observational studies' major limitations in collecting comparable data, and risk of potentially reducing Brolga breeding success.

Several submitters were critical of reliance on the Veltheim 2019 paper. Ms Lenehan (D439) noted the paper was purely based on walking chicks and not flighted Brolga. This just used 400 GPS tracking data points out of nearly 80,000 records. Ms Lenehan considered this failed to protect the full life cycle of the Brolga, failed to protect the adult that is not sitting on the nest (is out foraging), did not protect the family of Brolgas that remain in residence at the home range until they leave to flock at their flocking home range, and did not protect the walking chicks if their parents were displaced (chased away never to return) from the nesting site.

Ms Lenehan submitted that Veltheim recognised in her 2019 paper that breeding adults may range further to forage during nest building, incubation and chick rearing. Veltheim recommended studies focusing on GPS telemetry of breeding adult pairs to identify if larger buffers are required to avoid potential disturbance and mortality effects from turbines during the entire breeding season - from nest building and incubation, to chick fledging.

Ms Lenehan considered breeding buffers should instead be based on the full range of data used in the 2022 Veltheim paper (D267). This found Brolgas moved 1.6 kilometres from roost to foraging areas on average throughout the year, with 95 per cent of those movements within 5.2 kilometres.

Mr Cumming (D434) claimed the 2019 Veltheim paper relied on a 2011 study by Venosta et al. for the Penshurst Wind Farm (D298) which used a flawed methodology.

DEECA (D393) advised it was satisfied the work undertaken to determine breeding buffers had been undertaken in accordance with the Brolga Interim Guidelines.

Mr Cumming tabled an internal DEECA memo (D285) released under Freedom of Information which recommended a 600 metre breeding buffer plus a 300 metre disturbance buffer, consistent with the Project. In the memo, the DEECA Biodiversity Division recommended this as:

- Based on simulations, the buffer protected between 89 to 100 per cent of the foraging habitat and movements with the 95 per cent utilisation distribution for all chicks in the Veltheim 2019 study.
- This was considered adequate to maximise fledgling success.
- The 300 metre disturbance buffer reflected a precautionary measure to minimise potential human disturbance.

The DEECA memo noted the buffers were designed to protect the three key habitat elements related to pre-fledging movements:

- the wetlands used for the nest, egg incubation and night roosting
- the non-wetland areas around breeding wetlands used for foraging
- the non-wetland areas used as movement corridors between nesting and night roost wetlands.

The buffer recommended in the DEECA memo, and adopted by the Project, is consistent with the breeding buffer recommended in the Renewable Energy Handbook 2025. In response to a question from the IAC, DEECA advised that the handbook was informed by the memo but it should not be taken as DECCA's rationale for the buffer distance. Other information, such as public submissions, were also considerations.

Mr Venosta explained that some submitters failed to acknowledge that suitable breeding wetlands within 2 kilometres were also given a 900 metre buffer in the EES. This resulted in a series of interconnected buffers, including those applied to suitable breeding habitat along Long Swamp and in the north-east of the Project area.

DEECA referred to Mr Venosta's comment that measures would be taken post approval, most likely through the Brolga Compensation Plan, if construction of the main substation resulted in failure of Brolga breeding at wetlands 57 or 58. DEECA noted Mr Organ's evidence that Brolga compensation under the Interim Brolga Guidelines would be assessed before approval and Mr Organ therefore disagreed on retrospective application of compensation. DEECA preferred the view expressed by Mr Organ.

Displacement and the adequacy of the disturbance buffer

Several submitters submitted the 300 metre disturbance buffer (additional to the breeding buffer) was inadequate. Ms Lenehan claimed there are now 14 wind farm post completion reports that show Brolga will not flock within 5 kilometres of turbines due to displacement, and that over 99 per cent of Brolga will not even feed or attempt to nest within 5 kilometres of turbines. As a result, 70 nest sites and 20 flocking sites are no longer used by the Brolga.

Mr Cumming referred to research from the United States showing displacement due to wind farms of 5 kilometres for Whooping Crane and 8 kilometres for Sandhill Crane. Mr Cumming and Ms Lenehan tabled reports from Stockyard Hill, Berrybank, Ararat, Codrington and Yambuk, Salt Creek, Dundonnell and Macarthur wind farms which they consider demonstrated displacement. In particular, Mr Cumming claimed:

- Only two successful breeding attempts have occurred at the Macarthur Wind Farm and only when the capacity factor for the turbines was below 30 per cent. Nesting sites were abandoned when the capacity factor exceeded 30 per cent.
- There has been only one breeding record at Stockyard Hill within 5 kilometres since commissioning.
- There have been no breeding records at Salt Creek since commissioning in 2018.

Mr Cumming considered loss from displacement and failing to nest should be used in the PVA.

Mr Venosta disagreed with these claims. He stated the losses of Brolgas ascribed to wind energy by the submissions appear to assume that all recorded Brolga nesting wetlands in the vicinity of the various wind farms are used by Brolgas. In reality, a small proportion of wetlands are used for breeding in any given year. This is natural and is affected by seasonal conditions of wetlands, territoriality and other effects not associated with wind farms.

Mr Organ indicated he had reviewed the wind farm post-approval compliance reports provided in written submissions and found no evidence of displacement. At the request of the IAC, he provided a more comprehensive assessment of these reports and international literature on displacement (D383). His key findings were:

- Unlike long-distance migratory cranes, such as the Whooping Crane, Brolga in Victoria do not depend on narrow corridors or fixed migratory staging wetlands. Instead, they exhibit seasonally responsive regional movements influenced by rainfall and wetland availability. They cannot be ecologically or behaviourally equated with Whooping Crane concerning wind farm displacement impacts.
- The paper by Marques et. al. (D283) provided a synthesis of 71 peer-reviewed studies. Displacement occurred in 40.6 per cent of cases while 51.7 per cent found no effects. Average displacement was modest for most species (116 – 474 metres). The most significant displacements relate to species with vastly different life histories and habitat requirements than Brolga.
- A review of pre- and post-construction monitoring results from the Stockyard Hill, Berrybank, Dundonnell, and Salt Creek Wind Farms does not support the claim that the presence of operating wind turbines has displaced Brolgas. While the frequency and success of breeding at these sites have varied, the absence of Brolgas during certain monitoring years (particularly in dry seasons) is more plausibly attributed to rainfall variability and corresponding wetland availability than to turbine-related disturbance.
- Where Brolgas have been observed post-construction, their presence and behaviour have aligned with expected habitat use patterns, showing no evidence of systematic avoidance. Importantly, breeding activity has been recorded at several wetlands within 1–3 kilometres of turbines after construction, including at the Stockyard Hill and Dundonnell Wind Farms, confirming the species' continued use of the area.

Mr Organ considered these findings highlight the importance of long-term, site-specific monitoring and support the effectiveness of evidence-based buffer design, as adopted for the proposed Kentbruck Project.

In response to an IAC question, DEECA (D481) confirmed that the balance of scientific opinion supports that wind farms can displace Brolga. DEECA advised the 300 metre disturbance buffer in the Interim Brolga Guidelines was based on recommendations from the Brolga Scientific Panel established at the time. The aim of this additional 300 metre buffer was to mitigate the potential disturbance impacts, which can include displacement. In adopting the same disturbance buffer, the Renewable Energy Handbook 2025 represents the present state of understanding on the matter.

DEECA confirmed that the wind farm compliance reports that had been submitted since the Interim Brolga Guidelines were prepared in 2011, and other new information since that time, had not changed its view regarding the adequacy of the 300 metre disturbance buffer.

Collision risk

Mr Organ's expert opinion (D84) was that collision risk for Brolga in the EES was over-stated. He noted that Brolgas typically do not reach RSA heights (60–240 metres) until they are approximately 2.5 kilometres or more from a breeding wetland (and therefore will often be clear of the wind farm). While the collision risk modelling (CRM) conservatively assumed that 70 per cent of Brolga flights that could intersect with turbines would occur within the RSA (and 30 per cent below), the empirical flight data suggest the actual proportion is likely lower.

Mr Cumming questioned the validity of the CRM. He claimed mathematics professors across four universities in three states all agreed the CRM used by Biosis/Symbolix was flawed and should not be used for planning purposes.

The VNPA considered the CRM to be overly optimistic given the lack of comprehensive collision data and underestimation of flight height. The NGT submitted that Brolga exhibit seasonally specific behaviours, respond to environmental cues and undertake regional movements that are not fully understood.

Mr Turner (D480) referred to tracking data that showed, after raising their chicks to an age where they can take flight, the parents utilised thermals to migrate the young birds from the wetland at Cape Bridgewater over the Project area to wetlands across the South Australian border where they joined other Brolgas to continue to parent and raise their young. This data was mentioned by other submitters, including BirdLife South East South Australia (S201), who considered these movements put birds at the risk of collision.

BirdLife South East South Australia also raised concerns about the collision risk with the proposed 36 metre high power line along the Portland-Nelson Road and considered it needed to be underground. They submitted that only one potentially suitable movement corridor has been allowed towards the eastern end of the Project. This leaves a 20 kilometre long field of turbines as well as the power line directly impeding movements between inland and coastal habitats.

The Proponent noted (D135) that buffers at Gorae West provided a zone, approximately 6 kilometres wide, that will be free of collision risk between the coastal area of Discovery Bay to the south and Cobboboonee National Park and Lower Glenelg National Park to the north. Buffers adjacent to Long Swamp extend for approximately 15 kilometres along the southern boundary of the wind farm.

Mr Venosta advised that CRM had been completed for the central option section of the above ground internal transmission line. The result projected an annual average of 0.04 collisions or an average of one collision per 25 years.

DEECA supported undergrounding the internal transmission line where it intersects with Brolga breeding buffers.

Mitigation measures

In response to submissions, the Proponent revised MM-BR01 to include a requirement for a plan for managing impacts on Brolgas during works for the main substation. The requirement for a Brolga Monitoring and Compensation Plan (BMCP) was moved from the EMF to the Incorporated Document. Additional requirements were added for the plan to be informed by an updated PVA and potentially include fox baiting. Further detail was added on reporting requirements and performance targets.

(iv) Discussion

Brolga breeding wetlands have been identified and buffered. No flocking sites were identified within 5 kilometres of the Project area. The IAC is satisfied that the Project is unlikely to directly impact breeding and flocking sites.

Breeding buffers

Several lengthy submissions raised concerns about the adequacy of the 600 metre breeding buffers. A general comment was that site-specific surveys had not been completed and, therefore, the default buffer of 3.2 kilometres in the Interim Brolga Guidelines should apply. The Proponent's position was that the buffers should be informed by the latest science, drawing on the Veltheim 2019 paper. This was also DEECA's position and is reflected in the recently released Renewable Energy Handbook 2025.

The basis for the 600 metre breeding buffer proposed in the handbook is not entirely clear. No rationale is provided in the handbook. As described above, the internal DEECA memo (D285) focuses on protection of pre-fledgling chicks. DEECA acknowledged that this memo and the underlying Veltheim 2019 paper informed the handbook but said it should not be taken as the rationale for the breeding buffer.

In the absence of any further explanation from DEECA, the IAC has considered Veltheim 2019, the internal DEECA memo and the objective in the Interim Brolga Guidelines that turbine-free areas around potential nesting sites are sufficient to ensure no significant impact on the likelihood of successful reproduction. In addition, the Renewable Energy Handbook notes that "*Brolgas have low breeding success rate in surviving from egg incubation to fledgling*". The IAC accepts this is the most critical stage in the breeding cycle noting the low reproductive success of the species in Victoria. The IAC acknowledges that adult birds will fly out of the nominated breeding buffer and potentially collide with turbines which, as discussed below, the IAC consider low risk.

The IAC concludes that the proposed breeding buffer meets the key objective of protecting pre-fledgling chicks.

The IAC has considered the concerns of some submitters about the reliance on the Veltheim 2019 paper as follows:

- The paper only used 400 GPS tracking data points out of nearly 80,000 records. The IAC accepts this was due to the focus on pre-fledgling chick movements.
- The breeding buffer in the paper was based on a 2011 study by Venosta et al which used a flawed methodology. The IAC's review of the Veltheim paper is that it only relied on Venosta et al. 2011 for information on the age of Brolgas at fledgling. This is not in dispute. The other reference to Venosta et al. 2011 is in the context of a literature review provided as background, as is typical for these academic papers. The paper relies on Veltheim's own GPS records rather than these references, which are referred to by Veltheim as based on "*scant, unpublished field sightings*". This information gap forms part of the rationale for Veltheim's work.
- The breeding buffers should instead be based on the more recent Veltheim 2022 paper which uses a more comprehensive data set. The IAC notes the two papers have different purposes. The 2022 paper focuses on seasonal movements of Brolgas. The 2019 paper considers pre-fledgling chick movements. Consequently, the 2019 paper is more relevant.

The EES notes that some construction will occur for the main substation within the breeding buffer. The IAC supports the measures in MM-BR01 (Construction during Brolga breeding season) to minimise impacts on breeding Brolgas.

Displacement

Another major focus of submissions was the potential for wind farms to cause displacement of Brolgas from breeding and foraging habitat. Submitters tabled a number of reports they considered demonstrated displacement at existing Victorian wind farms. The IAC has reviewed the reports and Mr Organ's analysis of several of these reports (D383). The IAC's assessment is shown in Table 6.

Table 6 IAC review of wind farm reports

Report	IAC Analysis
Stockyard Hill Wind Farm Brolga Report, and Bird and Bat Monitoring Year One report (D285 and submissions 62 and 82))	<p>The Year One report does not provide a sufficient basis to conclude displacement has occurred. In this case, seasonal conditions appear to have been a more significant factor. The report notes <i>"with high rainfall in 2022, breeding attempts have been abandoned in multiple locations due to high rainfall and/or competition with Black Swan"</i>.</p> <p>Monitoring over several years is needed to discount seasonal variation. Mr Organ noted that <i>"additional Brolga records from several wetlands within 1-3 kilometres (e.g. Lake Goldsmith, Black Lake, and Slater Lake) of the operating wind farm in 2022, 2023, 2024, and 2025 have recently been submitted to the VBA"</i>. The IAC has not verified this information.</p> <p>The Year One report does note successful nesting and fledging at Slater Lake. Mr Organ claimed this was 2.9 kilometres from the nearest turbine although Mr Cumming submitted that this was to a foraging record and the distance to the nest was 3.5 kilometres.</p> <p>The report notes observations of Brolga and juveniles <i>"safely flying around obstacles"</i> such as the turbines. This was based on observations by environmental personnel so could not be verified by the IAC.</p> <p>Overall, there is insufficient evidence to draw conclusions as to the extent of displacement (if any) that may have occurred.</p>
Berrybank Wind Farm Brolga Report (D271)	<p>The IAC agrees with Mr Organ's conclusion that historical use of the project area has been limited. The failure to find Brolgas during the first year survey is therefore not surprising and does not necessarily indicate displacement.</p>
Yambuk and Codrington Wind Farm Avifauna Monitoring Survey (D272)	<p>The IAC agrees with Mr Organ that no Brolgas were detected during the survey period and the report provides no information on displacement of Brolgas.</p>
Dundonnell Wind Farm, First year annual report (D288) and Dundonnell Brolga Assessment (2014) (D289)	<p>Mr Organ noted <i>"The Brolga records shown in Figure 19 of the Brolga Assessment Report (Brett Lane and Associates Pty Ltd 2014) are a compilation from five breeding seasons (2009, 2010, 2011, 2012, and 2013) and three flocking seasons (2011, 2012, and 2013), and also include landholder observational data and documented records that were available at the time on the VBA"</i>. Consequently, they are not comparable with monitoring results from a single year.</p> <p>Successful breeding did occur approximately 3.2 kilometres from turbines. Mr Organ also noted seven confirmed Brolga records in proximity to the wind farm have been submitted to the VBA and may be from more recent post-construction surveys.</p> <p>Several years of monitoring would be required before any conclusions about Brolga displacement could reliably be drawn.</p>

Report	IAC Analysis
<p>Salt Creek Wind Farm - First year annual report – BBAMP (D291) and Salt Creek Wind Farm - Second year annual report – BBAMP (D292)</p>	<p>There were seven historical records of Brolgas breeding within 3 kilometres of the wind farm site suggesting limited usage of the area. The first year monitoring report recorded Brolgas at a single wetland. The record was 3.25 kilometres from the nearest turbine. The report notes the lack of breeding records in the 2018 season as ‘unusual’ but considers it ‘plausible’ this was due to the season being too dry to sustain breeding in the area as many wetlands did not fill.</p> <p>The second year report observed Brolga pairs 6 times within 3 kilometres of the wind farm boundary. Three of these observations included a breeding attempt but none were successful.</p> <p>Mr Organ concluded the reports do not show evidence of displacement. Instead, they <i>“indicate a continuation of historically low Brolga usage within a five-kilometre radius of the wind farm, consistent with data collected during the pre-construction risk assessment”</i>.</p> <p>The reports show evidence of some ongoing usage of the areas by Brolgas but the information is not sufficient to draw conclusions about displacement.</p>
<p>Ararat Wind Farm – First year annual report (D418)</p>	<p>The report makes no reference to Brolgas.</p>
<p>Understanding AGL’s “Utilisation of habitat by Brolga within the vicinity of the Macarthur wind farm 2013 (D415)</p>	<p>This paper by Mr Cumming provides a detailed assessment of Brolga records from the AGL report against Australian Energy Market Operator electricity production data. Mr Cumming claimed it demonstrates that Brolga only came within 3 kilometres of the turbines to feed or attempt to breed when daily average generation was 30% or below.</p> <p>The AGL report was not tabled so the IAC is unable to verify Mr Cumming’s findings. However, the IAC did locate the 2016 update of the report, prepared for AGL by Australian Ecological Research Services, which found that during the breeding season of 2016, seven Brolgas, consisting of three pairs and one chick, were found within 3 kilometres of the wind farm. It also notes that in 2014, two Brolga pairs attempted to breed but were unsuccessful in producing offspring to the fledging stage. During the 2016 breeding season, at least two pairs attempted to breed at the wind farm site, one of which successfully raised a chick to the fledging stage.</p> <p>The 2016 AGL report describes usage of the wind farm site by Brolgas noting they were observed to forage within 100 m of turbines. On two occasions Brolgas were observed to fly at low altitude below the rotor-swept area of the turbine and on another occasion were seen to deliberately avoid the turbines when flying at altitudes within the rotor-swept area, diverting their course slightly to fly between turbines.</p> <p>The report does not link these observations with electricity production data so they do not necessarily disprove Mr Cumming’s claim. However, the ongoing use of the windfarm area, including for breeding, suggests that avoidance is not occurring. The report concludes: <i>“The Macarthur Wind Farm does not appear to have had any detrimental impact on the local Brolga population, either from the direct impact with turbines or displacement from habitat”</i>.</p>

In summary, the IAC considers the reports do not provide an adequate basis for drawing conclusions regarding displacement. Comparing historical breeding records with records from one or two years is not appropriate. The IAC agrees with Mr Venosta that a small proportion of wetlands are used for breeding in any given year. This is natural and is affected by seasonal conditions of wetlands, territoriality and other effects not associated with wind farms.

Also relevant is that Brolgas have low breeding success rates. A failure to raise a chick to fledging may not necessarily be due to the presence of a wind farm.

Several years of operational monitoring would be needed before reliable conclusions could be drawn on whether a wind farm has caused displacement and over what distance. Given the number of wind farms that are now operating in Victoria, such information likely exists and, if it had been made available, would have assisted the IAC.

The IAC has not received any evidence from DEECA to demonstrate a 300 metre disturbance buffer is appropriate, other than noting it was recommended by the Brolga Scientific Panel for the Interim Brolga Guidelines.

The issue of disturbance buffer was explored by the IAC during the Hearing. DEECA advised it has not changed its position following the release of new information since the Interim Brolga Guidelines were published (including wind farm monitoring and compliance reports). DEECA did not provide further explanation or evidence, such as outcomes from any DEECA review of wind farm monitoring reports. If information was available to support the 300 m disturbance buffer, it would have assisted the IAC in providing greater confidence on the effectiveness of this buffer.

The IAC considers uncertainty regarding displacement is not fully resolved. This indicates the need in the BMCP for a comprehensive long-term monitoring program to determine if displacement has occurred. To ensure confidence in the program, the IAC recommends the BMCP provide a greater role for the IEA in oversighting this program. If displacement is confirmed, the IAC recommends the wind farm operator be required through the BMCP to develop appropriate responses to ensure the net zero impact outcome (in the Interim Brolga Guidelines) is met. This could be through curtailment, in the first instance, or further compensation measures. These measures should be determined in consultation with DEECA.

While not specific to the Project, Veltheim 2019 recommends a before-after control-impact (BACI) study tracking multiple individuals, within the same breeding season, to understand potential wind farm impacts to movement behaviour, habitat use and breeding success of Brolgas. The IAC considers this would be beneficial to understand and, if necessary, inform impact mitigation for the Project to ensure the net zero outcome is met. The IAC recommends this be included in the BMCP requirements in the Incorporated Document.

Collision risk

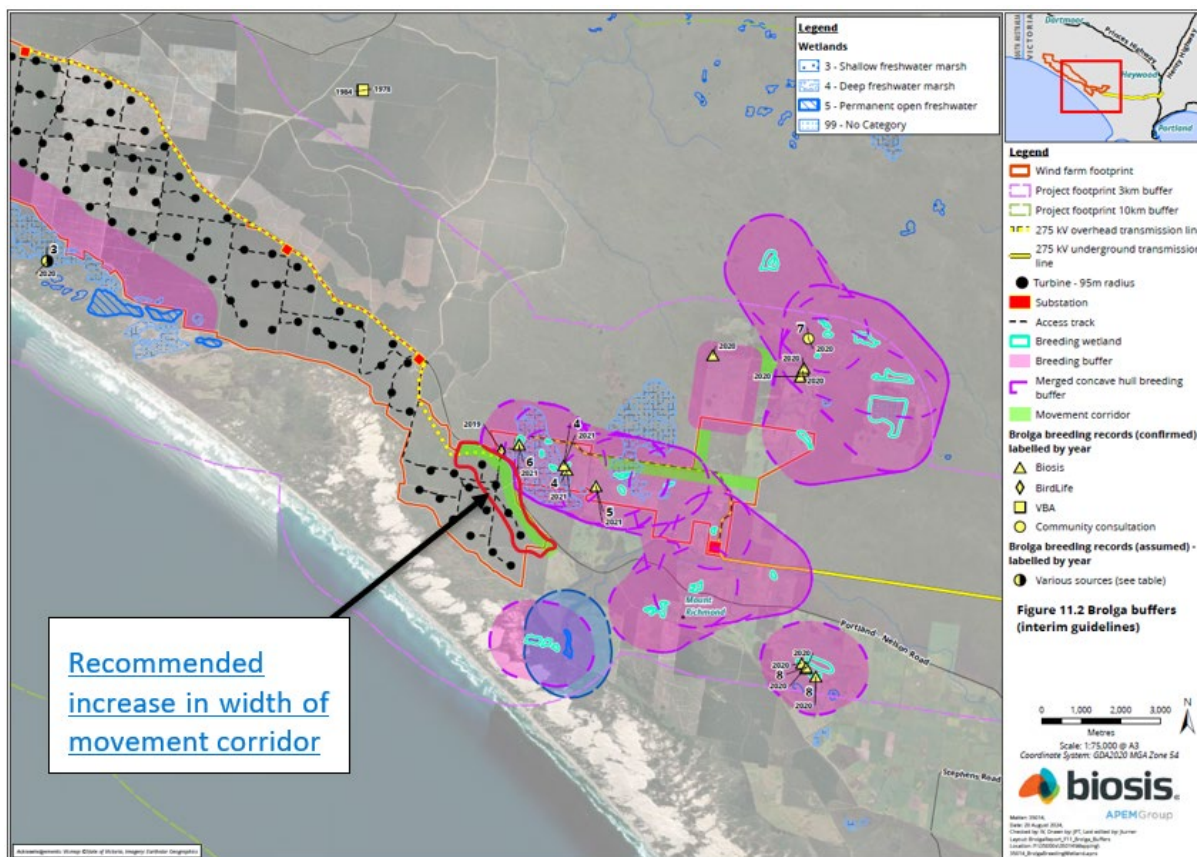
While some submitters claimed wind farms had caused multiple fatalities of Brolga, the IAC was only provided with evidence of one mortality. The IAC accepts the findings of the EES that there is a low risk of collision with turbines with Brolgas. This is recognised in the Renewable Energy Handbook 2025.

While the risk of collision is low, the IAC considers the risk should not be elevated by placing turbines near likely Brolga movement corridors. As there is a risk of serious or irreversible harm to Brolga, the precautionary principle should apply.

Following a detailed review of the EES, evidence and submissions material, the IAC considers the 300 metre turbine free wide movement corridor south-east of Kentbruck Heath area (refer to Figure 10 for map details) inadequate, for the following reasons:

- The assessment informing the buffer was based on field observations only.
- There are multiple Brolga potential breeding wetlands mapped to the east of this area.
- There are also several confirmed breeding records in this area.
- The proposed movement corridor immediately adjoins Brolga breeding buffers.
- Information was provided in submissions showing tracking of a Brolga from Cape Bridgewater through the eastern section of the wind farm travelling to South Australia. Brolgas flying from breeding wetlands at Swan Lake to the wetlands near Kentbruck Heath would also likely pass through this broader area. Consequently, there is potential for multiple Brolga movements through this section of the wind farm and it would seem unlikely that they would be confined to a 300 metre corridor.
- Section 5.2.4 of EES Technical Appendix D (Brolga Impact Assessment) notes that the 300 metre width represents the median movement corridor in one study with the species recorded flying across a corridor of 100 – 750 metres. Given the ecological sensitivity of the Kentbruck Heath and surrounding area and the net zero objective in the Interim Brolga Guidelines, the IAC considers a precautionary approach should be applied and the upper, rather than median, distance used.

Figure 10 Brolga buffers based on Interim guidelines (with IAC notation)



Source: Figure 11.2, EES Appendix D

There remains uncertainty about the extent of Brolga movements within this area. Pre-commissioning monitoring required in the BBAMP is expected to provide a greater understanding

of Brolga movements and subsequent risk from turbine collision. Consequently, the IAC recommends the following approach:

- As a default position, widening the movement corridor to 750 metres by removing Turbines 12, 34, 35 and 42.
- If pre-commissioning monitoring demonstrates with a high level of confidence that the risk to Brolga is low and can be managed, the turbines may be reintroduced in appropriate locations and with required management strategies such as curtailment.

For clarity, the IAC notes this pre-commissioning could occur at any time before pre-commissioning.

The IAC considered whether this monitoring should be before construction or commissioning. The Proponent may choose to undertake this monitoring as early as possible to confirm, prior to construction, if any of the turbines listed above could proceed. The IAC considers it appropriate to provide the Proponent with some flexibility in determining its preferred approach. Any changes to the default position to remove the turbines would need to be agreed by the Minister in consultation with DEECA.

Brolgas have been known to collide with powerlines and the IAC supports marking of the overhead powerline, as set out in MM-BD13 (Improved powerline visibility) to reduce this risk.

Three internal transmission line options near the Kentbruck Heath were presented in the Proponent's submission, with the central option being preferred by the Proponent. The new central option is within a designated Brolga movement corridor with a large number of Brolga records.

The IAC has discussed and made recommendations relating to the internal transmission line options in Chapter 17.1 of this Report. The IAC supports the southern underground option unless all or part of the central option is underground (subject to assessment of potential impacts). This requirement could be reviewed if pre-commissioning monitoring demonstrates Brolgas are unlikely to fly through this area.

There is a need to improve knowledge of Brolga flight movements across the Project area. The BMCP requirements in the Incorporated Document should be amended to require monitoring with advanced technology.

Role of Independent Environmental Auditor

The Incorporated Document identifies a role for the IAE in implementing the BBAMP but not the BMCP. The IAC sees no reason for this difference and recommends extending the IAE's role to the BMCP. Given the inherent risks to Brolgas from the siting of the Project and the high level of community interest in their conservation, the IAE's role in the BMCP will help to provide confidence to stakeholders that the plan will achieve its net zero objective.

(v) Findings and recommendations

The IAC finds, subject to its recommendations:

- The Project is not likely to result in significant effects on the Brolga.
- The effects are acceptable and, with implementation of the BMCP, should have a net zero impact on the Victorian Brolga population.

- If the central option is adopted for the internal transmission line, it should be constructed underground unless pre-commissioning monitoring demonstrates Brolgas are unlikely to fly through this area (see Chapter 17.1).

The IAC recommends:

Incorporated Document

Make the following changes:

- a) **Amend the Brolga Monitoring and Compensation Plan requirements to:**
 - **require pre-commissioning monitoring to inform movement corridor width and management measures**
 - **require a before-after control-impact study**
 - **ensure compensatory measures include impacts from habitat displacement**
 - **require the Independent Environmental Auditor to have a similar role in reviewing the Brolga Monitoring and Compensation Plan to that specified for the Bird and Bat Adaptive Management Plan.**
- b) **Incorporate the recommendations in Chapter 5.7 this Report.**

These changes are included at Appendix F:2.

Other recommendation

Remove turbines 2, 34, 35 and 42 unless pre-commissioning monitoring demonstrates to the satisfaction of the Minister for Planning, in consultation with the Department of Energy, Environment and Climate Action, that the risk to Brolgas is low.

5.4 Australasian Bittern

(i) The issues

The issues are whether:

- the Project is likely to result in significant effects on the Australasian Bittern
- such effects are acceptable and will not compromise the recovery of the species.

(ii) What did the EES say?

The Australasian Bittern is listed as endangered under the EPBC Act and critically endangered under the FFG Act. The Australian population consists of an estimated 1200 (650–1750) individuals.

The species inhabits freshwater wetlands and may also occur in estuarine and tidal wetlands and river mouths. Australasian Bittern undertake seasonal and dispersive movements between breeding and non-breeding habitats. Whether individuals fly between breeding and non-breeding areas as single birds, in pairs or groups, is unknown. The Australasian Bittern Recovery Plan (D258) defines habitat critical to the survival of the species as *“any natural wetland habitat where the species is known to occur (breeding or foraging habitat) within the indicative distribution map”*.

Three Australasian Bittern were recorded during the Project surveys:

- an incidental observation of a single individual flying north-east within the Project area at Gorae West
- one male calling at a wetland north of Lake Mombeong within the Project area

- one male calling at Lake Mombeong, outside the Project area.

Australasian Bittern are known to occur in the Long Swamp, in the middle and east sections, in Lower Glenelg National Park and in wetlands near Portland.

Satellite tracking and local observations indicate that Australasian Bittern are present throughout the year. Some individuals are likely to remain resident, whilst others may regularly or occasionally fly inland between breeding and non-breeding seasons. One juvenile male (Robbie) was tracked moving at night from the Riverina rice fields to Long Swamp and Picaninny Swamp.

The Project can potentially impact upon Australasian Bittern through:

- direct removal of habitat for construction of temporary and permanent infrastructure
- direct mortality due to collisions with turbines or transmission lines
- displacement of breeding or foraging activity due to disturbance caused by construction and operation of wind farm infrastructure
- indirect disturbance to wetland habitat due to changes to hydrological regimes, sedimentation, erosion and pollution
- disturbance to riparian vegetation and other vegetation surrounding wetlands that provides a protective buffer.

Wetland habitat, including breeding habitat, is not likely to be impacted by the Project. The majority of known and suitable habitat is within the Brolga habitat buffers.

Given potential and known habitat occurs south, north and east of the Project Area and the likely local and seasonal movements across the wind farm, a portion of Australasian Bittern using the local wetlands are expected to fly across the Project area. Some flights could occur at RSA and present a collision risk.

Birds could also collide with the proposed overhead powerline parallel to Portland-Nelson Road. Marking of overhead electricity wires has been shown to reduce bird collisions. Bird diverters designed to maximise visibility in low light and nocturnal conditions used by the Australasian Bittern are available but their effectiveness has not been researched and published.

Given the uncertainty on the number of movements across the wind farm and the absence of a PVA, the EES concluded that collisions from the Project could lead to a long-term decrease in the size of the population and therefore represent a significant impact.

The EES identifies technology that could detect presence of Australasian Bittern near turbines and triggers shut-down as a potential adaptive management measure.

(iii) Evidence and submissions

The evidence and submissions were focused on the following key matters:

- disturbance to habitat
- flight height
- flight movements across site and collision risk
- whether the impact on Australasian Bittern was likely to be significant
- adequacy of the proposed offset.

Disturbance to habitat

Mr Venosta (D67) gave evidence that the measures taken to avoid habitat disturbance through applying wetland buffers, including Brolga buffers, and not placing turbines in the eastern section

of the Project area. The buffers would likely cover the majority of movements recorded for Robbie while resident in Long Swamp.

Mr Venosta considered indirect impacts on habitat, such as through construction noise, traffic and artificial light, were expected to be minimal due to the separation distances, topography and vegetation between the wind farm site and most wetlands used by Australasian Bittern. He noted that Australasian Bittern occupy wetlands adjacent to the Henty Highway in Portland (suggesting a tolerance to human disturbance).

Mr Venosta also gave evidence that the potential for barrier effect, reducing movement between habitats, has not been detected for onshore wind farms in Australia.

This evidence was supported by Mr Organ (D84). Mr Organ advised there was no evidence that plantation environments are used by Australasian Bittern for breeding, foraging, or roosting.

Some submitters considered the EES had understated the value of the adjoining wetlands as Australasian Bittern habitat. DEECA (D393) argued the habitat mapping omitted seasonally inundated and ephemeral features known to be used by the species. BirdLife Australia (D430) noted they had documented at least annual occupancy in the wetlands between Cape Bridgewater and Pick Swamp over the last 20 years, including use of significant habitat on both the northern and southern boundaries of the proposed Project area. It does not account for seasonal increases in birds leaving known breeding sites in the Riverina district or the presence of females, juveniles or non-booming males.

NGT (D420) submitted that, because of the remoteness of the wetlands along the coast, there had been limited survey effort in the past. They noted that, when a staff member was located at Nobles Rocks during dune reinstatement works, Australasian Bittern were sighted almost daily.

Flight height

There was a divergence of views as to whether the flight height of Australasian Bittern would put them at risk of collision. NGT presented tracking data from the Bitterns in Rice project¹⁹ and this was also referred to by the Proponent. Preliminary analysis of this data showed about 90 per cent of flight heights were below 30 metres but flights went up to around 56 metres. The NGT noted the data points were currently limited. With a greater sample size, it was expected that more variability in flight elevation would be captured.

The NGT also presented data from Australasian Bitterns in New Zealand that regularly flew at heights within the RSA for the Project. The Proponent (D485) provided extensive submissions criticising this information from New Zealand noting:

- The data was collected incidentally during a national landscape-scale movement study and had no relationship to a wind farm.
- The information was published in a Department of Conservation report and not as a peer-reviewed scientific paper.
- The birds used in this data were flying in terrain entirely different from the terrain around the Project area, and consequently, may have fundamentally different behaviours from the individuals that utilise Long Swamp.

¹⁹ <https://www.bitternsinrice.com.au/>

Mr Organ (D84) noted that, while some stakeholders, had expressed concern that the plantation structure could force Australasian Bittern into higher altitude flight paths (thus into the RSA), this assumes a uniform, dense canopy. The plantations within the Project area are structurally variable, with significant portions harvested at any given time and multiple wide access paths and roads maintained for forestry operations. These features provide low-canopy or open corridors through which bitterns could travel without needing to ascend within, or above, turbine height.

Flight movements across site and collision risk

All parties agreed there was potential for Australasian Bittern to fly over the Project area but views differed on the extent to which this would occur, and whether the Project area contained an important flyway.

Mr Venosta and Mr Gibson (D493) considered the tracking information for Robbie from the Bitterns in Rice project was insufficient to determine if the birds were crossing the Project area, or if they were moving along the coast and then departing from other areas, such as wetlands near Nelson or further west.

DEECA noted that records of Australasian Bittern activity exist north of the Project area, suggesting potential for local flights across the wind farm. Australasian Bittern habitat use is highly variable and influenced by seasonal conditions, habitat quality, and disturbance — all of which could prompt movement across the plantation landscape.

NGT submitted that the pattern of post-breeding dispersal identified from the tracking data, as well as the relatively high density of Australasian Bittern records in the Long Swamp and Pick Swamp region, suggested a regular, significant movement corridor for the species flying to and from the NSW Riverina to the wetlands of Discovery Bay. The NGT estimated around 50 individuals would use this or similar flight paths and this would result in a minimum of approximately 170 movements per year. A collision risk of just 1 per cent would equate to 1.7 deaths per year; about 51 over the project lifespan of 30 years, which for a single wind farm would be substantial.

This number was disputed by Mr Organ (D494). He considered there was no data to support the presence of 50 individuals occupying wetlands such as Long Swamp. Only parts of these wetlands contain suitable microhabitat, namely dense emergent vegetation which the species requires for residence and cover. Some sections of the wetlands, such as large open water areas, are unlikely to be used for breeding.

Mr Organ noted there were other suitable wetlands used by the species in the local area and across south-western Victoria and south-eastern South Australia. The assumption that 50 individuals undertake multiple long-distance movements from Long Swamp each year was speculation.

Mr Organ further noted that CRM was not performed as Australasian Bittern were not observed flying across the turbine area. However, by using Brolga as a surrogate given similar flight behaviour, Mr Organ calculated that using the NGT estimate of 170 flights and a 98 per cent avoidance rate would result in approximately 0.005 collisions per year. This suggested the risk, even with the presumed 170 flights across the Project Area, would be extremely low.

Mr Organ and the Proponent referred to IdentiFlight as an example of a tracking system that could be used to identify flights by Australasian Bittern across and near the Project area. IdentiFlight (D224) is a bird detection and informed curtailment system designed to mitigate the impact of

wind energy projects on bird populations. Using artificial intelligence and optical sensor technology, IdentiFlight detects, classifies, and quantifies risk to sensitive bird species so that turbines are efficiently curtailed. Information from IdentiFlight:

- Noted that while the current technology operates from dawn to dusk, nighttime detection systems for nocturnal birds and bats are under development
- Described a proposed monitoring study program for the Australasian Bittern, using mobile camera units with night time vision capability, to validate a detection methodology (and species identification), and then track flights over a period of about 12 months, to characterise flight heights, trajectories, dispersion, and quantity and timing of flights.

Mr Gibson (D493) advised that, if a clearly defined flight path was to be identified through the area where turbines are proposed, the Project may be able to further reduce risk by application of nocturnal curtailment for selected turbines, timed to coincide with conditions when flights through the site are most likely (seasonal considerations, time of night, weather conditions etc). Additionally (or alternatively) technological approaches, such as the successful application of the IdentiFlight system to detect approaching birds and apply turbine shut-downs could be used in areas where flights were most likely to occur.

The VNPA raised concerns about the collision risk of the proposed powerline. They noted that research on bird diverters primarily applied to species with good forward vision such as raptors and waterfowl. Bitterns, being stealth predators that rely on camouflage, have different visual perception and may not detect diverters as effectively as other species. In addition, diverters have shown limited effectiveness at night and in poor weather conditions.

Significance of impact

Mr Venosta and Mr Organ both considered the significance of residual impacts on the Australasian Bittern against the EPBC Significant Impact Guidelines but arrived at different conclusions. Mr Venosta concluded the Project was likely to have a significant impact, while Mr Organ concluded it would not have a significant impact at a population level.

Mr Venosta took a more precautionary approach noting:

- uncertainty on the number of potential movements at risk and the lack of accurate data required to assess population viability. This made it difficult to ascertain if such an impact would affect the population in the long term. Given this uncertainty, Mr Venosta applied the precautionary principle.
- a number of recovery actions are currently occurring, including the local restoration of Long Swamp and Pick Swamp, Catchment Management Authority projects in the region, the Birdlife Australia Bittern Project, habitat creation and enhancement in the Riverina rice fields and environmental water allocations in the Murry-Darling Basin. While the Project will not impact upon the species habitat, individuals benefiting from these recovery actions may potentially collide with wind turbines and power lines, resulting in at least some impact on the recovery efforts undertaken at these locations.

DEECA (D393) supported Mr Venosta's findings and agreed the Project could result in a long-term decrease in the size of the Australasian Bittern population and impact the species. It considered this particularly concerning given the species' reliance on the broader Discovery Coast wetland network as a key regional refuge, and the limited capacity of the population to absorb additional mortality or habitat disruption.

DEECA's view was the available evidence did not support a conclusion that the Project is unlikely to result in significant impact. In particular, DEECA noted:

- There was no robust, site-specific data on flight behaviour or turbine avoidance to rule out collision risk.
- The habitat mapping omitted seasonally inundated and ephemeral features known to be used by the species.
- The assertion of no residual impact was contradicted by the Project's own recognition that turbines are located near high-value Australasian Bittern habitat.

Adequacy of the proposed offset and mitigation measures

Mr Organ (D84) provided an example of a coastal wetland with restoration potential on private property west of the Discovery Bay Estuary that could be used as an offset. The Proponent subsequently advised (D485) that a letter of intent had been signed with the owner to use this area as an offset, should it be required.

Mr Organ also noted that, in addition to on-ground habitat enhancement at wetlands, there are opportunities to undertake research in the species movement patterns and use of habitats on a spatial and temporal scale.

The NGT submitted that wetland restoration projects involve all sorts of complexities and should not be suggested as a quick or simple offset solution. If this was used as an offset for the anticipated decline or loss of values at an existing high quality wetland site, these outcomes cannot be guaranteed and may lead to net loss.

The Proponent (D485) rejected this argument. While it recognised the positive outcomes the NGT had achieved, there are others equally capable of restoring or recovering former wetlands. The Proponent noted constraints on the NGT were limited access to funds and reliance on volunteer labour which would not apply to the Project.

Mitigation measures

In response to submissions, the Proponent revised MM-BD10 to:

- qualify that the requirement for works in Broilga breeding buffers to be conducted outside the Australasian Bittern breeding season does not apply if it is demonstrated the buffers are not suitable breeding habitat for the Australasian Bittern
- include a requirement for a plan to manage works for the main substation to avoid impacts on Australasian Bittern breeding activity
- require monitoring technologies, such as GPS/satellite/camera-based tracking of movements to be used in pre-commissioning monitoring.

Clause 7.20 of the Incorporated Document (which was moved from the BBAMP) was revised to require the BBAMP to:

- adopt the use of advanced technological identification for the pre-commissioning monitoring
- adopt the use of advanced technological identification for identifying operational measures to manage impacts on species of concern (such as monitoring, detection and or curtailment) unless it is demonstrated that, as a result of the pre-commissioning monitoring, alternative measures are suitable for managing impacts or no measures are required. The decision on the use of technology must consider the need for the response to the risk to be proportionate to the risk.

Revisions to the Incorporated Document added greater detail on the role of the IEA.

(iv) Discussion

The IAC considers impacts on the Australasian Bittern are likely to be significant and accordingly it is appropriate to take a precautionary approach. This is primarily due to the risk of collision with turbines but impacts could also occur through displacement from habitat.

Disturbance of habitat

EES surveys and database information clearly establish the presence of Australasian Bittern in wetlands along Discovery Bay. Sections of these wetlands could be regarded as habitat critical to the survival of the species under the Australasian Bittern National Recovery Plan. As submitted by the NGT and others, the IAC accepts this area has been historically under-surveyed due to the difficulty of access and its remoteness.

The Project is unlikely to directly impact Australasian Bittern habitat. While there will be indirect impacts, such as from noise, lighting and dust, these will be significantly mitigated by the proposed Brolga and wetland buffers.

Experts had different views on whether wind turbines could displace Australasian Bittern from its habitat. Mr Venosta noted a potential impact from the Project on Australasian Bittern could be displacement of breeding or foraging activity due to disturbance caused by construction and operation of wind farm infrastructure while Mr Organ considered this risk was low. Given the significant investment in restoration of Long Swamp and the current use of this and other nearby wetland areas by Australasian Bittern, the IAC considers displacement an important issue to resolve, as this could result in a significant impact on the species. Accordingly, the IAC recommends a BACI study to provide a better understanding of potential wind farm impacts to movement behaviour and habitat use by Australasian Bittern.

Collision risk

The primary risk to the Australasian Bittern from the Project is through collision with turbines and the proposed internal transmission lines. The Proponent considered this will not result in a significant impact primarily as:

- most flights will be below the RSA
- relatively few flights will occur across the wind farm area
- the transmission line in the eastern Project area will be underground and not present a collision risk.

From the limited data available, the IAC accepts that the Australasian Bittern is mainly likely to fly below the RSA in the wind farm area. The IAC agrees with the Proponent that the data from New Zealand is not appropriate to use given the very different site context. However, there remains the potential that some flights will be in the RSA and place the Australasian Bittern at risk.

Tracking data indicates local flights are generally within and between wetlands along the coast and rarely extend outside the proposed buffers. A possible exception is in the Kentbruck Heath area. Surveys undertaken for the EES detected an Australasian Bittern in this area. Richard Loyn (in his independent peer review at Appendix 18 of the FFIA) notes the potential for Australasian Bittern to use the wetlands in Kentbruck Heath. Flights from these wetlands to Long Swamp and other wetlands along Discovery Bay would take the Australasian Bittern through the wind farm.

The Australasian Bittern Conservation Advice²⁰ (D261), submitted by the Proponent, recognises inappropriate placement of infrastructure as a threat to the species. Given the conclusion in the EES (supported by Mr Venosta and DEECA) that the Project was likely to have a significant impact on the Australasian Bittern, and the very limited data on Australasian Bittern flight movements in this area, the precautionary principle should be applied. On this basis, the IAC recommends the following:

- As a default position, turbines should not be placed within 750 metres of the Kentbruck Heath. Consistent with recommendations for Brolga (discussed in Chapter 5.3), this would require removal of Turbines 12, 34, 35 and 42. In the absence of Australasian Bittern flight information, the IAC considers the movement corridor width proposed for Brolga is appropriate noting Mr Organ's advice (D494) that both are large-bodied waterbirds with generally direct flight patterns.
- Given Turbine 112 is located at a point where the separation between the Kentbruck Heath and coastal vegetation is the narrowest, and therefore could be a preferred flight path, Turbine 112 should also be removed.
- These restrictions should be reviewed following pre-commissioning monitoring. If monitoring demonstrates with a high level of confidence that the risks to Australasian Bittern are low, the Minister may agree to permit these turbines in consultation with DEECA. As noted above for Brolga, pre-commissioning monitoring could occur at any time prior to commissioning.

Long distance flights to the Riverina are likely to present the greatest risk. Tracking data from Robbie show flights across the wind farm area. While the IAC agrees with the Proponent that this flight path is an extrapolation from very little data, the potential for flights across the wind farm cannot be dismissed.

Mr Organ and the NGT had very different views on the extent to which this would occur. This highlights the considerable uncertainty on this matter. For this reason, the IAC supports the need for comprehensive pre-commissioning monitoring using detection technology, as required in the Updated BBAMP. This will provide an understanding of the location and frequency of flight movements by Australasian Bittern across the Project area and inform the need for detection technology (and automatic curtailment) during operation. If this technology is used for monitoring during Project operation, the Proponent should also investigate the potential for the technology to detect collisions. This could inform, rather than replace, mortality monitoring.

Submitters noted the digital tracking technology discussed during the Hearing is currently not suited to low light conditions in which Australasian Bittern frequently fly. However, this capability is under development. Other systems that can work in low light conditions are also available.²¹

The IAC agrees there is a risk of Australasian Bittern colliding with the proposed powerline. The EES notes that bird diverters are available that can maximise visibility in low light, but their effectiveness still requires more research. The IAC considers these should be used at higher risk locations as determined by pre-commissioning monitoring. Their effectiveness should be assessed through ongoing mortality monitoring. As this is an evolving area, the IAC recommends

²⁰ Prepared under the EPBC Act, 18 January 2019

²¹ D224 and D225, Proponent – Attachments to Technical Note 16

technology should be reviewed at least every five years to determine whether replacement with newer diverters is warranted.

To minimise the risk of collision with transmission/powerlines, the IAC reiterates its recommendation above for Brolga that the central option of the internal transmission line is constructed underground. This is particularly relevant for Australasian Bittern given the proximity of the central option to the Kentbruck Heath and its location on a potential flight corridor between this area and the coast. This requirement could be reviewed if pre-commissioning monitoring demonstrates Australasian Bittern are unlikely to fly through this area.

The IAC agrees with the trigger in the BBAMP of one mortality requiring curtailment or other remedial measures. As was recommended above for the SBWB, the IAC recommends the BBAMP includes a benchmark with confidence limits for the Australasian Bittern specifying the proportion of total mortalities or injuries that must be detected through monitoring.

Significance of impact

Given the uncertainty regarding the number of movements of Australasian Bittern across the wind farm area and the resultant risk of collision, the IAC considers it is appropriate to take a precautionary approach. It concludes that impacts on Australasian Bittern may be significant. In this context, it is necessary to apply all reasonable mitigation measures before offsets are considered. The recommendations below have been framed with this in mind.

Adequacy of the proposed offset

If DCCEEW accept the residual impact on the Australasian Bittern will be significant, an EPBC offset will be required. The proposed offset is considered suitable and the IAC is satisfied restoration of habitat should be feasible. Consistent with the EPBC Offsets Policy, the BBAMP should seek to achieve a net benefit for the Australasian Bittern.

(v) Findings and recommendations

The IAC finds, subject to its recommendations:

- The Project is likely to result in significant effects on the Australasian Bittern.
- With provision of an offset, the effects are likely to be acceptable and the Project is not likely to compromise the recovery of the species
- Suitable offsets are available.
- If the central option is adopted for the internal transmission line, it should be constructed underground unless pre-commissioning monitoring demonstrates Australasian Bittern are unlikely to fly through this area (see Chapter 17.1).

The IAC recommends:

Environmental Management Framework

Include the following changes:

- a) **Amend MM-BD10 (Australasian Bittern) to add a requirement for a before-after control-impact (BACI) study to provide a better understanding of potential wind farm impacts to movement behaviour and habitat use by the Australasian Bittern.**
- b) **Amend MM-BD13 (Improved powerline visibility) to add a requirement for a review to be undertaken every five years to determine whether more effective**

diverters have become available and whether their use is warranted taking account of the results of mortality monitoring.

Incorporated Document

Include the following changes:

- a) Amend the Bird and Bat Adaptive Management Plan requirements to:**
 - **include an objective for the Project to result in a net benefit to the Australasian Bittern**
 - **include benchmarks with confidence limits for the Australasian Bittern specifying the proportion of total mortalities or injuries that must be detected through monitoring**
 - **add the potential for advanced detection technology to be used for collision detection**
 - **incorporate the recommendations in Chapter 5.7 this Report.**

These changes are included at Appendices F:1 and F:2.

Other recommendation

Remove turbines 2, 34, 35, 42 and 112 unless pre-commissioning monitoring demonstrates to the satisfaction of the Minister for Planning, in consultation with the Department of Energy, Environment and Climate Action, that the risk to Australasian Bittern is low.

5.5 Impacts on other birds

(i) The issues

The issues are whether:

- the Project is likely to result in significant effects on birds (other than Brolga and Australasian Bittern)
- such effects are acceptable and will not compromise the recovery of any other threatened bird species.

(ii) What did the EES say?

The Project is not expected to significantly impact any other birds. The IAC has summarised the EES findings in Table 7.

Table 7 **Impacts on other birds**

Species and status	Assessment
South-eastern Red-tailed Black Cockatoo EPBC: Endangered FFG: Endangered	Unlikely to be significantly impacted as: <ul style="list-style-type: none"> - In the Kentbruck heath area, the species primarily feeds on Brown Stringybarks. These mostly occur to north of Project area. - The Project area does not provide suitable foraging habitat as the species does not feed on pine seeds. - Flights through the wind farm are expected to be very occasional, as the subspecies is only very rarely recorded south of the wind farm, and the area to the south does not support important foraging habitat. There may be occasional movement between Lower Glenelg National Park and Mount

Species and status	Assessment
	<p>Richmond. These movements would mostly likely be through the eastern farmland area where no turbines are proposed.</p> <ul style="list-style-type: none"> - Observational studies on flight heights by Biosis suggest flights within the RSA are likely to be rare events. - Construction of the wind farm portion of the project does not involve any removal of potential habitat for the species. - Underground construction of the external transmission line removes any power line collision risk for the species within areas of native forest and is not expected to impact Brown Stringybark. - Trenching for transmission line access to the Heywood terminal station will only impact the root zone of one Brown Stringybark tree.
<p>Gang Gang Cockatoo EPBC: Endangered* FFG Act: Not listed</p>	<p>Unlikely to be significantly impacted as:</p> <ul style="list-style-type: none"> - It is not expected to pass through the Project area at heights that would place it at risk of turbine collision. - It has a high capacity to avoid collisions with overhead powerlines.
<p>Orange-bellied Parrot EPBC: Critically endangered FFG: Critically endangered</p>	<p>Unlikely to be significantly impacted as:</p> <ul style="list-style-type: none"> - No suitable foraging or roosting habitat will be removed. - Preferred habitat is along the coast and any flights inland are likely to be rare. - Flights are likely to be below rotor-swept height.
<p>Blue-winged Parrot EPBC: Vulnerable* FFG: Not listed</p>	<p>Unlikely to be significantly impacted as:</p> <ul style="list-style-type: none"> - No suitable foraging or roosting habitat will be removed. - The windfarm is unlikely to present a barrier to movement of the species. - Flights are likely to be below rotor-swept height. - Collision risk modelling indicates an annual average of 1.5 collisions with turbines at the lowest avoidance rate of 0.95. This would be well within the natural variability in the species population mortality rate and will not affect functioning or viability of the population.
<p>Elegant Parrot EPBC: Not listed FFG: Vulnerable</p>	<p>Unlikely to be significantly impacted as:</p> <ul style="list-style-type: none"> - No suitable habitat will be removed. - The species is considered rare in the region and unlikely to inhabit the area in large numbers.
<p>Eastern Ground Parrot EPBC: Not listed FFG: Endangered</p>	<p>Unlikely to be impacted as:</p> <ul style="list-style-type: none"> - No suitable habitat will be removed. - Occurs in Discovery Bay and may occur in Kentbruck Heath. Movement between these areas would likely be in turbine-free buffers. - Generally, do not fly more than a few metres above ground.
<p>King Quail EPBC: Not listed FFG: Endangered</p>	<p>Unlikely to be impacted as:</p> <ul style="list-style-type: none"> - No suitable habitat will be removed. - Regular flights by numerous individuals through turbine and powerline area are considered very unlikely. - Unlikely to fly at rotor-swept height.

Species and status	Assessment
<p>Other threatened waterbirds Magpie Goose, Australian Painted Snipe (EPBC: Endangered, FFG: Critically endangered), Lewin’s Rail (FFG: Vulnerable), Australian Little Bittern (FFG: Vulnerable)</p>	<p>Unlikely to be significantly impacted as:</p> <ul style="list-style-type: none"> - No suitable habitat will be removed. - None of these species are likely to routinely fly at rotor-swept height. - Is likely to be present in Project area and surrounds in very small numbers - While there is a low potential for collisions with the overhead powerline, this can be largely mitigated through marker devices.
<p>Shorebirds, gulls and terns Refer to Table 7.8 of the EES for the full list of species.</p>	<p>Unlikely to be significantly impacted as:</p> <ul style="list-style-type: none"> - The surrounding area provides limited suitable habitat other than the Glenelg River Estuary, Long Swamp and Discovery Bay coastline. - No suitable habitat will be removed. - Habitat on Project area is generally unsuitable, other than a small portion of agricultural land in the eastern extremity which contains some ephemerally inundated areas that may occasionally be visited by Latham’s Snipe and other species. This is within turbine-free buffers. - All wind turbines are more than 5 kilometres from the key shorebird area at the Glenelg River Estuary, and around 2 kilometres from shorebird habitat along the ocean beach. - Long distance migratory flights of shorebirds are considered unlikely to be within rotor-swept height when (and if) birds fly across the wind farm. However this assessment is based on data from other locations, and there is no flight height data for these species available for the Investigation Area. - Local flights generally remain within a single broad area of habitat, such as estuaries, other shallow wetlands, or ocean beaches.
<p>White-throated Needletail EPBC: Vulnerable & Migratory FFG: Vulnerable</p>	<p>Unlikely to be significantly impacted as:</p> <ul style="list-style-type: none"> - Studies have indicated collision with wind turbines and overhead wires is of low severity and affects a small number of birds. - Collision risk modelling predicts there may be 1.12 collisions per year at the most conservative avoidance rate (0.95). This is unlikely to annually reach 0.1% of the estimated population threshold?.
<p>Fork-tailed Swift EPBC: Migratory</p>	<p>Unlikely to be significantly impacted as:</p> <ul style="list-style-type: none"> - No roosting habitat will be removed. - Not recorded in surveys and considered to visit the area infrequently. - Number of collisions with turbines and powerlines is unlikely to reach the 1% of estimated population threshold.
<p>Owls Powerful Owl (FFG: Vulnerable) Barking Owl (FFG:</p>	<p>Unlikely to be significantly impacted as:</p> <ul style="list-style-type: none"> - All species are unlikely to frequently inhabit habitats where turbines are proposed. - Foraging is focused on terrestrial prey species and would be unlikely to put

Species and status	Assessment
Critically endangered)	the birds at risk of collision with turbines.
Masked Owl (FFG: Critically endangered)	- Other than a single Barn Owl, no mortalities of these species have been reported at Victorian wind farms where data is available.
Southern Boobook, Barn Owl	- Construction of the underground transmission line through Cobboboonee National Park and Cobboboonee Forest Park may involve indirect loss of trees that may provide foraging or roosting habitat for forest Owls, however these tree impacts, if they occur, are insignificant from a habitat availability perspective.
Rufous Bristlebird FFG: Endangered	Unlikely to be impacted as: <ul style="list-style-type: none"> - Unlikely to fly more than a few metres above ground. - Construction of the underground transmission line will not involve removal of understorey vegetation that provides habitat for the species. - Construction of turbines and infrastructure in young pine plantations could displace individuals but this is unlikely to result in mortality.
Little Eagle FFG: Vulnerable	Unlikely to be impacted as: <ul style="list-style-type: none"> - It is considered unlikely to regularly occur in the Project area. - It is not noted as a species of concern for windfarm developments in Victoria.
White-bellied Sea Eagle FFG: Endangered	Unlikely to be significantly impacted as: <ul style="list-style-type: none"> - It is unlikely to make regular use of the Project area. - The Project area lacks habitat that is more commonly associated with the species' presence. - No vegetation will be removed that is suitable habitat for the species.

* Not listed at the time of the Controlled Action decision.

(iii) Evidence and submissions

Mr Gibson's evidence (D66) addressed threatened parrots and cockatoos, swifts, raptors, owls, King Quail and Rufous Bristlebird. Mr Gibson considered none of these species were likely to be significantly impacted. Mr Venosta (D67) considered the Project was unlikely to significantly impact shorebirds, gulls and terns, or any other threatened waterbirds. The reasons both experts gave for their opinions were consistent with those in Table 7 above.

Mr Gibson considered the BBAMP could manage residual impacts. Key elements include:

- an ongoing monitoring regime to investigate occurrence of the species near the site, including habitat within Discovery Bay Coastal Park and the Kentbruck Heath during the overwintering period
- investigation and trials of detection systems such as IdentiFlight
- a robust carcass monitoring regime; and adaptive responses.

Mr Venosta noted that, for shorebirds and gulls using the Ramsar Site, most habitat is along the Discovery Bay beach, while Long Swamp and associated wetlands provide waterbird habitats. The application of a 500 metre buffer from the Ramsar Site boundary, 300 metre public reserve buffer and application of the 900 metre Brolga buffer on Long Swamp creates a considerable buffer between the proposed turbine locations and the Discovery Bay Coastal Park, Glenelg Estuary, and Long Swamp. Within this buffer is a large band of existing pine plantation that presents unsuitable

habitat for these species. Mr Venosta considered the collision risk that remains for some of these species can be addressed via adaptive management in the BBAMP.

Parrots

Mr Organ (D84 and D226) supported the findings of Mr Venosta. In particular, Mr Organ:

- Agreed with the conclusion that Orange-bellied Parrots would not be significantly impacted since there was no suitable overwintering or foraging habitat for the species within the Project area, and the local landscape lacks the coastal saltmarsh and low-lying saline vegetation communities that Orange-bellied Parrot typically occupies during its non-breeding season.
- Agreed the risk of collision for Orange-bellied Parrots was negligible. The species has not been observed flying through or near the turbine envelope, and its known low, direct flight behaviour (typically close to ground level when moving between foraging patches) suggests a very low likelihood of interaction with turbine rotor-swept zones.
- Considered Blue-winged Parrots were unlikely to flock in Victoria in the way they do in Tasmania when they are about to migrate. Mr Organ considered it was very unlikely a flock of Blue-winged Parrots would collide with a turbine on the Project area.

DEECA (D393) submitted that the known population of the Orange-bellied Parrot is very small and therefore any impact would have a measurable effect on the species. DEECA considered the expert evidence of Mr Organ and Mr Gibson did not resolve this potential impact. Mr Organ relied on Blue-winged Parrot behaviour as a proxy for Orange-bellied Parrots, without providing scientific evidence that their flight behaviour is comparable. No information was provided as to whether Orange-bellied Parrots observed during field surveys were seen flying with Blue-winged Parrots, or whether they behave similarly in plantation-dominated landscapes.

DEECA also noted, given the rarity and dispersive nature of the Orange-bellied Parrot, uncertainty remains on where the species could occur if the population expands into new or previously occupied areas. No level of survey effort can confidently assess the risk of individuals flying across the Project area over the life of the wind farm.

DEECA also did not have knowledge of the basis for the evidence of Mr Organ that the flocking behaviour of the Blue-winged Parrot in Tasmania will not correlate to the experience in Victoria. DEECA recommends that the CRM and associated impact assessment be revised to reflect current records and flocking behaviour, and that mitigation measures in the BBAMP be strengthened accordingly.

The VNPA also questioned the comparison of flight heights of the Orange-bellied Parrot with the Blue-winged Parrot and noted there was no reliable flight height data for the species. It noted the claim in the EES that impacts on Orange-bellied Parrots were unlikely was based in part on the lack of nearby records and absence of previous evidence that individuals can be killed by wind turbines. However, the VNPA submitted that the numbers of wild Orange-bellied Parrot are now so low (less than 100 individuals) that the species was very difficult to detect, and any mortalities caused by wind turbines could easily have been over-looked.

South-eastern Red-tailed Black Cockatoo

Mr Organ (D84) considered some of the records south of the Project area were not valid. In his opinion, flights over the Project area were likely to be highly infrequent and transient, given the

absence of suitable foraging habitat in this area (most notably, the limited distribution of Brown Stringybark) and the absence of large, hollow-bearing River Red-gums required for nesting.

This was disputed by Mr Tuck (D453) and DEECA. Mr Tuck noted Long Swamp was the closest permanent fresh water to the Bulley Range where the cockatoos are known to forage. In contrast, the Glenelg River is estuarine to Dartmoor. NGT (D420) submitted that South-eastern Red-tailed Black Cockatoos regularly fly over pine plantations throughout their range and are often observed doing so in the nearby Princess Margaret Rose Cave area.

DEECA did not dispute that movement across the wind farm site may be infrequent. However, given the species' endangered status and tendency to fly in flocks, DEECA considered even a single turbine strike involving multiple individuals could have population-level consequences.

BirdLife South East South Australia (D423) disagreed with the claim that flights within the RSA would be rare. They noted the Biosis study of flight heights quoted (FFIA Appendix 7) was in stringybark woodland and open farmland with scattered red gum and hence this flight height data was not comparable to a mature pine plantation. Further, birds making long distance movements across the landscape were likely to fly at greater altitudes than those moving within feeding habitats.

BirdLife South East South Australia submitted that South-eastern Red-tailed Black Cockatoos routinely fly over the top of pine plantations when moving across the landscape. Given the height of mature plantations can reach 40 metres, it was conceivable a South-eastern Red-tailed Black Cockatoo may fly within rotor swept height of 60 metres.

BirdLife South East South Australia also questioned the level of consultation noting, as far as they were aware, no members of BirdLife South East South Australia, the South-eastern Red-tailed Black Cockatoo Recovery Team or bird enthusiast residents of Nelson were approached by Biosis for information regarding locations of the species.

Mr Organ (D84) considered the findings of the Biosis study of flight heights (FFIA Appendix 7) were directly relevant to the Project. While the Project area vegetation was floristically distinct from the native stringybark woodlands of the Wimmera, it was structurally similar in terms of tree height and canopy form. He argued there was no biological or ecological reason to expect flight heights to increase in the proposed Project context for a species that typically flies within or just above the canopy.

Mr Organ also noted that, in the Wimmera study, longer-distance flights across open paddocks occurred mainly during late afternoon transitions to roosting sites. As the Kentbruck plantation does not support foraging habitat and is outside the species' core activity areas, there was even less reason to expect it would be engaging in concentrated or frequent movement through the Project area, let alone at heights approaching the RSA.

White-throated Needletail

Several submitters were concerned about potential cumulative impacts on the White-throated Needletail. The NGT submitted it was one of the listed migratory species that frequently features in wind farm mortality surveys, from Queensland to Victoria. Their migration path closely corresponds with the windiest parts of Australia, down to coastal Victoria. Hence, it is conceivable that a single White-throated Needletail might avoid 20 wind farms on their way to Victoria and then collide with a turbine at the 21st wind farm they pass through. BirdLife South East South Australia made similar comments and noted this also applied to Pacific Swifts.

With regard the difficulty in assessing cumulative impacts on the White-throated Needletail due to the limited availability of suitable data from other wind farms, Mr Gibson (D66) and several other submitters agreed an industry wide coordination of collision data would be valuable for this and other species.

Mr Organ (D84 and D226) noted experience with IdentiFlight at the Cattle Hill Wind Farm in Tasmania which showed, with appropriate algorithm refinement, IdentiFlight can reliably monitor a fast-flying aerial insectivore such as the White-throated Needletail. While not ideally suited for real-time curtailment due to the species' speed and erratic flight, the technology offers significant value in quantifying presence, flight height, and seasonality, which can inform impact assessment and mitigation planning.

Other birds

Some submitters raised the potential presence of White-bellied Sea Eagles. BirdLife South East South Australia (D423) considered database records, and the record collected during the Biosis studies, provided evidence the species can be found further inland at times and will utilise pine plantations.

BirdLife South East South Australia submitted that GPS tracking is only beginning to unlock new information about inland flight paths of migratory species. These studies are consistently providing surprising results about longer range and overland movements during the time spent in Australia. As an example, GPS tracking study has found Sanderling making regular journeys between Port Fairy, Discovery Bay and coastal South Australia. At least one bird of only a handful fitted with transmitters has been tracked flying inland, demonstrating they may be at risk of collision with turbines when making long-distance movements across inland routes.

DEECA noted the proposed Brolga buffers in the north-east of the Project area which Mr Venosta had said would benefit Latham's Snipe. However, there was no explanation of how these will reduce risk across the broader site or address species-specific flight behaviour or impact pathways. DEECA supported the proposal in the draft BBAMP for smart curtailment technologies if the species is identified as at risk through the monitoring efforts.

Several submitters were concerned about impacts on Wedge-tailed Eagles claiming significant numbers of deaths at other wind farms, under-estimation of deaths and the potential for wind farms to act as a sink. Mr Gibson stated they were in low abundance on the site. He considered the frequent observations of Wedge-tailed Eagles along Portland-Nelson Road was likely due to availability of road-killed carcasses. However, Mr Tuck argued Wedge-tailed Eagles have everything they need in the Project Area – tall trees for roosting and nesting, roadkill, and lots of birds, wallabies and rabbits in the pines.

Mitigation measure

In response to submissions, the Proponent revised MM-BD10 to require monitoring technologies, such as GPS/satellite/camera-based tracking of movements to be used in pre-commissioning monitoring.

It also revised Clause 7.20 of the Incorporated Document (which was moved from the EMF) to require the BBAMP to:

- adopt the use of advanced technological identification for the pre-commissioning monitoring

- adopt the use of advanced technological identification for identifying operational measures to manage impacts on species of concern (such as monitoring, detection and or curtailment) unless it is demonstrated that, as a result of the pre-commissioning monitoring, alternative measures are suitable for managing impacts or no measures are required. The decision on the use of technology must consider the need for the response to the risk to be proportionate to the risk.

Revisions in the Proponent's Day 4 Incorporated Document added greater detail on the role of the IEA.

(iv) Discussion

Habitat adjoining the Project area is suitable for a wide range of birds. The IAC accepts that habitat in the Project area is of lower value but is still regularly used by birds such as Yellow-tailed Black Cockatoos and Blue-winged Parrot.

The IAC is satisfied the proposed Brolga, wetland and public land buffers presented in the EES will prevent direct impacts on breeding and foraging habitats most birds. Some birds will forage in the plantations and interact directly with the wind farm.

The IAC notes the Project will not require removal of Brown Stringybarks and therefore is consistent with the Environmental Significance Overlay Schedule 3 (ESO3) (see Chapter 14) which seeks to protect South-eastern Red-tailed Black Cockatoo habitat areas.

There is potential for movement of birds across the Project area. The IAC accepts that movements of South-eastern Red-tailed Black Cockatoos across the Project site are likely to be no more than occasional but still present a risk.

The IAC recognises the potential for cumulative impacts on White-throated Needletails from the Project and other wind farms in western Victoria. As noted by Mr Gibson and several submitters, there is a lack of consistent industry-wide collision data to inform an assessment. Appendix 4 of the Renewable Energy Handbook 2025 seeks to address this by providing guidance for post-construction mortality monitoring including minimum data requirements. While the transitional arrangements in the handbook mean it does not apply to the Project, the IAC considers it is sensible and reasonable to apply the requirements in Appendix 4 in the BBAMP.

The independent avifauna peer review (Appendix 18 of the FFIA) notes that Kentbruck Heath potentially provides habitat for a range of threatened and near-threatened birds such as Lewin's Rail, King Quail, Eastern Ground Parrot, Blue-winged Parrot, Elegant Parrot, Orange-bellied Parrot, Rufous Bristlebird and the local sub-species of Olive Whistler. The peer review considers that *"Lewin's Rail and all four parrot species might undertake regular or intermittent movements between the Kentbruck Heath and complementary habitats close to the coast, putting them at risk of collision"*.

This potential for collision could lead to significant impacts on these species, particularly the Orange-bellied Parrot given its critically endangered status and low numbers. The flight paths for these species envisaged by the peer reviewer would intersect the internal transmission line central option and the turbines the IAC has recommended for removal to protect the Australasian Bittern and Brolga (see Chapters 6.3 and 6.4 of this Report). This risk further reinforces the IAC's recommendation that the central option only proceed all or part underground, and following further analysis to understand and manage risks.. As discussed for the Brolga and Australasian

Bittern, the need for this measure could be reviewed if pre-commissioning monitoring demonstrates the risk to threatened birds is low.

The IAC agrees with the trigger for threatened species in the BBAMP of one mortality requiring curtailment or other remedial measures. As recommended above for other species, the BBAMP should include benchmarks with confidence limits specifying the proportion of total mortalities or injuries that must be detected through monitoring. This is to ensure there is not a potentially significant difference between detected and actual mortalities. There is potential for advanced detection technology to assist in detecting collisions and this should be further examined.

Given its critically low numbers, mortality of one Orange-bellied Parrot would constitute a significant impact and an offset would need to be provided in consultation with DEECA and DCCEEW. As there is a very low likelihood of such an event, the IAC considers the offset does not have to be developed at this stage.

Migratory shorebirds are unlikely to fly over the Project area during local foraging flights. Most migratory flights are expected to leave from the Glenelg Estuary and are not likely to cross the Project area. Given the proposed buffers along the Discovery Bay wetlands, most migratory flights from this area are likely to be above turbine height over the wind farm.

The exception is Latham's Snipe. The IAC is satisfied the Brolga breeding buffers will also ensure Latham's Snipe is not significantly impacted.

(v) Findings and recommendations

The IAC finds, subject to its recommendations:

- The Project is not likely to result in significant effects on other birds.
- The effects are acceptable and will not compromise the recovery of the other threatened bird species.

The IAC recommends:

Incorporated Document

Make the following changes:

- a) Amend the Bird and Bat Adaptive Management Plan requirements to:**
 - **add the potential for advanced detection technology to be used for collision detection**
 - **to include benchmarks with confidence limits for threatened birds specifying the proportion of total mortalities or injuries that must be detected through monitoring**
 - **recognise that mortality of one Orange-bellied Parrot would constitute a significant impact and an offset would need to be provided in consultation with Department of Energy, Environment and Climate Action and Department of Climate Change, Energy, the Environment and Water (C'th)**
 - **incorporate the recommendations in Chapter 5.7 this Report.**

These changes are included at Appendix F:2.

5.6 Mammals, reptiles and aquatic fauna

(i) The issues

The issues are whether:

- the Project is likely to result in significant effects on mammals, reptiles or aquatic fauna
- such effects are acceptable and will not compromise the recovery of any threatened species.

(ii) What did the EES say?

Terrestrial and arboreal mammals

Terrestrial mammals could potentially be impacted through direct mortality of individuals, habitat clearance, construction noise and/or lighting.

Only two threatened terrestrial mammal species were recorded during Project surveys: Southern Brown Bandicoot near the Heywood Terminal Station and the White footed Dunnart in the eastern end of the Project Area. Species previously recorded within 10 kilometres of the Project area include: White footed Dunnart (FFG: Vulnerable), Heath Mouse (EPBC and FFG: Endangered), Southern Brown Bandicoot (EPBC and FFG: Endangered), Long-nosed Potoroo (EPBC and FFG: Vulnerable), Swamp Antechinus (EPBC and FFG: Vulnerable), and Yellow-bellied Glider (EPBC and FFG: Vulnerable).

The wind farm site is unlikely to support significant habitat for any of these threatened mammals due to its highly modified nature. The broader area of Cobboboonee National Park provides habitat suitable for all these threatened mammal species. While they may be present within the edges of the road alignment, disturbance will be confined to the short construction period. Road fatalities may temporarily increase with construction traffic but impacts would be highly localised. Any impacts from trenching on adjacent trees is unlikely to impact on the broader populations throughout the National Park.

No survey was undertaken for the Grey-headed Flying-fox as there were limited records in the region. It has been expanding its distribution across Victoria. The habitat within the Project area is unlikely to be regularly used as most fox camps are established near rivers or other waterbodies. If a camp was established within the nightly foraging range of the species from the Project area, it is possible that individuals may fly through the Project area and be at risk of collision.

Given the size of the population, the Project is considered highly unlikely to result in sufficient collisions for the impact to be considered a significant impact to the population.

Reptiles

The Swamp Skink is listed as endangered under the EPBC Act and the FFG Act. It has been recorded in suitable habitat outside the Project area, and has the potential to occur in Tea-tree or Paperbark thickets along the transmission route within Cobboboonee National Park or Cobboboonee Forest Park. While it may be present within the edges of the road alignment where it intersects with low-lying and wetland environments, disturbance will be confined to the short construction period and will have little impact on the broader population throughout the National Park.

Three reptile species listed as threatened under the FFG Act may occur within or near the Project area: Striped Worm-lizard, Glossy Grass Skink and Eastern Bearded Dragon. Two juvenile Striped

Worm-lizards and a single Eastern Bearded Dragon were found during ecological surveys for the Project. The Project has some potential to impact these species through construction works and traffic. Impacts are unlikely to affect the viability of the local population.

Aquatic fauna

The Growling Grass Frog was not detected in surveys. The Southern Toadlet is known to be present in Cobboboonee Forest and Lower Glenelg National Park. Pre-clearance surveys are proposed for both species but it is expected their habitat can be avoided. The Portland Burrowing Crayfish and Hairy Burrowing Crayfish are also known to occur in the local area but are not expected to be impacted.

(iii) Evidence and submissions

The Proponent (D243) submitted that impacts on terrestrial, arboreal and aquatic fauna had largely been avoided by siting the Project in plantations and cleared farmland, which generally do not provide habitat for this fauna. The removal of native vegetation associated with the Project was also minimal with limited removal of habitat. While there is potential for some impacts during construction, such as from noise, traffic and light, the Proponent considered these were limited and are not expected to cause significant impacts.

Mr Gibson (D246) concluded that significant impacts on terrestrial mammals and reptiles were unlikely due to avoidance of native vegetation and habitat areas. Threatened fish and crayfish inhabiting flowing waters were unlikely to be impacted due to avoidance of direct and indirect impacts to waterways and large wetlands. There was potential for some disturbance to habitat and mortality of individuals of Burrowing Crayfish during construction of the underground transmission line through farmland in the eastern section of the project area, but pre-construction habitat surveys would inform micro-siting of the alignment. Pre-construction surveys would also be used to detect and protect sensitive areas for the Southern Toadlet.

Mr Gibson's opinion was assessment of potential tree impacts along Boiler Swamp road was highly conservative and it was highly unlikely the Project would result in disturbance or mortality of habitat trees sufficient to impact upon the Yellow-bellied Glider population, which occupies a vast area of contiguous suitable habitat (Cobboboonee Forest Park, Cobboboonee National Park and adjoining areas of Lower Glenelg National Park).

Mr Organ (D84) supported these conclusions in his expert witness statement.

Some submitters raises issues relating to mammals, reptiles and aquatic fauna received less attention from submitters than birds.

Mitigation measures

In response to submissions, MM-BD9 was revised to:

- require the Flora and Fauna Management Plan to be prepared prior to the commencement of construction
- require pre-clearance surveys to include surveys of hollows
- require specific measures to be implemented in relation to trees with hollows
- include salvage and relocation of fauna if required
- clarify that matters covered in the BBAMP do not need be addressed in the Flora and Fauna Management Plan.

(iv) Discussion

The IAC accepts the Proponent's conclusion that loss of protected fauna habitat on the wind farm area is likely to be minimal and can be mitigated through micro-siting of turbines. The requirement in MM-BD08 (Pre-clearance surveys) for pre-clearance survey for threatened species is considered adequate to identify and protect any significant fauna habitat.

The IAC also considers the revisions to MM-BD10 (Flora and fauna management) addressing trees with hollows will ensure impacts on Yellow-bellied Glider and other arboreal mammals are acceptable.

(v) Findings

The IAC finds, subject to its recommendations:

- The Project is not likely to result in significant effects on mammals, reptiles or aquatic fauna.
- The effects are acceptable and not likely to compromise the recovery of any threatened species.

5.7 Bird and Bat Adaptive Management Plan

(i) The issue

The issue is whether the changes proposed by the Proponent to the requirement for the BBAMP are appropriate.

(ii) Submissions

The Proponent submitted an Updated BBAMP during the Hearing (D229).

The Proponent's Day 4 Project documentation proposed changes to the requirements for the BBAMP including:

- relocating the requirement from the EMF to the Incorporated Document
- requiring the BBAMP be publicly available on the Project website throughout the life of the Project
- requiring mitigation measures in the EMF be included
- adopting the use of advanced technology for completing pre-commissioning monitoring and for identifying operational measures to manage impacts on species of concern
- specific details for the monitoring program and reporting
- the role and reporting of the IEA.

(iii) Discussion

The BBAMP is the key document for managing impacts from the Project on fauna.

The IAC supports the changes proposed by the Proponent to the BBAMP requirements in the Day 4 Incorporated Document but considers the following changes are needed:

- As noted above, the BBAMP should include an objective to ensure operation of the Project results in a net benefit to the SBWB and the Australasian Bittern. The BBAMP's objectives should be supported by measurable performance indicators.

- Pre-commissioning monitoring should occur for a minimum of 18 months to allow sufficient time for training of any detection technology and provide for a full year of seasonal data.
- If detection technology is used during operation, there is potential for this technology to detect collisions of birds with turbines. For example, IdentiFlight (D224) notes ongoing improvements and developments include collision monitoring for non-target species, with auditable video evidence. The option to use the technology for this purpose should be kept under review.
- Matters that must be considered in deciding whether to use technology for operational monitoring should, first and foremost, include the objectives for each species in the BBAMP. For example, if the technology is essential for achieving the objective of a net benefit for the Australasian Bittern, this will override any other consideration. The mitigation hierarchy is also relevant in that opportunities to mitigate impacts through the use of technology should be explored before offsets are considered.
- To improve searcher efficiency, the IAC recommends the BBAMP require:
 - The use of trained detection dogs in searching for carcasses. DEECA (D153) note that trained detection dogs consistently detect significantly more carcasses than human searchers. This was also supported by Mr Organ.
 - Fuel management around turbines as required by the CFA. In response to a question from the IAC, the CFA advised that fuel management could include pruning of pine trees. The reduction in canopy cover would likely result in fewer carcasses being caught in branches.
- As noted in the discussion on the SBWB, the use of mortality triggers for adaptive actions for threatened fauna can only be relied on if there is confidence mortality monitoring will detect a sufficient proportion of total mortalities. The BBAMP should include acceptable benchmarks and confidence limits for key fauna species.
- Given the inherent risks to fauna given the site location, the IAC considers mortality monitoring should continue for the life of the Project unless otherwise determined by the Minister, in consultation with DEECA.
- The Minister for Planning should be able to require specified revisions to be made to the BBAMP.

The IAC has recommended changes to the BBAMP relating to specific species in Chapters 5.2, 5.4 and 5.5 of this Report.

(iv) Finding and recommendation

The IAC finds, subject to its recommendations:

- The changes to the BBAMP requirement are appropriate.

The IAC recommends:

Incorporated Document

Make the following changes:

- a) **Amend the Bird and Bat Adaptive Management Plan requirements to:**
 - **include an objective to ensure operation of the Project results in a net benefit to the Southern Bent-wing Bat and the Australasian Bittern**
 - **require it to be revised and re-approved following completion of pre-commissioning monitoring**

- **include measurable performance indicators to support the objectives**
- **require 18 months of pre-commissioning monitoring to allow sufficient time for training of detection technology and provide a full year of data**
- **provide for the option of using advanced detection technology during operation, and revise considerations for deciding whether the technology should be used**
- **require a monitoring program for the life of the project**
- **include acceptable benchmarks and confidence limits for mortality monitoring for key fauna species**
- **provide for the Minister for Planning to require specified revisions.**

These changes are included at Appendix F:2.

5.8 Independent Environmental Auditor

(i) The issue

The issue is whether the role of the IEA is appropriately specified in the Project documentation.

(ii) Discussion

The EMF and Incorporated Document describe various roles for the IEA, including:

- reviewing management documents
- ongoing monitoring of implementation to ensure it reflects current operational obligations, relevant legislation and policy
- preparing audits/reports and recommending corrective and preventative actions.

The IEA must have qualifications, expertise and experience relevant to the roles specified for the IEA, including ecology and avifauna.

The role of the IEA is important for ensuring rigorous oversight of the BBAMP, providing confidence in its implementation and ensuring accountability and transparency. As discussed above, this role should also extend to the BCMP. Given the residual risks to fauna, the IAC recommends IAE review should be annual rather than every two years. A key role for the IEA is to assess whether the objectives of the BBAMP and BMCP are being met. For public transparency, the findings of the IAE's review should be made public.

The IAC considers the BBAMP and BMCP submitted to the Minister prior to construction should be reviewed by the IEA to ensure they reflect international obligations, relevant legislation and policy, and to ensure the plans will achieve the required objectives. The findings of this review should be submitted to the Minister to inform their decision. Given the IEA's subsequent review role, it is crucial that the IEA is satisfied with the initial plans.

(iii) Findings and recommendation

The IAC finds, subject its recommendations:

- The role of the IEA is appropriately specified in the Project documentation.

The IAC recommends:

Incorporated Document

Make the following changes:

- a) **Amend the Independent Environmental Auditor requirements to:**
 - **require the Independent Environmental Auditor review the revised Bird and Bat Adaptive Management Plan and the Brolga Monitoring and Compensation Plan and undertake ongoing monitoring of implementation, including assessment against the objectives of the plans**
 - **require the Independent Environmental Auditor's findings be made public within 30 days of being report to the Minister for Planning.**

The IAC's recommended Incorporated Document include these changes.

5.9 Ecologically sensitive area

(i) The issue

The issue is whether the fauna impacts are appropriately assessed and acceptable, in the context of the Project being in an ecologically sensitive location surrounded by areas of high biodiversity value including national and coastal parks.

(ii) Submissions

Many submitters were concerned the Project was poorly located given its proximity to the Lower Glenelg National Park, Glenelg Estuary and Ramsar site, and Discovery Bay Coastal Park. These concerns are reflected in the NGT's submission that the Project is likely to:

- place several highly threatened EPBC and FFG listed species at ongoing risk of collision, or reduced habitat availability (through spatial avoidance) over a very large area beyond the development footprint, in a highly sensitive landscape
- undermine the biodiversity values of adjacent protected areas beyond the development footprint, and in doing so, set a risky precedent for all future wind farms proposed immediately adjacent to (or in between) high value biodiversity assets and/or protected areas in Victoria
- compromise the biodiversity values and conservation status of the adjacent Glenelg Estuary and Ramsar Site, and in doing so, set a risky precedent for wind farm developments proposed in close proximity to Ramsar-listed Wetlands of International Importance, not only in Victoria, but across Australia.

The NGT and others submitted the Proponent had not applied the precautionary principle and the mitigation hierarchy, in particular, in not placing adequate emphasis on avoiding impacts.

In response the Proponent (D135) submitted the Project had been designed to minimise impacts on sensitive environmental areas. This has been through predominantly locating the Project in a heavily disturbed pine plantation and providing buffers to the Ramsar Site, wetlands and public land.

(iii) Discussion

The IAC agrees with submitters that from a biodiversity perspective the location is less than ideal for a wind farm. While the IAC considers the impacts of the Project on fauna can be acceptably

managed, its location adjoining sensitive ecosystems introduces significant risks that will require active management. This is reflected in the number of biodiversity mitigation measures in the EMF, the need for pre-commissioning monitoring using detection technology and comprehensive operational monitoring, and the requirements for seasonal curtailment.

The IAC agrees with NGT that *“if a proponent seeks to push development into high-risk locations for biodiversity, then they must be required to invest much more heavily, and take much more time, in documenting risks and values – and that the ‘bar’ (i.e. the threshold for correct application of the precautionary principle) must be set at a much higher level”*. The IAC’s recommendations are framed accordingly.

The east of the Project area near Kentbruck Heath is particularly sensitive. The IAC has recommended the removal of turbines in this area in relation to the Brolga and Australasian Bittern, but notes these recommendations will also mitigate risks to several other bird species. However, given the uncertainty regarding the number and location of flight movements over the Project area, it is possible that pre-commissioning monitoring may demonstrate these turbines present a low risk. In that case, it would be acceptable for those turbines to proceed.

(iv) Finding

The IAC finds, subject to its recommendations:

- While the Project is surrounded by areas of high biodiversity value including national and coastal parks, the impacts on fauna can be acceptably managed and are acceptable.

5.10 Overall conclusions on fauna effects

The IAC finds, subject to its recommendations:

- The Project is consistent with relevant policy and legislation and the relevant draft evaluation objective.
- The Project is not likely to result in significant effects on any species, other than the Australasian Bittern.
- Impacts on the Australasian Bittern can be appropriately offset.
- The effects of the Project are acceptable and will not compromise the recovery of the species.

6 Matters of National Environmental Significance

6.1 Introduction

The IAC's ToR require it to consider and report on potential significant impacts on relevant MNES protected under the EPBC Act, including the significance and acceptability of residual impacts.

The draft evaluation objectives in the Scoping Requirements do not refer specifically to MNES but relevant objectives are:

To avoid or minimise potential adverse effects on biodiversity values within the project site and its environs, including native vegetation, listed species and ecological communities other protected species and habitat for these species

To maintain the functions and values of aquatic environments, surface water and groundwater quality and stream flows and prevent adverse effects on protected beneficial uses.

Impacts on MNES are assessed throughout the EES but are specifically addressed in EES Appendix X (MNES Report).

Other sections of particular relevance are:

- EES Chapters 7 (Biodiversity)
- EES Technical Appendices AA (Draft Bird and Bat Adaptive Management Plan), C (Flora and Fauna Existing Conditions and Impact Assessment), E (Southern Bent-wing Bat Impact Assessment), F (Surface Water Impact Assessment), G (Groundwater Impact Assessment) and H (Groundwater Dependent Ecosystem Impact Assessment).

The exhibited EMF includes the following mitigation measures:

- MM-BD01 Native vegetation
- MM-BD06 Weed and pest animal control
- MM-BD08 Pre-clearance surveys
- MM-BD10 Flora and fauna management
- MM-BD11 Australasian Bittern
- MM-BD12 Bird and Bat Adaptive Management Plan
- MM-BD13 Southern Bent-wing Bat Management
- MM-BD14 Seasonal Nocturnal Low wind speed curtailment
- MM-BD15 Southern Bent-wing Bat Recovery and Funding
- MM-BD16 Improved powerline visibility
- MM-BR01 Construction during Brolga breeding season.

The exhibited Incorporated Document includes a number of Clauses relevant to MNES:

- 7.1 Requirements for Development Plan
- 7.5 Allows for micro-siting or turbines
- 7.8 Requires approval of the EMF
- 7.14 – 7.18 Address native vegetation clearance
- 7.19 – 7.24 Requirements for the BBAMP
- 7.30 Australasian Bittern Offset Plan
- 7.31 Ecology Fund.

Table 8 lists the experts providing evidence on relevant to MNES.

Table 8 Evidence on MNES effects

Documents	Party	Expert	Firm	Area of expertise
D65	Proponent	Rob Gailbraith	Galbraith and Associates	Arboriculture
D66, D149, D245, D246, D263, D321, D384, D493	Proponent	Matthew Gibson	Biosis	Ecology
D67, D264, D385	Proponent	Mark Venosta	Biosis	Ecology
D84, D247, D383, D494	Proponent	Aaron Organ	Ecology and Heritage Partners	Ecology – independent peer review
D187	Proponent	Ben Hughes	Water Technology	Surface water
D188	Proponent	Jon Fawcett	CDM Smith	Groundwater and groundwater dependent ecosystems

The IAC has had regard to relevant legislation, policy and guidelines, including:

- EPBC Act
- EPBC Significant Impact Guidelines 1.1 – Matters of national environmental significance
- National Recovery Plan for the South-Eastern Red-tailed Black Cockatoo *Calyptorhynchus banksii graptogyne*
- Glenelg Estuary and Discovery Bay Ramsar Site Management Plan 2017
- Glenelg Estuary and Discovery Bay Ramsar Site Ecological Character Description 2017
- D251 – EPBC Act Environmental Offsets Policy
- D258 – National Recovery Plan for the Australasian Bittern *Botaurus poiciloptilus*
- D259 – National Recovery Plan for the Southern Bent-wing Bat *Miniopterus orianae bassanii*
- D261 – Conservation Advice – Australasian Bittern, Threatened Species Scientific Committee
- D262 – Conservation Advice – Southern Bent-wing Bat, Threatened Species Scientific Committee
- D322 – EPBC Act Policy Statement 3.21: Industry guidelines for avoiding, assessing and mitigating impacts on EPBC Act listed migratory shorebird species.

Other key documents are listed in Chapters 4 (Flora), 5 (Fauna) and 7 (Surface water, groundwater and groundwater dependent ecosystems) of this Report.

6.2 Listed threatened species and ecological communities

(i) The issues

The issues are whether:

- the Project is likely to result in significant effects on EPBC-listed threatened species and ecological communities
- such effects are acceptable and will not compromise the recovery of any threatened species or ecological communities.

(ii) What did the EES say?

The IAC has summarised the predicted effects of the Project on listed threatened species and ecological communities in Table 9. More detail is provided in Chapters 4 and 5 and is not repeated here.

Table 9 Likelihood of significant adverse impacts for threatened species and ecological communities

Species / Community	Construction	Operations
Karst springs and associated alkaline fens of the Naracoorte Coastal Plain Bioregion	No significant impacts. Occurs at Lake Mombeong outside the Project area. No direct impact. Buffers and surface/ground water controls prevent indirect impacts.	No operational impacts
Threatened flora species potentially occurring in Project area include: River Swamp Wallaby-grass, Green-striped Greenhood, Square Raspwort, Swamp Greenhood, Swamp Everlasting, Wrinkled Casinia, Mellblom's Spider-orchid, Ornate Pink-fingers, Maroon Leek-orchid, Coast Dandelion, Limestone Spider-orchid, Clover Glycine, Metallic Sun-orchid, Colourful Spider-orchid, Dense Leek-orchid, Swamp Fireweed	No significant impacts. Limited vegetation clearance across Project area (< 9 ha). EMF includes pre-clearance surveys and measures for protecting any threatened plants identified.	No operational impacts
Southern Bent-wing Bat	Impacts not expected	No significant impacts. Potential for collision with turbines to be managed through adaptive management curtailment under the BBAMP.
South-eastern Red-tailed Black Cockatoo Gang gang Cockatoo	Impacts not expected	No significant impacts. Potential for collision with turbines to be managed through adaptive management under the BBAMP.

Species / Community	Construction	Operations
Orange-bellied Parrot	Impacts not expected. Wetland buffers are expected to mitigate any indirect habitats on habitat through noise or lighting.	No significant impact. Not expected to be a collision risk due to flight height and unsuitability of habitat on Project area.
Blue-winged Parrot	Impacts not expected	No significant impacts. Potential for collision with turbines to be managed through adaptive management under the BBAMP.
Australasian Bittern	Impacts not expected. Wetland buffers are expected to mitigate any indirect habitats on habitat through noise or lighting.	Taking a precautionary approach, a significant impact considered likely due to collision risk.
White-throated Needletail Fork-tailed Swift	Impacts not expected	No significant impacts. Potential for collision with turbines to be managed through adaptive management under the BBAMP
Heath Mouse Southern Brown Bandicoot Long-nosed Potoroo Swamp Antechinus	No significant impacts. If present, impacts on habitat would be very minor.	Impacts not expected.
Yellow-bellied Glider	No significant impact. Potential tree loss for construction of underground transmission line is not likely to include large hollow-bearing trees.	Impacts not expected
Grey-headed Flying-fox	Impacts not expected	No significant impacts. May fly occasionally over site and be at risk of collision.
Growling Grass Frog	Impacts not expected. No suitable habitat in Project area.	Impacts not expected.
Swamp Skink	No significant impact. Suitable habitat adjoins but it outside Project area.	Impacts not expected.

(iii) Evidence and submissions

Refer to Chapters 5 and 6 of this Report.

(iv) Discussion

Threatened flora and ecological communities

The IAC agrees with the conclusions in the EES. There is no potential to impact any listed threatened ecological communities. Given the small area of vegetation that will be removed, there is a low risk the Project will impact any listed threatened flora species. If any threatened flora species are identified during pre-clearance surveys, the IAC is satisfied the measures in MM-

BD08 (Pre-clearance surveys) for marking and protecting habitat will be adequate to prevent any significant impacts.

Threatened fauna species

Impacts on threatened fauna species are discussed in Chapter 6. With the implementation of the IAC's recommendations, significant impacts are not expected on any species other than the Australasian Bittern (taking a precautionary approach). A suitable offset is available for the Australasian Bittern.

(v) Finding

The IAC finds, subject to its recommendations:

- The Project effects on listed threatened species and ecological communities are unlikely to be significant and can be acceptably managed.

6.3 Listed migratory species

(i) The issues

The issues are whether:

- the Project is likely to result in significant effects on EPBC-listed migratory species
- such effects are acceptable.

(ii) What did the EES say?

The IAC has summarised the predicted effects of the Project on listed migratory species in Table 10. More detail is provided Chapter 6 and is not repeated here.

Table 10 Likelihood of significant adverse impacts for migratory species

Species	Construction	Operations
Bar-tailed Godwit	No impacts expected. Other than for Whiskered Tern, habitat is outside the Project area and unlikely to be indirectly impacted.	No significant impacts. Birds are unlikely to fly over the Project area during local foraging flights. Migratory flights from the Glenelg Estuary are not likely to cross the Project area. Given the proposed buffers along Discovery Bay wetlands, most migratory flights from this area are likely to be above turbine height over the wind farm.
Common Greenshank		
Curlew Sandpiper		
Red-necked Stint		
Sanderling		
Sharp-tailed Sandpiper		
Double-banded Plover		
Caspian Tern		
Common Tern		
Crested Tern		
Fairy Tern		
Little Tern		
Whiskered Tern		
Pacific Gull		

Species	Construction	Operations
Latham's Snipe	No impacts expected.	No significant impacts. May fly inland and was recorded in east of Project area. Turbine-free Brolga buffers in this area reduce the risk of flying over the wind farm.

(iii) Evidence and submissions

Refer to Chapter 6 of this Report.

(iv) Discussion

The IAC agrees with the conclusions in the EES. Local flights by migratory species are mainly expected to be outside the Project area or in turbine-free buffers. Most migratory flights will leave from the Glenelg Estuary and be unlikely to cross the wind farm. There is a risk that some flights leaving from Discovery Bay may be within the RSA but the IAC agrees that most are likely to be above this height, given birds leaving on these flights fly steeply to gain height.

(v) Finding

The IAC finds, subject to its recommendations:

- The Project effects on listed migratory species are unlikely to be significant and can be acceptably managed.

6.4 Glenelg Estuary and Discovery Bay Ramsar Site

(i) The issues

The issues are whether:

- the Project is likely to result in significant impacts on the ecological character of the Ramsar Site
- such effects are acceptable.

(ii) What did the EES say?

The Ramsar Site covers 22,289 hectares and comprises three main systems:

- freshwater wetlands
- the Glenelg Estuary
- dune fields and beach along the Discovery Bay Coastal Park.

Several of the wetlands within the Ramsar Site also contain occurrences of the EPBC-listed threatened ecological community: *Karst springs and associated alkaline fens of the Naracoorte Coastal Plain Bioregion*. The Glenelg River estuary is included in the EPBC Act listing of the salt wedge estuary community: *Assemblage of species associated with open-coast salt-wedge estuaries of western and central Victoria*.

The *Ecological Character Description of the Glenelg Estuary and Discovery Bay Ramsar Site* (DELWP 2017) (Ecological Character Description) defines the critical components, processes and services of the wetland at a given point in time.

Critical components include:

- hydrology
- vegetation – type and extent
- fish – diversity and abundance
- waterbirds – diversity and abundance.

The Ecological Character Description identifies a single critical process: stratification of the Glenelg Estuary, which is considered important for ecosystem services and critical for successful recruitment of estuarine fish species.

Critical ecosystem services identified in the Ecological Character Description include:

- diversity of wetland types
- special geomorphic features including dune slacks (damp or wet hollows within the coastal dune fields)
- habitat for waterbirds, threatened wetland species and ecosystems
- ecological connectivity.

Resource Condition Targets are defined in the *Glenelg Estuary and Discovery Bay Ramsar Site Management Plan*. They were developed to guide the development of appropriate management strategies. The targets are statements of the aspirational condition for each of the identified critical components, processes and services. The EES evaluated the impacts of the Project against the targets.

The EES concluded that the Project is unlikely to have a significant impact on the ecological character of the Ramsar Site. The IAC has summarised the assessment in Table 11.

Table 11 Summary of impact assessment for Ramsar Site

Critical components, processes and services	Resource Condition Target	Assessment
Hydrology	Maintain diversity of wetland types	Low to very low potential to alter hydrological regimes temporarily or permanently such that the diversity of wetland types might be affected.
Stratification	Maintain seasonal stratification in the Glenelg Estuary	Low to very low potential to alter stratification in the Glenelg River estuary.
Vegetation type and extent	Maintain 2008 extent of freshwater vegetation communities	No direct effects on freshwater vegetation communities of the Ramsar wetlands. Low to very low potential to alter hydrological regimes temporarily or permanently. There is no apparent hydrological pathway that might cause changes in the extent of freshwater vegetation communities.
Fish diversity and abundance	Maintain fish diversity and abundance, and the following common species: <ul style="list-style-type: none"> • Australian Herring <i>Arripis georgianus</i> • Black Bream 	Potential mechanisms that could alter fish diversity and abundance substantially relate to altered surface water and groundwater regimes and to infiltration of sediment or pollutants. The Project has been assessed as having low to very low potential to alter hydrological regimes

Critical components, processes and services	Resource Condition Target	Assessment
	<p>Acanthopagrus butcheri</p> <ul style="list-style-type: none"> • Bridled Goby <i>Arenigobius bifrenatus</i> • Common Galaxias <i>Galaxias maculatus</i> • Estuary Perch <i>Percalates colonorum</i> • Flatheaded Gudgeon <i>Philypnodon grandiceps</i> • Scary's Tasmangoby <i>Tasmanogobius lasti</i> • Mullet <i>Argyrosomus japonicus</i> • Pouched Lamprey <i>Geotria australis</i> • Sea Mullet <i>Mugil cephalus</i> • Southern Shortfin Eel <i>Anguilla australis</i> • Smallmouthed Hardyhead <i>Atherinosoma microstoma</i> • Southern Pygmy Perch <i>Nannoperca australis</i> • Spotted Galaxias <i>Galaxias truttaceus</i> • Southern Smelt <i>Retropinna</i> spp. • Tamar Goby <i>Afurcagobius tamarensis</i> • Tupong Pseudaphritis <i>urvillii</i> • Yellow-eye Mullet <i>Aldrichetta forsteri</i> 	temporarily or permanently.
Waterbird diversity and abundance	Maintain waterbird diversity (> 32 species regularly recorded). Maintain > 1% of the population of Sanderling	Some potential for infrequent turbine collisions by waterbirds, but not at a level that is likely to affect the diversity of species or alter the percentage of the Sanderling population using the Ramsar site.
Diversity of wetland types	Maintain extent and diversity of wetland types	No potential to alter the extent or diversity of wetland types.

Critical components, processes and services	Resource Condition Target	Assessment
Physical habitat for waterbirds	See Resource Condition Targets for Diversity of wetland types and Vegetation type and extent	No potential to alter the extent or diversity of wetland types nor the types or extent of vegetation communities.
Threatened species: plants	Maintain abundance of Maroon Leek-orchid and Swamp Greenhood	No potential to alter the abundance of Maroon Leek-orchid or Swamp Greenhood within the Ramsar Site.
Threatened species: fish	Increase abundance by 10% of Yarra Pygmy Perch at Long Swamp	No potential to affect the abundance of Yarra Pygmy Perch (Section 34) in Long Swamp provided careful management of any construction to ensure no infiltration of pollutants into dune slack wetlands.
Threatened species: birds	Maintain presence and abundance of threatened bird species at the site: Australasian Bittern, Hooded Plover, Fairy Tern	Not expected to alter the presence of these species. Due to their habitat separation from the Project area, Hooded Plover and Fairy Tern are considered very unlikely to be involved in turbine collisions. Australasian Bittern is expected to fly across the wind farm component of the project and be at potential risk of turbine and transmission line collision. The Project may have a significant impact on the Australasian Bittern population.
Threatened species: Growling Grass Frog	Annual occurrence of Growling Grass Frog within the site	No potential to reduce the abundance of Growling Grass Frog within the Ramsar site. Surveys for the species undertaken for the Project did not detect it.
Threatened species: Ancient Greenling	Maintain population of Ancient Greenling	No potential to reduce the abundance of Ancient Greenling provided careful management of any construction to ensure no infiltration of pollutants into dune slack wetlands.
Ecological connectivity	Maintain ecological connectivity between habitats in the site	No potential to alter ecological connectivity between terrestrial and freshwater habitats in the Ramsar site. While a level of turbine collision risk may affect movements of some individual birds and bats, the great majority of the Project area will remain permeable to individual movements and to gene flow between habitats within the Ramsar site.

(iii) Evidence and submissions

The Proponent submitted (D189) the Project would have a negligible and acceptable impact on the hydrological and associated values of the Ramsar Site, and that this impact would not be a significant impact for the purposes of the EPBC Act. This conclusion was based on the following:

- The Project does not involve any direct impact on the Ramsar site.
- There is a turbine buffer of 300 metres from the boundary of the Ramsar Site and 500 metres from the wetlands within the site. These have been extended in practical terms by Brolga breeding buffers and movement corridors.
- There is no discharge from the Project into waters of the Ramsar Site.
- There is no realistic prospect of the Project increasing the risk of pest species being introduced within the Ramsar Site (given the distance of the infrastructure from the Ramsar Site, the existing conditions in the area, and the proposed mitigation measures).

NGT (D420) noted the Ramsar Site Management Plan acknowledged that certain areas within the site had been under-surveyed. It submitted that the development footprint impacted directly on a number of wetlands and had the potential to significantly impact on the availability of surface water and sub-surface groundwater to wetlands in good condition, within the conservation estate, or in altered condition (within farmland or plantation).

NGT considered that, should the Project proceed, the Ramsar Site now faces the prospect that, rather than functioning as highly productive population source helping to support increased numbers of some of Australia's most threatened species (notably the Australasian Bittern and SBWB), Long Swamp could act as a population sink, by offering highly attractive and suitable habitat for these species, immediately adjacent to inherently dangerous airspace.

Other submitters raised concerns about impacts on the Ramsar Site and questioned the decision to propose the Project in close proximity to the site.

(iv) Discussion

The only pathways for the Project to impact on the Ramsar Site are through:

- direct or indirect disturbance to critical ecosystems services identified in the Ecological Character Description
- changes to groundwater flows or groundwater quality that supports the wetlands in the Ramsar site
- sedimentation or contamination from surface water flows
- introduction of pest species to the Ramsar site
- indirect impacts (noise, dust, lighting) on species that form part of the ecological character of the Ramsar site and potential for displacement
- direct impacts on species that form part of the ecological character of the Ramsar site though mortality from collision with turbines.

The Project will have no direct impacts on the Ramsar site. Surface water, groundwater and groundwater dependent ecosystems are discussed in Chapter 7 of this Report. The assessment concludes that impacts can be acceptably managed and are unlikely to impact the Ramsar site.

Impacts on wetland birds that contribute to the ecological character are discussed in Chapters 5.4 and 5.5 of this Report. The assessment concludes that the Project is unlikely to have a significant impact on any species, other than the Australasian Bittern. This impact will require offsetting to ensure there is no net impact on this species and a suitable offset area is available. The IAC has

also recommended removal of specified turbines to reduce risks to the Australasian Bittern, unless pre-commissioning monitoring demonstrates risks are low.

As there will be no impact on habitat within the Ramsar site, no impacts are expected on frogs or aquatic species.

The Project area mainly consists of pine plantations with limited habitat available. The small clearance areas required for turbines will not adversely affect the ecological connectivity of the Ramsar Site.

MM-BD05 in the EMF has requirements for weed and pest animal control. The IAC considers these are appropriate for ensuring the Project does not increase the abundance or diversity of weeds and pest animals in the Ramsar Site.

(v) Findings

The IAC finds, subject to its recommendations:

- Impacts on the ecological character of the Ramsar Site are unlikely to be significant
- Impacts are acceptable.

6.5 Overall conclusions on effects on MNES

Subject to applying its recommendations, the IAC is satisfied the Project is consistent with relevant policy and legislation and relevant draft evaluation objectives. The likely MNES effects are not significant, other than for the Australasian Bittern, and subject to its recommendations the IAC is satisfied any effects are acceptable and do not preclude the Project being approved.

7 Surface Water, Groundwater and Groundwater Dependent Ecosystems

7.1 Introduction

The relevant draft evaluation objective in the Scoping Requirements is:

To maintain the functions and values of aquatic environments, surface water and groundwater quality and stream flows and prevent adverse effects on protected beneficial uses.

Surface water and groundwater effects are assessed in:

- EES Chapter 9 (Surface Water, Groundwater and Groundwater Dependent Ecosystems)
- EES Technical Appendices F (Surface Water Impact Assessment), G (Groundwater Impact Assessment) and H (Groundwater Dependent Ecosystem Impact Assessment).

The exhibited EMF includes the following mitigation measures:

- MM-SW01 Dewatering
- MM-SW02 Surface water run-off
- MM-SW03 Watercourse Trenching
- MM-SW04 HDD watercourse crossings
- MM-SW05 Fuel and chemical spills
- MM-SW06 Changes to flow regime during construction
- MM-SW07 Changes to flow regime during operation
- MM-SW08 Stormwater management at operational facilities and roads
- MM-SW09 Surface water monitoring and contingency plan
- MM-GW01 Turbine location
- MM-GW02 Dewatering Plan
- MM-GW03 Water supply investigation
- MM-GW04 Registered bore locations
- MM-GW06 Groundwater contamination management
- MM-GW06 Groundwater monitoring program
- MM-GD01 GDE Monitoring and Management Plan.

Table 12 lists the experts providing evidence on surface water and groundwater effects.

Table 12 Evidence on surface water and groundwater

D#	Party	Expert	Firm	Area of expertise
D78, D187, D216	Proponent	Ben Hughes	Water Technology	Surface water
D68, D188	Proponent	Jon Fawcett	CDM Smith	Groundwater and groundwater dependent ecosystems

The Proponent provided the following Technical Notes and other key documents:

- TN01 - Construction staging (D63)
- TN04 - Evaluation objectives (D105)
- TN27 - Percentage impact to wetlands (D242)

- D189 – Proponent’s submissions on Ramsar Hydrology.

The IAC has had regard to relevant legislation, policy and guidelines, including:

- *Water Act 1989*
- National Parks Act
- *Environment Protection Act 2017* (EP Act)
- *Marine and Coastal Act 2018*
- International Erosion Control Association *Best Practice Erosion and Sediment Control Guidelines*
- EPA Publication 1834: *Civil Construction, Building and Demolition Guide*
- EPA Publication 1896: *Working within or adjacent to waterways.*

7.2 Surface water

(i) The issue

The issue is whether effects on surface water have been appropriately assessed and are acceptable.

The IAC has addressed matters relating to Ramsar wetlands in Chapter 6.4 of this Report.

(ii) What did the EES say?

The EES described the local surface water context including:

- the Project is mostly located within the Glenelg River Basin and a small portion in the Portland Coast Basin catchment regions
- surrounding surface water features include the Ramsar site (southern and north-western boundaries), Lake Mombeong, Swan Lake and several defined waterways and other wetlands
- highly variable topography with no or limited defined flow paths at the western end and more defined flow paths in the east.

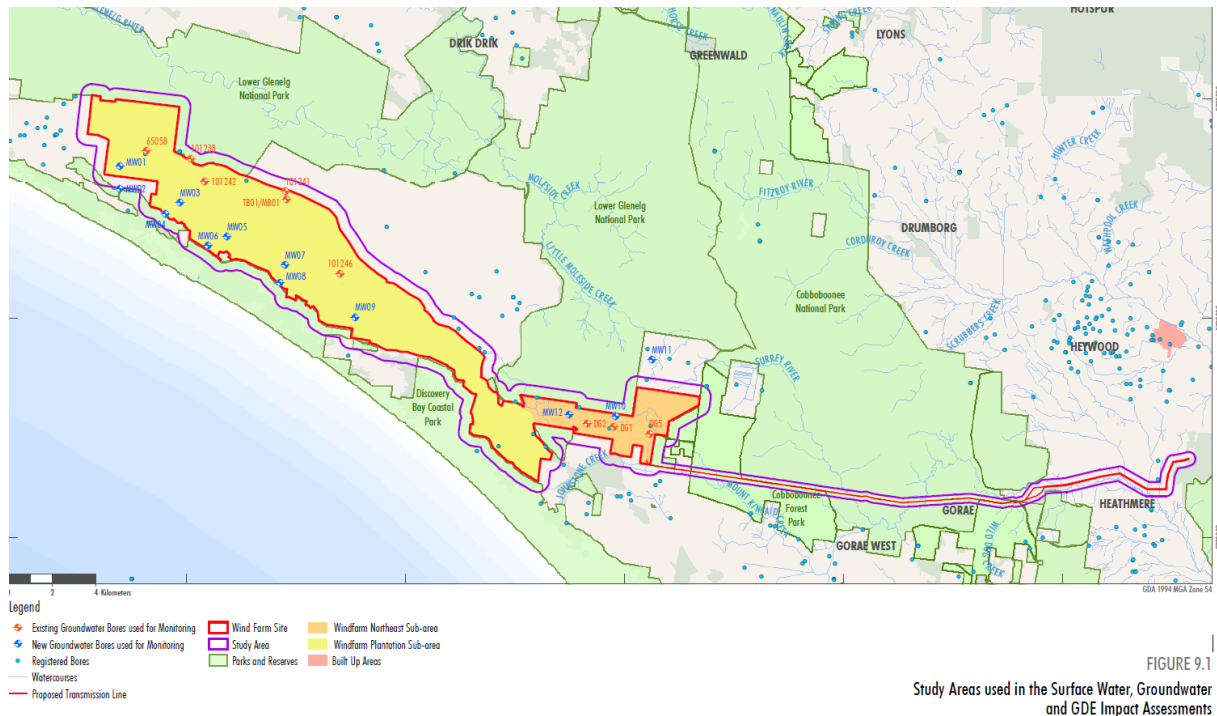
The methodology for the surface water assessment included:

- establishing the study area (see Figure 11) and characterisation of surface water and groundwater environments
- desktop review of baseline reports, publicly available information and databases
- consultation with relevant stakeholders including with Glenelg Shire Council and Southern Rural Water
- site walkovers to verify records and existing conditions
- identify and assess potential impacts
- development of mitigation measures to avoid, minimise and manage potential impacts
- assess residual effects.

Project construction has the greatest potential for impacts on surface water, including through dewatering of turbine foundations and trenches resulting in increased sediments being discharged to the environment, and stormwater run-off from disturbed areas containing sediments or other pollutants reaching receiving waterbodies. There is potential for changes to surface water hydrology and flows, including altered flood risk and changes to low flow regimes.

It is unlikely Project operations will impact surface water.

Figure 11 Study areas used in the surface water and groundwater assessments



Source: EES Chapter 9

The EES said that applying the industry standard mitigation measures will ensure the potential residual impacts on surface water are minimised during construction.

It recommended a range of mitigation measures to ensure the Project minimises adverse effects on water quantity and quality within the Project area and downstream waterbodies including the Ramsar site. The measures include preparation and implementation of a Project-wide CEMP, incorporating a Sediment, Erosion and Water Quality Management Plan for all work areas.

(iii) Evidence and submissions

The Proponent relied on the evidence of Mr Hughes, and accepted his recommended changes to the EMF.

Mr Hughes generally agreed with the methodology and conclusions of the EES and supported the mitigation measures subject to minor changes. He was satisfied the surface water risks for the Project are low and while modelling was not required to demonstrate for the EES, flood modelling should be undertaken during the next stage of the process.

In response to submissions on surface water Mr Hughes gave evidence that:

- the risk to water quality in the wetlands to the west of the Project is very low as surface water does not drain to the wetlands
- while there will be a reasonable increase to the impervious area resulting from the project, runoff will discharge to drains and will mostly infiltrate.
- the combination of trenching and drilling will reduce the potential surface water impacts to as low as reasonably practicable.

Mr Hughes recommended:

- Hydraulic surface water modelling should be undertaken during the detailed design process and reviewed by Glenelg Hopkins Catchment Management Authority.

- A baseline water quality assessment should be undertaken and any discharge be required to meet the background water quality. The timing and location of samples would be outlined in the Surface Water Management Plan.
- A Quarry Water Management Plan should be required, including water balance modelling and a determination of the water storage requirements.
- A Works on Waterways Licence Application should be lodged with Glenelg Hopkins Catchment Management Authority as part of the detailed design process.

In response to questions from the IAC Mr Hughes explained:

- he was not concerned if the flood modelling was required under a consolidated mitigation measure or across several mitigation measures
- the baseline water quality assessment would be better expressed as a separate mitigation measure
- the specific tributary crossings could also be included but with flexible requirements (MM-SW04)
- the new mitigation measures MM-QU09 (Quarry Water Management Plan) was appropriate
- climate change would be adequately addressed through the flood modelling work required by the EMF.

In response to questions from Parks Victoria relating to the transmission line options (EES Technical Appendix A – Transmission Line Options Assessment) Mr Hughes (D216):

- agreed with the assessment methodology
- advised the proposed HDD proposed for the preferred (southern) option was the lowest impact construction methodology for a major waterway
- considered the potential for water quality impacts to be low and flooding impacts negligible.

Some submitters raised issues relating to surface water quality and changes to hydrology. NGT was concerned about the methods proposed for waterway crossings, availability of surface water impacts on wetlands. GMTOAC identified intangible cultural values associated with surface water.

(iv) Discussion

The IAC is satisfied the surface water assessment is appropriate and has been prepared with consideration of relevant regulations and guidelines. There is potential for some impacts during construction and there are no likely impacts during operations.

The IAC accepts the evidence of Mr Hughes that the surface water impacts are likely to be limited and are acceptable, subject to implementation of the Day 4 EMF.

Changes to the Day 4 EMF appropriately:

- require surface water discharge to meet background water quality (MM-SW01)
- require a surface water quality monitoring and an adaptive management plan to be implemented before construction, and for water quality to be monitored before, during and after construction (MM-SW02)
- specify a works on waterways licence must be lodged for designated waterways (MM-SW03)
- specify the waterway crossings where HDD is required (MM-SW04)

- require a Sediment, Erosion and Water Quality Management Plan which includes provision for base line water quality assessment before construction (MM-SW09)
- include a new separate requirement for flood and hydraulic surface water modelling (MM-SW10) and amend and/or cross references this new requirement in other mitigation measures as relevant
- introduce new MM-QU09 (Quarry Water Management Plan) which requires water balance modelling and water storage requirements.

The IAC recommends minor changes to improve drafting, as shown in Appendix F:1

The IAC has concluded the impacts on the Ramsar site are acceptable, as discussed in Chapter 6.4 of this Report.

Other issues relating to surface water are discussed in:

- Chapter 8 relating to contamination
- Chapter 9.2 Aboriginal cultural heritage.

(v) Finding

The IAC finds, subject to its recommendations:

- The effects on surface water effects have been appropriately assessed and are acceptable.

7.3 Groundwater and Groundwater Dependent Ecosystems

(i) The issue

The issue is whether effects on groundwater and groundwater dependent ecosystem effects have been appropriately assessed and are acceptable.

(ii) What did the EES say?

The EES described the local groundwater context including the geology of the wind farm and transmission line areas, key aquifers, bore locations and a description of groundwater occurrence.

In addition to the surface water study methods identified in Chapter 7.2, the following was undertaken as part of the groundwater assessment:

- fieldwork to characterise groundwater (quality, depth and hydraulic conductivity of underlying aquifers) including installation of 12 new groundwater wells, gauging new and existing wells, water sampling from the new wells and aquifer hydraulic testing for all new wells (the location of new bores is shown in Figure 11)
- groundwater supply investigation and pumping test
- assessment of potential impacts including groundwater drawdown modelling at turbine locations where groundwater would likely be intersected and require dewatering.

Regarding groundwater occurrence and depth the EES noted:

... 12 monitoring bores were installed to gain a better understanding of groundwater occurrence across the wind farm site, with a focus on the lower lying areas near the southern boundary adjacent to the Ramsar site.

The inferred depth to groundwater based on the data collected from these bores ... shows that there is considerable variation in groundwater levels across the plantation sub-area (from 1.8 to 40.9 mbgs [metres below ground surface]), due to the flat water table and undulating ground surface which quickly increases in elevation to the north away from the

southern site boundary. The depth to groundwater was shallowest adjacent to the Ramsar site, at less than 6 mbgs at some lower lying areas of the site.

The EES concluded there was limited potential for four metre deep turbine foundations to intersect groundwater, and it was unlikely shallow cable and transmission line trenches would be interested. It found that in the unlikely event ground water is intersected during trenching it would be localised and of limited depth, dewatering would be limited and changes to levels and flow would be negligible. Further:

- groundwater is expected to flow readily around and beneath the turbine foundations
- potential impacts on bores are unlikely
- groundwater contamination is not expected to be present across the majority of the Project area.

The EES assessed impacts for subterranean, terrestrial and aquatic Groundwater Dependent Ecosystems (GDEs). It concluded risk to GDEs was low and no permanent or measurable impacts would occur as a result of the Project. While the extraction of groundwater for construction could result in less groundwater being available for aquatic GDEs, the flow of groundwater to aquatic GDE wetlands is predicted to be maintained. A GDE monitoring and management plan will be implemented to ensure the hydraulic gradient to the Ramsar site is maintained throughout and for two years after construction.

Potential impacts on aquatic GDEs are not anticipated to be significant with the implementation of standard sediment control and contamination management measures.

(iii) Evidence and submissions

The Proponent relied on the evidence of Dr Fawcett and was satisfied the Project would not have significant effects on groundwater and any residual effects could be managed.

Dr Fawcett gave evidence relating to the GDE assessment and additional work he had completed since the GDE report was submitted. He was satisfied the assessment was based on an appropriate risk based methodology.

He summarised the three potential risk pathways for GDEs as:

- groundwater drawdown caused by dewatering for transmission lines and/or turbine footings
- depressurising groundwater supply for construction
- transmission line trenching.

He noted:

- in the unlikely event that dewatering is required during turbine construction or trenching, the magnitude and extent of drawdown will be small
- requiring trenchless crossing of waterways and wetlands and implementation of an industry standard CEMP will result in acceptable impacts
- only very small changes to the wetland budget is predicted.

Dr Fawcett concluded the assessment indicated no permanent or measurable impact to GDEs or groundwater users would result from the Project. He said the potential impact to DGEs and all groundwater users is low, and he was satisfied the EMF contained appropriate mitigation measures.

In response to the RFI Dr Fawcett explained:

- MM-GW01 (Turbine location) requires the final location of turbines to avoid, where practicable, areas where inferred depth to groundwater is less than 6 metres below ground surface.
- MM-GW02 (Dewatering plan) states that if groundwater is intersected at a turbine location, the turbine should be micro-sited to higher ground to avoid groundwater intersection, and if intersected during turbine footing excavation to require a dewatering plan. It also requires installation of monitoring wells.

Dr Fawcett considered there was no ongoing impacts to stygofauna communities (if present). He said:

The impact assessment for stygofauna assumes the presence of stygofauna, even though this is unknown. If groundwater is intersected, drawdown will be minimal and of limited duration. Stygofauna can move in the aquifer and are at limited risk of temporary drawdown (i.e. they survive seasonal fluctuations).

MM-GW02 includes an instruction to assess the drawdown relative to GDEs (which includes stygofauna).²²

Dr Fawcett recommended minor changes to:

- MM-GW02 to clarify requirements
- MM-GW05 to respond to EPA submissions.

He also recommended that groundwater be added to the Incorporated Document provisions relating to micro-siting turbines.

In response to questions from the IAC, Dr Fawcett recommended:

- additional groundwater monitoring in MM-GW05 along with groundwater quality monitoring
- MM-GW06 should require baseline monitoring of groundwater levels 12 months prior to the commencement of water supply pumping in line with baseline water quality monitoring for 1 year prior to the commencement of water supply pumping.

In response to the EPA's submission Mr Organ advised the likelihood of impacts on stygofauna was low. He explained:

- the environmental setting of the Project is not known to support stygofauna of conservation concern, or GDEs or aquifers with ecological sensitivity
- the scale and nature of works is unlikely to result in significant drawdown, contamination or alteration of groundwater flows, and groundwater impacts will be managed through the EMF
- further targeted assessment is not warranted.

Submitters raised issues relating to the adequacy of the assessment, potential impacts on wetlands (including Ramsar wetlands), changes in water table levels, groundwater pollution, compliance with legislation and regulations and adequate monitoring and measurement.

EPA raised issues relating to monitoring groundwater quality and risks to stygofauna (given the lack of information).

NGT was concerned about impacts of on wetlands, stating *"as a wetland system that is highly groundwater dependent, risks to groundwater availability and quality are also critical"* (S124).

²² D68, Dr Fawcett Expert Witness Statement, page 14

The Proponent recommended drafting changes and adopted the recommendations of Dr Fawcett in its Day 4 EMF.

(iv) Discussion

The IAC is satisfied the groundwater and GDE assessment is appropriate and has been prepared with consideration of relevant regulations and guidelines. There is potential for some impacts during construction and there are no likely impacts during operations.

The IAC accepts that the groundwater investigation provides sufficient confidence to conclude there is limited potential for the four metre deep turbine foundations to intersect groundwater.

The Day 4 EMF appropriately make drafting refinements and to:

- clarify that turbines should where practicable be located to avoid areas with inferred depth of groundwater less than six metres (MM-GW01)
- clarify that turbines will be moved to avoid groundwater intersection if practicable, and if not practicable to provide for a contingency plan including a site specific risk assessment of impacts and to require groundwater quality monitoring (MM-GW02)
- require that groundwater contamination management must have regard to quality monitoring (MM-GW05)
- require baseline water quality monitoring be undertaken for at least one year to account for reasonable variability (MM-GW06).

The IAC recommends minor changes to improve drafting of groundwater mitigation measures and amending MM-GW02 to change the name and clarify turbines can be moved by micro-siting.

(v) Finding

The IAC finds, subject to its recommendations:

- The effects on groundwater and GDEs have been appropriately assessed and are acceptable.

7.4 Overall conclusions on surface water, groundwater and Groundwater Dependent Ecosystem effects

Subject to applying its recommendations, the IAC is satisfied the Project is consistent with relevant policy and legislation and relevant draft evaluation objectives. The likely surface water, groundwater and GDE effects are low and the IAC is satisfied any effects are manageable and do not preclude the Project being approved.

8 Contamination and acid sulfate soils

8.1 Introduction

The relevant Scoping Requirements draft evaluation objective is:

To maintain the functions and values of aquatic environments, surface water and groundwater quality and stream flows and prevent adverse effects on protected beneficial uses.

Contamination and acid sulfate soils (ASS) effects are assessed in:

- EES Chapter 10 (Soil Contamination and Acid Sulfate Soils)
- EES Technical Appendix I (Environmental Site Investigation).

The exhibited EMF includes the following mitigation measures:

- MM-CA01 Management of contaminated soil
- MM-CA02 Management of unknown contamination
- MM-CA03 Acid Sulfate Soil Management Plan
- MM-CA04 Spoil Management
- MM-CA05 Contamination management
- MM-CA06 Pre-construction peat-assessment.

The Proponent provided the following Technical Notes:

- Technical Note 30 - Management of stockpiled acid sulfate soils.

The IAC has had regard to relevant policy and guidelines, including:

- EP Act and associated publications.
- *Victorian Best Practice Guidelines for Assessing and Managing Coastal Acid Sulfate Soils* (Department of Sustainability and Environment, October 2010).

8.2 Contamination

(i) The issue

The issue is whether contamination effects have been appropriately assessed and impacts are acceptable.

(ii) What did the EES say?

EES Chapter 10 (Soil contamination and acid sulfate soils) described the potential impacts associated with disturbance of contaminated soil and groundwater and the mitigation measures proposed to manage potentially adverse impacts.

The methodology for the contamination and ASS assessment included:

- establishing a study area and the existing conditions
- conducting a preliminary site investigations including desktop reviews, interviews with landowners and land managers and site inspections
- conducting detailed site investigations including testing soil and groundwater samples
- developing mitigation measures and assessing residual impacts.

Construction activities have the potential to disturb contaminated soils and contaminated groundwater. Due to existing and historical land uses the potential to encounter contaminated soils is low.

Groundwater contamination is not expected to be present within the majority of the study area, but it is proposed that extracted groundwater near test pit 05 (near a former sheep dip) be tested before discharging or taken off-site for disposal.

No contaminated soil impacts are expected to occur during operation of the Project. Potential contamination would be associated with fuel or oil spills or leaks, and the mitigation measures include preventative controls to manage these at all times.

The EES concluded that potential impacts on human health and the environment from contaminated soils was not significant. The CEMP includes an unexpected finds protocol that details procedures if needed.

(iii) Evidence and submissions

The Proponent submitted the various mitigation measures would address risks related to contamination, compaction and erosion.

Regarding contamination Dr Fawcett gave evidence:

The release of sediments or site spillages into local waterways has the potential to affect aquatic ecosystems. The plans to include trenchless crossing for waterways and wetlands and the implementation of an industry standard Construction Environmental Management Plan (CEMP) will reduce the likelihood of any spillages or erosion occurring that would impact waterways to acceptable levels.

In response to submissions Dr Fawcett recommended groundwater quality monitoring be required in the EMF.

Some submitters raised concerns about soil contamination, compaction and erosion.

The EPA recommended amending MM-GW05 (Groundwater management plan) to require monitoring of chemicals of interest. The Proponent proposed to amend MM-GW06 (Groundwater level monitoring program) to monitor groundwater quality.

(iv) Discussion

The IAC is satisfied the methodology for the soil contamination assessment is appropriate. It accepts its findings that the potential to encounter or disturb contaminated soils during construction is low, and no impacts are anticipated during operations.

The EMF appropriately requires a CEMP that will include processes and responsibilities for (among other things) using and maintaining plant and equipment to minimise risk of harm from pollution. It also contains mitigation measures that address management of contaminated soil (MM-CA01), management of unknown contamination (MM-CA02) and spoil management including unexpected contaminated wastes (MM-CA04).

The Proponent's Day 4 EMF responds appropriately to the EPA's submission and amends MM-GW06 to require groundwater quality monitoring (see Chapter 7.3).

(v) Finding

The IAC finds, subject to its recommendations:

- Contamination effects have been appropriately assessed and are acceptable.

8.3 Acid sulfate soils**(i) The issue**

The issue is whether ASS effects have been appropriately assessed and impacts are acceptable.

(ii) What did the EES say?

EES Chapter 10 (Soil contamination and acid sulfate soils) described the potential impacts associated with ASS and the mitigation measures proposed to manage potentially adverse impacts.

The methodology is described in Chapter 8.2 above.

Construction activities have the potential to disturb ASS. Coastal ASS are naturally occurring in many parts of Victoria's coastal zone, including Portland which are largely benign if undisturbed but if disturbed can react with oxygen and produce sulfuric acid. This can result in acidification of water and soil, de-oxygenation of water and reduced water quality.

Potential impacts due to disturbance of ASS during construction can be managed through the proposed ASS management plan (MM-CA03) and would not result in a significant residual effect.

No ASS impacts are expected to occur during operation of the Project.

(iii) Submissions

In response to a question from the IAC the Proponent submitted TN30 which described how the EES and mitigation measures addressed ASS management with regard to relevant regulations and guidelines. It said:

- 3.3 The Proponent expects that all reasonable risk factors would need to (and will) be considered and addressed through the ASS management plan, which would include measures to respond to significant storm events.
- 3.4 That said, the Proponent expects that the range of measures typically employed to manage stockpile runoff (as set out above) would adequately address the impacts from significant storm events.
- 3.5 The Proponent does not consider it necessary to expressly identify the need to consider significant storm events in MM-CA03 and MM-CA04, but this can be added in if considered appropriate by the IAC.²³

The EPA recommended amending MM-CA03 (Acid Sulfate Soils) to reflect the requirements for lawful disposal of ASS. The Proponent agreed and proposed to amend MM-CA03 to:

- remove the requirement, that where ASS is proposed to be removed or disposed of offsite, that an EMP should be prepared and submitted to the EPA for approval; and
- provide that ASS [disposal] must occur at a lawful place that is permitted to accept N123 WASS [waste ASS] or PASS [potential ASS] and that if the WASS/PASS has

²³ D306, TN30 – Management of stockpiled acid sulfate soils

contaminants above fill material thresholds, it can be classified as N120 which is a reportable priority waste.²⁴

(iv) Discussion

The IAC is satisfied the methodology for the ASS assessment is appropriate. It accepts that the proposed mitigation measures can appropriately manage any impacts resulting from disturbance of ASS during construction, and no impacts are anticipated during operations.

The range of measures typically employed to manage stockpile runoff (as set out in TN30) adequately address the impacts from significant storm events.

The Proponent's Day 4 MM-CA03 (Acid Sulphate Management Plan) is appropriate. It requires the management plan be prepared with regard to the *Victorian Best Practice Guidelines for Assessing and Managing Coastal Acid Sulfate Soils* and national ASS guidance, and includes appropriate requirements for ASS disposal.

(v) Finding

The IAC finds, subject to its recommendations:

- ASS effects have been appropriately assessed and are acceptable.

8.4 Overall conclusions on contamination and acid sulfate soil effects

Subject to applying its recommendations, the IAC is satisfied the Project is consistent with relevant policy and legislation and relevant draft evaluation objectives. The likely contamination and ASS effects are low and the IAC is satisfied any effects are manageable and do not preclude the Project being approved.

²⁴ D136, Proponent's response to agency submissions

9 Cultural Heritage

9.1 Introduction

The relevant Scoping Requirements draft evaluation objective is:

To avoid or minimise adverse effects on Aboriginal and historic cultural heritage and associated values.

Cultural heritage effects are assessed in:

- EES Chapter 11 (Cultural Heritage)
- EES Technical Appendices J (Aboriginal Cultural Heritage Technical Report) and K (Historical Heritage Assessment).

The exhibited EMF includes the following mitigation measures:

- MM-AH01 GMPAOC Consultation
- MM-AH02 CHMP 17822
- MM-AH03 Exclusion zones
- MM-HH01 Site induction
- MM-HH02 Avoidance of historical heritage items
- MM-HH03 Unexpected discovery of historic sites.

Table 13 lists the experts providing evidence on cultural heritage.

Table 13 Evidence on cultural heritage

Documents	Party	Expert	Firm	Area of expertise
D64 and D326	Proponent	Ricky Feldman	Andrew Long and Associates	Aboriginal cultural heritage

The Proponent provided the following Technical Notes and submissions:

- TN7 – Aboriginal cultural heritage.
- D325 – Proponent’s submissions on Aboriginal cultural heritage.

The IAC has had regard to relevant policy and guidelines, including:

- *Aboriginal Heritage Act 2006*
- *Heritage Act 2017*
- *Planning and Environment Act 1987*
- Glenelg Planning Scheme.

9.2 Aboriginal cultural heritage

(i) The issue

The issue is whether Aboriginal cultural heritage effects have been appropriately assessed and are acceptable.

(ii) What did the EES say?

The Aboriginal Cultural Heritage Technical Report described the investigations undertaken in relation to Aboriginal cultural heritage effects, including consultation with the GMTOAC. The GMTOAC is the Registered Aboriginal Party for the Project Area under the *Aboriginal Heritage Act*

2006. The Gunditjmara are the native title holders for approximately 1,219 hectares of the Project Area and are represented by the GMTOAC through the EES process.

The investigations involved a desktop assessment followed by a standard assessment in 2021 that was based on an earlier iteration of the Project. This has been supplemented by iterative predictive modelling developed in consultation with the GMTOAC. This modelling is being further refined and will inform the complex assessments and Cultural Heritage Management Plan (CHMP) now being prepared. The complex assessment is based on the exhibited Project.

The EES noted there are six previously registered Aboriginal places within the Project area and three new Aboriginal places were recorded during the standard assessment. It found that potential impacts on these places would be confined to the construction phase of the Project and there are no expected operational impacts.

There are no previously identified or recorded Aboriginal places within the turbine and associated hardstand areas and foundations. The previously unregistered sites and material in these areas will be managed through the CHMP and siting of turbines. Impacts associated with electrical reticulation, substations and other infrastructure will be managed through the implementation of the EMF and CHMP.

The EES identified various further site investigations and surveys needed to identify the nature, extent, and significance of various places and to assess possible impacts. These impacts will be managed through the implementation of the EMF and CHMP.

CHMP 17822 is being prepared in consultation with the GMTOAC and in accordance with section 49 of the *Aboriginal Heritage Act 2006*. The CHMP will outline procedures, management conditions and contingency measures if unrecorded Aboriginal cultural heritage material is encountered during the construction phase of the Project. The Project cannot proceed without the CHMP being approved.

The Gunditjmara have commenced negotiations with the Proponent about an Indigenous Land Use Agreement under the *Native Title Act 1993* (C'th). As part of this process, the Proponent sponsored a Cultural Values Assessment at the request of the Gunditjmara to articulate their intangible cultural values within and around the Project Area and to inform the Indigenous Land Use Agreement and the CHMP.

(iii) Evidence and submissions

The Proponent relied on the EES assessment and Mr Feldman's evidence. Its Day 4 EMF included various changes in response to Mr Feldman's evidence and the GMTOAC (S179) submission.

Mr Feldman provided an update on the further work being undertaken in developing and refining the predictive modelling, undertaking further site investigations and progressing the CHMP. He provided responses to submissions that informed the Proponent's proposed changes to the EMF.

He concluded that the requirement for the CHMP to be approved satisfied the Aboriginal cultural heritage aspect of the draft evaluation objective.

He also provided advice about possible impacts on Aboriginal cultural heritage associated with the internal transmission line options that is discussed in Chapter 17.1 of this Report.

The GMTOAC provided advice about its role and updates on various activities it was undertaking in relation to the Project. It advised that its submission reflected its technical review of the EES, was

independent of the CHMP and Indigenous Land Use Agreement processes and *'should not be considered an endorsement of the project'*.²⁵

The GMTOAC provided an assessment of the likelihood of tangible and intangible heritage impacts including biodiversity impacts for various themes in the EES. In summary, the GMTOAC submitted that the following matters could have intangible heritage impacts, including biodiversity impacts, and sought the opportunity for further consultation and review as the Project proceeds:

- biodiversity – native vegetation and threatened terrestrial species
- biodiversity – threatened bats and avifauna collision risk
- Ramsar Site
- Broilga
- surface water
- groundwater
- groundwater dependent ecosystems
- contamination and ASS
- Aboriginal cultural heritage (tangible and intangible effects)
- landscape character and visual amenity
- noise and vibration
- social economic
- safety, hazard and risk
- the EMF.

The GMTOAC said possible tangible heritage impacts were for Aboriginal cultural heritage, safety, hazard and risk and the EMF.

Other submitters raised Aboriginal cultural heritage issues in support of and opposition to the Project. Issues related to the adequacy of investigations and consultation that informed the EES and the potential damage to heritage sites and places, including burial sites. Some submitters acknowledged the consultation undertaken with GMTOAC, including the Cultural Values Assessment funding, while others questioned whether Traditional Owner consultation had been sufficiently extensive.

The Proponent's Day 4 EMF included various changes (MM-AH01 and MM-AH03) that broadened the extent of consultation with the GMTOAC during construction and operation. These changes were sought by the GMTOAC and supported by Mr Feldman and include consultation in relation to the CEMP (including the Dewatering Plan and Sediment Erosion and Water Quality Management Plan), the CHMP, the BBAMP, the Quarry Work Plan, the OEMP and the Fire Management Plan. It also provides for the GMTOAC to be provided with monitoring reports under the BBAMP.

(iv) Discussion

The IAC is satisfied the EES assessment (and further work being undertaken as part of the CHMP process) adequately investigates potential Aboriginal cultural heritage effects.

The IAC supports the Proponent's proposed EMF changes in response to the GMTOAC submission and is satisfied the EMF and CHMP will provide suitable mechanisms to protect known Aboriginal cultural heritage sites and any that may be discovered during Project construction. The additional

²⁵ S179, page 1

consultation mechanisms agreed by the Proponent and included in the Day 4 EMF will also assist in addressing potential impacts on intangible heritage.

Issues relating to the internal transmission line options are discussed in Chapter 17.1.

(v) Findings

The IAC finds, subject to its recommendations:

- The EES appropriately assessed Aboriginal cultural heritage effects, although further investigations are necessary and are underway.
- Effects on Aboriginal cultural heritage can be appropriately managed through the EMF and CHMP.

9.3 Historic cultural heritage

(i) The issue

The issue is whether historic cultural heritage effects have been appropriately assessed and are acceptable.

(ii) What did the EES say?

The Historical Heritage Assessment covered two study areas:

- the wind turbine area (study area 1)
- the transmission line corridor (study area 2).

It involved a desktop assessment and selective site inspections, and identified two historic heritage places including:

- Former Kentbruck School site within study area 1 (Victorian Heritage Inventory H7121-053)
- Boiler Swamp Sawmill site within study area 2 (Victorian Heritage Inventory D7121-0045).

The Boiler Swamp Sawmill site has since been delisted from the Victorian Heritage Inventory.

Earlier investigations over a larger study area identified other places for which site cards²⁶ were submitted to Heritage Victoria. In addition to the Former Kentbruck School, the following sites were added to the Victorian Heritage Inventory through this process:

- Emu Flat Hotel (Victorian Heritage Inventory H7121-0052)
- Johnstone Family Homestead (Victorian Heritage Inventory H7121-0054).

These additional sites are outside the study areas and will not be impacted by the Project.

The assessment concluded the proposed works within study areas 1 and 2 were not likely to have a substantial negative impact on the historical, architectural, or archaeological values of known or discovered heritage places. The proposed works would not have any permanent physical impacts on the built historical fabric of identified heritage items or identified areas of archaeological potential, subject to recommendations relating to:

- site induction
- avoidance of heritage items

²⁶ A prescribed form required by Heritage Victoria

- unexpected discovery of historical heritage places or sites
- construction plans to include unexpected finds procedure.

These recommendations were reflected in the exhibited EMF (MM-HH01, HH02 and HH03) and carried over in the Day 4 EMF.

(iii) Evidence and submissions

The Proponent relied on the assessment in the EES and submitted the proposed mitigation measures would satisfactorily address known and discovered historic sites.

There were no submissions directly related to historic cultural heritage, although Mr Stokes (S174) raised various issues in relation to the existing application of the Heritage Overlay in the Glenelg Planning Scheme, including the:

- content of the Heritage Overlay Schedule
- application and purpose of the Heritage Overlay.

(iv) Discussion

The IAC is satisfied the Historical Heritage Assessment was appropriately prepared and consistent with Heritage Victoria guidelines.

The Former Kentbruck School site is the only identified site within the Project area and the assessment was unable to identify any archaeological remnants or confirm the exact location of any school buildings, instead it relied on personal communication from a local resident to identify the site.

Although it is not expected the site will be directly affected by the Project, MM-HH02 includes measures for avoiding impacts on identified heritage sites, including the Former Kentbruck School and establishes when consent from Heritage Victoria would be required for certain works.

MM-HH03 includes measures related to the unexpected discovery of heritage sites, including reporting, consent and works requirements. These will be reflected in the CEMP.

The IAC is satisfied that the potential for historic cultural effects is minimal and that any effects can be appropriately managed through the EMF and requirements of the *Heritage Act 2017*.

The issues raised by Mr Stokes (S174) in relations to the Heritage Overlay are not relevant the IAC's considerations, noting the Heritage Overlay is not applied with the Project site.

(v) Findings

The IAC finds, subject to its recommendations:

- The EES appropriately assessed historic cultural heritage effects.
- Known and discovered historic cultural heritage can be suitably managed through the EMF and *Heritage Act 2017*.

9.4 Overall conclusions on cultural heritage effects

Subject to applying its recommendations, the IAC is satisfied Project is consistent with relevant policy and legislation and the relevant draft evaluation objective. The likely cultural heritage effects are not significant and the IAC is satisfied any effects are acceptable and do not preclude the Project being approved.

10 Landscape character and visual amenity

10.1 Introduction

The relevant Scoping Requirements draft evaluation objective is:

To minimise and manage potential adverse effects on landscape and visual amenity.

Landscape and visual effects are assessed in:

- EES Chapter 12 (Landscape Character and Visual Amenity)
- EES Technical Appendix L (Landscape Character and Visual Impact Assessment) and M (Shadow Flicker and Blade Glint Assessment)
- LVIA Peer Review.

The exhibited EMF includes the following mitigation measures:

- MM-LV01 Public view locations
- MM-LV02 Landscape screening
- MM-LV03 On-site landscaping plan
- MM-LV04 Infrastructure design and materials
- MM-LV05 Lighting
- MM-LV06 Shadow flicker assessment
- MM-LV07 Non-reflective coating.

Table 14 lists the expert evidence on landscape and visual impacts.

Table 14 Evidence on landscape and visual impacts

Documents	Party	Expert	Firm	Area of expertise
D69, D70 - D75, D127, D314 - D320, D338, D350, D351, D362	Proponent	Peter Haack	Peter Haack Consulting	Landscape and visual impact
D88, D345	Proponent	John Glossop	Glossop Town Planning	Town planning

The Proponent provided the following Technical Notes:

- D330 - TN31 – Landscape character and visual amenity mitigation measures
- D307 - TN32 – RFI 34 Turbine colour
- D308 - TN33 – RFI 33 Shadow flicker
- D309 - TN34 – RFI 40 SLO1 (Glenelg River Estuary and Surrounds)
- D381 - TN36 – Lake Mombeong landscape mitigation measures.

Other key documents include:

- D314 – Addendum report of Peter Haack
- D336 – Proponent’s submissions on landscape, visual, shadow flicker and blade glint
- D337 – Panel Report – Glenelg Planning Scheme Amendment C52.

The IAC has had regard to relevant policy and guidelines, including:

- Glenelg Planning Scheme
- *Coastal Spaces Landscape Assessment Study, 2006*
- National Parks Act

- *Ngootyoong Gunditj Ngootyoong Mara South West Management Plan May 2015*
- *Heritage Rivers Act 1992.*

10.2 The landscape character and visual impact assessment methodology

(i) The issue

The issue is whether the landscape character and visual impact assessment methodology is satisfactory.

(ii) What did the EES say?

The EES included the Landscape Character and Visual Impact Assessment (LCVIA) (Appendix L) and the LVIA Peer Review. The LCVIA describes the methodology used in the assessment, the key elements of which are described below.

The LCVIA adopted the well-established methodology described in the *Guidelines for Landscape and Visual Impact Assessment*, 3rd Edition, 2013 and included assessments of:

- landscape character
- zones of theoretical visibility (ZTV)
- key views, visual effects and mitigation
- night lighting
- cumulative impacts
- pre-construction and construction impacts
- mitigation.

The assessment considered landscape impacts (impacts on physical elements and features that make up a landscape or seascape) and visual impacts (impacts on viewers caused by development on views from selected viewpoints).

It noted that the key principles of visual impact assessment include a combination of receiver sensitivity (landscape or people) and the potential magnitude of visual effects. In relation to wind farms, the magnitude of visual effects is primarily determined through the:

- distance between wind turbines and receiver locations
- horizontal field of view occupied by wind turbine structures
- vertical field of view occupied by wind turbines.

The LCVIA adopted viewshed distances of 20 kilometres for preparing ZTV diagrams and identifying named lookouts, 10 kilometres for assessing key view locations (including dwellings) and 60 kilometres for identifying other wind farms. The extent of viewshed was informed by the height of the turbines and the nature, location and height of landform or vegetation that might limit and influence the extent of visibility. Viewshed distances and viewpoints are shown in Figure 12.

Figure 12 Landscape viewshed distances, designations and localities

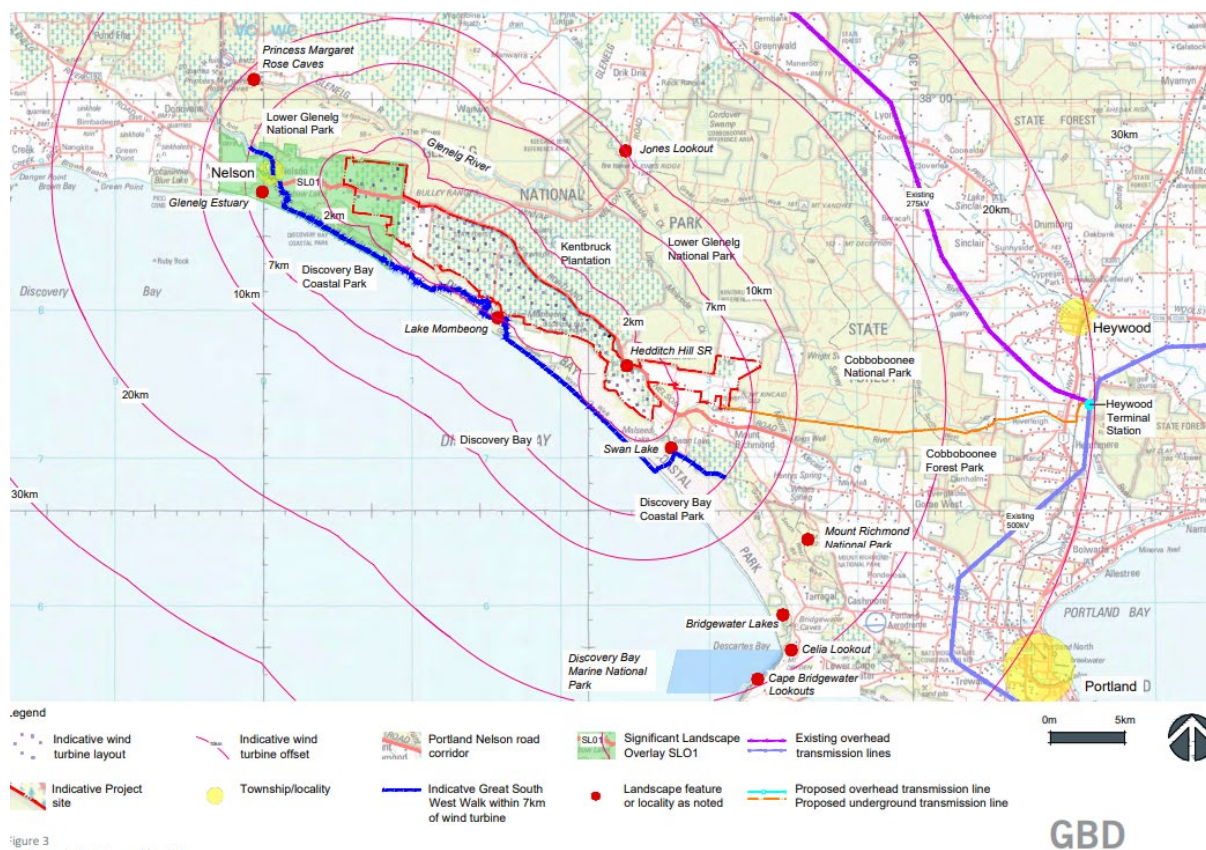


Figure 3 Landscape designations and localities

Source: EES Appendix L, Figure 3

The LCVIA noted that turbines might be visible beyond the 10 kilometre viewshed (and potentially up to 50 kilometres) however a 270 metres turbine blade tip would occupy a relatively small proportion of a person’s field of view when more than 10 kilometres distant. This would result in a relatively low level of perceived visual effects, particularly when tree cover and topography also affect views.

The LCVIA includes sets of public and dwelling viewpoint photomontages and wireframe diagrams that illustrate the proposed turbines and informed the impact assessment. It also includes ZTV diagrams, based on digital terrain modelling, to determine the visibility of turbines. The ZTV diagrams are conservative given they do not include the screening that might be provided by vegetation and topography.

The LCVIA identified seven landscape character areas and included a sensitivity analysis for each landscape character areas that applied a Negligible, Low, Moderate or High rating, based on various criteria. It found the Project site and surrounding landscape character has an overall Moderate High sensitivity level, with High levels of sensitivity extending along the coastal zone, and Moderate to Moderate High sensitivity around the Glenelg Estuary and Glenelg River. It concluded the Project will have potential to impact landscape values associated with coastal environments including landscape characteristics within national and coastal parks and other public.

The visual effects for 10 key public viewpoints were assessed, based on the sensitivity of visual receivers and the magnitude of visual effects. These were rated as Negligible, Low, Moderate or

High. This included the assessment of potential mitigation opportunities. The assessment of these viewpoints is discussed later in this chapter.

The LCVIA noted it relies on a process of professional judgement and that:

Professional judgement applies knowledge, assessment skills and relevant experience within the context of existing guidelines and technical supplements. Professional judgements applied in this LCVIA are based on reasonable and defined criteria and have been subject to peer review.²⁷

The LVIA Peer Review was prepared by Peter Haack Consulting and exhibited with the EES. It reviewed earlier documents prepared by GBD Landscape Architecture for the Proponent: Draft Landscape and Visual Impact Assessment, March 2023 and Final LCVIA.

It concluded the methodology, mitigation measures and conclusions were appropriate and recommended various drafting and content additions and revisions, as well as:

- the application of a 10 kilometre viewshed for dwellings
- revised landscape character areas landscaping sensitivity ratings
- revised visual effect ratings.

Most of the recommendations were addressed in the exhibited LCVIA and if not, were not considered consequential.

(iii) Evidence and submissions

The Proponent (D336) supported the LCVIA methodology and relied on the evidence of Mr Haack. The Proponent submitted there was a degree of subjectivity in the consideration of visual impacts and it should not be assumed that wind turbines necessarily had a negative impact. It suggested that the largest proportion of viewers would consider the turbines to be a 'neutral' feature.

The Proponent acknowledged the Project would have impacts on various viewpoints, but acknowledged they have to be considered "*...in the aggregate – that is, the benefits of the Project in totality have to be weighed against the totality of the disbenefits*".²⁸

Mr Haack reviewed the exhibited LCVIA in his evidence report and generally supported its methodology and findings. He found that the LCVIA was conservative and rated impacts at the higher end of the scale.

The only methodological difference noted by Mr Haack related to defining viewer sensitivity which he believed should reduce as distance from the Project increases, with the impact reducing to Low in viewpoints beyond 10 kilometres. The LCVIA does not reduce viewer sensitivity as distance from the Project increases. Mr Haack noted some minor differences in visual effect ratings for some residential viewpoints and lookouts that are discussed later in this chapter.

Submitters raised concerns about elements of the LCVIA methodology, including:

- the misrepresentation of visual impacts in photomontages and other visual representations
- the incorrect assessment and application of impact ratings
- the failure to properly reflect community values.

²⁷ EES Appendix L, section 3, page 22

²⁸ D386, Proponent – Closing Submission, paragraph 184, page 47

Recurring themes in many submissions were that the LCVIA underestimated the magnitude of impacts and that the height and density of the turbines had not been adequately assessed.

Submitters also sought additional photomontages and impact assessments for specific dwellings and viewpoints.

In response to submissions and requests, the Proponent engaged Mr Haack to undertake additional impact analysis (as documented in D314), including impacts on three dwellings and 29 public viewpoints.

Mr Haack advised this additional analysis did not differ from the material in his evidence report and it did not require any changes. The only exception was a proposed change to the exhibited MM-BD16 relating to bird diverters on the overhead powerline along Portland-Nelson Road. Mr Haack recommended the selected diverters should minimise visual impacts as much as possible and this is addressed in the amended MM-BD13. Bird diverters are discussed in Chapter 5 of this Report.

(iv) Discussion

The IAC generally accepts the methodology relied on in the LCVIA and the higher order identification, description and rating of impacts.

The photomontages and other visual representation have been of assistance, although the IAC accepts there are some limitations to the extent they can accurately reflect visual impacts. The IAC has been assisted in interpreting this material by undertaking extensive site inspections, particularly of sensitive viewpoints and through Mr Haack's evidence and the many submissions about these issues.

The IAC generally supports the LCVIA's application of sensitivity and magnitude ratings, and the overall impact ratings. It agrees with Mr Haack that some of these ratings are conservative, although it believes that others potentially understate the possible impacts.

As the LCVIA noted:

The process of landscape and visual impact assessment incorporates both qualitative and quantitative analysis; however, determinations of impacts are ultimately based on interpretations informed by professional judgement.²⁹

In undertaking its review of the impact assessments in the LCVIA and Mr Haack's evidence, the IAC has had the benefit of extensive submissions and inspections to inform its understanding of the magnitude and significance of impacts.

(v) Finding

The IAC finds:

- The LCVIA methodology was generally sound and adopted a suitably conservative approach.

²⁹ EES LCVIA section 1.2, page 14

10.3 Specific areas, sites and issues

The following sections describe the impacts on specific areas and sites and generally adopt the headings used in the LCVIA and Mr Haack's evidence.

In assessing the Project's landscape and visual impacts the IAC has considered relevant legislation, Glenelg Planning Scheme provisions, guidelines and management plans. Many of these support protecting significant landscapes and views, including those associated with coastal areas and waterways. There is also significant support for protecting national and coastal parks and the IAC has had regard to the objects of the National Parks Act and the vision, goals and strategies in the *Ngootoyong Gunditj Ngootoyong Mara South West Management Plan* May 2015.

In this context, the IAC has placed significant weight on protecting the amenity and natural experience of the national and coastal parks. This is particularly so in relation to Lake Mombeong, Swan Lake and the GSWW that are important community and tourism assets that to varying degrees would be negatively impacted by the Project.

At a more practical level, the IAC has been assisted by its inspections of the areas and sites discussed below as well as existing wind farms in the local area and broader western Victoria. Existing local wind farm turbines are notable for being significantly shorter than the proposed turbines, with tip heights ranging between 80 metres (Codrington) and 130 metres (Cape Nelson North/Sir William Grant). Wind farms in western Victoria include turbines with tip heights up 180 metres (Berrybank, Mortlake South and Ryan Corner). The Kentbruck turbines would be significantly taller at 270 metres, comparable to the 297 metre height of the Eureka Tower in Melbourne.

Finally, the IAC agrees with the LCVIA that there is a degree of subjectivity in assessing landscape and visual impacts. In undertaking its review, the IAC has had the benefit of the many submissions about the extent and significance of expected impacts and the value the local community places on the impacted areas.

10.3.1 Significant Landscape Overlay

(i) The issue

The issue is whether and how the Significant Landscape Overlay (SLO) applies to the Project.

(ii) What did the EES say?

The LCVIA explained that SLO's are applied to identify, conserve and enhance the character of significant landscapes.

The Significant Landscape Overlay Schedule 1 (SLO1) under the Planning Scheme applies to part of the Project site (see Figure 13). The SLO Schedules 2 and 3 (SLO2 and SLO3) are applied to areas to the south-east of the Project site.

The LCVIA found that the 12 turbines proposed within the SLO1 would not be contrary to the SLO1 decision guidelines. The turbines would be visible from seven dwellings to the west of the Project site, and result in a Moderate High to High visual effect, with a residual Low to Moderate visual effect following mitigation. Elements of the Project would be visible from within sections of the SLO2 and SLO3 but would not impact or contradict visual landscape character requirements or decision guidelines.

Figure 13 Extent of SLO1

Source: LCVA, Figure 4

(iii) Evidence and submissions

The Proponent, Mr Haack and Mr Glossop agreed the SLO1 was a relevant consideration where it applies to the Project site but did not believe it precluded turbines in this area. This was based on their assessment against the SLO1 'landscape character objectives to be achieved' and 'decision guidelines'.

They provided additional material in relation to the SLO1, including the *Coastal Spaces Landscape Assessment Study*, 2006 that is referenced in the Glenelg Planning Scheme as a policy document (Clause 12.02-1S), Policy guideline (Clause 17.04-2S), Background document and SLO1 decision guidelines.

They did not believe the SLO2 and SLO3 were relevant considerations because they do not apply to the Project site.

Submitters raised general concerns about the Project's compliance with the SLO Schedules, particularly the SLO1. Some believed that the SLO1 was intended to protect views from Nelson and should preclude the development of wind turbines that would be visible from Nelson.

(iv) Discussion

The IAC agrees the SLO1 is a relevant consideration where it applies to the Project site and has reviewed the parent Clause and Schedule, as well as the:

- *Coastal Spaces Landscape Assessment Study*, 2006 which is referenced as a decision guideline in SLO1
- Amendment C52 Panel report which implemented the *Coastal Spaces Landscape Assessment Study*, 2006 and introduced the SLO Schedules.

The SLO1 includes various landscape character objectives to be achieved, the most relevant of which is:

To protect locally significant views to the ocean, the Glenelg River Estuary and other natural landforms from Nelson-Portland Road, the Great South West Walk and other publicly accessible locations.

The area of the Project site within the SLO1 includes 12 proposed turbines, eight on the north side of Portland-Nelson Road and four on the south side. They would be distant from the “*ocean and the Glenelg River Estuary*” and are unlikely to have any significant or unacceptable impacts on views to those areas from the nominated viewpoints. Some turbines might impact on views to ‘natural landforms’ in the hinterland of the coast, but they would be limited by the small number of turbines and the screening provided by vegetation and topography. Any impacts on views associated with natural landforms are unlikely to be significant or unacceptable.

The IAC is satisfied the Project is generally consistent with the other SLO1 landscape character objectives and decision guidelines and does not preclude the proposed turbines being constructed.

The IAC notes the Project site is not subject to the SLO2 and SLO3 and agrees with the Proponent that the overlays are not directly relevant to the IAC’s assessment. However, impacts on views from within these areas are assessed in the LCVIA and are relevant to the IAC’s assessment. These are discussed later in this chapter.

(v) Findings

The IAC finds:

- The SLO1 is a relevant consideration where it applies to the Project site.
- The Project is generally consistent with the SLO1 landscape character objectives and decision guidelines and it does not preclude the proposed turbines.
- The SLO2 and SLO3 are not directly relevant because they do not apply to the Project site.

10.3.2 Nelson

(i) The issues

The issues are whether the:

- visual impact assessment in relation to Nelson is appropriate
- impacts are significant and acceptable.

(ii) What did the EES say?

The LCVIA found that views toward the Project from dwellings and public viewing locations in Nelson would be screened by adjoining structures, tree cover and undulating landform. It concluded the Project would not have a significant visual impact. Some views from dwellings and the public domain along the eastern edge of the town (Wade Street) would have distant views toward turbines (approximately five kilometres away) but the overall visual effect on views from the town would be Negligible Low. A small number of dwellings along Wade Street would experience a Moderate High visual effect that could be partially mitigated by screen planting on individual properties. The residual impact following mitigation would be Low Moderate.

The exhibited MM-LV02 provides for soft landscaping works (tree and shrub planting) at non-involved dwellings within 10 kilometres of turbines where the visual impact would be Moderate High or High.

(iii) Evidence and submissions

Mr Haack supported the LCVIA findings and noted that views of the Project from most areas of Nelson would be screened by topography, buildings and vegetation, resulting in Negligible Low impacts. He agreed some locations along the elevated north-eastern edge would have distant views to the Project and have a Moderate High impact.

In response to Mr Haack's evidence, the Proponent proposed changes to MM-LV02 to specify the six properties that would be subject to the mitigation measure, as shown in the Day 4 version of the EMF.

Submissions raised concerns about the Project's visual impacts on Nelson and individual properties. Some sought the removal of various turbines in the western area of the Project (including the area subject to the SLO1) as a means of mitigating those impacts.

(iv) Discussion

The IAC agrees that various factors, particularly topography, will limit views of the Project from most of Nelson. The most impacted area will be along the Wade Street/eastern boundary within which some locations will have distant views to the Project. The distance to the nearest turbine would be approximately five kilometres. As discussed earlier in relation to the SLO1, the IAC does not consider that the overlay precludes turbines in the western area of the Project.

The IAC is satisfied that subject to implementing the revised MM-LV02, the impacts would not be significant and can be acceptably mitigated. This is included the IAC's recommended EMF at Appendix F:1.

(v) Findings

The IAC finds, subject to its recommendations:

- The landscape character and visual impacts on Nelson have been appropriately assessed.
- The impacts on Nelson are not significant and mitigation measures are acceptable.

10.3.3 Glenelg Estuary

(i) The issues

The issues are whether the:

- landscape and visual impact assessment in relation to the Glenelg Estuary is appropriate
- impacts are significant and acceptable.

(ii) What did the EES say?

The LCVIA noted that views from publicly accessible areas around the Glenelg Estuary to turbines would be partially restricted by a combination of landform and low coastal vegetation, however there might be views towards turbines from the end of Beach Road and some parts of the Discovery Bay Coastal Park. The closest wind turbines would be around six kilometres from the picnic area and unlikely to form a dominant visual element within the view. The overall visual effect on views from the Glenelg Estuary was assessed as Moderate High.

The LVCIA found that there was limited scope to mitigate impacts by screening views toward turbines and that any screening that blocked views to the Glenelg Estuary would be undesirable.

(iii) Evidence and submissions

Mr Haack supported the LCVIA findings and noted that views from the Glenelg Estuary and edges would be limited by vegetation and rising landform. He agreed that where views were possible, the impact would be Moderate High.

Submitters raised concerns about visual impacts and expressed the general view that turbines should not be visible from the estuary. Mr Turner provided extensive material about various viewpoints along the Glenelg River and estuary. He submitted the visual impacts would be unacceptable and contrary to various legislation and policies. He raised technical concerns about the LCVIA and Mr Haack's evidence.

In response to submissions from Mr Turner, the Proponent advised the Project is not within the declared heritage river area and the *Heritage Rivers Act 1992* does not apply.

(iv) Discussion

The IAC agrees that topography and vegetation will screen views from most areas around the Glenelg Estuary. Any views of turbines will be distant and mainly involve the upper elements of turbines, including parts of turbine blades.

The IAC agrees with the LCVIA that the sensitivity of this area is High and that the magnitude of the impact is Moderate given the distance of the turbines and the existing screening. The overall Moderate High impact rating is appropriate.

The IAC understands these impacts cannot be effectively mitigated; however it notes the views of turbines will be confined to a limited number of viewpoints. While the IAC agrees with submitters that potential impacts are undesirable, it does not believe they will be significant and is satisfied the impacts are acceptable.

The IAC acknowledges Mr Turner's submissions about the LVIA and Mr Haack's assessment but is satisfied the methodology they adopted was appropriate and fit for purpose.

(v) Findings

The IAC finds:

- The landscape character and visual impacts on the Glenelg Estuary have been appropriately assessed.
- The impacts on the Glenelg Estuary are not significant and are acceptable.

10.3.4 The Discovery Bay Coastal Park (ocean foreshore, Great South West Walk, Lake Mombeong and Swan Lake)

(i) The issues

The issues are whether the:

- landscape and visual impact assessment in relation to the Discovery Bay Coastal Park is appropriate
- impacts are significant and acceptable.

(ii) What did the EES say?**Ocean beach foreshore and Great South West Walk**

The LCVIA noted the Project would be visible from sections of the GSWW, including an approximate 30-kilometre length along the Discovery Bay foreshore. The Project would also be visible from the Lake Mombeong inland track and from the GSWW as it crosses sand dunes from the ocean foreshore toward the Swan Lake campground.

Views toward wind turbines from the foreshore (from around the high-water mark), would be largely screened by sand dunes and associated vegetation rising above the ocean foreshore. Moving away from the high-water mark toward the ocean would potentially increase turbine visibility.

The location would have a High sensitivity, while the magnitude of impacts and rating of visual effects would range through Negligible (where foreshore views are blocked), Moderate (where ocean foreshore views are partially screened) and High (from sections of the GSWW).

The LCVIA concluded it was not feasible to block out all views of turbines from the ocean beach, however there was scope to mitigate and offset impacts along inland sections of the GSWW.

Lake Mombeong

The LCVIA found that turbines would be visible from Lake Mombeong campground, day use areas and paths toward and around the lake and from the track/lookout to the ocean beach. The turbines would form dominant elements within these views and would also be visible from some portions of the Nobles Rock Track travelling from the beach toward the plantation and Lake Mombeong. The sensitivity of this area, the magnitude of effects and overall impact were all rated as High.

Figure 14 shows the view to the turbines from the Lake Mombeong lookout to the south of the campground. The approximate distance to nearest turbine is 2.52 kilometres. The views from locations within the campground (located adjacent to the south side of the lake) would be more pronounced given their closer proximity to the turbines.

Figure 14 Photomontage view to the north from the Lake Mombeong lookout



Source: EES LCVIA Figure 51

Swan Lake

The LCVIA found that views toward wind turbines from the Swan Lake campground³⁰, day use area and local tracks would be partially screened by landform and vegetation. Turbine visibility would increase to the west of the campground area including views from coastal sand dunes between the campground and ocean beach. The overall visual effect from the campground and surrounds would be Moderate High, with a sensitivity rating of High.

Figure 15 shows the view to turbines from the sand dune area, south of the campgrounds. This area is used by the Portland Dune Buggy Club for four-wheel driving and off-road racing. The approximate distance to the nearest turbine is 3.56 kilometres. Views to the turbines from the campgrounds would be less pronounced given the topography and intervening vegetation.

Figure 15 Photomontage view to the northwest from the Swan Lake sand dunes



Source: EES LCVIA Figure 49

Mitigation

The LVCIA recommended that mitigation and offsets be developed and implemented in consultation with Parks Victoria and the GSWW Committee. These could include planting strategies to increase screening at specific sensitive viewpoints and/or infrastructure works for the benefit of those using the campgrounds and travelling between the lakes and ocean beach.

The LCVIA noted that mitigation strategies would have some limitations because of the proximity of turbines and the extensive visibility from elevated viewpoints, particularly from Lake Mombeong.

MM-LV01 in the exhibited EMF provides for additional planting to increase screening at sensitive viewpoints and the installation/upgrading of infrastructure to offset impacts. The mitigation strategies would be developed and implemented in consultation with Parks Victoria and the GSWW Committee.

³⁰ At Swan Lake there is a five-site campground associated with the Discovery Bay Coastal Park and a larger campground associated with the Portland Dune Buggy Club area

(iii) Evidence and submissions**Ocean beach foreshore and GSWW**

Mr Haack supported the LCVIA findings. He noted that the wind turbines are between 2.5 and 3 kilometres at their closest to the beach and, in some areas, are visually obscured by a sequence of sand dunes ranging from 10 to 20 metres in height, which extends along much of the foreshore. In these locations, the extent of wind turbine visibility would mostly range from no visibility to blades only. However, in the southeast where the dunes begin to reduce in elevation, wind turbines would be seen in almost their entirety. The GSWW traverses the dunes, continuing inland along the Lake Mombeong track for approximately seven kilometres. Along the section south of Lake Mombeong, glimpses of the wind turbines would be seen through openings in the surrounding vegetation. Mr Haack support the LCVIA findings and noted the possibility that additional planting along the inland track might mitigate these impacts.

Many submitters highlighted the scenic and tourism benefits associated with the GSWW and expressed concerns about the Project's impacts and the extent to which they would deter people from using the area and the GSWW.

Lake Mombeong

The Proponent acknowledged the potential impacts at Lake Mombeong but submitted:

- many viewers would experience the turbines as a positive or neutral impact
- views from this area are already highly modified by the pine plantation and its periodic clearance
- only a small number of people used the area and the duration of views was limited
- for most visitors the turbines would be (or become) part of the landscape.
- the Public Park and Recreation Zone (PPRZ) that applies to the area affords less protection than the Public Conservation and Resource Zone
- there was scope for mitigation and offsets to address impacts.

The Proponent concluded that minimising impacts through the removal of turbines would have a significant impact on the Project's feasibility because of the large number of turbines that would need to be removed.

Mr Haack supported the LCVIA findings in relation to the Lake Mombeong campground. He noted that while the lower sections of the turbines would be partially screened by trees (except during tree harvesting), the upper sections, including the rotor faces and hubs, will be visually prominent above the skyline. Turbines would be located approximately two kilometres from the campsite and day use areas and consequently would be visually prominent and warranted an impact rating of High. He agreed that mitigation through the establishment of vegetation might be possible for sections of the day use area and camping sites. Mr Haack provided additional material in relation to possible mitigation works (TN36) that included a high-level concept plan that identified screen planting areas and visitor enhancements. He noted that further analysis of potential mitigation would be required, including discussions with rangers, identifying planting areas and assessing the most suitable types of vegetation.

Many submitters were concerned about the visual impacts of the turbines on the Lake Mombeong area, and the extent to which they would affect their amenity and enjoyment. Some indicated that the impacts would be significant enough to deter visitors and campers. Mr Tuck expanded on these concerns and challenged the practicality and benefits of the proposed mitigation works.

Swan Lake

Mr Haack supported the LCVIA findings in relation to the Swan Lake campground. He noted that this area was approximately three kilometres from the nearest turbines and that views of the turbines would be possible from the Swan Lake campsites, day use areas, and surrounding walking tracks, as well as paths leading to and from the ocean beach. Some turbines would be partially obscured by landforms and tree cover, with the upper sections (rotor faces and hubs) visible above the skyline. He agreed with the Medium High impact rating and the potential for mitigation through screening vegetation in sections of the day use area and camping sites.

Many submitters were concerned about the visual impacts of the turbines on these areas and the extent to which they would affect their amenity and enjoyment. Some indicated that the impacts would be significant enough to deter visitors and campers.

(iv) Discussion

Ocean beach foreshore and GSWW

The IAC agrees that this area has a High sensitivity to visual impact although the extent of the impact would vary across different locations depending on topography, elevation and screening vegetation. Where views of turbines are possible, it is likely there would be a significant negative impact on the enjoyment of the GSWW given their proximity and density. While there might be scope for impacts to be mitigated along inland sections of the GSWW with additional screening vegetation, there would be challenges to achieving this in a coastal environment where vegetation can be difficult to establish and it is not certain that a suitable height and density of planting would be easily achievable.

When considered in isolation from the broader Project benefits and given the uncertainty about the effectiveness of the proposed mitigation measures, the impacts in this area are likely to be unacceptable.

Lake Mombeong

The IAC was not persuaded by the Proponent's submissions that sought to downplay the expected impacts in this area. It agrees with the LVCIA and Mr Haack that the sensitivity, magnitude of impact and overall impact rating are all High. Unsurprisingly, this is consistent with the concerns raised by many submitters about the visual impacts on this and other natural areas.

The IAC finds that the visual effects on the campground and associated areas will be significant and is not satisfied they can be effectively mitigated. The significance of the effects is a consequence of the proximity of the turbines, the large number of visible turbines, the extent of the turbines that would be visible (particularly following plantation logging and during re-establishment) and the general northern orientation of the campground toward Lake Mombeong and the Project.

The planting regime recommended in the LCVIA and expanded upon by Mr Haack would likely screen some views of some turbines from some areas, but it would also screen views to the Lake. This would seem to be counterproductive given the significant contribution that views and access to the Lake and surrounds make to the attraction and amenity of the campground and would likely be an ineffective mitigation measure.

In fairness to the Proponent, it acknowledged there would be residual impacts following mitigation and sought to offset those impacts by installing and/or upgrading infrastructure to service visitors. The suggested improvements included a new viewing platform at the eastern end of the Lake that

would be oriented to the west and away from the turbines to the north, and a day visitor shelter near the existing viewing platform. It seems to the IAC that these proposals would do little of consequence to offset the Project's significant visual impacts, although Parks Victoria would be better placed to assess the benefits of any new or upgraded infrastructure.

Having reviewed extensive submissions, evidence and other material, as well as inspecting the area, the IAC has concluded that impacts would be significant and cannot be effectively mitigated. Seeking to offset these impacts is a legitimate response, however the offsets suggested by Mr Haack and the Proponent would have little, if any, obvious benefit. On balance, the IAC finds that when considered in isolation from the broader Project benefits, the impacts are unacceptable.

Swan Lake

The IAC agrees with the Moderate High impact rating for this area. In contrast to Lake Mombeong, Swan Lake is more distant from the nearest turbines and the campgrounds benefit from more extensive screening provided by topography and vegetation. The campgrounds have a different character and amenity to Lake Mombeong, in part because the Swan Lake is not an open body of water and they are co-located with the Portland Dune Buggy Club area used for four-wheel driving and off-road racing.

As shown in Figure 15, the turbines will be highly visible from the Portland Dune Buggy Club sand dune area, but as noted in the LCVIA, views from the campgrounds and associated areas will be largely screened.

Although the LCVIA and Mr Haack supported additional landscape screening as a potential mitigation measure, there is no detailed discussion of where and how this might be implemented, or the what the residual impact might be. Similarly, there was no guidance about what other offset works could be undertaken to ameliorate impacts. This contrasts with the more detailed analysis provided for Lake Mombeong that, despite its limitations, at least provided some guidance about potential mitigation and offsets. These matters will require further analysis and input from Parks Victoria.

On balance, the IAC believes that if appropriate mitigation and offsets can be implemented, the residual impacts will be acceptable.

Mitigation and offsets

In recognition of the significance of the visual impacts and limited scope for effective mitigation, the LCVIA recommended additional planting and/or infrastructure works to offset those impacts. The IAC believes that better outcomes would be achieved where impacts are mitigated (removed) rather than offset (compensated). Nevertheless, it accepts that offsetting impacts can be a legitimate approach where mitigation is not possible, subject to those offsets enhancing the visitor experience.

MM-LV01 would be the mechanism for implementing offsets and would be heavily reliant on Parks Victoria to inform that process. The IAC believes that the provision of a comprehensive and effective 'package' of mitigations and offsets should be a key condition of any approval and should be subject to approval by the responsible authority (the Minister). This requirement is reflected in the recommended MM-LV02 at Appendix F:1.

Parks Victoria submissions

The Parks Victoria submissions (S177 and D394) were focussed on legislative and policy matters, including the consent required for transmission infrastructure. It provided little detailed advice about visual or landscape impacts although it acknowledged it would have a role in addressing these matters should the Project be approved. The IAC notes that Parks Victoria met with the Proponent during the Hearing process.

The Hearing process would have benefited from Parks Victoria taking a more active role in the discussion of impacts, particularly in relation to the GSSW, Lake Mombeong and Swan Lake. Despite the LCVIA findings, Mr Haack's evidence, numerous submissions and IAC questions about the visual impacts on these areas, Parks Victoria was largely silent on possible mitigation and offsets and seemed content to defer that to future processes.

As noted earlier, Parks Victoria would have a fundamental role in developing a package of mitigation and offset actions with the Proponent. The success of this process would be key factor in addressing visual impacts and contributing to a positive assessment of the Project.

The IAC believes that a package of suitable mitigation and offset actions should developed in consultation by Parks Victoria and approved by the Minister for Planning before the Project proceeds. While the provision of offset actions should be focused on the areas directly and most significantly affected by the Project, other less affected National Parks (discussed in the following section) could also be considered as part of an offset package. This is reflected in the recommended EMF at Appendix F:1.

The IAC has considered what guidance the EMF might provide in developing this package, including identifying preferred areas and actions, achieving consistency with relevant management plans or specifying a minimum budget amount, but believes these matters should be at the discretion of Parks Victoria which has the appropriate knowledge and experience to determine these matters.

(v) Findings and recommendation

The IAC finds:

- The landscape character and visual impacts on the Discovery Bay Coastal Park have been appropriately assessed.
- The impacts in some areas, including parts of the GSWW and Lake Mombeong, would be significant and cannot be effectively mitigated.
- The impacts on the Swan Lake area are acceptable, subject to appropriate mitigation and offsets.
- Residual impacts could be partially offset through additional planting and new/upgraded visitor infrastructure.
- The provisions of offsets should not be limited to the coastal section of the GSWW, Lake Mombeong and Swan Lake.
- When considered in isolation from the Project's benefits, the impacts on parts of the GSWW and Lake Mombeong are unacceptable.

The IAC recommends:

Environmental Management Framework

Make the following change:

Revise MM-LV01 (Public view locations in national and coastal parks) to require that a package of mitigations and offsets be approved by the responsible authority and to enable offsets to be provided within any or all the affected national and coastal parks.

10.3.5 National Parks (Lower Glenelg, Cobboboonee and Mount Richmond), Glenelg River and Great South West Walk

(i) The issues

The issues are whether the:

- landscape and visual impact assessment in relation to National Parks (Lower Glenelg, Cobboboonee and Mount Richmond), Glenelg River and associated parts of the GSWW is appropriate
- impacts are significant and acceptable.

(ii) What did the EES say?

The LCVIA noted that some areas, including sensitive view locations within the Lower Glenelg National Park and the Glenelg River environs, would have a greater ability to absorb the Project because of the screening provided by existing native vegetation. These areas include campgrounds and day use areas along the Glenelg River corridor as well as other localities within the adjoining National Parks. Similarly, views toward the Project from within the Cobboboonee and Mount Richmond National Parks would be substantially screened by extensive tree cover. For these reasons the overall visual effect would be Low. Many of these areas are also distant from the nearest turbines.

The LCVIA concluded that no additional mitigations measures were necessary to manage impacts relation to the National Parks, Glenelg River and GSWW.

(iii) Evidence and submissions

Mr Haack supported the LCVIA findings and agreed that views to the Project within the Lower Glenelg National Park, Cobboboonee National Park and Mt Richmond National Park will mostly be screened by the existing dense tree cover. He noted that in the few locations where turbines would be visible, this would be limited to the turbine blade tips and any impact would be Low.

Some submitters expressed general concerns about the visual impacts on these areas, including Mr Turner who raised various concerns about the LCVIA and Mr Haack's evidence.

(iv) Discussion

The IAC agrees with the LCVIA that the sensitivity of this general area is High and the magnitude of impacts is typically Low given the screening provided by existing vegetation and topography. However, the IAC notes that turbine blades are likely to be visible from some more proximate areas, possibly including sections of the GSWW. These views would diminish the experience of these areas and are not generally capable of effective mitigation.

The IAC believes there could be scope to undertake additional landscaping and/or provide new/upgraded infrastructure to offset some of these impacts. As discussed earlier, this approach has been proposed in relation to the Lake Mombeong, Swan Lake and coastal areas and would be implemented through MM-LV01. The exhibited MM-LV01 did not specify areas that might be subject to offset actions, although the Proponent's Day 4 version refers to Lake Mombeong, Swan Lake and coastal areas.

The IAC believes the opportunity to undertake offset actions, in consultation with Parks Victoria, should be extended to other National Parks, the Glenelg River and the inland section of the GSSW. It would form part of a broader package to be approved by the Minister for Planning as discussed earlier. This change is included in the recommended EMF at Appendix F:1.

(v) Findings and recommendation

The IAC finds:

- The landscape character and visual impacts on the National Parks, Glenelg River and associated parts of the GSWW have been appropriately assessed.
- The impacts on the National Parks, Glenelg River and most of the GSWW would not be significant and are acceptable, subject to further broader application of possible mitigation and offsets, as recommended by the IAC.

The IAC recommends:

Environmental Management Framework

Make the following change:

Revise MM-LV01 (Public view locations in national and coastal parks) to broaden the areas where mitigation and offsets might be provided.

10.3.6 Named lookouts

(i) The issues

The issues are whether the:

- landscape and visual impact assessment in relation to named lookouts is appropriate
- impacts are significant and acceptable.

(ii) What did the EES say?

The LCVIA assessed five named lookouts surrounding the Project site, while noting there are other informal and local lookout points. The named lookouts are:

- Green Pool Lookout
- Celia Lookout
- Jones Lookout
- Lake Mombeong Lookout
- Hedditch Hill Scenic Reserve Lookout.

The LCVIA noted the lookouts provide a range of opportunities to view the Project and surrounding landscape/seascape at various distances and from various directions. The visual effect rating varied depending on distance from the Project, with Lake Mombeong and Hedditch Hill having a High visual impact rating and the others a Medium rating.

The LCVIA found it was generally not appropriate to screen or curtail views from the lookouts.

(iii) Evidence and submissions

Mr Haack's assessment concluded:

- the visual effect rating for Jones Lookout should be High instead of Medium
- the visual effect rating for Green Pool and Celia Lookouts should be Low Moderate instead of Medium.

Mr Haack noted that the view of the Project from the Hedditch Hill Scenic Reserve Lookout would be progressively screened as the intervening pine plantation establishes.

Submitters expressed concerns about the impacts on views from various lookouts and viewpoints.

(iv) Discussion

The IAC accepts the LCVIA's Moderate and High ratings for the lookouts and agrees with the general proposition that impacts will decrease as distance to the wind farm increases. The IAC notes Mr Haack's alternative ratings but these differences are not significant and do not affect the IAC's assessment.

Impacts on the Green Pool, Celia and Jones Lookouts will not be significant given their distance from the wind farm and are acceptable.

The impact on the Hedditch Hill Scenic Reserve Lookout will be more significant given its immediate proximity to turbines, although as Mr Haack noted this will diminish over time as the adjoining pine plantation establishes. While the view from the lookout will be impacted by the Project, the IAC agrees with Mr Haack that the scenic vista is relatively narrow and it is satisfied that impacts are acceptable.

The impacts on the Lake Mombeong Lookout are discussed in Chapter 10.3.5 of this Report.

(v) Findings

The IAC finds:

- The landscape character and visual impacts on the named lookouts have been appropriately assessed.
- The impacts on the named lookouts are not significant and are acceptable, except for the Lake Mombeong Lookout.

10.3.7 Local roads and agricultural land

(i) The issues

The issues are whether the:

- landscape and visual impact assessment in relation to local roads and agricultural land is appropriate
- impacts are significant and acceptable.

(ii) What did the EES say?

The LCVIA found there will be transitory views toward turbines and ancillary infrastructure from Portland-Nelson Road, other local roads and areas of agricultural land. The impact on these views would be subject to the direction of travel and vegetation screening along road corridors and

scattered vegetation through cleared agricultural areas. The overall visual effect on views from local roads and agricultural land was rated as Low Moderate.

(iii) Evidence and submissions

Mr Haack generally supported the LCVIA although he rated the impact on Portland-Nelson Road as Moderate rather than Low because of its role as a tourist route. He noted that to varying degrees turbines would mostly be visible over the 30-kilometre journey. He proposed that this be mitigated through the retention of a buffer plantation along the road edge following harvesting.³¹ This was separate to Mr Haack's recommendation that a 30 metre wide plantation buffer be retained along Portland-Nelson Road quarry frontage.³²

Submitters raised concerns about the visual impacts of the turbines, particularly those in proximity to Portland-Nelson Road.

(iv) Discussion

The IAC agrees that views of the turbines and ancillary infrastructure from roads would be transitory depending on the viewpoint and screening provided by vegetation and topography. However, it agrees with Mr Haack that the impact on views along Portland-Nelson Road after harvesting would be more significant and would warrant a Moderate rather than Low impact rating, particularly because of its role as a tourist route. This could be partially mitigated by Mr Haack's proposal that a plantation buffer be retained along the road edge during harvesting. The IAC does not expect that a continuous buffer along Portland-Nelson Road would be necessary, but there might be scope for some selective vegetation retention to address specific views. This might include, for example, the Hedditch Hill Scenic Reserve Lookout discussed earlier.

This approach was not discussed during the Hearing and the IAC does not have adequate information to make any specific recommendations about where buffers might be located or how they might be configured. Consequently, it recommends that MM-LV03 (On-site landscaping plan) be augmented to require further analysis of the utility and possible location and depth of any retained buffer.

The IAC supports the provision of a 30 metre wide buffer along the quarry frontage and notes this requirement has been included in MM-LV03. MM-LV03 should be amended to ensure the on-site landscaping plan includes the location and design of the buffer planting.

The changes are shown in the IAC's recommended EMF at Appendix F:1.

The IAC agrees with the Low Medium impact rating for other roads and agricultural areas in the LCVIA and Mr Haack's evidence and that mitigation works would not generally be feasible or necessary. It is satisfied that any impacts in these areas would be acceptable.

(v) Findings and recommendation

The IAC finds, subject to its recommendations:

- The landscape character and visual impacts on local roads and agricultural areas have been appropriately assessed.

³¹ D69, P Haack Evidence Statement, section 4.3.2.1, page 22

³² D69, P Haack Evidence Statement, section 4.5.3, page 31

- The impacts on the local roads and agricultural areas would not be significant and are generally acceptable, although there should be further analysis of retaining plantation buffers along Portland-Nelson Road.

The IAC recommends:

Environmental Management Framework

Make the following change

Revise MM-LV03 (On-site landscaping plan) to require analysis of the utility and possible location and depth of retained plantation buffers along Portland-Nelson Road.

10.3.8 Dwellings

(i) The issues

The issues are whether the:

- landscape and visual impact assessment in relation to existing dwellings is appropriate
- impacts are significant and acceptable.

(ii) What did the EES say?

The LCVIA assessed the impacts on the 50 non-involved dwellings within 10 kilometres of the turbines, excluding consolidated dwelling locations (areas D1, D2 and D3) within Nelson. Most dwellings (43 in total) would not have direct views to the Project site, wind turbines or ancillary infrastructure, and would experience visual effects up to and including a Moderate rating. Seven dwellings would experience Moderate High to High visual effects.

Most dwellings located beyond 10 kilometres were unlikely to be significantly impacted because of tree planting in proximity to the dwelling. This would have greater screening significance as the viewing distance from the turbines increases and visual scale decreases.

The LCVIA found that dwellings with a Moderate High to High visual effect would have a Low to Moderate residual effect following the implementation of mitigation measures.

MM-LV02 in the exhibited EMF provides for soft landscaping works (tree and shrub planting) at non-involved dwellings within 10 kilometres of turbines where the visual impact would be Moderate High or High.

(iii) Evidence and submissions

Mr Haack generally supported the analysis and findings in the LCVIA although his additional assessment indicated the number of non-involved dwellings was 44 instead of 50. He also adopted differing visual effect ratings for some properties, resulting in six non-involved dwellings having a Medium High or High rating.

Mr Haack undertook additional inspections and analysis of three properties raised in submissions and concluded that the LCVIA had correctly rated the visual effects at those properties.

The Proponent highlighted the small number of dwellings within 10 kilometres of turbines compared to other wind farms and noted that only six dwellings attracted the Medium High or High impact rating.

Submissions raised concerns about the visual impacts on dwellings, particularly those located on the eastern side of Nelson and in closer proximity to turbines.

(iv) Discussion

The IAC accepts the findings of the LCVIA and Mr Haack's further analysis and agrees that only a small number of non-involved dwellings warrant an impact rating higher than Moderate. Impacts on these dwellings can be partially mitigated through additional planting should the owners wish to participate.

The IAC agrees with the Proponent that the relatively small number of impacted dwellings is a positive element of the Project.

The Proponent proposed various changes to MM-LV02, including clarification that landscaping works would be provided on an 'opt in' basis and to specify the dwellings that were subject to the mitigation measure.

The IAC supports the Proponent's Day 4 version of MM-LV02.

(v) Findings

The IAC finds, subject to its recommendations:

- The landscape character and visual impacts associated with dwellings have been appropriately assessed.
- The impacts are acceptable subject to implementing the recommended mitigation measure.

10.3.9 Lighting

(i) The issues

The issues are whether the:

- landscape and visual impact assessment in relation to lighting is appropriate
- impacts are significant and acceptable.

(ii) What did the EES say?

The LCVIA found that temporary and safety night lighting associated with electrical infrastructure (substations) and office/maintenance buildings would be largely filtered or screened from most surrounding viewing locations. Lighting would not be significant enough to directly impact on the dark sky night time experience within or beyond the Project site. An obstacle lighting review determined that wind monitoring towers would be appropriately marked in accordance with applicable guidelines and would not require obstacle lighting. The overall visual effect on views from temporary and safety night lighting would be Low.

MM-LV06 in the exhibited EMF requires that construction and operational lighting be in accordance with Australian Standard AS 4282: Control of the obtrusive effects of outdoor lighting.

(iii) Evidence and submissions

Mr Haack supported the LCVIA's findings and agreed with the Low impact rating for temporary and safety lighting.

Some submitters raised concerns about the visual impacts of obstacle lighting on the turbines; however, the Proponent advised the turbines and monitoring towers would not be lit.

(iv) Discussion

The IAC accepts the LCVIA findings and Mr Haack's evidence. MM-LV05 (Lighting) will address any impacts associated with outdoor lighting.

The IAC is satisfied that impacts are not significant and are acceptable.

(v) Findings

The IAC finds:

- The landscape character and visual impacts from lighting have been appropriately assessed.
- The impacts are acceptable subject to implementing the recommended mitigation measures.

10.3.10 Cumulative impacts

(i) The issues

The issues are whether the:

- the landscape and visual impact assessment in relation to cumulative impacts is appropriate
- impacts are significant and acceptable.

(ii) What did the EES say?

The LCVIA found that the cumulative visual impacts from existing onshore wind farm projects will be largely mitigated by landform and vegetation screening or by distance between wind farms. The closest turbines at the Cape Bridgewater Wind Farm, are approximately 20 kilometres from the Project turbines with an equidistant viewpoint at approximately 10 kilometres. Turbines at a view distance of 10 kilometres or greater would occupy less than 2 per cent of a person's vertical field of view and would not result in a significant visual effect. The overall visual effect from potential cumulative visual impacts would be Low.

(iii) Evidence and submissions

Mr Haack supported the analysis and findings in the LCVIA about cumulative impacts. He noted that there is only a small area of overlap between the 10 kilometre viewshed from the Cape Bridgewater Wind Farm and the Project's turbines, and that there were no dwellings or higher visual sensitivity roads in the overlap area.

(iv) Discussion

The IAC accepts the LCVIA findings and Mr Haack's evidence that the potential for cumulative impacts is limited because of the distance between the Project's turbines and other wind farms in the area.

(v) Findings

The IAC finds:

- The cumulative landscape character and visual impacts have been appropriately assessed.
- The impacts will not be significant and are acceptable.

10.3.11 Maintaining mitigation and offset planting**(i) The issue**

The issue is the period for which the Proponent should maintain vegetation plantings in national and coastal parks as required under MM-LV01.

(ii) What did the EES say?

The exhibited MM-LV01 did not include any requirements relating to the maintenance of additional planting.

(iii) Evidence and submissions

The Proponent's Day 4 EMF included various changes to MM-LV01 in response to Parks Victoria and other submissions, including a requirement that the Proponent maintain any additional planting for three years.

Parks Victoria submitted new vegetation should be maintained for 10 instead of three years. The Proponent did not agree and relied on the evidence of Mr Haack that the maintenance period should be three years.

(iv) Discussion

The IAC agrees with Park Victoria that the need for any new landscape or screen planting is generated by the Project and should be established and maintained by the Proponent. The IAC is satisfied that maintaining it for ten years would be appropriate, after which it should require little if any maintenance. In reaching this view, the IAC notes the challenges in a coastal environment where it can take time to establish new vegetation, and the likelihood of failures which will then need to be replaced. In addition, plantings are likely to be in areas of regular public use which makes young vegetation susceptible to trampling or other damage unless well protected.

This change is included in Appendix F:1.

(v) Finding and recommendation

The IAC finds:

- Additional plantings in national and coastal parks should be maintained for 10 years.

The IAC recommends:

Environmental Management Framework

Make the following change:

Amend MM-LV01 (Public view locations in national and coastal parks) to require the Proponent maintain additional -plantings for 10 years.

10.3.12 Shadow flicker

(i) The issues

The issues are whether the:

- assessment of shadow flicker impacts was appropriate
- impacts are acceptable.

(ii) What did the EES say?

The EES described the shadow flicker assessment methodology to give the theoretical number of hours shadow flicker at receptor dwellings. It referred to the *Planning Guidelines for Development Wind Energy Facilities*, DTP, September 2023 (Wind Energy Guidelines) which state:

The shadow flicker experienced immediately surrounding the area of a dwelling (garden-fenced area) must not exceed 30 hours per year as a result of the operation of the wind energy facility.

Exception can be given if a wind farm operator has entered into an agreement with a landowner stating the shadow flicker may exceed 30 hours per annum at the landowner's dwelling.

Two receptors (dwellings) were modelled to experience more than 30 hours of shadow flicker per year (see Table 15). The Proponent has entered into neighbour agreements with the relevant landowners, which express consent to shadow flicker exceeding 30 hours per year.

There are no shadow flicker impacts for all the other potential receptors because they were calculated as having zero hours of shadow flicker for both worst-case and expected-case models.

Table 15 Receptors with shadow flicker

Receptor ID	Worst Case Shadow Flicker [hours/year]	Expected Case Shadow Flicker [hours/year]	Dwelling Status
Receptor 21	64:51	29:05	Host Landowner
Receptor 675	86:32	37:55	Host Landowner

Source: EES Appendix M, page 10

(iii) Evidence and submissions

The Proponent submitted the Wind Energy Guidelines are intended to avoid unreasonable amenity impacts at neighbouring properties, but this is not a statutory requirement.³³

It explained that EES Appendix M (Shadow Flicker Blade Assessment) overestimates shadow flicker as it was based on the theoretical worst case defined as “*the sun is shining the entire day, from sunrise to sunset, with zero cloud cover*” using greenhouse mode “*which simulates receptors being covered in windows like a greenhouse*”. It was also based on very conservative assumptions including:

- all windows are perpendicular to the wind farm;
- the turbine placement is such that the rotor plane is always perpendicular to the sun;
- all wind turbines are always spinning; and
- any vegetation blocking visibility of wind turbines has been ignored.³⁴

³³ D308, Proponent – Technical Note 33, page 1

³⁴ D308, Proponent – Technical Note 33, page 2

The Proponent submitted:

... the fact that the two affected landowners have entered into neighbour agreements, and otherwise have not objected to the Project, can be taken by the IAC as evidence of their satisfaction that the Project will not cause unreasonable amenity impacts. For that reason, the IAC can conclude that the technical non-compliance with the 30 hours per year metric in the [Wind Energy] Guidelines, under a conservative theoretical worst-case scenario, does not mean that the Project is an unacceptable planning outcome.³⁵

Further, of the two receptors modelled to experience more than 30 hours of shadow flicker per year under a worst case scenario, one did not make a submission (receptor 675) and the other made a supporting submission (receptor 21, S29).

Mr Glossop stated:

There were two dwellings which may experience shadow flicker in excess of 30 hours per year (the measure specified in the Planning Guideline for Development of Wind Energy Facilities). These dwellings are both involved in the Project meaning owners have consented to these exceedances.³⁶

Submitters were concerned about shadow flicker impacts on the community of Nelson and local residents.

(iv) Discussion

The shadow flicker assessment shows:

- For receptor 21, while the worst case is more than double the guidelines, the expected scenario just below the guidelines (29 hours/year)
- For receptor 675 – worst case is nearly three times the guidelines and expected is greater than the guidelines by 25 per cent (37.55 hours/year).

The IAC accepts the shadow flicker assessment is very conservative and likely overstates the potential for shadow flicker impacts. The Proponent has entered into landowner agreements with the two properties modelled to have potentially greater than 30 hours of shadow flicker each year.

While the IAC accepts the Proponent's submissions, Mr Glossop's evidence and advice in the EES that the landowner agreement are an acceptable approach to addressing shadow flicker impacts, it notes that the Wind Farm Guidelines is silent on landholder agreements regarding shadow flicker (it includes guidance on agreements for noise). In this case, the IAC accepts the approach in the context that the Glenelg Planning Scheme is not prescriptive about shadow flicker requirements, and the affected landholders supported or did not object to the Project.

EES Chapter 12 says (IAC emphasis):

Once the Project's turbine locations have been finalised prior to construction, an updated shadow flicker assessment would be undertaken **to minimise shadow flicker impacts on nearby receivers** where possible, and to ensure there is no increase in exceedances (see mitigation measure MM-LV06).

In the spirit of the evaluation objective to minimise and manage potential adverse amenity effects, the IAC considers the requirement to minimise shadow flicker should be reflected in MM-LV06. This is included in the IAC's recommended MM-LV06 at Appendix F:1.

³⁵ D308, Proponent – Technical Note 33, page 3

³⁶ D88, Mr Glossop Expert Witness Statement, page 31

The IAC also recommends a change to MM-LV06 to delete the superfluous requirement for a copy of any agreement to be provided to the responsible authority.

(v) Findings and recommendations

The IAC finds, subject to its recommendations:

- The assessment of shadow flicker impacts is appropriate.
- Shadow flicker impacts are acceptable.

The IAC recommends:

Environmental Management Framework

Include the following change:

Amend MM-LV06 (Shadow flicker assessment) to require:

- a) the pre-construction shadow flicker assessment to determine potential effects of shadow flicker on existing dwellings and to identify any opportunities to further minimise impacts, and to refine drafting**
- b) refine drafting relating to landholder agreements.**

10.4 Overall conclusions on landscape character and visual amenity effects

Subject to applying its recommendations, the IAC is generally satisfied the Project is consistent with relevant policy and legislation and relevant draft evaluation objectives. However, it has concerns about some residual landscape character and visual impacts within national and coastal parks and concludes that those impacts would be unacceptable when considered in isolation from the Project's broader benefits. Chapter 2.4 describes Project benefits and Chapter 19 includes an integrated assessment.

11 Air quality

11.1 Introduction

The relevant Scoping Requirements draft evaluation objective is:

To avoid and minimise adverse effects for community amenity and safety, with regard to construction noise, vibration, dust, traffic and transport, operational turbine noise and fire risk management.

Air quality effects are assessed in:

- EES Chapter 13 (Air Quality)
- EES Technical Appendix N (Air Quality Impact Assessment) (AQIA).

The exhibited EMF includes the following mitigation measures:

- MM-AQ01 Dust suppression
- MM-AQ02 Vehicle movements
- MM-AQ03 Vehicle movements on unsealed tracks
- MM-AQ04 Vehicle speed limits
- MM-AQ05 Transport of loads
- MM-AQ06 Weather monitoring
- MM-AQ07 Dust monitoring
- MM-AQ08 Vehicle emissions and equipment maintenance
- MM-AQ09 Odorous soils.

No air quality evidence was provided.

Other key documents include:

- D410 Letter from Proponent in relation to the UK Institute of Air Quality Management Guidance on the Assessment of Dust from Demolition and Construction
- D411 AECOM Updated assessment considering Institute of Air Quality Management 2024 guidance.

The IAC has had regard to relevant policy and guidelines, including:

- EP Act
- Environment Protection Regulations 2021
- Environment Reference Standard
- EPA Guideline for Assessing and Minimising Air Pollution in Victoria 2021.

11.2 Air quality

(i) The issue

The issue is whether air quality effects are appropriately assessed and acceptable.

(ii) What did the EES say?

The AQIA found that potential air quality impacts would predominantly be associated with dust generating activities during Project construction, decommissioning and quarrying. These impacts would result from vehicular movements, earthworks, and construction/decommissioning activities associated with the turbine foundations, access tracks, quarry activities and underground

powerlines. These activities have the potential to result in short-term amenity, human health, and ecological impacts on nearby sensitive receptors. The likelihood of impacts during operation were assessed as Negligible.

The AQIA applied a risk based semi-quantitative method to assess construction and decommissioning impacts. This was based on the UK Institute of Air Quality Management *Guidance on the Assessment of Dust from Demolition and Construction* (IAQM 2014). The AQIA determined this to be the most appropriate level of assessment for construction dust impacts, an approach that was supported by the EPA.

The AQIA noted that odour impacts might occur where acid sulfate soils are encountered. This is discussed in EES Chapter 10 and would be addressed through the relevant mitigation measures recommended in that chapter.

The assessment concluded that the post-mitigation construction dust impacts were expected to be Negligible.

Dust impacts associated with the proposed quarry were separately addressed using the UK Institute of Air Quality Management *Guidance on the Assessment of Mineral Dust Impacts for Planning* (IAQM 2016). The AQIA noted that the nearest sensitive receptor is more than six kilometres from the quarry site. It concluded that management measures and a reactive dust management plan would mean the risk of any dust impact from the quarry is likely to be Negligible.

EES Appendix W (Quarry Work Plan Requirements Report) would inform an application to Earth Resources Regulation for a Quarry Work Authority and Work Plan. It includes a discussion of dust issues including management controls and mitigation measures that have been included in the EMF.

(iii) Submissions

The Proponent relied on the AQIA and did not provide expert evidence. It acknowledged that dust and air emissions were likely during construction and decommissioning, but that impacts during operation would be Negligible.

It noted that a CEMP required under the Incorporated Document and to be approved by the Minister for Planning would provide the mechanism to manage dust and air quality impacts. The CEMP would implement the relevant elements of the EMF, including the mitigation measures. The EMF includes detailed mitigation measures relating to air quality and dust management, including the requirement to prepare a dust management plan as a sub-plan of the CEMP (MM-AQ01) and undertake weather monitoring (MM-AQ06) and dust monitoring (MM-AQ07).

The Proponent concluded that with the implementation of these mitigation measures any residual dust impacts from construction of the Project would be acceptable.

The EPA (S129) submitted that as there are sensitive receptors in proximity of the Project's internal access roads it recommended that MM-AQ04 be revised to clarify that vehicle speed limits will be limited to 20 kilometres per hour within 50 metres of dwellings. The Proponent included this clarification in its revised EMF and is supported by the IAC.

Submitters raised general concerns about dust and air impacts during construction.

During the Hearing the IAC noted that the AQIA relied on IAQM 2014 and that this had been updated in a 2024 version. The IAC sought advice from the Proponent about whether the application of the updated version might change the AQIA. The Proponent provided a response from AECOM (the authors of the AQIA) (D411) that discussed the relevant differences between the two versions and advised that no changes to the assessment, conclusions or recommended mitigation measures were necessary.

(iv) Discussion

The IAC accepts the AQIA findings that potential air quality impacts would be associated with dust generation during construction and decommissioning and in association with the quarry. Any impacts during the operation phase would be negligible.

The AQIA found that these impacts can be satisfactorily managed through normal construction techniques, the CEMP and the relevant mitigation measures in the EMF. It concluded that the potential for post-mitigation impacts would be negligible.

The EMF includes comprehensive mitigation measures including MM-AQ01 that requires the preparation of a site-specific dust management plan as sub-plan of the CEMP that will include measures related to dust suppression, contingencies, monitoring and complaint investigation and response. Dust related issues associated with the quarry would also be managed through the approval of the Quarry Work Plan.

The IAC is satisfied the AQIA and EES have appropriately assessed potential air quality impacts and accepts the overall conclusion that post-mitigation impacts would be negligible.

(v) Findings

The IAC finds:

- The EES has appropriately assessed potential air quality impacts.
- The approval of the CEMP and Quarry Work Plan and implementation of the EMF will appropriately address potential air quality impacts.

11.3 Overall conclusions on air quality effects

Subject to applying its recommendations, the IAC is satisfied the Project is consistent with relevant policy and legislation and relevant draft evaluation objective. The likely air quality effects are not significant and the IAC is satisfied any effects are acceptable and do not preclude the Project being approved.

12 Noise and vibration

12.1 Introduction

The relevant Scoping Requirements draft evaluation objective is:

To avoid and minimise adverse effects for community amenity and safety, with regard to construction noise, vibration, dust, traffic and transport, operational turbine noise and fire risk management.

Noise and vibration effects are assessed in:

- EES Chapter 14 (Noise and Vibration)
- EES Technical Appendix O (Environmental Noise and Vibration Assessment) (NVA)
- Background Noise Monitoring Report and Verification Report.³⁷

The exhibited EMF includes the following mitigation measures:

- MM-NV01 Construction Noise and Vibration Management Plan (CNVMP)
- MM-NV02 Concrete batching plant
- MM-NV03 Quarry Work Plan
- MM-NV04 Pre-development noise assessment of ancillary infrastructure
- MM-NV05 Construction wind turbine noise assessment
- MM-NV06 Post-construction Noise Assessment
- MM-NV076 Noise Management Plan
- MM-NV08 Noise Monitoring
- MM-NV09 Annual Statement.

The exhibited Incorporated Document provides for micro-siting turbines without amendment to the development plans if there will be no material adverse change to noise impacts.

Table 16 lists the experts providing evidence on noise and vibration effects.

Table 16 Evidence on noise and vibration effects

Document	Party	Expert	Firm	Area of expertise
D76, D361	Proponent	Christophe Delaire	Marshall Day Acoustics	Noise

Other key documents include:

- D359 – Proponent’s submissions on noise.

The IAC has had regard to relevant policy and guidelines, including:

- EP Act
- Environment Protection Regulations 2021, as amended by the Environment Protection Amendment (Wind Turbine Noise) Regulations 2022 (EP Regulations)
- Environment Reference Standard (ERS)
- *Guide to the Environment Reference Standard*, EPA Publication 1992, June 2021
- EPA-DTP Publication 3011 *Wind Energy Facility Turbine Noise – Technical Guideline*, December 2024 (Noise Technical Guideline)

³⁷ Additional reports placed on exhibition on 24 February 2025 (see Chapter 3.1)

- EPA Publication 1834.1 *Civil construction, building and demolition guide*, 12 September 2023 (EPA Publication 1834.1)
- EPA Publication 1826.4 *Noise limit and assessment protocol for the control of noise from commercial, industrial and trade premises and entertainment venues* (Noise Protocol).

12.2 What did the EES say?

(i) Noise and Vibration Assessment

The NVA considered noise impacts associated with construction, operation and decommissioning the Project. It determined potential noise and vibration levels at noise sensitive receiver locations, including dwellings and campgrounds, within five kilometres of the proposed turbine locations.

The NVA explained the relevant legislation, policy and guidelines for regulating of wind farm noise.

The EP Act establishes a General Environmental Duty (GED) to minimise the risks of harm to human health or the environment from pollution or waste, including noise, so far as reasonably practicable. The GED applies to both construction and operations of the Project.

The relevant noise standard for wind farms in Victoria is New Zealand Standard NZS 6808:2010 *Acoustics – Wind farm noise* (NZS 6808:2010). Relevant noise limits include:

- 40 decibel (dB) or the background sound plus 5 dB (whichever is greater) for a noise sensitive location
- 45 dB(A) or the background sound plus 5 dB (whichever is greater) for a property with a wind turbine noise agreement
- 35 dB for designated high amenity areas (HAA).

Unreasonable noise is defined as exceeding the noise limit.

Noise impacts associated with construction activities include on-site (construction of access roads, connection of infrastructure, on-site quarry activities and turbine erection) and off-site works (movement of heavy goods to and from the site). Most works would be during normal working hours, with the exception of unavoidable works or low-noise managed works.

The key noise consideration relates to operation of the wind farm. Wind turbine noise is generally associated with the turbine blades passing through the air. While mechanical components of a wind turbine can be a source of noise, in modern turbines this type of noise is generally effectively suppressed. Other operational noise sources include substations and potentially new overhead powerlines.

The NVA concluded that, with implementation of the proposed mitigation measures:

- construction noise impacts can be satisfactorily managed in accordance with EPA Publication 1834.1 through considerate work practices and restricted working hours
- operational noise from wind turbines is predicted to comply with noise limits in NZS 6808:2010 and can be controlled through wind farm layout design and equipment selection to achieve acceptable noise levels
- operational noise from the substations and on-site quarry is predicted to be below the Noise Protocol limits
- noise generated by decommissioning can be controlled using similar measures to those for construction
- the GED could be satisfied by implementing standard forms of engineering control.

(ii) Noise Verification Report

As required by the Wind Energy Guidelines, a Noise Verification Report was prepared and exhibited with the EES (see Chapter 3.1). The purpose of the Noise Verification Report was to assess whether the noise assessment has been conducted in accordance with NZS 6808:2010. It did not assess construction noise and vibration, operational noise other than from the wind turbines or operational vibration. The Noise Verification Report concluded that the NVA (and the Background Noise Monitoring Report that informed it) been appropriately conducted in accordance with NZS 6808:2010.

The Noise Verification Report explained:

- The EP Act and GED require a wind farm to not emit “*unreasonable noise or permit an unreasonable noise to be emitted*” and that operational noise must comply with the noise limits in NZS 6808:2010.
- The predicted noise levels for the wind farm will achieve the noise criteria in NZS 6808:2010.

The Noise Verification Report explained the Environmental Reference Standard (ERS):

- provides noise indicators and objectives for various land use categories, while the EP Regulations addresses wind turbine noise
- does not provide specific guidance on noise from wind turbines
- is primarily relevant to aspects that are not controlled by the EP Regulations, and potentially includes natural areas where an environmental value may exist, for example human tranquillity and enjoyment outdoors in natural areas
- is considered in the NVA but is beyond the scope of this verification.

In relation to whether the HAA noise limit is applicable for the PPRZ, and associated application of the ERS, the Noise Verification Report states:

... the auditor accepts that a high amenity limit is not justified for the proposed Kentbruck WEF – although noting that the application remains the subject of a separate EES and planning process, and this matter may well be discussed further.

12.3 Noise and vibration assessment and operational impacts**(i) The issues**

The issues are whether:

- noise and vibration effects have been appropriately assessed
- high amenity noise limits should be applied at campgrounds in natural areas surrounding the Project
- operational impacts are acceptable.

(ii) Evidence and submissions**Noise and vibration assessment**

Mr Delaire explained the focus of the NVA was assessment of the potential effects of noise and vibration from the Project on people. The NVA was conducted in accordance with all relevant legislation, policy and guidelines, and while it was prepared prior to publishing the Noise Technical Guideline (December 2024) its assessment procedures were consistent with the guidelines. Mr

Delaire adopted the NVA as the basis for his evidence to the IAC, noting the Noise Verification Report confirmed the NVA was based on appropriate methods and supported its conclusions.

In preparing his evidence, Mr Delaire considered an additional 25 receivers identified by the Proponent. He updated the noise modelling (see Figure 16) and confirmed the predicted noise levels at the additional receivers was at least 14 dB below the applicable noise limit of 40 dB for all candidate turbines. He undertook supplementary noise modelling to indicate how wind turbine noise would vary with wind direction. This was to provide context to the predicted noise levels in the NVA, which were only based on worst wind direction.

Figure 16 Updated noise contour map



Source: Mr Delaire's Expert Witness Statement, Appendix E (D76)

Mr Delaire explained that candidate wind turbines³⁸ were used to assess the viability of complying with noise limits. Noise emissions depend on a range of turbine design factors, and while size and power rating of turbines has increased over time, due to design improvements noise emissions tend to be comparable or lower than previous generations of turbines. He said mitigation measure MM-NV05 requires a noise assessment based on the final turbine selection and layout before construction, and this will be required to demonstrate compliance with noise limits.

Mr Delaire confirmed that following review of submissions, and consideration of any changed circumstances and assumptions since the NVA was prepared, that the findings of the NVA remained valid.

In response to issues raised in submissions he advised:

³⁸ The purpose of the candidate wind turbine models is to assess the viability of achieving compliance with the applicable noise limits, based on noise emission levels that are typical of the turbines being considered for the Project (D76 – Expert Statement Mr Delaire).

- Special audible characteristics cannot be predicted at the planning stage, and noise emission data does not include tonality. The occurrence at operational wind farms is limited and atypical.
- The noise modelling was based on ISO 9613-2³⁹, which represents noise propagation under atmospheric conditions which increase noise levels at receivers and which were assumed to occur at all times.
- The Victorian Department of Health in 2010 had concluded that infrasound from wind farms was well below the hearing threshold and would be inaudible to surrounding residents.
- Vibration levels would be well below perception thresholds.

The Proponent emphasised that the IAC should have a high level of confidence in the NVA due to the expertise and experience of Mr Delaire and:

- noise assessment having been “*audited by a statutory auditor*” which confirmed the assessment was appropriate
- mitigation measures which “*include provision for repeated involvement of a statutory auditor*”.⁴⁰

Some submitters raised issues relating to the noise assessment including:

- suitability of assessment procedures in NZS 6808:2010
- suitability of the prediction modelling methodology, including selected input parameters and use of some proxy locations for background noise assessment
- candidate turbine size implications for noise impacts
- consideration of special audible characteristics
- predicted wind turbine noise levels accounting for range of wind conditions
- consideration of infrasound and vibration
- assessment of impacts on fauna.

Some submitters requested noise assessments at their properties.

Application of the High Amenity Areas

Mr Delaire gave evidence that application of the HAA is not justified for the Project, noting:

- there is no clear precedent, indication or justification for the application of a high amenity limit to a receiver within the PPRZ
- while the Noise Technical Guideline considers application of the HAA to campgrounds in natural areas with the environmental value of “*human tranquillity and enjoyment outdoors in natural areas*” the ERS does not apply to the campgrounds
- the sensitivity analysis found the predicted noise levels at all non-stakeholder receivers, including the campgrounds, are below the high amenity limit for all wind turbines.

During the hearing Mr Delaire advised:

- in some natural areas, such as along parts of the GSWW, turbines may be audible at low levels (anything above 30 dB) if it is not too close to the surf

³⁹ ISO 9613-2: 1996 *Acoustics – Attenuation of sound during propagation outdoors – Part 2: General method of calculation* (ISO 9613-2)

⁴⁰ D359, Proponent submission

- the HAA limit can be applied to campgrounds, noting the campground of greatest concern is Lake Mombeong
- for practical reasons, a proxy site was used to measure background noise at Lake Mombeong, however ideally background noise would be measured at the campground
- if the IAC was of the view the HAA should be applied at campgrounds, compliance would be achieved.

Parks Victoria was concerned with the impact of the Project on the visitor experience to the National Parks and GSWW. It referred to the *Ngootyoong Gunditj Ngootyoong Mara South West Management Plan* which includes:

...a direction to 'enhance the remote and quiet nature of the (Glenelg) river experience'. There is also a goal to 'Maintain the Great South West Walk as a state significant walking experience', as a 'semi-remote' journey.⁴¹

Parks Victoria submitted NZS 6808:2010 defines noise sensitive locations inclusively, acknowledges that campgrounds may be noise sensitive locations, and the standard is silent on land use zones.

Parks Victoria did not consider the background assessment was adequate in relation to the Lake Mombeong campground, stating that "*campgrounds promote outdoor living and patrons shelter in more acoustically vulnerable accommodation*" than dwellings and "*the impact needs to be assessed in the context of the GSWW and its importance*".⁴²

Parks Victoria submitted:

The impact of determination would be to change the noise limit at this location from background plus 5dB or 40dB, whichever is the greater to background plus 5dB or 35dB whichever is the greater. Because of the absence of an accurate measurement of background for the campground it is unknown what the impact of this would be. It plausibly could result in a different sound level against which compliance of the windfarm would be measured.⁴³

EPA questioned whether the correct noise limit had been applied to campgrounds within the National Parks. It said the EP Regulations and NZS 6808:2010 provide for application of a HAA to natural areas where environmental values warrant this. It submitted:

The campgrounds are located within National Parks which are natural areas as defined in the ERS. As such, the environmental value of *human tranquillity and enjoyment outdoors in a natural area* should be a relevant consideration when determining whether the campgrounds are high amenity areas.⁴⁴

EPA acknowledged the predicted levels are below the HAA noise limit but said it is not properly documented why the HAA limits are not relevant to campgrounds in the National Parks.

Some submitters said the HAA limit should be applied to the campgrounds in surrounding parks areas.

Operational impacts

The Proponent relied on the evidence of Mr Delaire and submitted that noise and vibration impacts during wind farm operation would be acceptable.

The Proponent submitted the residual wind turbine noise impacts will be acceptable, noting:

⁴¹ D76, C Delaire Expert Witness Statement, page 13

⁴² D394, Parks Victoria submission, para 116

⁴³ D394, Parks Victoria submission, para 125

⁴⁴ EPA submission (S129)

- the NVA was comprehensive and conservative, and predicted wind turbine noise levels would be below applicable noise limits for all receivers and all candidate wind turbine models by a margin of at least 2 dB
- while the turbines will be audible in some locations (including within natural areas), subject to implementation of the proposed mitigation measures the Project readily complies with applicable standards.

It said that:

- during Project development turbines were removed to avoid or minimise noise impacts, including exclusion from within 2 kilometres of Lake Mombeong campsite⁴⁵
- while noise would be audible *“to variable extents in different parts of these natural areas”* there are areas where it will not be audible
- in areas where the noise may be audible it will be difficult to distinguish from other noise such as surf
- the mitigation measures require noise impacts on natural areas to be considered.

In response to submitter issues Mr Delaire advised:

- it is not feasible or practical for the wind farm to have inaudible noise levels
- compliance noise levels are set at values that provide balance between protecting amenity and enabling development
- attitudes and reactions to noise are highly variable and depends on a complex set of acoustic and non-acoustic factors
- the NZS 6808:2010 provides for *“wind farm noise to be restricted to a permissible margin above background noise”* with some exceptions when noise levels are low
- MM-NV05 (Pre-construction noise assessment) required an updated assessment of wind turbine noise to verify the predicted noise levels and to ensure compliance with noise limits, accompanied by a noise verification report.

The EPA submitted:

- its role is to regulate noise when the wind farm is operating
- the GED is separate to and operates independently of the ‘unreasonable noise provisions’ in the EP Act and EP Regulations
- the GED establishes a proactive approach to risk identification and management and imposes ongoing obligations on duty holders to identify, assess and controls risks to human health and the environment
- risks are likely to vary during the life of the Project.

Several submitters raised general concerns about operational wind turbine noise, including at dwellings, in natural areas and for wildlife. Some submitters said that while noise associated with wind farms was a common concern this would not be an issue due to advances in turbine technology.

EPA raised issues relating to operational substation noise, and recommended MM-NV04 be amended to consider low frequency noise emissions during equipment selection.

Mr Delaire explained that the NVA did not recommend measures for the control of substation noise, as the modelling indicated low noise levels due to proposed separation distances. However,

⁴⁵ D53, Proponent Part A Submission, paras 118 and 119

in response to EPA's submission, Mr Delaire proposed changes to MM-NV04 to include a requirement for the selection of transformers with sound power levels "*lower than the standard maximum values determined in accordance with AS 60076-10:2009 Power transformers – Part 10: Determination of sound levels*"⁴⁶ and to refer to EPA Publication 1997.

Mitigation measures

Mr Delaire recommended changes to the EMF to clarify various matters. These were generally accepted by the Proponent subject to minor drafting changes relating to the role of the independent auditor.⁴⁷ The Proponent also proposed to amend the Incorporated Document to add reference to NZS 6808:2010, to ensure consistency with the EP Regulations.

(iii) Discussion

The key issue is whether the NVA has appropriately assessed and applied HAA noise limits, specifically to campgrounds in the National and Coastal Parks surrounding the Project. The IAC addresses this before discussing the NVA more generally.

The Noise Technical Guideline explains how the HAA limit should be applied in Victoria, including:

- application to dwellings in specific land use zones
- with consideration of background sound levels
- for wind speeds up to and including 6 metres per second during evening and night-times
- when no wind turbine noise agreement is in place.

The Noise Technical Guideline also explain that the ERS defines natural areas where the environmental value of "*human tranquillity and enjoyment outdoors in natural areas*" applies. This may be applied in some circumstances "*to campgrounds, caravan parks and tourist establishment in such natural areas, where this environmental value is considered to be relevant*". The ERS defines the environmental values as:

An ambient sound environment that allows for the appreciation and enjoyment of the environment for its natural condition and the restorative benefits of tranquil soundscapes in natural areas.

The IAC's view is the HAA should apply to campgrounds in the surrounding natural areas. This is important to protect the relevant environmental value specified in the ERS.

The IAC does not agree with the NVA's approach to assessing application of the HAA. The NVA concludes there is no there is "*no clear precedent, indication or justification for the application of a high amenity limit to a receiver within the PPRZ*". This is because, among other things, the PPRZ:

- does not specifically promote higher degree of sound amenity protection
- is not included in the EPA's recommended land use zones for application of the HAA.

The IAC's view is that:

- While the PPRZ does not promote a higher degree of amenity (sounds environment) protection, the campgrounds are located in natural areas in designated National and Coastal Parks and the GED and ERS applies.

⁴⁶ D76, C Delaire Expert Witness Statement, page 12

⁴⁷ D492, Proponent's updated expert recommendations table, page 3

- It is not relevant that the PPRZ includes provisions for uses that are not inherently low noise. These will be subject to separate assessments, and the use may be subject to conditions. Adding a higher noise source is not justified on this basis.
- It is not relevant whether there are precedents for applying the HAA in the PPRZ. Each matter must be assessed on its merits in the context of current guidelines and regulations.

The IAC agrees with Parks Victoria that dwellings and campgrounds are not the same.

Campgrounds are much more acoustically vulnerable than dwellings, particularly at night, when people are sleeping in tents and as people are spending time outdoors. These are highly sensitive locations and are being used by people specifically, in many instances, to experience, appreciate and enjoy the tranquillity of the natural environment.

To satisfy the evaluation objective to avoid and minimise adverse noise effects, it is appropriate to take a conservative approach and set appropriate noise limits that respect the sensitivity of the receivers, and to ensure these are enforceable. Applying the HAA to campgrounds in natural areas around the Project is consistent with application of the GED which requires “*persons undertaking activities to minimise risks of harm so far as reasonably practicable*”.⁴⁸

Based on the advice of Mr Delaire, the IAC understands that compliance can be achieved for the Project if the HAA is applied to campgrounds, as the predicted noise levels for all candidate turbine noise levels are below 35 dB for wind speeds up to 6 m/s inclusive for evening and night-time periods. Regardless, it is important to recognise the appropriate noise limit in the EMF to ensure this is considered during detailed design and operation of the wind farm.

Accordingly, the IAC recommends amending MM-NV05 (Pre-construction wind turbine noise assessment) and MM-NV06 (Post-construction noise assessment) to require the HAA be applied to campgrounds in natural areas surrounding the Project.

On other matters raised in relation to the NVA:

- The IAC accepts the advice of Mr Delaire it is not appropriate or necessary for the assessment to assess special audible characteristics and infrasound, and that vibration will be well below perception thresholds.
- The relevant legislation and regulations do not require the NVA to assess impacts on fauna. Impacts of the Project on fauna are discussed in Chapter 5 of this Report.

Subject to its findings relating to application of the HAA, the IAC is satisfied that noise impacts have been appropriately assessed in the NVA, as verified by Noise Verification Report.

Together the NVA, Background Noise Report, Noise Verification Report and Mr Delaire’s Expert Witness Statement provide a reliable assessment of noise impacts for the Project. The IAC is satisfied the assessment:

- is generally based on and complies with the relevant the legislation, guidelines and regulations, including NZS 6808:2010 which is the required standard for assessment of wind farm noise in Victoria
- is based on appropriately conservative assumptions and parameters, including using appropriate candidate wind turbines
- adequately considers noise impacts accounting for a wide range of wind conditions.

⁴⁸ Guide to the Environmental Reference Standard (EPA Publication 1992, June 2021), page 14

The IAC accepts there will be audible noise at some sensitive locations, however the Project can appropriately avoid and minimise adverse operational noise effects, and is expected to comply with all applicable standards.

The IAC accepts the changes proposed by the Proponent in its Day 4 version of the EMF (as shown in Appendix F:1). Pre-construction noise assessments for substations (MM-NV04) and the wind turbines (MM-NV05) will ensure that the noise assessment is updated to reflect the noise predictions based on final turbine and other infrastructure selection and layout before construction, ensuring compliance with relevant regulations and guidelines. MM-NV05 also requires background noise monitoring at Lake Mombeong rather than an alternative proxy location, with the consent of Parks Victoria.

MM-NV06 (Post-construction noise assessment) requires a post-construction noise assessment to demonstrate the wind farm is compliant with applicable noise limits.

Other mitigation measures will ensure operational noise emissions comply with relevant guidelines and the GED, including through MM-NV02 (Concrete batching plant), MM-NV03 (Quarry work plan) and MM-NV04 (Pre-construction noise assessment of substations).

Impacts on fauna are addressed in Chapter 5 of this Report, and the IAC accepts Mr Delaire's advice that vibration impacts will be acceptable.

(iv) Finding and recommendation

The IAC finds, subject to its recommendations:

- That noise and vibration effects are appropriately assessed by, combined, the NVA, Background Noise Report, Noise Verification Report and Mr Delaire's Expert Witness Statement.
- Operational noise impacts will be acceptable.

The IAC recommends:

Environmental Management Framework

Make the following change:

Amend MM-NV05 (Pre-construction wind turbine noise assessment) and MM-NV06 (Post-construction noise assessment) to apply High Amenity Area noise limits to campgrounds in natural areas surrounding the Project.

These changes are included at Appendix F:1.

12.4 Construction noise and vibration

(i) The issue

The issue is whether construction noise and vibration effects are acceptable.

(ii) Evidence and submissions

The Proponent relied on the evidence of Mr Delaire and considered noise and vibration impacts during construction would be acceptably managed by the mitigation measures.

The Proponent accepted the changes to the EMF recommended by Mr Delaire, apart from a minor drafting change to MM-NV01 “to clarify that the process for selecting appropriate plant items may include low noise emission plant items”.⁴⁹

Several submitters raised concerns about construction noise and vibrations effects for sensitive receptors, for visitors to the area and wildlife.

The EPA raised issues relating to construction noise impacts at natural areas. It recommended including the mitigation measures identified in the NVA in the EMF (in MM-NV01 or as a new mitigation measure).

Mr Delaire explained that MM-NV01 required development and implementation of a CNVMP which must document reasonably practicable measures to fulfill the GED, and this would inherently address construction noise at natural areas. However, in response to the EPA’s submission, he proposed changes to MM-NV01 to incorporate the measures relating to construction noise at natural areas as identified in the NVA.

The EPA raised issues relating to construction noise associated with traffic, recommending the movement of construction heavy vehicles be restricted to normal working hours (Monday to Friday, 7am to 6pm) and for this to be made explicit in MM-NV01.

Mr Delaire did not agree with the EPA that restricting the timing of heavy vehicle movements associated with construction of the Project was reasonable, as all vehicles would access the site from major arterial roads, not local roads. Further, he stated that the CNVMP required by MM-NV01 would address construction noise at both habitable receivers and natural areas.

Mr Delaire proposed changes to mitigation measures in response to the EPA’s submission, specifically to amend MM-NV01 to confirm that restrictions of working hours also apply to vehicle movements within the site.

Mr Delaire advised he preferred the central internal transmission line option. He said it was located further away from the nearest receiver and construction noise impacts would be lower than for the northern option.

In comments on the Proponent’s Day 3 Project documents⁵⁰ the EPA recommended amending MM-NV01 to refer to natural areas “as defined under the Environmental Reference Standard” and amending protocols to consider noise duration as well as exposure. It also identified a potential inconsistency with the Incorporated Document including reference to NZS 6808:2010 but not the Noise Technical Guideline.

The change to MM-NV01 was supported by the Proponent. It clarified there was no inconsistency between the documents as NZS 6808:2010 and Noise Technical Guideline relate to different noise concerns.

(iii) Discussion

The IAC accepts the NVA findings that construction noise impacts, including on-site Project construction and transport of goods to and from the site, can be managed in accordance with EPA Publication 1834.1. Construction noise is predicted to be within the typical noise range expected

⁴⁹ D492, Proponent – Updated Expert Recommendations Summary Table, page 3

⁵⁰ D495, EPA Comments on Proponent Day 4 version of EMF and Incorporated Document

for a wind farm, and the construction period at each location is likely to be relatively brief (a few weeks) and less than a week for the higher noise generating activity of trenching.

The EMF includes appropriate mitigation measures for managing construction noise impacts, including preparation of a CNVMP (MM-NV01). The CNVMP will establish a clear plan to avoid and minimise construction noise impacts. It is required to include all reasonably practicable mitigation measures to reduce the risk of harm from construction activity noise as required by the GED. Construction noise is also managed through MM-NV02 (Concrete batching plant) and MM-NV03 (Quarry work plan).

The Proponent's Day 4 EMF appropriately included the changes recommended by Mr Delaire in response to issues raised in submissions, including those issues raised by the EPA. The changes include:

- consideration of noise impacts in natural areas
- protocols for minimising the duration of noise exposure
- restrictions for vehicle movements on-site
- guidance on selecting appropriate low-noise emission plant
- maintenance requirements to manage noise.

The IAC agrees with the Proponent's response to the EPA's submission on Day 3 Project documents. It supports reference to natural areas as defined by the ERS in MM-NV01, and agrees it is not necessary to reference to the Noise Technical Guideline in the Incorporated Document, noting it captured in MM-NV07 (Noise Management Plan).

The EES referred to the importance of "*considerate*" work practices for managing construction noise. The IAC endorses the concept and recommends expressing the requirement as "*good environmental working practices*" in MM-NV01 to be consistent with the language in EPA Publication 1834.1.

The IAC agrees with Mr Delaire it is not necessary or appropriate to restrict heavy vehicle movements on major arterial roads, noting on-site movements are restricted.

Matters to do with internal transmission line options are discussed in Chapter 17.1.

(iv) Finding and recommendation

The IAC finds, subject to its recommendations:

- That construction noise and vibration effects are acceptable.

The IAC recommends:

Environmental Management Framework

Make the following change:

Amend MM-NV01 (Construction noise and vibration management plan) to require refer to good environmental work practices, consistent with EPA Publication 1834.1 *Civil construction, building and demolition guide*, 12 September 2023.

This change is included at Appendix F:1.

12.5 Overall conclusions on noise and vibration effects

Subject to applying its recommendations, the IAC is satisfied the Project is consistent with relevant policy and legislation and relevant draft evaluation objectives. The likely noise and vibration effects are not significant and the IAC is satisfied any effects are acceptable and do not preclude the Project being approved.

13 Transport

13.1 Introduction

The relevant Scoping Requirements draft evaluation objective is:

To avoid and minimise adverse effects for community amenity and safety, with regard to construction noise, vibration, dust, traffic and transport, operational turbine noise and fire risk management.

Transport effects are assessed in:

- EES Chapter 15 (Transport)
- EES Technical Appendix P (Transport Impact Assessment) (TIA).

The exhibited EMF includes the following mitigation measures:

- MM-TP01 Communications Plan
- MM-TP02 Traffic Management Plans
- MM-TP03 Road safety audits
- MM-TP04 OD/OSOM [over-dimensional/oversize overmass] transport route assessments
- MM-TP05 Access strategy and design.

Table 17 lists the experts providing evidence on transport.

Table 17 Evidence on transport

Documents	Party	Expert	Firm	Area of expertise
D79 and D367	Proponent	Charmaine Dunstan	Traffix Group	Traffic

The Proponent provided the following Technical Notes and submissions:

- TN37 – reconciliation of DTP condition requests (D387)
- D368 – Proponent’s traffic submissions.

The IAC has had regard to relevant policy and guidelines, including:

- *Road Management Act 2004*
- *Transport Integration Act 2010*.

13.2 Transport

(i) The issue

The issue is whether transport effects are appropriately assessed and acceptable.

(ii) What did the EES say?

The TIA investigated potential transport impacts associated with the Project’s construction and operation. It included a desktop review of relevant material, consultation with stakeholders, site inspections, traffic generation and distribution analysis, route survey assessment, identification of potential impacts, recommended mitigation measures and the assessment of residual impacts. The TIA included a Route Survey (Appendix C) for transporting the wind turbine equipment from the Port of Portland to the windfarm site.

The TIA relied on the following key transport elements:

- site access via 10 existing site entrances that intersect with Portland-Nelson Road

- the use of internal access roads
- a preference for the delivery of large components via the Port of Portland via over dimension/oversize and/or overmass (OD/OSOM) roads
- the delivery of non-OD/OSOM components, including containerised components, via the Port of Geelong
- the temporary storage of components at an existing storage yard at 211 Portland-Nelson Road Portland
- the progressive temporary closure of sections of Boiler Swamp Road as the underground transmission line is installed.

The use of Port of Melbourne is an option for OD/OSOM and containerised components, subject to further investigation and would require a new route survey.

The TIA recommended various mitigation measures that were included in the exhibited EMF, including the need to prepare separate TMPs for the wind farm and transmission line.

The Route Survey identified three ‘pinch points’ on the OD/OSOM route that would require vegetation/infrastructure removal and/or temporary road pavements to accommodate the transport of turbine blades⁵¹. Sections of road within the windfarm site will also need to be upgraded to accommodate construction traffic. The TIA did not identify any further works that would be required, although this would be confirmed during more detailed investigations required under the EMF.

The TIA concluded that the existing road network has adequate spare capacity to facilitate construction and operational traffic associated with the wind farm and transmission line. It did not identify any transport constraints that would preclude the Project’s delivery and recommended various mitigation measures that require further detailed planning and assessment related to safety, route and access arrangements. Any residual impacts following the implementation of the mitigation measures were assessed as not being significant.

(iii) Evidence and submissions

The Proponent relied on the EES, TIA and evidence of Ms Dunstan. It submitted that the public road network and the site’s access and internal arrangements have the capacity to safely accommodate traffic movements, including over-dimensioned vehicles, during Project construction and operation. It added that impacts associated with construction of the transmission line could be safely and effectively managed.

The Proponent highlighted the role the EMF and TMP requirements would have in managing and mitigating potential impacts. Following its consideration of evidence and submissions, the Proponent adopted various changes to the transport mitigation measures, particularly in relation to the TMP requirements.

Ms Dunstan assessed the potential traffic impacts and reviewed the impacts described in the TIA, including the Route Study Report. She identified some inadequacies in the EES relating to the analysis of site access and traffic generation and undertook further analysis to address those matters.

⁵¹ Ms Dunstan’s evidence noted that ‘pinch point 2’ (the Henty Highway/Portland-Nelson Road intersection) has been modified since the Route Survey was prepared and that further modifications are no longer required.

Ms Dunstan provided responses to transport issues raised in submissions, including concerns about road capacity, convenience, emergency services and safety. She was satisfied that these concerns were overstated or could be effectively managed through the relevant mitigation measures, particularly the required TMPs.

Ms Dunstan concluded that:

- The proposed primary and secondary over-dimensioned vehicle routes are appropriate, subject to various management actions and two minor upgrades/alterations.
- Over-dimensioned loads will not be overly disruptive to the operation of the road network and movements can be appropriately managed under convoy.
- Vehicle access to the windfarm site is appropriate, noting that no additional hardstand areas would be required in conjunction with the Blacks Road access or Cowlands Road Lower access, and an alternative location should be used to gain access to Lightbody Road.
- The Project will not significantly impact the operation of Portland-Nelson Road, noting that traffic levels will remain low for this road despite the additional construction traffic. Operational traffic levels will be modest given the capacity of the road and small number of operational movements.
- Traffic and access impacts associated with underground transmission line construction (Boiler Swamp Road) can be managed through the use of alternative routes and consultation with stakeholders, including the CFA.
- The review of casualty crash data (including the over-dimensioned routes, Portland-Nelson Road and the windfarm area) did not identify any significant issues for the Project.
- The proposed mitigation measures are appropriate, subject to some recommended revisions and additions.

Ms Dunstan noted that some traffic volume data relied on in the TIA was recorded in 2020 and was likely to have been impacted by the Covid-19 pandemic. She recommended additional surveys be completed at the time TMPs are prepared to better understand peak times, including those for heavy vehicle movements.

The Proponent supported Ms Dunstan's recommendations and addressed them in its Day 3 EMF.

The DTP (S88) undertook a preliminary assessment of the road transport elements of the Project and provided a set of proposed conditions. These conditions primarily related to the preparation, content and approval of a TMP and various road upgrade and maintenance requirements. Following its review of this material and the advice of Ms Dunstan the Proponent sought to accommodate elements of the submission through revisions to the EMF.

Glenelg Shire Council (S183) noted the Project's use of Council managed roads and the need for a TMP to address various matters. Its Hearing submission (D404) included proposed 'planning permit' conditions relating to pre and post-construction road surveys, TMPs and traffic upgrade works.

Given that the Project approvals would not include a planning permit, the IAC invited Glenelg Shire Council to provide comments on the EMF and Incorporated Document as a means of addressing its concerns (D426). Glenelg Shire Council subsequently reviewed the Day 2A EMF and sought the following revisions to MM-TP02 and MM-TP03 (D451):

- the review of existing conditions should be closer to works commencing or the survey should be updated because of the time lag (MM-TP02)

- including: *“Before the use starts an Engineering Review and Acceptance Report must be prepared outlining any traffic upgrade works required for Council managed roads to the satisfaction of the responsible authority”* (MM-TP02)
- requiring the road safety audit *“On completion of works, prior to use commencing”* (MM-TP03).

The Proponent’s responses to these changes were included its Day 4 EMF, including:

- the review of existing conditions needs to occur when the TMP is prepared
- a review and acceptance report is unnecessary because of the TMP requirement for detailed engineering drawings to be agreed with the relevant road authority
- the road safety audit refinement was partially accommodated in revised MM-TP03.

DEECA considered the use of Boiler Swamp Road for emergency access during construction and agreed that any impacts could be acceptably managed through the EMF.

Submitters raised various issues including:

- the accuracy of the TIA, including the traffic figures for Portland-Nelson Road
- the capacity of the road network to safely and efficiently accommodate additional traffic, particularly during construction
- the potential for driver distraction
- impacts on specific roads, including Portland-Nelson Road and Boiler Swamp Road
- conflict between construction traffic and logging and agricultural traffic
- impacts associated with the need for over-dimensional vehicles
- the funding of required road upgrades, maintenance and repairs
- impacts on emergency service access
- impacts on wildlife.

(iv) Discussion

The IAC is satisfied that the TIA and Ms Dunstan’s evidence demonstrate that the existing road network has the capacity to service the Project, subject to implementing the relevant EMF requirements, including the development of the two TMPs and other specified investigations and approvals.

As Ms Dunstan noted at the Hearing, Portland-Nelson Road has significant underutilised capacity and even if the traffic generated by the Project increased significantly, the road would still have adequate capacity. She noted that managing impacts on Portland–Nelson Road would be relatively straightforward given the pine plantation is in a single ownership and the number of key stakeholders is limited.

Ms Dunstan’s evidence report provided responses to many of the detailed issues raised in submissions and the IAC generally accepts and agrees with that material. It notes that many of the issues raised by submitters will be addressed through the further, more detailed investigations that will be necessary under the EMF and the further approvals that will be required. These will address the safety, emergency service and access issues raised in submissions.

There was discussion at the Hearing about the transport of construction material required for the turbine foundations, including the amount of material and from where it might be sourced. These matters will be further refined during detailed Project design and the IAC is satisfied there is nothing particular about the Project that raises any fundamental concerns about how construction material might be delivered to the site.

Submitters raised concerns about the funding of road upgrades and maintenance required by the Project. As noted by Ms Dunstan, the EMF provides for the Proponent to fund upgrade or maintenance works through the TMPs (MM-TP02).

The Proponent reviewed the various conditions sought by DTP and accommodated most of them in its Day 1 EMF. During the Hearing, the IAC queried the extent to which DTP's conditions had been addressed in the revised EMF. The Proponent subsequently provided TN37 that included a reconciliation of the conditions sought by DTP and the revised EMF. The IAC has reviewed this material and is satisfied that the proposed changes to MM-TP02 are appropriate and adequately address the DTP submission.

The IAC accepts the Proponent's responses and EMF changes in response to the Glenelg Shire Council submission discussed earlier.

MM-TP02 refers to the TIA as providing baseline information for the TMPs. While this is appropriate, the IAC notes that Ms Dunstan's evidence report updates some of the material and analysis in the TIA. For this reason, the IAC believes that MM-TP02 should include a reference to the evidence report in addition to the TIA. This change is included in the recommended EMF at Appendix F:1.

(v) Findings and recommendation

The IAC finds, subject to its recommendations:

- The existing road network has adequate capacity to service the traffic generated by the construction and operation of the wind farm and transmission line.
- Detailed design and traffic management issues can be addressed through the further investigations and approvals required under the EMF, including the requirement for TMPs to be prepared.

The IAC recommends:

Environmental Management Framework

Make the following change:

Amend MM-TP02 (Traffic Management Plans) to include a reference to updated material in Ms Dunstan's evidence report (D79).

13.3 Overall conclusions on transport effects

Subject to applying its recommendations, the IAC is satisfied the Project is consistent with relevant policy and legislation and relevant draft evaluation objectives. The likely transport effects are not significant and the IAC is satisfied any effects are acceptable and do not preclude the Project being approved.

14 Land use and planning

14.1 Introduction

The relevant Scoping Requirements draft evaluation objectives are:

To avoid and minimise adverse effects on land use, social fabric of the community, local infrastructure, aviation safety and to neighbouring landowners during construction, operation and decommissioning of the project.

To avoid and minimise adverse effects for community amenity and safety, with regard to construction noise, vibration, dust, traffic and transport, operational turbine noise and fire risk management.

Land use and planning effects are assessed in:

- EES Chapter 16 (Land Use and Planning)
- EES Technical Appendices Q (Land Use and Planning Impact Assessment) (LUIPIA) and Y (Planning Scheme Amendment Documents).

Table 18 lists the experts providing evidence on these effects.

Table 18 Evidence on land use and planning impacts

Documents	Party	Expert	Firm	Area of expertise
D89, D345	Proponent	John Glossop	Glossop Town Planning	Planning

Other key documents are:

- D346 – Proponent’s submissions on Land use and planning.

The IAC has had regard to relevant policy and guidelines, including:

- *Planning and Environment Act 1987*
- Glenelg Planning Scheme
- Great South Coast Regional Growth Plan 2014.

14.2 Land use and planning effects

(i) The issue

The issue is whether the land use and planning effects are acceptable.

(ii) What did the EES say?

The EES included a LUIPIA (Appendix Q) that assessed potential impacts during construction, operation and decommissioning.

The LUIPIA identified key Commonwealth and State legislation, policies, strategies and guidelines, and relevant elements of the Glenelg Planning Scheme, including policy, zones, overlays and particular and general provisions.

The methodology for undertaking the LUIPIA included:

- establishing the existing land use and planning conditions within the Project area and broader region.
- considering the construction and operational activities within the land use and planning context

- identifying potential effects associated with Project design, construction, operation and decommissioning
- identifying key avoidance and mitigation measures
- assessing potential impacts having regard to the sensitivity and significance of receptors
- evaluating potential cumulative effects
- identifying additional mitigation measures
- identifying and evaluating residual environmental effects
- assessing whether the evaluation objective is achieved.

Key LUPIA findings were that the Project:

- would not prejudice the ongoing use of the land for forestry and agriculture
- is permissible under the Glenelg Planning Scheme and generally consistent with the relevant Planning Policy Framework provisions and the purposes of the applicable zones and overlays.
- gives effect to renewable energy provisions in the Glenelg Planning Scheme.

The LUPIA had regard to the relevant technical reports and their assessments of impacts, proposed mitigation measures and residual effects. It assessed potential effects as follows:

- Construction and decommissioning:
 - land use changes would have minor and temporary land use or amenity impacts within or close to the Project area
 - land to be occupied during construction and decommissioning would be temporary and impacts can be managed
 - some minor amenity effects might be experienced in adjacent public land
 - the area around the Project area is sparsely populated and not incompatible with temporary, localised construction and decommissioning effects.
- Operation
 - the Project is compatible and consistent with the site's land use designations
 - there would not be any long-term detrimental impacts on adjacent public land
 - amenity effects on adjacent land uses are minor
 - changes to visual amenity will be permanent but localised, and sensitive receptors such as Lake Mombeong would be investigated for landscape screening
 - some users of adjacent public land might experience noise impacts under certain conditions.

The LUPIA concluded that implementing the management plans required under the EMF would minimise impacts on existing land uses and manage disruption to adjacent public land. Consequently, it would achieve the draft evaluation objectives.

(iii) Evidence and submissions

The Proponent highlighted various sections of the *Planning and Environment Act 1987* that it submitted gave elevated significance to climate change and emission reduction targets in decision making. This was echoed by Mr Glossop who outlined the Project's environmental benefits, including its contribution to renewable electricity generation. He noted relevant renewable energy policies in the Glenelg Planning Scheme, including an overarching purpose "*To support responses to climate change*" that was introduced through Amendment VC216.

The Proponent and Mr Glossop noted the significant policy framework support was contingent on the suitability of the proposed site when considered in the context of competing policies and potential negative impacts. Mr Glossop observed:

... the Planning Scheme does not provide unqualified support for renewable projects. As I have mentioned..., there are other policy objectives which need to be weighed and balanced against the Project's benefits. In this case, this involves considering whether the site is an appropriate location for the Project.⁵²

Mr Glossop's assessment included discussion of the agriculture, ecological, landscape/visual, recreation/tourism, amenity, heritage, bushfire and transport and construction impacts. He noted the relevant policies in the Glenelg Planning Scheme and largely relied on the material in the relevant technical reports to assess the associated impacts and their acceptability. He concluded the Project would have a net community benefit having regard to the expert assessments in the EES and their general findings that where impacts were likely, they would be acceptable, acceptable subject to mitigation or positive.

Mr Glossop provided commentary on the draft PSA documentation (EES Technical Appendix Y) that is discussed in Chapter 3.3 of this Report.

Submitters raised various concerns about the Project's land use and planning impacts, particularly in relation to amenity and visual impacts on private and public land and specific biodiversity impacts.

(iv) Discussion

The IAC accepts the general methodology and findings in the LUPIA, although the assessment of some potential impacts is understated. The IAC agrees there is strong planning legislation and policy support for renewable energy that is also evident at the regional and local levels, including key documents such as Great South Coast Regional Growth Plan 2014.

However, this support is qualified by the need to consider other factors and potentially conflicting planning objectives. As the Proponent observed in relation to the legislative support for renewable energy, it does not provide "*...carte blanche for the use and development of land for renewable energy projects, and it is clear that there are other policy provisions, and applicable planning controls, that seek to minimise and avoid ecological and amenity impacts, which the IAC and Minister for Planning will need to weigh in the balance.*"⁵³

The IAC agrees with this observation, and it is clear there are legitimate concerns about the suitability of the site given its location within an environmentally and visually sensitive area. In particular, there is wide-ranging support in the Planning Policy Framework for protecting biodiversity, native vegetation, coastal environments and landscapes.

In relation to the planning permit requirements, the IAC notes that the use of the SCO would obviate the need to obtain a permit under the applicable zone and overlay provisions. However, it has reviewed the relevant elements of those provisions to assist its understanding of the land use and planning issues that might be relevant to the Project.

The elements of the Project on private land are principally subject to the Farming Zone within which a wind energy facility is permissible. Parts of the new transmission line are within the Public

⁵² D88, J Glossop Expert Evidence Statement, paragraph 37, page 18

⁵³ D346, Proponent – submissions on land use and planning, paragraph 13, page 6

Conservation and Resource Zone (Cobboboonee National Park) within which a wind energy facility is prohibited in a National Park. The SCO overcomes this prohibition.

The IAC is satisfied the Farming Zone does not preclude the Project and is a suitable zone for a wind farm, subject to site specific analysis. The appropriateness of a wind farm within land zoned Public Conservation and Resource Zone is broadly discussed in relation to the application for consent under the National Parks Act in Chapter 18.3 of this Report.

The site is subject to various overlays including the Environmental Significance Overlay Schedule 1 (ESO1), ESO3, SLO1 and Bushfire Management Overlay (BMO). The ESO1 provides general guidance in relation to protecting the environmental values of the coast while the ESO3 is specific in seeking to protect critical habitat of the South-eastern red-tailed Black Cockatoo within the bird's known feeding area. The SLO1 seeks to protect the Glenelg River estuary and surrounds. The ESO1 is broadly relevant to the Project and the matters it seeks to address are discussed elsewhere in this Report, particularly Chapters 5 (Fauna) and 10 (Landscape character and visual amenity). The ESO3 only relates to the removal of specific native vegetation and is not directly relevant. The SLO1 is discussed in Chapter 10.3.

While the BMO applies to the Project area, a permit is not required for a wind energy facility or utility installation. The Project's response to bushfire policy is discussed in Chapter 16.4.

The IAC is satisfied the site has several positive land use features and elements including:

- the use of a pine plantation for the turbines and ancillary infrastructure
- the use of disturbed land, including existing roads, for the transmission line
- the minimal effect it would have on the forestry/agricultural capacity of the turbine site
- the limited number of dwellings within its immediate proximity
- its distance from settlements, including Nelson and Portland
- its access to the wind resource and proximity to transmission infrastructure at Heywood.

The site's disadvantages include the extensive interface with national and coastal parks and the associated biodiversity, visual and amenity impacts.

These broader impacts are discussed in other chapters of this Report under the relevant themes and the IAC's integrated assessment, is provided in Chapter 19. The IAC's integrated assessment concludes the Project is consistent with and supports legislation and policy and strikes an acceptable balance between potentially competing policies.

(v) Findings

The IAC finds, subject to its recommendations:

- The Project is broadly supported by renewable energy planning policies, but this does not preclude the need to assess the suitability of the site.
- The site has various positive features that make it suitable for a wind farm but is likely to have some negative offsite impacts that can be managed, as discussed in other Chapters of this Report.

14.3 Overall conclusions on land use and planning effects

Subject to applying its recommendations, the IAC is satisfied Project is consistent with relevant policy and legislation and relevant draft evaluation objectives. The likely land use and planning effects are not significant and the IAC is satisfied any effects are acceptable and do not preclude the Project being approved.

15 Socio-economic

15.1 Introduction

The relevant Scoping Requirements draft evaluation objective is:

To avoid and minimise adverse effects on land use, social fabric of the community, local infrastructure, aviation safety and to neighbouring landowners during construction, operation and decommissioning of the project.

Socio-economic effects are assessed in:

- EES Chapter 6 (Community and stakeholder engagement)
- EES Chapter 17 (Socio-Economic)
- EES Technical Appendices R (Social Impact Assessment) (SIA) and S (Economic Impact Assessment) (EIA).

The exhibited EMF includes the following mitigation measures:

- MM-SE01 Community Engagement Strategy
- MM-SE02 Shared Benefits Strategy
- MM-SE03 Local Participation and Social Procurement Strategy
- MM-SE04 Workforce Accommodation Management Plan
- MM-SE05 Aboriginal Participation Plan
- MM-SE06 Complaint Investigation and Response and Complaints Register

Table 19 lists the experts providing evidence on socio-economic effects.

Table 19 Evidence on socio-economic effects

Document/s	Party	Expert	Firm	Area of expertise
D77, D327	Proponent	Glenn Weston	Public Place	Social impacts

Other key documents include:

- D324 – Proponent submissions on social impact
- D137 – TN11 – Neighbour agreements
- D138 - TN12 – Campground data with attachments:
 - D139 - Attachment 1 – Campground data analysis
 - D140 - Attachment 2 – Raw data hike-in campgrounds
 - D141 - Attachment 3 – Raw data main campgrounds
- D230 – TN25 – Capacity Investment Scheme and the Victorian Transmission Plan, with attachment:
 - D231 – Capacity Investment Scheme – Tender 1 National Electricity Market Generation Guidelines.

The IAC has had regard to following relevant policy and guidelines, including:

- Clauses 02.02 (Vision) and 02.03-6 (Economic development)
- *Guide to Community Engagement and Benefit Sharing in Renewable Energy Development in Victoria* (DELWP, 2021) (Community Engagement Guide).

15.2 Social

(i) The issue

The issue is whether social effects are appropriately assessed and acceptable.

(ii) What did the EES say?

As described in EES Chapter 17:

The *Guide to Community Engagement and Benefit Sharing in Renewable Energy Development in Victoria* (DELWP, 2021) defines social impacts to include all issues associated with a renewable energy project that affect local and regional communities, both directly and indirectly, in a positive or negative way. Social impacts are considered to be changes that occur to communities (as a result of a project) to one or more of their quality and way of life, health, safety and wellbeing, livelihoods or economic prospects, access to cultural resources, community services, infrastructure or social values. The impacts can be perceptual or physical and can be felt by individuals, families, social groups, workplaces and other segments of the community.

The SIA concluded the Project would appropriately mitigate potential negative impacts and enhance positive social impacts. It stated the Project had been refined to respond to community feedback and the EES assessment, and mitigation measures would be implemented to manage impacts.

EES Chapter 4 (Project development) describes the design changes made to manage impacts, including siting turbines to minimise amenity impacts, removal of clusters of turbines and a two kilometre turbine exclusion zone around the GSWW campsites.

The SIA methodology included:

- establishing a study area (including communities and townships associated with the Project area, communities which form part of the transport routes or Project workforce, broadly the Glenelg municipality and others who access or use the surrounding natural environment)
- establishing a social baseline against which to assess potential social impacts, with consideration of political, cultural, natural, human, social, economic and physical capital
- consulting with community members and stakeholders, in accordance with the Community Engagement Strategy (EES Chapter 6)
- identifying and assessing potential impacts and potential Project benefits associated with construction, operation and decommissioning
- developing mitigation measures to avoid, minimise or manage potential adverse social impacts and to ensure benefits are realised and enhanced
- assessing residual impacts and benefits.

The SIA relied on technical assessments relating to noise, visual impact, traffic and transport and biodiversity, and included a Workforce Accommodation Management Plan at Appendix C.

Assessed social impacts include:

- community and way of life, including disruption to sense of place and population influx
- changes to surroundings, including industrialisation of the landscape, visual and noise amenity
- changes to access and enjoyment of surrounding natural areas
- access to housing and accommodation and community services and infrastructure

- Aboriginal cultural values and land rights
- employment opportunities
- health and wellbeing, including fire risk and road and aviation safety
- community participation and decision making.

The SIA included a ranking of residual social impacts which considered both the magnitude of the potential social impact and the likelihood of it occurring (see Table 20).

Table 20 Social impact ranking

Low	Little noticeable change experienced by the community with a low likelihood of occurring
Medium	Mid to noticeable change to something the community may value with a low to moderate likelihood of occurring
High	Noticeable to substantial change to something the community values of lasts for a significant amount of time with a moderate to higher likelihood of occurring
Very High	Substantial change, displacement or effect on the community with a higher

Source: EES Chapter 17, page 17-3

The SIA did not identify any high or very high residual social impacts. It identified the following medium ranked residual impacts during construction and operations:

- impacts on access to and enjoyment of nature during construction and operations, including disruptions to access to the GSWW and Cobboboonee National Park during construction
- impacts on natural amenity and community values associated with environmental features during construction
- disruption to Aboriginal cultural values through land use change and impacts on ecosystems during construction
- impacts on visual amenity due to industrialisation of the landscape during operations
- increased risk of collisions and road injuries and fatalities during operation.

Decommissioning impacts would be like those identified for construction.

Relevant mitigation measures to manage the medium ranked impacts include:

- MM-SE01 (Community engagement strategy)
- MM-SE02 (Shared benefits strategy)
- MM-SE04 (Workforce accommodation management plan)
- MM-SE05 (Aboriginal participation plan)
- MM-TP01 (Communications plan)
- MM-TP02 (Traffic management plan).

The Project is likely to have significant social benefits including training and upskilling for locals, and local employment opportunities.

Chapter 2.4 describes the components of the proposed Shared Benefits Strategy.

(iii) Evidence and submissions

The Proponent identified the key social issues as:

- a) demand for housing and community facilities and services associated with construction workers; and

b) changes to amenity and character.⁵⁴

It accepted Mr Weston's:

- approach to preparing a Workforce Accommodation Plan (MM-SE04) to minimise housing impacts resulting from an influx of workers
- advice that demand for community facilities and services would be readily absorbed into the surrounding large regional centres of Portland and Mount Gambier.

Regarding amenity and character impacts the Proponent submitted the:

- changes were unavoidable and had been minimised through Project design
- mitigation measures were appropriate, particularly the general neighbour agreements and shared benefit fund
- impacts were far outweighed by the Project's economic, renewable energy and climate change benefits.

The Proponent submitted that tourism stakeholders had been adequately consulted, as documented in the SIA. It relied on the evidence of Mr Weston that further consultation would not alter the conclusion of the SIA.

The Proponent explained it was committed to discussions with Parks Victoria and the GSWW Committee to consider alternative mitigation options to improve walking and campsite infrastructure to offset visual impacts.⁵⁵ It provided campsite booking data for Lake Mombeong and Swan Lake, which identified a peak around summer school holidays and some long weekends.⁵⁶ It stated this data suggested that even when busy the campsite was rarely at capacity, and outside of those periods recorded usage was low. This material only related to booked campers and did not include day visitors or campers that had not booked. The Proponent said this information was not presented to suggest the impacts are justified on the basis only a small number of people will be impacted, but it was presented to aide understanding of the scale of impacts.

The Proponent explained the Project will be required to deliver direct benefits for the local and Traditional Owners as part of its commitment as a Capacity Investment Scheme (CIS) project. It explained that while there was no public consultation undertaken as part of the assessment of tenders for the CIS, comments from Australian Energy Market Operator regarding the merits assessment for the process said a strong bid demonstrated "*early, meaningful and robust approaches to community and First Nations engagement*".⁵⁷

Mr Weston advised the Project workforce could be accommodated in a manner that avoids negative impacts, subject to his recommendations. He identified a number of deficiencies in the Workforce Accommodation Plan (Appendix C of the SIA) including the analysis inappropriately:

- focussed on the supply of beds rather than rooms
- used industry averages rather than auditing room/bed numbers
- treated visitor accommodation in holiday rentals as equivalent to hotel/motel, serviced apartment and caravan park venues.

⁵⁴ D324, Proponent – social impact submissions

⁵⁵ D133, Proponent – Part B Submission, page 61

⁵⁶ D138-D141, Technical Note 12

⁵⁷ D230, Technical Note 25 – Capacity Investment Scheme and the Victorian Transmission Plan, page 8

Further, the assessment assumed 75 per cent of the construction workforce would be from outside the local area which was not clearly justified. In preparing his evidence he had assumed a higher proportion of workers would be imported.

Mr Weston recommended changes to mitigation measure MM-SE04 (Workforce accommodation plan) to *“include an updated assessment of accommodation supply by location and accommodation class and based on the availability of separate rooms suitable for occupation by a construction worker”*⁵⁸ and require a sequence of actions relating to demand reduction, securing access to or augmenting existing accommodation supply and a workers camp.

Further, he said it was important to keep construction workers out of the housing rental market, so as not to impact rental prices, accessibility and affordability. He also recommended including caps on the use of visitor accommodation (based on the occupancy data provided in the SIA and anecdotal information provided by accommodation providers). He said the suggested caps seek to strike a balance between benefiting from additional demand and displacing existing users (including tourists), noting:

I do not suggest that the nominated cap levels necessarily represent the correct balance, but rather an empirically grounded compromise. In this context, if the local Councils and the Proponent were to agree on a slightly higher or lower cap level, then I would not be opposed to this.

He said that a worker’s camp was an option of last resort and should not be seen as necessary or desirable.

Regarding community facilities and services, Mr Weston was satisfied any additional demand could be serviced. He said the key issue was additional demand for medical services, advising this is likely to be relatively small, estimated at less than 0.15 general practitioner for Mt Gambier where there exist 10 multi practitioner clinics. He concluded it is *“unlikely to substantially reduce the accessibility of medical services for the existing community”*.⁵⁹

Regarding character, Mr Weston acknowledged that many submitters placed high value on the character of the area, felt an intangible connection and held a strong desire for the character to be preserved, which cannot be ameliorated by financial compensation.

Regarding amenity impacts, Mr Weston:

- accepted the conclusions of the EES that noise and traffic impacts during construction will be minor
- noted all but three dwellings meet the noise limits, and those dwellings have agreements in place in accordance with the Wind Energy Guidelines.

He was satisfied other potential impacts could be managed through implementation of the EMF, including avoiding accommodating workers in Nelson (to reduce impact on social cohesion). He explained there are no legislative requirements or industry code of practice guiding the use of voluntary acquisition and the proposed Neighbours Benefit Plan, and the measures should be seen as proactive and well-intentioned by the Proponent to offset the impacts of the wind farm.

⁵⁸ D77, G Weston Expert Evidence Statement, page 7

⁵⁹ D77, G Weston Expert Evidence Statement, page 8

In summary, Mr Weston explained that he expected if impacts are managed in an acceptable way then *“community concerns would dissipate overtime, as real-world experience of the Project accumulates”*.⁶⁰

Glenelg Shire Council submitted the potential impacts on local infrastructure, services and accommodation are of particular concern, noting *“the contribution would be of most benefit to the closest affected communities such as in Nelson”*. It sought:

- a formal role in setup and administration of the *“Community Benefit Fund”*
- greater accommodation benefits in the Glenelg Shire, with consideration of temporary worker camps and investment in local accommodation and services.

Parks Victoria made submissions in relation to visual and noise amenity impacts on the national and coastal parks, seeking opportunities to minimise impacts. These are presented and discussed in other chapters of this Report.

The GMTOAC submitted it had been engaged in consultation on the Project, and that it would continue to request engagement in relation to tangible and intangible heritage. It said *“GMTOAC and Gunditjmarra must continue to be consulted and involved”* and referred to its consultation protocols.

Submitters raised social impact concerns including:

- impacts of the construction workforce on demand for short stay accommodation, particularly in Nelson
- the proposed *“Community Benefit Fund”* is inadequate, the funding should be indexed, there was no indication of where the funds would go, and funds would not be sufficiently allocated to Nelson
- effect on amenity and character of natural areas
- experience of public recreation in the surrounding natural areas
- the level of community support for the Project was overstated, and there was a lack of social licence for the Project
- impacts on the community of Nelson, with inadequate targeted consultation
- the impact of the Project on mental health and wellbeing, in a location where people experience the benefits of being in the natural environment
- lack of community consultation, including with park users and hikers who may not know of the proposal.

In closing (reply) submissions, the Proponent advised that while it agreed with Glenelg Shire Council being consulted during preparation and administration of the Shared Benefits Strategy, it did not support Council having an oversight role or an obligation to report to it.

In response to evidence and submissions the Proponent proposed changes in its Day 4 version of the EMF including:

- MM-SE01 (Community engagement strategy) - to develop and implement the strategy in consultation with Council
- MM-SE02 (Shared benefits strategy) - to develop and implement the strategy in consultation with Council, proactively and purposefully share rewards of the Project with

⁶⁰ D77, G Weston Expert Evidence Statement, page 21

the local community through the Community Enhancement Plan and clarify the Neighbours Benefit Plan

- MM-SE04 (Workforce accommodation management plan) - to introduce Mr Weston's recommendations with an explicit goal of keeping construction workers out of the rental market, including caps for the Project's use of local accommodation options (in consultation with Glenelg Shire Council) and a program of monitoring and reviewing the effectiveness of measures
- MM-SE05 (Aboriginal participation plan) to require consultation with the GMTOAC.

Glenelg Shire Council advised it was satisfied with the changes to MM-SE02 and MM- SE04.

(iv) Discussion

Social Impact Assessment methodology and key issues

The methodology for the SIA is generally appropriate, subject to the specific matters discussed in this chapter. It was prepared in accordance with the Community Engagement Guide which provides guidance on:

- direct and indirect social impacts
- assessment of social impacts
- preparation of a community engagement strategy, benefit sharing program and monitoring, evaluation and reporting plan.

The key social impact issues relate to:

- worker accommodation
- community services, in particular access to medical services
- amenity and character.

Worker accommodation

Mitigation measure MM-SE04 requires preparation of a Worker Accommodation Management Plan. The Day 4 version of MM-SE04 responds to Mr Weston's evidence by including a stepped process for determining and delivering an appropriate workforce accommodation plan. While Mr Weston's evidence recommended a three-part demand reduction step, the Proponent proposed to include a simplified demand reduction step, to "*consider implementation of practicable demand reduction measures*". The IAC prefers modified wording to ensure the demand reduction measures are identified and implemented where practicable.

The IAC agrees with Mr Weston regarding the deficiencies of the Workforce Accommodation Management Plan at Appendix C of the SIA, and his recommendation that an updated assessment of accommodation should be prepared. The requirement for this updated assessment should be explicit in MM-SE04, and will be important to inform the stepped process that considers demand reduction, securing access or augmenting supply and workers camp. The IAC's recommended MM-SE04 includes these changes.

The IAC supports the suggestion of Mr Weston that caps may be useful to manage competing demands for visitor accommodation. Noting his qualification that it may be necessary for some flexibility with caps to achieve the right balance, the IAC supports the inclusion of the adjustment Clause in consultation with Glenelg Shire Council.

Mr Weston's conclusions that accommodating construction workers in Nelson should be avoided or limited is not reflected in the EMF. There will many factors at play in determining suitable

accommodation strategies and it is important these are explored during preparation of the Worker Accommodation Management Plan. The IAC is satisfied that preparing the Worker Accommodation Management Plan should inform and guide the suitability of locations across and around the Project area. The IAC notes the Project relies on accommodation in surrounding areas. The Worker Accommodation Management Plan should be prepared in consultation with Glenelg Shire Council, and surrounding local government areas of Warrnambool and Mt Gambier in South Australia.

With these changes to the EMF the IAC is satisfied the Project workforce can be accommodated in a manner that minimises negative impacts.

Community services

The IAC is satisfied the impacts relating to community facilities and services can be appropriately managed and will be acceptable. While the EES identifies there is a lack of social infrastructure to service the community in Glenelg municipality, it assessed the impact on access to health and community services as low. This is because the workforce is likely to access services in the regional centres of Portland and Mount Gambier, and the Proponent has indicated it will *“encourage non-local staff to access routine health services in their place of residence”*.⁶¹

Some submitters were concerned about the mental health impacts resulting from the Project. While the SIA and the EMF do not explicitly address mental health impacts, the IAC is satisfied that with the approach to meeting health service needs for the Project workforce, with low impact on existing health services for the community, this can be managed. Notwithstanding this, the IAC notes the Community Engagement Guide states the SIA should address potential impacts to mental health. If the SIA had explicitly addressed mental health it would have assisted the community and IAC’s to better understand potential impacts on this matter.

Amenity and character

The IAC accepts that amenity and character impacts are unavoidable but can be minimised and for the most part are acceptable. As described in EES Chapter 4, the Proponent has amended the Project design to minimise impacts where possible.

In relation to amenity, as discussed in other chapters of this Report the IAC has concluded that subject to its recommendations the impacts in relation to the following issues are acceptable:

- visual amenity (see Chapter 8), noting the IAC concludes the impacts at the ocean beach foreshore, GSWW and Lake Mombeong are not acceptable in isolation of the Project benefits
- noise (see Chapter 10.4)
- transport (see Chapter 13).

The social impacts associated with changes to character of the Project and surrounding areas, and public experience of natural areas is difficult to assess. As noted in Mr Weston’s evidence, the responses to the Project will vary significantly depending on a person’s association and level of connection with the area and existing views on suitability of the location for the Project.

Regarding mitigation of amenity and character impacts along the ocean beach foreshore, GSWW, Lake Mombeong and Swan Lake, social impacts relate to the visitor experience and expectations of

⁶¹ EES Chapter 17, Socio-economic, page 17-15

tranquillity in a natural area away from an industrialised landscape. This cannot be fully mitigated and the IAC considers the offset works to improve walking and campsite infrastructure, and to manage visual impacts through planting and other measures, critical. This is discussed further in Chapter 10.

MM-SE02 Shared Benefits Strategy seeks to compensate affected landowners and community members through a:

- Community Enhancement Plan that is a dedicated fund that will provide sponsorship and grants to the local community.
- Neighbours Benefit Plan that provides annual financial benefits to landowners of residential dwellings within 3.5 kilometres of a turbine.

Several submitters were concerned the Community Enhancement Plan (also referred to as the Community Benefit Fund in submissions) was insufficient to provide adequate benefits. A community benefit fund is an accepted and standard part of a wind farm proposal, designed to distribute benefits across the community, as detailed in the Community Engagement Guide. This is an appropriate and an important mitigation measure.

The Day 4 version of the EMF appropriately identifies that the overarching Shared Benefits Strategy should be prepared in consultation with Glenelg Shire Council. The IAC accepts the Proponent's submissions that Glenelg Shire Council should not have a role in administering the Shared Benefits Strategy (but notes some confusion with terms as Glenelg Shire Council sought a planning and administrative role in the "*Community Benefit Fund*").

Best practice approaches, involve the community in "*management and governance*"⁶² of a Community Benefits Fund, and the IAC recommends this should be added as a requirement to MM-SE02. This is consistent with EES Chapter 6 (Community and stakeholder engagement) which states its intent to (among other things) "*deliver engagement beyond regulatory conditions and compliance*" and involving stakeholders "*so they can play a part in decisions that affect them*".⁶³

This matter was not discussed during the Hearing and the IAC has not made specific recommendations about the model for involving the community, however it has included this as a general requirement in MM-SE02. The IAC is satisfied the exact role for community in management and governance can be suitably determined in consultation with Glenelg Shire Council when preparing the Shared Benefits Strategy. The IAC also recommends the program be renamed Community Benefit Program to ensure its intent is clear and the language is more consistent with industry practice as expressed in the Community Engagement Guide.

The IAC does not recommend the focus of the fund should be Nelson, as suggested by some submitters. The IAC is satisfied the distribution of funds will be resolved through consultation with Glenelg Shire Council and appropriate governance structures, as recommended.

Consultation

The IAC has reviewed EES Chapter 6 (Community and stakeholder engagement) and considers the plan broadly complies with the Community Engagement Guide. It appropriately:

- identifies stakeholders, including Traditional Owners and tourists/the tourism industry and engagement objectives relevant to each

⁶² Community Engagement Guide, page 23

⁶³ EES Chapter 6, page 6-3

- describes consultation methods and explains the consultation undertaken to-date and proposed
- details the findings of consultation and proposed benefit sharing
- establishes a plan for monitoring and evaluation.

Mitigation measure MM-AH01 commits to ongoing consultation and involvement with GMTOAC, and MM-SE05 (Aboriginal Participation Plan) is intended to guide consultation with GMTOAC to facilitate culturally appropriate benefits for First Nations people. This consultation is important and is supported by the IAC. Matters relating to Aboriginal cultural heritage and engagement with GMTOAC are discussed in Chapter 9.

MM-SE01 states the Community Engagement Strategy will be implemented to ensure consistent and consultative engagement with communities throughout the life of the Project, and it is critical to ensure social acceptance, strong local partnerships and more successful and sustainable Project outcomes. The Day 4 MM-SE01 introduces a requirement for the Community Engagement Strategy to be prepared in consultation with Glenelg Shire Council. This is supported by the IAC.

Social licence and net community benefit

The Community Engagement Guide explains social licence to operate as a *“level of acceptance or approval continually granted to an organisation’s operations or project by the local community”*. It includes information on sharing significant benefits with the community, but does not mandate a specific approach. Innovation is encouraged. It also notes that a lack of social licence, *“or one that diminishes over time, can have significant impacts on key milestones in a project’s development, such as permit approvals”*. The IAC’s recommendation above to provide for community involvement in the Community Benefits Fund is made in this context.

As a successful tenderer through the CIS process the Proponent has been required to demonstrate it has:

...properly engaged with First Nations and local communities to build social licence, and demonstrated considered and meaningful benefits sharing programs and social and First Nations commitments, that could be translated into contractually binding obligations under the CIS agreement.⁶⁴

The IAC accepts the advice of the Proponent regarding the CIS commitments, but does not rely on this for acceptability of social impacts. The Project and proposed mitigation measures are assessed to with a view to ensuring acceptable impacts. Matters relating to the CIS and renewable energy policy are discussed in Chapter 17.3.

For the many reasons discussed in this Report, the Project does not enjoy universal support. While the IAC finds Mr Weston’s comment that community concerns can be expected to *“dissipate overtime, as real-world experience of the Project accumulates”* somewhat flippant and not clearly justified, it does agree that for community acceptance impacts must be managed in an acceptable way. In the context of a highly sensitive environment (based on the combination of values) every effort should be made to achieve this.

The IAC has discussed and made conclusions regarding net community benefit in Chapter 18.1 of this Report.

⁶⁴ D230, TN25 – Capacity Investment Scheme and the Victorian Transmission Plan

(v) Finding and recommendations

The IAC finds:

- That social impacts have been appropriately assessed, in combination, the EES and Mr Weston's evidence.
- Subject to its recommendations the effects are acceptable.

The IAC recommends:

Environmental Management Framework

Make the following changes:

Amend MM-SE02 (Shared benefits strategy) to rename the Community Enhancement Plan to Community Benefit Program and to require community involvement in its management and governance

Amend MM-SE04 (Workforce Accommodation Management Plan) to require an update assessment of accommodation supply and to clarify the demand reduction step.

These changes are included at Appendix F:1.

15.3 Economic**(i) The issue**

The issue is whether economic effects are appropriately assessed and acceptable.

(ii) What did the EES say?

The EIA (EES Appendix S) was supplemented by additional material and commentary in EES Chapter 17. The EIA considered various local, regional and State economic output and labour market impacts based on high, medium and low impact scenarios. Workforce composition was modelled under two scenarios that used different local and non-local workforce participation rates (25/50 per cent and 75/50 per cent respectively).

The EIA noted that 350 workers will be required during construction, equating to 253 full time equivalent positions. Construction would generate the following total economic output (assuming 25 per cent local employment) of between:

- \$152.7 million and \$164.8 million for the Glenelg Shire Council
- \$250 million and \$270 million for the Great South Coast Region
- \$610.7 million and \$659.3 million for the State of Victoria more broadly.

The Proponent advised the Project would require 14 local jobs when operational. The EIA assessed the operational phase would generate the following total economic output (assuming 100% local employment) of between:

- \$46.3 million and \$49.9 million for the Glenelg Shire Council
- \$52.1 million and \$56.1 million for the Great South Coast Region
- \$57.9 million and \$62.3 million for the State of Victoria more broadly.

The EIA made the following findings in relation to other economic factors:

- Impacts on commercial forestry (associated with the loss of plantation area and product) would be 'marginal' because of the:
 - compensation payable to the landowner (Green Triangle Forest Products)(GTFP)

- relatively large size of the plantation
- opportunity to replant trees.
- Impacts on grazing land would be ‘low’ because of the:
 - compensation payable to landowners
 - small area of grazing land to be acquired for the Project relative to the regional supply of land
 - opportunity to relocate cattle during construction and operation.
- The undergrounding of the new transmission line and compensation payments to landowners would only result in ‘marginal’ economic impacts.
- Impacts on tourism could result from the diversion of human resources from the tourism sector to servicing Project workers, such as accommodation and hospitality, but would be mitigated through measures such as the Workforce Accommodation Management Plan (MM-SE04) and Shared Benefits Strategy (MM-SE02).
- Increased traffic associated with construction would not have a significant negative economic effect given the underutilised capacity of the local road network and the requirement that the Proponent fund any required road infrastructure upgrades.
- The Project would help reduce wholesale spot electricity prices.
- There are unlikely to be negative impacts associated with local materials and services being diverted from local supply to service the Project because of the specialised nature of those materials and services.
- Local labour and business participation will be encouraged through measures such as the Local Participation and Social Procurement Strategy (MM-SE03).

EES Chapter 17 provided further discussion about various economic effects and outlined the relevant mitigation measures.

In relation to tourism, it noted that the local tourism sector might experience a decline because of the perceived industrialisation of the natural landscape but found this would be offset by the broader economic activity generated by the Project. In contrast, it also noted that the Project might increase tourism in the area by becoming a new attraction for visitors. It highlighted various mitigation measures such as the Community Engagement Strategy (MM-SE01) and Shared Benefits Strategy (MM-SE02), particularly in association with tourism providers and groups such as Friends of the GSWW.

The EES noted the Proponent is investigating opportunities to supply power to the Portland aluminium smelter, a significant local employer.

(iii) Evidence and submissions

The Proponent submitted the Project would bring significant economic benefits to Victoria, Portland and the local area, particularly those associated with employment and the use of local service providers. It noted the broader economic benefits associated with providing additional, more affordable electricity supply and submitted that the Project has the potential to increase tourism in the area by becoming a new attraction for visitors.

The Proponent submitted any negative impacts on some tourism activities, such as eco-tourism, could be addressed by the proposed community benefit mitigation measures. In relation to agriculture, the Proponent noted the Project is largely within a pine plantation and would have little effect on agricultural productivity. The Proponent acknowledged the turbines would be sourced from overseas suppliers, but noted there would be opportunities for local procurement,

including through the Local Participation and Social Procurement Strategy required under MM-SE03.

The Proponent also noted that the CIS contract with the Commonwealth required it deliver specific targets relating to training, workforce participation and local capital and operational expenditure.

The submission from Alcoa Portland Aluminium Pty Ltd (S64) advised it is working with the Proponent under a memorandum of understanding “*to explore potential contracting opportunities*”.

Glenelg Shire Council noted the Project’s potential negative impacts on tourism resulting from the industrialisation of the landscape. It provided comments on the Community Benefit Fund and Workforce Accommodation Management Plan discussed earlier.

Submitters, including the Committee for Portland (S163), the South West Trades and Labour Council (S45) and various local businesses supported the Project and submitted that the economic benefits, particularly in the local area, would be significant. The Committee for Portland noted the need for effective local procurement policies and the use of local labour and businesses.

Some submitters anticipated benefits including:

- increased employment, business and service provider opportunities
- potential support for the Portland aluminium smelter.

Other submitters raised concerns about anticipated negative economic effects and the belief the EES overstated the economic benefits the Project might bring. Key concerns included negative impacts associated with:

- overstating the number of jobs that might be created and understating the impacts associated with increased local worker demand
- reduced tourism visitation, including impacts on national park visitation and eco-tourism
- displacement of local industries and businesses, including timber production, agriculture and aviation
- the lack of Australian manufacturing input
- the reduction of property values.

(iv) Discussion

Various local and regional strategies highlight the region’s wind resource and the economic opportunities associated with windfarms and other renewable sources of energy. The IAC is satisfied the Project is broadly consistent with the economic elements of those strategies.

The IAC accepts that the Project will bring economic benefits to the local, regional and State economies and is satisfied their assessment in the EES is generally sound. These benefits will primarily be derived through the construction phase and the additional employment and other inputs that it generates. Operational benefits will be less significant and mainly associated with additional employment and through various mitigation measures included in the EMF, including the Shared Benefits Strategy (MM-SE02), the Local Participation and Social Procurement Strategy (MM-SE03) and the Aboriginal Participation Plan (MM-SE05). The requirements under the CIS contract will reinforce and expend on those benefits.

The Project will assist in achieving renewable energy policies, although the extent to which it might contribute to lowering energy prices is difficult to determine and is not a benefit that the IAC can

quantify. Similarly, the potential to supply energy to the Portland aluminium smelter is not a significant factor in the IAC's assessment given its understanding that there is no agreement in place to supply energy to the smelter. The IAC notes that other wind farm projects in the region indicated they could supply power to the smelter, although it does not appear that this has eventuated.

A more problematic issue is the potential impact the Project might have on local tourism, including national park visitation and eco-tourism. The EES was contradictory on this, suggesting that the Project might increase tourism by becoming a new attraction for tourists, while noting that the industrialisation of the landscape might decrease the areas attractiveness to tourists.

The IAC was not presented with any evidence that tourism would increase and it is not clear how the development of another wind farm in the area would create an additional tourism draw. It is more likely that the Project will act a disincentive to some nature-based tourism associated with the National Parks and the GSWW given the visual and landscape impacts discussed in Chapter 10 of this Report. This view was shared by Glenelg Shire Council (S183) that expressed a particular concern about the GSWW and submitted it is *“unlikely that the loss of amenity can be adequately offset or compensated”*. However, the IAC was not presented with any compelling evidence or material that confirmed the extent of potential impacts and it is difficult to form any definitive conclusions about this, other than to observe that tourism impacts are more likely to be negative than positive.

The IAC agrees with submitters that the potential for local benefits will be maximised if effective local procurement policies are in place and it supports the implementation of the Local Participation and Social Procurement Strategy (MM-SE03).

The IAC agrees with the EIA that the Project is unlikely to displace or negatively impact existing industries or businesses, subject to its concerns about potential impacts on tourism and eco-tourism. It also agrees that the impacts on agricultural production would be negligible, particularly during the operational phase.

Some submitters were concerned that the Project would negatively impact property values although there was no evidence provided in support of this. Nevertheless, the IAC accepts the value of some properties that are close to turbines might be negatively affected depending on various factors, such as the extent to which the turbines are visible. This was addressed in the EES and the EMF provides for a Neighbours Benefit Plan and financial payments (MM-SE02) for the owners of dwellings within 3.5 kilometres of a turbine. The IAC accepts the findings of the EES that residual impacts on property values is likely to be low.

(v) Findings

The IAC finds:

- The Project will bring economic benefits to the local, regional and State economies, particularly during the construction phase.
- Local benefits will be enhanced by having effective local procurement policies.
- The Project will likely have a negative impact on nature-based tourism although the possible extent of that impact is difficult to quantify.
- Subject to its recommendations, mitigation measures MM-SE02(Shared Benefits Strategy) and MM-SE03 (Local Participation and Social Procurement Strategy) are appropriate.

15.4 Overall conclusions on socio-economic effects

Subject to applying its recommendations, the IAC is satisfied the Project is consistent with relevant policy and legislation and relevant draft evaluation objective. The likely socio-economic effects are not significant and the IAC is satisfied any effects are acceptable and do not preclude the Project being approved.

16 Safety, hazard and risk

16.1 Introduction

The relevant Scoping Requirements draft evaluation objective is:

To avoid and minimise adverse effects on land use, social fabric of the community, local infrastructure, aviation safety and to neighbouring landowners during construction, operation and decommissioning of the project.

To avoid and minimise adverse effects for community amenity and safety, with regard to construction noise, vibration, dust, traffic and transport, operational turbine noise and fire risk management.

Safety, hazard and risk effects are assessed in:

- EES Chapter 18 (Safety, Hazard and Risk)
- EES Technical Appendices T (Aeronautical Impact Assessment), U (Electromagnetic Interference Assessment) and V (Bushfire Risk Assessment and Mitigation Plan) (Bushfire Risk Assessment).

The exhibited EMF includes the following mitigation measures:

- MM-EI01 Exclusion zones
- MM-EI02 Pre and Post Construction Television and Radio Signal Assessments
- MM-EI03 AM/FM radio narrowcast and broadcast
- MM-EI04 Meteorological radar
- MM-EI05 Defence radio system
- MM-AI01 Portland Aerodrome
- MM-AI02 Air route lowest safest altitude
- MM-AI03 Meteorological monitoring masts visibility
- MM-AI04 Wind turbine design
- MM-AI05 Reporting tall structures
- MM-BF01 Construction Emergency Management Plan
- MM-BF02 Fire risk communications
- MM-BF03 Design and infrastructure
- MM-BD04 Fire Danger Period
- MM-BF05 Operational Emergency Management Plan
- MM-BF06 Fire Management Plan
- MM-BF07 Operational design and infrastructure
- MM-BF08 Operational maintenance
- MM-BF09 Bushfire suppression operations.

The exhibited Incorporated Document:

- requires development plans showing no aviation safety lighting on any turbine (Clause 7.1(f))
- provides for micro-sighting turbines that does not result in material adverse change to fire risk or aviation impacts (Clause 7.5(a)).

Table 21 lists the experts providing evidence on safety, hazard and risk.

Table 21 Evidence on safety, hazard and risk

Documents	Party	Expert	Firm	Area of expertise
D53, D356, D357	Proponent	Ian Jennings	Chiron Aviation	Aviation
D54, D314	Proponent	Mark Potter and Graeme Taylor	Fire Risk Consultants	Bushfire
D97, D98, D99	Save our Surroundings Riverina	Grant Piper		Aerial fire fighting

The Proponent provided the following Technical Notes and submissions:

- D109 - TN8 – Electromagnetic interference
- D214 - Bushfire history 1900-2024 prepared by Mr Potter
- D307 - TN32 – RFI 34 Turbine colour
- D335 - Proponent’s submissions on bushfire
- D354 - Proponent’s response to electromagnetic interference impacts and land mobile radio systems used by the CFA
- D358 - Proponent’s submissions on aviation.

The IAC has had regard to relevant policy and guidelines, including:

- Glenelg Planning Scheme
- D348 - *Design Guidelines and Model Requirements, Renewable Energy Facilities v4*, CFA, August 2023 (CFA Guidelines).

16.2 Electromagnetic interference

(i) The issue

The issue is whether electromagnetic interference (EMI) effects are appropriately assessed and acceptable.

(ii) What did the EES say?

The EES explained that EMI can be caused by extraneous sources of electrical signals/noise or when objects are placed between a signal source and a signal receiver. For wind farms, the wind turbines may produce unwanted electrical noise and the structures themselves can alter how wanted signals propagate to the intended receivers which could result in the degradation of the service.

An EMI assessment was undertaken to determine which areas of the Project site are unsuitable for installation of turbines as well as to consider the impacts on the wide-area services in the region.

The assessment methodology included:

- obtaining information about radio sites and services within approximately 50 kilometres radius of the boundary of the Project area from the ACMA database⁶⁵

⁶⁵ Australian Communications and Media Authority Radiocommunications licence database

- consulting with the wind farm developer, third-party stakeholders including Bureau of Meteorology, Department of Defence, Geoscience Australia, Telstra and Optus as well as residents
- identifying and assessing potential impacts on licensed radio systems during Project operation
- developing mitigation measures and assessing residual effects.

The EES stated there are limited telecommunication services in the vicinity of the Project and potential impacts on Telstra point-to-point radio systems have been avoided by changes to the Project layout.

It concluded:

- There are not expected to be any construction impacts. In the unlikely event the exclusion zone for the point-to-point link cannot be avoided, Telstra will be consulted before construction so any potential temporary service degradation can be managed.
- For many radio system types operational impacts are likely to be negligible.

The EES concluded that television broadcasting at dwellings south of the wind farm may be affected and there may be FM radio signal degradation for receivers in immediate vicinity of the wind farm. A specialist will be engaged to prepare a pre and post-construction assessment, and measures to restore affected reception will be undertaken if needed.

(iii) Evidence and submissions

The Proponent relied on the EES and its responses in TN8 (RFI 42 and 43), which concluded:

- there is no anticipated material impact on 5G services
- rectification costs are estimated to be less than \$100,000 if the digital television reception in all 32 dwellings in the Project area were adversely affected.

Some submitters raised questions about EMI to FM radio, TV services and internet.

The CFA's submission raised a question about interference to their operational communications systems and radios (land mobile radios - LMR) used in firefighting. In response to a question from the IAC the CFA confirmed it had not had any indication of interference with radios when fighting fires in and around wind farms.⁶⁶

Mr Potter gave evidence that "*Studies have not determined that there is any interference with emergency service radio communications. It is our understanding that this issue has not been reported at other existing Wind Farms across Victoria*".⁶⁷ In response to a question from the IAC the Proponent clarified the "*studies*" Mr Potter referred to was the EES Technical Appendix U.⁶⁸

(iv) Discussion

The IAC is satisfied the methodology for the EMI assessment was appropriate. It appropriately identified and assessed impacts and recommended Project refinements and mitigation measures to manage these. Potential impacts on the Telstra point-to-point radio system have been avoided by wind farm layout changes.

⁶⁶ D484, Email from CFA

⁶⁷ D54, Mr Potter and Mr Taylor Expert Witness Statement, page 17

⁶⁸ D354, Email from the Proponent

The EES Technical Appendix U appropriately recommends mitigation measures including:

- Consultation with the Bureau of Meteorology to ensure the Mount Gambier weather watch radar can maintain operational efficiency (MM-EI04).
- Pre and post construction assessment of the television and FM reception at existing or approved dwellings (MM-EI02 and MM-EI03). If the post construction assessment establishes an unacceptable increase in interference, measures will be undertaken to restore the affected reception to pre-construction quality.

The IAC supports the Day 4 mitigation measures relating to EMI, subject to minor drafting changes showing in Appendix F:1.

(v) Finding

The IAC finds:

- Electromagnetic interference effects are appropriately assessed and acceptable.

16.3 Aviation

(i) The issue

The issue is whether aviation effects are appropriately assessed and acceptable.

(ii) What did the EES say?

The EES explained there are two regulated aerodromes and two unregulated aerodromes near the wind farm.

The assessment methodology included:

- a desktop review to identify relevant aerodromes, Instrument Departure and Approach Procedures, the Obstacle Limitation Surface (OLS) and Procedures for Air Navigation – Operations (PANS-OPS), any published air routes, airspace classification and identify the location of communications, navigation and surveillance facilities
- a qualitative risk assessment in accordance with AS/NZS ISO 31000:2018 Risk Management and Guidelines
- an assessment of need for aviation obstacle lighting.

The EES found the closest regulated aerodrome, Portland aerodrome, is 10 nautical miles (nm) (18.5 kilometres) south-east of the nearest turbine, and the wind turbines would protrude into one of the instrument approach procedures. Several amendments are required to the non-precision instrument approach procedures and consultation is underway the Glenelg Shire Council (the Portland Aerodrome operator) and Airservices Australia. Glenelg Shire Council supports the changes.

The Project has been reported to Civil Aviation Safety Authority (CASA) and Airservices Australia has been notified (in accordance with CASA publication *AC 139-08(1) Reporting of Tall Structures*) to ensure the position of wind turbine and met masts are included within the vertical obstacle database and marked on aeronautical charts.

The EES found the Project would not affect any air routes for other aerodromes and turbines would be appropriately painted.

The qualitative risk assessment determined the overall risk of the Project to aviation is low, and that the wind farm is not a hazard to aircraft safety. Obstacle lighting is not required for the Project.

(iii) Evidence and submissions

The Proponent relied on evidence of Mr Jennings and EES Technical Appendix T. It said the EES has appropriately assessed aviation impacts, and those impacts will be *“mitigated to the extent reasonable to do so, through the design of the Project, and with the implementation of the proposed mitigation measures”*.⁶⁹

Mr Jennings noted a number of amendments and corrections to EES Chapter 18, but advised they were made for the record and were not material to his conclusions.

Mr Jennings provided a detailed response to issues raised by submitters and explained the Project:

- is in a Class G uncontrolled airspace where there is no Air Traffic Control, and the Pilot in command is responsible for ensuring separation with other aircraft
- the Pilot in Command is required to make sure, among other things, the aerodrome is suitable for landing and take-off and to abide by minimum height rules.

He explained:

As a result, a pilot will have appraised themselves of the issues that may affect their flight and planned accordingly. This includes having contingency plans (and necessary fuel) to divert the flight to a suitable alternate aerodrome should the need arise.

Mr Jennings considered the Project would have a small impact on the agricultural aerial applications.

Mr Jennings concluded:

- The Project would be more than 15 kilometres from Mount Gambier and Portland certified aerodromes and did not infringe their OLS.
- Safe aircraft operations would not be affected by the Project at the two uncertified Nelson and Kentbruck aerodromes, which had limited daytime use and relied on Visual Meteorological Conditions and Pilot in Command responsibilities.
- Redesigning procedures at Portland aerodrome to commence at 2,400 feet Australian Height Datum will remove the PANS-OPS penetration and negate safety concerns.
- The Project will not stop aerial agricultural applications, aerial firefighting or other authorised low flying.
- Aviation obstacle lighting is not required.

Mr Jennings recommended some drafting changes to MM-AI03 and MM-AI05, and recommended deleting MM-AI04 (Wind turbine design) as it was not necessary.

Some submitters raised issues relating to potential impacts on air safety and operation of nearby aerodromes and aerial firefighting.

Council raised the issue of cost associated with raising non-precision instrument approaches at Portland Aerodrome in its comments on the EMF (D451).

In relation to the mitigation measures, the Proponent:

⁶⁹ D358, Proponent’s submissions on aviation, pages 3-4

- accepted the change to MM-AI03 proposed by Mr Jennings
- retained MM-AI04 relating to turbine colour, stating:

Technical Note 32 has been filed which confirms that the turbines will be white or off-white in colour, as those are the standard colours that turbine manufacturers supply. Neither Mr Jennings nor Mr Haack have any concerns about those colours in terms of visual and landscape impacts, and aviation impacts.⁷⁰

(iv) Discussion

The IAC is satisfied the aviation assessment methodology was appropriate.

The Project will not impact aviation safety on the basis:

- amendments are required and can be made to the instrument approach procedures for Portland certified aerodrome
- no other aerodromes are affected.

The IAC accepts that turbine lighting is not required.

The IAC accepts the changes to the EMF proposed by the Proponent and Council to:

- require the cost of amendments to the non-precision instrument approaches at Portland Aerodrome be covered by the Proponent (MM-AI01)
- drafting changes to MM-AI03 (Meteorological monitoring masts visibility) and MM-AI05 (Reporting tall structures), consistent with the recommendations of Mr Jennings.

The IAC agrees with the Proponent to retain MM-AI04 (Wind turbine design) which specifies wind turbines that wind turbines must be of conspicuous colour and size to ensure visibility. While Mr Jennings recommended this mitigation measure be deleted as it was unnecessary, the IAC agrees with the Proponent the measure provides certainty.

The IAC supports the Day 4 mitigation measures relating to aviation, subject to minor drafting changes showing in Appendix F:1.

Matters relating to aerial firefighting are discussed in Chapter 16.4.

(v) Finding

The IAC finds:

- Aviation effects are appropriately assessed and acceptable.

16.4 Bushfire

(i) The issue

The issue is whether bushfire effects are appropriately assessed and acceptable.

(ii) What did the EES say?

The Bushfire Risk Assessment assessed potential fires from within and external to the Project area, during the construction and operational stages of the Project.

⁷⁰ D358, Proponent's submissions on aviation, page 3

It noted the wind farm is mostly located within a commercial pine plantation managed by GTFP. GTFP is also the manager of the local CFA brigade. The Proponent and GTFP have drafted a bushfire protocol agreement to ensure best practice bushfire management can continue and adapted for the Project.

The Bushfire Risk Assessment was undertaken in accordance with Australian Standard AS/NZS ISO 31000, as incorporated into the National Emergency Risk Assessment Guidelines. The methodology included:

- determining the study area and characterising existing conditions and firefighting resources
- undertaking a desktop review of relevant information relating to fire weather conditions, fire history, bushfire prone areas, vegetation, topography, and assets at risk from existing sources
- identifying bushfire hazards for communities and the surrounding area
- assessing site conditions that influence fire risk and management
- identifying bushfire response capability
- preparing a risk assessment to identify likelihood and consequence of potential risks
- Phoenix RapidFire predictive fire modelling⁷¹
- developing preventative bushfire risk and mitigation controls
- identifying measures to avoid, minimise or manage potential impacts.

Following implementation of proposed mitigation measures, residual bushfire risks were assessed as medium for both construction and operations.

The Bushfire Risk Assessment concluded:

- bushfire risk associated with construction and operation of the wind farm can be mitigated to an acceptable level by implementing appropriate mitigation measures
- the wind farm does not increase bushfire risk in the landscape
- the wind farm provides additional opportunities for emergency service response.

(iii) Evidence and submissions

The Proponent relied on the evidence of Mr Potter and Mr Taylor who submitted the Project:

- will not increase bushfire risk
- ignition risks from turbines can be acceptably managed
- will not impact aerial firefighting
- bushfire response capability is adequate.

The Proponent said it is committed to best practice bushfire mitigation and management measures, and to continued consultation with the CFA. It referred to the Delburn Wind Farm Panel Report (D352) which considered similar bushfire issues.

The Proponent explained the Project responded appropriately to planning policy provisions in the Glenelg Planning Scheme, the CFA Guidelines and other relevant guidelines.⁷² It noted the CFA

⁷¹ EES Technical Appendix V, page 46, states “The Victorian Fire Agencies use a fire modelling tool called Phoenix RapidFire to model fire scenarios before (existing) and after (impact) of these fire risk reduction works, such as on ground fuel management activities, to calculate the residual risk. It can be a useful tool to highlight how a bushfire will move through a landscape and the potential consequences (generally expressed as the number of houses burnt). Weather inputs can be adjusted to demonstrate the different outcomes based on lower or higher Fire Danger Indices (FDI)”.

Guidelines establish a set of principles and model requirements, which while relevant to the IAC's considerations are not statutory requirements.

The Proponent submitted that several features of the Project and its setting will not lead to increased risk, and may in fact reduce bushfire risk for the Project area and surrounds. Noting that the plantation setting is identified as a higher risk environment, proposed measures include:

- vegetation removal for access tracks and around turbines
- dedicated fire watch and response procedures during construction
- lightening conductors/protection systems for each turbine
- provision of static water supplies across the Project area
- augmentation of the existing smoke monitoring camera network operated by GTFP
- existing local firefighting brigades “*all of which have the ability to respond to fires in the vicinity of the Project*”.⁷³

The Proponent submitted the Project will not have any material impact on aerial firefighting, as agreed by the CFA, Mr Taylor and Mr Jennings. It explained aerial firefighting already occurs in and around wind turbines and the critical limitations to aerial firefighting arise from weather, terrain and smoke. The CFA Guidelines contemplate introduction of turbines to high-risk environments and recommend 300 metre minimum spacing (which the Project satisfies) and the turbines and met masts above 100 metres to be notified to Airservices Australia.

The Proponent submitted that Mr Piper is not an expert in aerial firefighting and his evidence should be given no weight.

Mr Potter and Mr Taylor gave evidence that the Bushfire Risk Assessment was appropriate. They provided updates based on further assessment and investigations including:

- responses to the RFI, submissions and further consultation with the CFA
- assessment against planning requirements
- further analysis relating to ignition risk.⁷⁴

The experts said the Project appropriately prioritised protection of human life. They recommended changes to the mitigation measures to ensure the documentation requirements align with the CFA Guidelines. Subject to their recommendations the experts said the bushfire risk can be acceptably mitigated.

The experts said in their experience “*fires involving Wind Energy Facilities are associated with older technology*”. They explained the occurrence of fires in modern wind energy facilities is rare and learnings from previous events have been incorporated into the Project design, CFA Guidelines and the proposed mitigation measures, including smoke and gas detection and suppression systems in nacelles, static water supplies, access tracks, and improved monitoring systems.

They noted an early smoke detection camera network had been installed by the GTFP, and recommended an additional camera be installed for coverage of the eastern and south-eastern parts of the Project area. Consistent with the CFA Guidelines the turbines were appropriately spaced at a minimum 300 metres.

⁷² Other relevant guidelines include the Australasian Fire and Emergency Service Authorities Council's *Wind Farms and Bushfire Operations Guideline* (v3.0) (October 2018) and South Australian Country Fire Service *Guidelines for Wind Farms* (March 2016)

⁷³ D335, Proponent – submissions on bushfire

⁷⁴ With consideration of Uadiale et al (2014) *Overview of Problems and Solutions in Fire protection Engineering of Wind Turbines*

The experts said the Project responded appropriately to concerns raised by CFA brigade members, including issues relating to safety, assessment and management of risk, monitoring of the Project area, coordination of firefighting services and communications, provision of adequate training and equipment. They were satisfied that coordinated slow or shut down of the wind farm could be activated rapidly if needed.

The Proponent's experts were satisfied that subject to their recommendations, the EMF would ensure fire risk was acceptable.

Save our Surroundings Riverina (S202) provided a written submission that mentioned fire risk associated with batteries, but no substantive submissions on the matter. It organised expert evidence provided by Mr Piper but did not appear at the Hearing or lead his evidence at the Hearing.

Mr Piper stated that wind farm proponents routinely discount the negative effect on aerial firefighting. In response to questions of cross examination from the Proponent Mr Piper agreed he had not reviewed the EES of the EMF, the CFA Guidelines, he had no experience as an aerial firefighter or supervising aerial firefighting in Victoria and was primarily opposing the Project because it is a renewable energy project.

CFA submitted the CFA Guidelines provide "*standard considerations and measures for fire safety, risk, and emergency management in designing, constructing and operating renewable energy facilities in the state of Victoria*". The guidelines support wind farms in high-risk environments, such as plantations, with specific requirements such as nacelles being equipped with fire detection and suppression systems, increased vegetation management, minimum 300 metre spacing of turbines and a fire protection system. Further:

Well-managed plantations with good access, fuel management, and early detection systems, along with effective strategies built into the Fire Management Planning, are key to successful fire control. This development will see a number of access road being constructed for the installation of the wind infrastructure. The new roads installed for this development, along with the existing road networks will allow for access to the site from multiple entry points, allowing greater access than is available today.

CFA said the biggest risk is fire ignition from a turbine nacelle. It submitted that even with the best efforts of the Proponent and effective permit conditions there is likely to be an increased risk from the Project. When the technology has been decided it can assess if residual risk is acceptable. It advised that vegetation management around turbines could involve pruning of pine trees, and that complete clearance of trees and shrubs may not be required.

Regarding aerial firefighting the CFA said the relevant guidelines focus on lower risk environments such as grasslands. It said the decision on aerial firefighting rests with the pilot of an aircraft, and under some conditions it may not be possible.

CFA advised it had developed an internal renewable energy action plan and standard operating procedures to ensure members are appropriately informed, trained and resourced to undertake firefighting safely and efficiently in renewable energy facilities.

CFA recommended changes to the mitigations measures relating to communications, consultation with CFA, correct reference to documents and a request for installation of a lightning detection system (D443).

DEECA was generally satisfied with the mitigation measures relating to fire, however it sought specific restrictions on works along Boiler Swamp Road during January and February, as these are the highest fire danger months.

Many submitters raised issues relating to:

- increased bushfire risk, particularly around Nelson
- risk of turbines igniting
- the wind turbines impeding aerial firefighting
- resource capacity to respond to bushfires as a result of the Project.

Mr Lomas (S160), an experienced local CFA volunteer, spoke passionately at the Hearing about the bushfire implications of the Project. He was concerned about the high-risk environment, impacts on aerial firefighting and lack of firefighting resources.

In response to evidence and submissions the Proponent's Day 4 EMF included amended and reordered mitigation measures.

In response to CFA submissions the Proponent noted the:

- mitigation measures have been amended to note the CFA Guidelines may be amended from time to time (while noting CFA advised they may not require or expect compliance with future amended guidelines)
- vegetation management distances around turbines will be dictated by the model of turbine and the fire detection and suppression technology used in those turbines (noting the CFA advised the whole of the fire systems would dictate appropriate vegetation management).

The Proponent largely accepted changes proposed by the CFA apart from:

- it did not support amending MM-BF01 to address all potential emergencies
- it supported a requirement in MM-BF04 to *"assess the suitability of installing lightning strike detection systems following the selection of equipment suppliers"* rather than requiring installation *"as it is not certain how advanced this technology is, whether it can be fitted to any turbine or what would trigger a shutdown"*.⁷⁵

In response to a question from the IAC following the Hearing, the Proponent clarified (D503) that MM-BF03 was intentionally removed from the EMF on the basis the requirements can be determined in consultation with the CFA as required by revised MM-BF04 (Risk Management Plan).

The Proponent proposed new MM-BS01 which addresses emergency access during construction along Boiler Swap Road. In response to DEECA it said the EMF should not be prescriptive about months as bushfires do not always occur at this time or in all high-risk locations around the State. It proposed in MM-BS01:

The relevant trigger for limitation on construction activities should be fire danger, with no construction activities to occur during higher fire danger periods; with a process in place to manage emergency access during those periods.⁷⁶

⁷⁵ D482, Proponent – Day 3 version EMF

⁷⁶ D133, Proponent – Part B Submission, page 10-11

(iv) Discussion

Key issues for the IAC are whether the Bushfire Risk Assessment is adequate, protection of human life is appropriately prioritised, mitigation measures are appropriate and bushfire risk is acceptable. Specific issues relate to risk of turbine ignition and whether aerial firefighting will be impeded.

Taking into consideration the Bushfire Risk Assessment and further work undertaken by Mr Potter and Mr Taylor, the IAC is satisfied that bushfire effects have been appropriately identified and assessed in consultation with the CFA.

The Project is in an existing high-risk environment, and the IAC accepts the landscape bushfire risk will not be increased by the Project. The CFA Guidelines contemplate wind farms in high-risk environments and provide guidance on how risks can be managed. The Bushfire Risk Assessment makes recommendations for managing bushfire risk in the context of the high-risk environment and the guidelines. Critically, the assessment notes the Project will not increase bushfire risk if its recommendations are adopted.

In terms of benefits, the IAC notes:

- there may be a minor reduction in bushfire impacts resulting from the Project, mainly due to fuel reduction at each turbine location
- the wind farm will provide additional opportunities for emergency service response in the Project area.

The Project does however introduce a potential source of ignition and appropriate equipment selection is critical to minimise risk. The CFA Guidelines say that nacelles must be equipped with automatic fire detection, alarm and fire suppression systems. The IAC accepts the Proponent's submissions and evidence that the risk of ignition in modern turbine nacelles is low and installing a detection and suppression system will reduce the risk of fire to very low. The Proponent proposes these requirements be included in new MM-B04 (Risk Management Plan). The IAC is satisfied this will appropriately inform equipment selection, on the basis the CFA Guidelines state the Risk Management Plan must "*form the basis for the design of the facility*".⁷⁷

It is noted that while the CFA advised that acceptability of the proposal would need to be determined when the technology has been decided, it did not object to the Project and suggested some refinements to the EMF to ensure design detail responds appropriately considers bushfire risk. The Proponent's Day 4 MM-BF04 appropriately requires the Risk Management Plan be developed in consultation with the CFA.

The IAC accepts the evidence of bushfire experts and Mr Jennings that there will be no material impacts on aerial firefighting. It agrees with the Proponent that Mr Piper is not an expert in aerial firefighting and accordingly his evidence on this matter has been given no weight.

Located in a high-risk environment the critical limitations to aerial firefighting exist independently of the wind farm infrastructure. Pilots should not fly if the conditions are not suitable for aerial firefighting, regardless of the turbines. While the IAC does not rely on the Delburn Wind Farm Panel Report (D352), it notes the panel concluded the Delburn wind farm will not result in loss of aerial firefighting ability, and "*wind turbines are additional obstacles pilots must factor into flight settings as part of dynamic risk assessment*".⁷⁸

⁷⁷ D348, CFA Guidelines, page 11

⁷⁸ D352, Delburn Wind Farm Panel Report, page 132

The Project responds to the aerial firefighting guidance in the CFA Guidelines by:

- spacing turbines no less than 300 metres apart
- requiring monitoring towers and guy ropes to be marked, and all monitoring towers must be notified to Airservices Australia in accordance with CASA guidance (MM-AI03)
- providing for shut down of turbines during bushfires or at the request of emergency services (MM-BF04 and BF05).

The IAC recommends amending MMBF-04 and BF05 to refer to automatic shut down, consistent with the CFA Guidelines.

In relation to concerns raised by the CFA brigades, the IAC is satisfied the firefighter safety has been adequately considered at this stage of the process, and that the EMF provides for development and refinement of fire emergency management processes, communications, training and equipment resourcing.

Overall, the IAC accepts that the Project can avoid an increase in bushfire risk through design and the implementation of appropriate mitigation measures. The proposed approach prioritises protection of human life as required by the Glenelg Planning Scheme.

The Proponent repackaged and reordered the bushfire mitigation measures to align more clearly with the CFA Guidelines. This is sensible. The Day 4 mitigation measures appropriately require:

- MM-BF01 (Construction Fire Emergency Management Plan) - emergency management procedures during construction, appointment of a person to support incident management and consultation with the plantation operator to ensure coordinated plans and processes.
- MM-BF02 (Fire risk communications) - engagement and regular familiarisation tours with local CFA brigades, arranged through the local District 4 HQ office.
- MM-BF04 (Risk Management Plan) - consultation with the CFA following selection of equipment and before construction commences, an additional camera for bushfire detection and assessment of the suitability of a lightning strike detection system.
- MM-BF05 (Operational Fire Emergency Management Plan) – the plan to be informed by the Risk Management Plan, and for maintenance activities around turbine areas to not be undertaken in elevated fire conditions, provision of a liaison person to support incident management, turbines to be shut down if requested from a fire service and for the plan to be reviewed annually and updated as appropriate in consultation with the CFA and other relevant emergency services.
- MM-BF06 (Fire Management Plan) – the plan to be prepared in consultation with the CFA, in accordance with the CFA Guidelines and including appropriate Fire danger Period requirements and maintenance/audit activities, to be reviewed every three years and updated as appropriate.

While the IAC accepts the Proponent intentionally removed MM-BF03 it is not entirely clear how the requirements are adequately captured in new MM-BF04. The exhibited MM-BF03 included requirements relating to, for example, static water supply and access tracks. Noting the parties, including the CFA, did not raise concerns with removal of MM-BF03 the IAC accepts its deletion. However, it recommends MM-04 include a reference to the Risk Management Plan model requirements in the CFA Guidelines to ensure these requirements considered are considered. To avoid confusion the IAC also recommends renumbering the bushfire mitigation measures.

The IAC accepts the Proponent's drafting of new mitigation measure MM-BS01 which requires a Construction Environmental Management Plan Boiler Swamp Road which addresses emergency access during January and February and on days declared as Extreme or Catastrophic Fire Danger Rating. Access arrangements must be prepared in consultation with DEECA Bushfire Forest services.

(v) Finding and recommendations

The IAC finds, subject to its recommendations:

- Bushfire effects are appropriately assessed and acceptable.

The IAC recommends:

Environmental Management Framework

Make the following changes:

Renumber the bushfire mitigation measures.

Amend MM-BF03 (Risk Management Plan) to require consideration of the model requirements in the Country Fire Authority's *Design Guidelines and Model Requirements, Renewable Energy Facilities (as amended from time to time)* and to refer to automatic shut down of turbines.

Amend MM-BF04 (Operational Fire Emergency Management Plan) to refer to automatic shut down of turbines.

These changes are included at Appendix F:1.

16.5 Overall conclusions on safety, hazard and risk effects

Subject to applying its recommendations, the IAC is satisfied the Project is consistent with relevant policy and legislation and relevant draft evaluation objectives. The likely safety, hazard and risk effects are not significant and the IAC is satisfied any effects are acceptable and do not preclude the Project being approved.

17 Other issues

17.1 Internal 275 kV transmission line options

(i) Introduction

As noted in Chapter 2.3 of this Report, the EES assessed two options for part of the internal 275 kV transmission line within the Project area. These were subsequently described by the Proponent as the 'northern' and 'southern' options.

The southern option was the Proponent's preferred option and would involve an underground transmission line between the eastern collector substation to Portland-Nelson Road / Sandy Hill Road intersection. It would run beneath existing roads in the GTFP pine plantation and extend for approximately six kilometres.

The northern option would involve an overhead transmission line continuing from the collector substation along Portland-Nelson Road to a transition station at Portland-Nelson Road / Sandy Hill Road intersection. It would extend for approximately 3.5 kilometres and would run adjacent to the road reserve.

In its Part A submission, the Proponent advised that it preferred a third option it identified as the 'central' option. The 'central' option would be an overhead transmission line extending approximately 3.8 kilometres within the Project area.

The three options are shown in Figure 4 of this Report and are all within the GTFP pine plantation.

(ii) The issue

The issue is whether the new 'central' internal transmission line option is acceptable.

(iii) What did the EES say?

The EES assessment of the northern and southern options found that:

The underground [southern] option is preferred as it would avoid impacts on native vegetation and Aboriginal cultural heritage, avoid potential visual impacts at the Hedditch Hill lookout, and reduce traffic disruptions along Portland-Nelson Road during construction. The Portland-Nelson Road corridor between Wilsons Lower Road and Sandy Hill Road has a relatively narrow shoulder and tight corners, making it a highly constrained section of road where impacts on native vegetation could not be avoided. A large artefact scatter is also located at the Portland-Nelson Road / Telegraph Track intersection which could be difficult to avoid.⁷⁹

(iv) Evidence and submissions

In its Part A submission (D52), the Proponent advised it preferred a new 'central' internal transmission line option. This option had become feasible following the rezoning of the land from PPRZ to Farming Zone⁸⁰ and the Proponent's view that the Project was more consistent with the purpose of the Farming Zone than the public land objectives of the PPRZ. It noted that the central

⁷⁹ EES Chapter 4 page 21

⁸⁰ Glenelg Planning Scheme Amendment C96gelg gazetted in June 2023

option would avoid native vegetation and the artefact scatter associated with the northern option and would be shorter and more cost-effective than the southern option.

In its closing submission (D380) the Proponent advised that the cost of undergrounding the line is approximately four times higher than for an overhead line.

The Proponent instructed its experts to consider all three options and to provide any opinions on the options where relevant. The responses are summarised below:

- Mr Gibson and Mr Venosta (ecology) (D66 and D67) assessed the impacts of each option and concluded the southern option presented the lowest risk to ecological values because:
 - it is co-located with other Project infrastructure
 - its construction does not require any direct native vegetation removal
 - the underground line does not add to bird and bat collision risk.They considered that the central option would increase the risk of bird and bat collision, although Mr Gibson noted that undergrounding this option would have low impact and address that risk. Mr Gibson also advised that the northern option was unacceptable given the other options that were available.
- Mr Organ (ecology) (D84) did not identify a preferred option but noted the central option passes through a Brolga movement corridor and breeding buffer. He advised that the CRM may need to be updated to account for the potential collision risk and that the transmission line should be marked with flagging to reduce collision risk. He noted that undergrounding of transmission lines eliminates collision risks in proximity to known habitat areas and that where overhead lines are used, high visibility markers should be used.
- Mr Feldman (Aboriginal cultural heritage) (D64) undertook a high-level assessment of the options having regard to registered places, intangible cultural values, mapped areas of cultural heritage sensitivity and Native Title implications. All options are located in areas of Aboriginal cultural heritage sensitivity. The southern and central options do not contain previously registered Aboriginal cultural heritage places, although he said at the central option tangible cultural heritage material would be possible. He presented this assessment in a scoring matrix that indicated the potential for impacts is lowest for the southern option and highest for the northern option.
- Dr Fawcett (groundwater and GDEs) (D68) advised there are no impact pathways identified for the overhead transmission line alignments. An underground alignment could impact groundwater if the watertable is intersected and dewatering is required, however the depth to watertable in this part of the site is expected to be deep and it is unlikely that groundwater would be intersected by trenching.
- Mr Hughes (surface water) (D78) advised the three options have similar risks, potential impacts and mitigation measures and he did not have a significant preference. He noted that the underground option has a greater disturbance footprint but did not consider this would change any of the impact assessment outcomes.
- Mr Haack (landscape and visual) (D69) noted the southern option would only result in short term impacts during construction, while impacts associated with the central option while travelling along Portland-Nelson Road would be Negligible to Low.
- Mr Delaire (noise and vibration) (D76) advised the impacts associated with construction would be minor for all options but noted that the central option was preferred over the

northern option given it is further from the nearest receiver. He concluded the inclusion of the additional option was inconsequential to the noise assessment.

- Mr Weston (social) (D77) noted that the visibility of transmission infrastructure was likely to be perceived as a negative social impact but did not have sufficient information about the visibility of the central option to reach a firm conclusion about its impacts.

The IAC queried whether the central option required any notification given it had not been described in the exhibited EES. The Proponent noted the SCO and Incorporated Document allow for alternative configuration and submitted that adopting the central option, being between the northern and southern options, would not give rise to a need for further notice.

The IAC also queried whether the Proponent had undertaken any investigations into undergrounding the central option or was aware of any impediments to it being underground. This was in response to Mr Gibson's evidence about undergrounding the central option. The Proponent advised it had not specifically investigated this but was not aware of any technical constraints on this approach. It preferred the central above ground option, but acknowledged undergrounding along this alignment would be a 'fallback' position. It noted that only part of the central option is within the Brolga movement buffer and that a 'hybrid' option with part underground and part overground could be implemented.

DEECA preferred the underground southern option because it would minimise potential impacts on Brolga. It noted that if a different option was then chosen and an overhead transmission line was to go through the Brolga breeding buffer additional mitigations would need to be applied, and the Collision Risk Modelling (CRM) would need to be recalculated and added to the Brolga compensation plan.

Glennelg Shire Council expressed a general preference that the internal transmission line be underground (D404).

(v) Discussion

The IAC notes the potential fauna and visual impacts associated with the aboveground northern option and agrees with the EES and Proponent that the southern underground option is preferable.

The central option, while shorter and significantly less costly than the southern option, extends through the Brolga movement corridor. For this reason, the ecology experts did not support an overhead transmission line in this area but noted potential impacts would need to be addressed if the line was underground. The central option is also close to the Kentbruck Heath and there is potential for Brolga, Australasian Bittern, Blue-winged Parrot and other threatened species to fly through this area when travelling from the Kentbruck Heath area to the coast.

The IAC agrees with the Proponent that a hybrid version of the central option, partly underground and partly overground, might be acceptable subject to further analysis of bird impacts and the outcomes of pre-construction surveys. Other issues such as potential impacts on Aboriginal cultural heritage might also require further analysis.

The IAC has included in its recommendations an option to pursue the central option, given the identified potential benefits, subject to further work demonstrating the impacts are acceptable to the satisfaction of the responsible authority.

(vi) Findings and recommendation

The IAC finds:

- The southern underground option is preferred over the northern overground option.
- The central option could be acceptable subject to further analysis of the extent to which it should be developed underground to address bird impacts, and with consideration of Aboriginal cultural heritage.

The IAC recommends:

Other recommendation

Adopt the underground southern option for the internal 275 kilovolt transmission line or alternatively the central option, to the satisfaction of the responsible authority, subject to:

- a) undergrounding all or parts of the central option to address bird impacts as required in the recommended Incorporated Document (see Appendix F:2 of this Report)**
- b) considering other potential impacts arising from undergrounding all or part of the central option, including impacts on Aboriginal cultural heritage.**

17.2 Decommissioning**(i) The issue**

The issue is whether the requirements in relation to decommissioning the Project are appropriate.

(ii) What did the EES say?

The exhibited Incorporated Document requires the Proponent to provide advice on the process and indicative timing of preparing a DEMP.

The exhibited EMF includes requirements and guidance for preparing the DEMP and includes mitigation measures that apply to the decommissioning phase of the Project, including requirements to address decommissioning in various plans and actions. It also establishes that the DEMP is subject to auditing by the IEA (MM-IA01).

(iii) Evidence and submissions

The Proponent advised that at the end of the Project's operational life it will either be decommissioned or upgraded with new turbines and ancillary infrastructure. Key decommissioning activities would include removal of all above ground non-operational equipment, removal and clean-up of any residual contamination, and rehabilitation of all storage areas, construction areas, access tracks and other areas affected by the Project.

The Proponent noted the DEMP will manage potential environmental impacts and specify controls for the management of waste at the end of the Project's life, including the removal or replacement of turbines. The DEMP will be prepared in consultation with agencies relevant to the decommissioning works and as required by relevant mitigation measures. An IEA will be appointed to audit compliance with the DEMP.

The Proponent advised the decommissioning of the transmission line would be addressed in the DEMP and would include consultation with the relevant agencies, including DEECA and Parks

Victoria. It submitted that for the purposes of the IAC's assessment, if the transmission line is required to be removed, the impacts would be similar to those during construction and therefore minimal.

Some submitters were concerned about the decommissioning process, who would be responsible for it and whether the turbines would be left on-site. Ms Chalmers (S188) (D454), for example, raised concerns about the retention of the concrete turbine foundations, Ms Taunt (S121) was concerned about the responsibility for decommissioning and Mr Turner was concerned about decommissioning of the transmission line along Boiler Swamp Road. Others had general concerns about potential, noise, dust and traffic impacts.

(iv) Discussion

The DEMP requirements are not prescriptive about how the Project might be decommissioned but establish what the DEMP must consider and address. This approach is reasonable given the uncertainties about when the Project might be decommissioned and whether it might include upgrading/renewal of the facility or its closure and removal.

The IAC does not expect that the DEMP would be prepared for some time given the Project's anticipated 30-year operational life and believes there would be little benefit in specifying outcomes now, including the types and extent of infrastructure to be removed. It would be better to make those decisions when more is known about the operational life of the Project, its possible renewal and any associated decommissioning. This might, for example, include the removal or retention of turbine foundations and underground transmission lines. It should also be prepared in the context of the regulatory framework that applies at the time.

The IAC is satisfied the Incorporated Document and EMP include appropriate content to manage the Project's decommissioning, including consultation with relevant stakeholders. However, it believes the DEMP should be approved by the responsible authority because of the location of the transmission line within the Cobboboonee National Park⁸¹ and the proximity of other Project infrastructure to the various national and coastal parks in the area. Adopting this approach would build on the DEMP consultation with DEECA and Parks Victoria required under the EMF and ensure appropriate regard is had to protecting public land assets. The IAC has included this requirement in the recommended EMF at Appendix F:1.

(v) Findings and recommendation

The IAC finds, subject to its recommendations:

- The Incorporated Document and EMF include appropriate content to guide the preparation of the DEMP.
- It would be premature to specify when or how the site might be decommissioned.
- The responsible authority should approve the DEMP.

⁸¹ As discussed in EES Appendix Z, Draft consent application under Section 27 of the National Parks Act

The IAC recommends:

Environmental Management Framework

Make the following change:

Require the Decommissioning Environmental Management Plan be prepared to the satisfaction of the responsible authority.

17.3 Renewable energy legislation and policy support

(i) Introduction

Renewable energy policy is assessed in:

- EES Chapter 2 Project rationale
- EES Technical Appendix B (Legislation and Policy Report).

Table 22 lists the experts providing evidence on renewable energy legislation and policy.

Table 22 Evidence on renewable energy legislation and policy

Documents	Party	Expert	Firm	Area of expertise
D55	Proponent	Richard Bolt	Richard Bolt Consulting Pty Ltd	Energy policy
D100 and D409	Save our Surroundings Riverina	Aiden Morrison	Centre for Independent Studies	Energy policy

Other key documents are:

- D230 – TN25 – Capacity Investment Scheme and the Victorian Transmission Plan.

The IAC has had regard to relevant policy and guidelines, including:

- *Climate Change Act 2022* (Cth)
- *Climate Change Act 2017* (Vic)
- *Renewable Energy (Jobs and Investment) Act 2017*
- *Draft 2025 Victoria Transmission Plan*, VicGrid, 16 May 2025 (draft VTP)
- *2025 Victoria Transmission Plan*, VicGrid, 17 August 2025 (VTP)⁸²
- *Victorian Transmission Plan Guidelines*, VicGrid, August 2024 (VTP Guidelines)
- 2024 Integrated System Plan (ISP)
- *Cheaper, cleaner, renewable: Our plan for Victoria's Electricity Future 2024*, DEECA, August 2024.

(ii) The issue

The issue is whether the Project is consistent with the legislative and policy framework for renewable energy.

⁸² The 2025 VTP was released on 17 August 2025 following the Hearing. The 2024 VTP Guidelines and 2025 draft VTP were discussed during the Hearing.

(iii) What did the EES say?

The EES provided an overview of the relevant legislation and policies and described how the Project would assist in achieving their objectives.

(iv) Evidence and submissions

The Proponent discussed the Commonwealth and State legislative and policy contexts for renewable energy in its Part A, Part B and closing submissions. It described the role the Project would play in the ISP and the National Electricity Market (NEM) and submitted there was broad legislative and policy support for the Project.

As noted in Chapters 2.4 and 15, the Proponent outlined the Project's inclusion in the CIS⁸³. It described the CIS tender process, outcomes and responsibilities and noted that projects were selected "...by reference to, *inter alia*, deliverability and timetable, reliability, emissions reductions, impact on electricity pricing, and First Nations and community engagement and commitments"⁸⁴. It submitted the Project's successful tender demonstrated it had high level legislative and policy support.

The Proponent noted the draft VTP and its role in planning renewable energy zones (REZ) and infrastructure in Victoria. It acknowledged that the draft VTP did not specifically reference the Project or include the Project site within the proposed South West REZ, however, it provided advice from VicGrid (the author of the VTP) that:

- the VTP assumed the Project was a fixed input in the VTP energy market modelling because it was successful in the CIS process
- it is anticipated the Project would be granted grid access authorisation because of its CIS approval.⁸⁵

Notably, the 2024 VTP Guidelines identified the Project site as a mixture of "*deprioritised*" and "*avoidance*" areas, presumably a response, in part, to the potential environmental sensitivity of the area.

Mr Bolt provided an overview of the electricity market and his assessment of the Project's consistency with relevant legislation and policies. He also provided responses to relevant issues raised in submissions. He was satisfied the Project was consistent with the legislative and policy framework and would contribute to energy security, greenhouse gas abatement and lower electricity prices. He highlighted the urgency of developing renewable energy to address climate change.

Some submitters were critical of energy policy and raised specific issues about:

- the extent to which the Project was consistent with the draft VTP
- the availability of better energy generating alternatives
- the inefficiency of wind farms
- the lack of storage capacity.

Others were satisfied the Project was consistent with energy policy, although some noted the potential environmental disbenefits including biodiversity and visual impacts.

⁸³ The CIS was established pursuant to Part 4A of the *Climate Change Act 2022* (Cth)

⁸⁴ D230, paragraph 3.13, page 4

⁸⁵ D232

Save our Surroundings Riverina (S202) provided a brief written submission that included references to “*national electricity law*”, but no substantive submissions about the Project’s consistency with energy policy. It organised expert evidence provided by Mr Morrison but did not appear at the Hearing or lead his evidence at the Hearing. Mr Morrison was critical of current energy policy, including the ISP and the transition to renewable energy. He did not believe the Project would improve energy security or contribute to lower electricity prices. He advised he had not read the relevant EES content, Mr Bolt’s evidence or PPV Practice Note 1 (Expert evidence). He noted the IAC was bound by the existing policy framework and that that the Project was likely consistent with current policy, while maintaining his opposition to that policy.

The Proponent’s closing submission was critical of the circumstances and content of Mr Morrison’s evidence and submitted the IAC should not give it any weight.

(v) Discussion

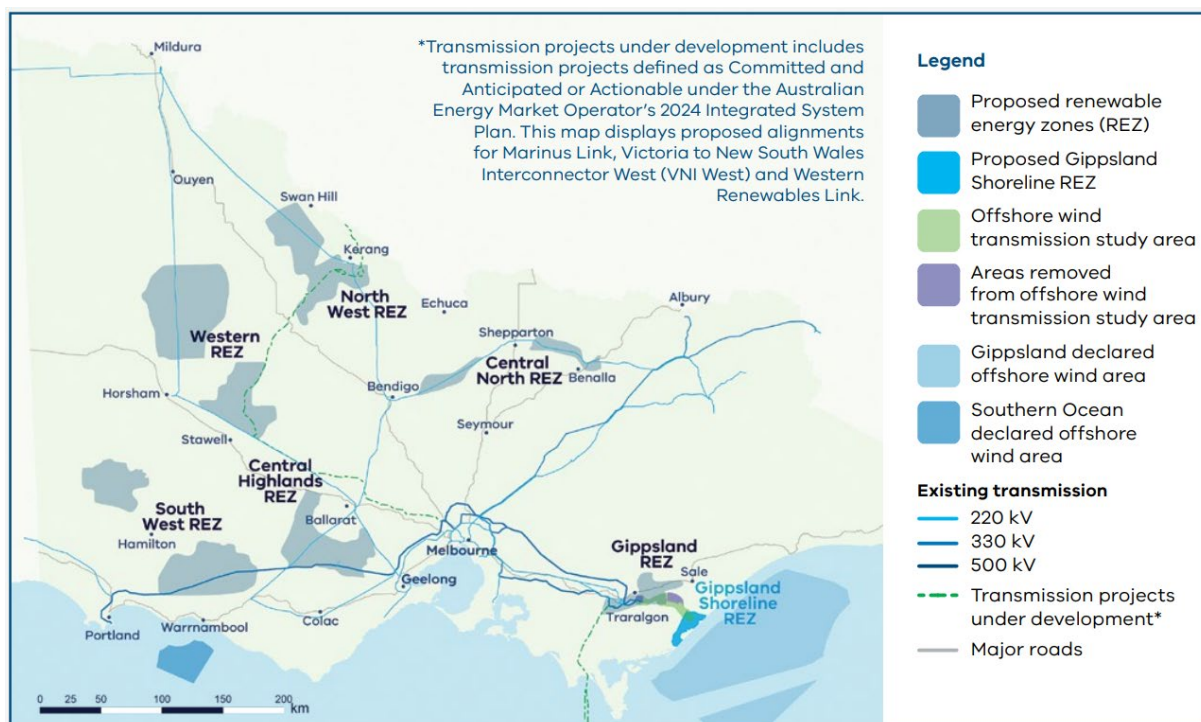
The IAC agrees with the Proponent and Mr Bolt that the Project is consistent with renewable energy legislation and policy. Although Mr Morrison and some submitters were critical of the policy framework, the IAC agrees with the Proponent’s observation that it “*...is bound to assess the Project by reference to the existing state of the law, and it is not open to the Committee to conclude that the existing legislative and policy settings are in any way deficient*”⁸⁶.

The IAC agrees with the Proponent that the Project’s inclusion in the CIS is evidence of its broad consistency with renewable energy policy, although it notes the CIS process was more focussed on deliverability, supply and grid outcomes rather than the site-specific impacts being considered as part of this EES process.

The IAC acknowledges submissions about whether the Project is consistent with the VTP and notes the VTP was approved in August 2025, after the Hearing concluded. However, the relevant elements are generally consistent with the draft VTP discussed during the Hearing. Notably, neither document referred to the Project and the site is outside the South West REZ shown in Figure 17.

⁸⁶ D485, paragraph 206, page 53

Figure 17 Renewable energy zones



Source: 2025 Victorian Transmission Plan, Figure 9

The VTP was informed by the 2024 VTP Guidelines and its assessment of the general area within which the Project is proposed. From the IACs reading of the document, it seems that the REZ does not extend to the Project site partly because of the environmental sensitives in that area.

Nevertheless, the IAC accepts that the Project has been in development for some time⁸⁷ and was within the South West REZ identified in the Victorian Renewable Energy Zones Development Plan Directions Paper released in 2021. It also notes VicGrid's advice that the VTP had assumed the Project was a fixed input and likely to be granted grid access. While it might be arguable that the Project site is inconsistent with the VTP because it is outside the South West REZ, this does not preclude it being considered on its merits through the EES process.

The general issues raised by submitters about renewable energy, and in particular windfarms, are of limited relevance given the IAC's overarching finding that the Project is consistent with the renewable energy policy framework. Mr Morrison's evidence was not relevant or helpful given his focus on the merits of the policy framework rather than the Project's compliance with it.

(vi) Findings

The IAC finds, subject to its recommendations:

- The Project is consistent with the legislative and policy framework for renewable energy.

⁸⁷ The initial EES referral to the Minister for Planning occurred in July 2019.

PART C: APPROVALS AND INTEGRATED ASSESSMENT

18 Approvals

18.1 Draft Glenelg Planning Scheme Amendment C116gelg

(i) Introduction

The IAC was appointed as an Advisory Committee pursuant to part 7, section 151(1) of the *Planning and Environment Act 1987*.

Clause 5 of the IAC's ToR requires the IAC to:

- a. review the draft planning scheme amendment (PSA) C116GELG, which has been prepared to apply a Specific Controls Overlay (SCO) and establish planning approval for the project under an incorporated document;
- b. consider issues raised in public submissions received in relation to the draft PSA; and
- c. recommend any changes to the draft PSA that it considers necessary.

Clause 35e provide for it to recommend:

...any appropriate conditions that may be lawfully imposed on any approval for the project, including with respect to the structure or content of draft PSA; the content of a work plan or conditions on any approval required for the on-site quarry, if issued under the MRSD Act; or conditions that should be attached to consents under the National Parks Act and the Forests Act if such consents are to be granted.

Table 23 lists the experts providing evidence on these effects.

Table 23 Evidence on land use and planning impacts

Document	Party	Expert	Firm	Area of expertise
D89 and D345	Proponent	John Glossop	Glossop Town Planning	Planning

The Proponent provided the following Technical Notes and submissions:

- TN14 – Draft Planning Scheme Amendment
- D346 – Proponent's submissions on land use and planning.

(ii) What did the EES say?

The EES includes the draft PSA and Incorporated Document at EES Technical Appendix Y, together with a planning report and assessment.

The draft PSA applies the SCO to the wind farm footprint and transmission line corridor. The SCO would introduce the Incorporated Document to regulate the use and development of Project infrastructure.

(iii) Evidence and submissions

The Proponent described how the draft PSA and Incorporated Document would operate and the rationale for using the SCO. It explained the SCO would allow the Project to occur without the need to separately obtain a planning permit on the basis that the Project has been subject to detailed assessment through the EES process. It submitted that the use of the SCO was appropriate for a Project of this type and scale, and consistent with the guidance about using the SCO in the *Practitioner's Guide to Victoria's Planning Schemes*, DTP.

Mr Glossop reviewed the draft PSA and concluded:

- the use of the SCO was appropriate
- the drafting of the Incorporated Document was generally appropriate, while recommending that it:
 - identify the EES plans on which development plans are to be based
 - include a reference that the EMF should be generally consistent with the exhibited EMF
- the SCO mapping should be adjusted to reflect Ms Dunstan's traffic evidence and the reduced area required for intersection works
- it is consistent with the Ministerial Direction Form and Content of Planning Schemes, subject to addressing various formatting and content matters in the explanatory report
- the Project would deliver net community benefit.

The Proponent supported these changes and they are included in the IAC recommended Incorporated Document at Appendix F:2.

The EPA (S129) made various suggestions in relation to the Incorporated Document, including:

- reviewing the clause numbering and ensuring cross-referencing is accurate
- amending the wording at Clause 7.8 (b and c) to ensure that the EMPs will incorporate the mitigation measures to address the risk of harm to amenity, human health and the environment.

The Proponent agreed to review the numbering and cross referencing in the Incorporated Document. It noted that the GED is legislated through the EP Act and the Incorporated Document is a subordinate legislative instrument which does not displace existing statutory duties and requirements. The Proponent submitted that, consistent with good drafting practices, it was not appropriate to adopt this recommendation as it would duplicate existing legislation.

Glenelg Shire Council (S183) expressed concerns about who would be responsible for enforcement under the SCO. It did not want to assume this role given the scale and complexity of the Project and believed it should rest with the Minister as responsible authority. The Proponent advised it was intended that the Minister would be responsible for enforcement and cited references to this in the EES. In order to clarify this, the Proponent sought a recommendation from the IAC that the Schedule to Clause 72.01 in the Planning Scheme be amended to specify that:

The Minister for Planning is the responsible authority for administering and enforcing clause 45.12 of the planning scheme in respect of the Kentbruck Green Power Hub Project, [month] 2025.

The Proponent cited examples of where this approach had been adopted, including the West Gate Tunnel Project and the North East Link Project. It submitted there were no 'notice' issues arising from this recommendation given the clear intention expressed in the EES that the Minister would be responsible for enforcement.

Glenelg Shire Council requested that the Incorporated Document be formally referred to it for consideration. The Proponent did not agree, noting the draft PSA had been publicly exhibited and the EES Hearing process provided opportunities for Glenelg Shire Council to request changes and to comment on various revisions and iterations provided by the Proponent and others.

The Proponent was satisfied there had been adequate opportunity for Glenelg Shire Council to review and consider the draft PSA, particularly given the Minister for Planning would be the responsible authority for the Project.

The Proponent sought a recommendation from the IAC that the draft PSA should proceed, including the Day 3 version of the Incorporated Document, subject to:

- redrafting the Explanatory Report as recommended by Mr Glossop
- amending the SCO mapping as identified by Mr Glossop
- modifying the Schedule to Clause 72.04
- preparing an Instruction Sheet.

Other issues about the draft PSA raised in evidence and submissions are discussed in Part B of this Report.

(iv) Discussion

The IAC has reviewed the draft PSA and is satisfied that the use of the SCO and Incorporated Document is an appropriate use of the Victoria Planning Provisions. The IAC generally supports the Proponent's Day 4 Incorporated Document unless otherwise stated in this Report. The recommended Incorporated Document will provide a suitable framework for managing the use and development of the Project.

The IAC is also satisfied the preparation and exhibition of the draft PSA have been consistent with the requirements of the *Planning and Environment Act 1987* and there are no statutory impediments to it being approved.

The Proponent has proposed extensive changes to the exhibited Incorporated Document in response to its consideration of submissions and evidence. These are discussed in Part B of this Report and are generally supported by the IAC and included in the recommended version at Appendix F:2.

The IAC supports Mr Glossop's assessment and his drafting and mapping recommendation. These are in the recommendations provide below.

The IAC supports the Proponent's response to the EPA submission. It notes the Incorporated Document has been substantially revised, including changes to numbering and cross references and agrees that the changes to exhibited Clause 7.8 (b and c) sought by the EPA are unnecessary.

The IAC supports the Proponent's response to the Glenelg Shire Council's submission. It agrees the Minister for Planning should be responsible for enforcement under the SCO and supports the inclusion of a reference in the Schedule to Clause 72.01 to confirm this. Whether or not this inclusion is necessary is a matter of drafting and interpretation, but the IAC is not opposed to clarifying the Minister is responsible for enforcement. The IAC does not believe Glenelg Shire Council need be provided with a further opportunity to comment on the Incorporated Document. As the Proponent noted, the EES process has provided Glenelg Shire Council with multiple opportunities for review and input, and the need to provide a further opportunity has not been established, particularly given that the Minister is the responsible authority.

The IAC notes that the draft PSA refers to SCO10 and that the GPS Glenelg currently includes the SCO10 and SCO11. The Schedule number will need to be updated in the amendment documentation.

The recommended Incorporated Document includes significant changes from the exhibited version, including the repositioning of various material from the EMF. The IAC has sought to identify any consequential changes that might be required to address this but believes both

documents would benefit from further detailed review to ensure that any necessary consequential changes to both documents are identified.

(v) Finding and recommendations

The IAC finds, subject to its recommendations:

- The planning controls in the draft PSA and Incorporated Document are appropriate to facilitate the Project.

If the Project proceeds, the IAC recommends:

Draft Glenelg Planning Scheme Amendment C116gelg

Approve draft Glenelg Planning Scheme Amendment C116gelg subject to reviewing it for consistency and to address any consequential changes resulting from other recommendations in this Report and to:

- a) include the recommended Incorporated Document at Appendix F:2**
- b) modify the Specific Controls Overlay Schedule 10 mapping as identified by Mr Glossop (Document 88)**
- c) modify the Schedule to Clause 72.01 to establish the Minister for Planning is responsible for enforcement under the Specific Controls Overlay**
- d) include an Instruction Sheet and revised Explanatory Report as recommended by Mr Glossop (D88)**
- e) update the Specific Controls Overlay Schedule number.**

Review the recommended Kentbruck Green Power Hub Project Incorporated Document at Appendix F:2 for consistency and to address any consequential changes resulting from the recommendations in this Report.

18.2 Environmental Management Framework

(i) Introduction

Clause 35f of the IAC's ToR require its report to contain:

recommendations as to the structure and content of the proposed environmental management framework, including with respect to monitoring of environmental effects and contingency plans and site rehabilitation

The IAC discusses the relevant elements of the EMF in Part B of this Report where it makes various recommendations that are included in the recommended EMF at Appendix F:1.

(ii) What did the EES say?

The EMF is included at EES Chapter 19.

The exhibited Incorporated Document requires an EMF be approved and endorsed by the Minister for Planning. The Incorporated Document describes what the EMF must include, and includes a requirement for the EMF submitted to the Minister to be accompanied by an explanation of any differences between it and the Minister's Assessment under the EE Act.

(iii) Evidence and submissions

The Proponent described the role of the EMF and the various changes it proposed following its consideration of evidence and submissions. These included various drafting changes to improve its clarity.

The specific issues raised by submitters and experts, particularly in relation to the mitigation measures, are discussed in Part B of this Report.

(iv) Discussion

The IAC notes the Proponent made extensive changes to the exhibited EMF following its consideration of submissions and evidence. The IAC generally supports the Proponent's Day 4 EMF unless otherwise stated in this Report. These changes, in combination with the further changes recommended by the IAC, significantly improve the EMF.

The IAC is satisfied the EMF will provide an appropriate framework for the design, construction and operation of the Project, subject to the recommended changes discussed in Part B of this Report and included in Appendix F:1.

The IAC has also recommended various language and content changes to the EMF that clarify its requirements and the actions that need to be undertaken. These will assist its implementation. Some of these address detailed drafting matters raised by submitters.

The IAC has undertaken limited review for consistent use of language and formatting. The EMF will need further revision, including format changes and updated page and section numbering, so that it can be read as a standalone document rather than as part of the EES.

The IAC's recommended EMF includes significant changes from the exhibited version, including new material and the repositioning of various material from the Incorporated Document. The IAC has identified some consequential changes but believes both documents would benefit from further detailed review to ensure that any necessary consequential changes to both documents are identified and resolved.

(v) Finding and recommendation

The IAC finds, subject to its recommendations:

- The recommended EMF will provide an appropriate framework for managing the Project.

If the Project proceeds, the IAC recommends:

Environmental Management Framework

Approve the Environmental Management Framework included at Appendix F:1 of this Report, subject to reviewing it for consistency and to address any consequential changes resulting from other recommendations in this Report.

18.3 National Parks Act 1975 and Forests Act 1958

(i) Introduction

The Project requires the following approvals:

- the consent of the Minister for Environment pursuant to section 27 of the *National Parks Act 1975* to allow for construction and operation of the proposed transmission line within Cobboboonee National Park
- a licence pursuant to section 52(1C)(f) of the *Forests Act 1958* for the proposed transmission line within Cobboboonee Forest Park.

Sections 27 (1) and (2) of the *National Parks Act 1975* are:

- (1) Subject to this Act and the regulations, a public authority may, where it has obtained the consent of Parks Victoria or the Great Ocean Road Coast and Parks Authority (as the case requires), perform its functions and exercise its powers in and in relation to a park in accordance with the conditions (if any) to which the consent is subject.
- (2) Parks Victoria or the Great Ocean Road Coast and Parks Authority (as the case requires) may not give consent to the performance of functions or exercise of powers by a public authority where the Minister considers that the performance of functions or exercise of powers may substantially affect a park unless the Governor in Council has determined that the consent should be given.

There were submissions and discussion during the Hearing about these provisions, including the interpretation of ‘substantially affect’.

Section 52(1C)(f) of the *Forests Act 1958* includes:

A licence or permit granted under this section to enter land set aside in section 50(1), may be for any one or more of the following purposes that is specified in the licence or permit—

...

(f) to provide any other facility or service which the Minister considers appropriate.

The IAC notes that the approvals required under the two Acts are different, and that the *National Parks Act 1975* is more prescriptive than the *Forests Act 1958*. For the purposes of its assessment, the IAC has applied the test of whether the Project would ‘substantially affect’ the park to both parks.

Clause 35e of the IAC’s ToR provide for it to recommend:

...any appropriate conditions that may be lawfully imposed on any approval for the project, including with respect to the structure or content of draft PSA; the content of a work plan or conditions on any approval required for the on-site quarry, if issued under the MRSD Act; or conditions that should be attached to consents under the National Parks Act and the Forests Act if such consents are to be granted.

(ii) What did the EES say

The approvals are discussed in EES Chapter 5 and Appendix Y (Planning Scheme Amendment documents). The EMF notes the approvals required under the *National Parks Act 1975* and *Forests Act 1958* but does not include any specific mitigation measures in relation to them.

EES Appendix Z includes a draft consent application under Section 27 of the *National Parks Act 1975*. The Proponent advised that at the request of DEECA, the draft consent application includes details of works proposed in Cobboboonee Forest Park to support a request under the *Forests Act 1958* for a lease to construct and operate the section of transmission line that is proposed within Cobboboonee Forest Park.

(iii) The issue

The issue is whether the proposed transmission line would substantially affect the Cobboboonee National and Forest Parks.

(iv) Evidence and submissions

The Proponent outlined the background to the draft consent application and indicated its intention to update and simplify the application. The was supported by Parks Victoria in its submission at the Hearing (D394). The Proponent provided submissions (D386) about the application of the *National Parks Act 1975* and various interpretation issues, including whether the Proponent was authorised to lodge an application and how to apply the term ‘substantially affect’.

It noted the *National Parks Act 1975* definition of ‘public authority’ included electrical distribution and transmission companies as defined in the *Electricity Industry Act 2000*. It submitted that the Proponent (or Ausnet) would meet that definition.

The Proponent assessed the impacts of the transmission line and their significance in the context of the objects of the *National Parks Act 1975*. It summarised the relevant objects as protecting the natural environment, flora and fauna, and recreational values.

The Proponent’s assessment highlighted the following factors:

- 52 First, and highly significantly, is that the transmission line will be constructed beneath the existing road. The construction of the road itself had an impact on the Park and its values through the removal, decades ago, of all vegetation along the road length, and the creation of artificial drainage lines, culverts and other road related modifications to the natural state of the land. The ongoing maintenance of the road also has a continuing impact. The use of the existing road reservation substantially limits the potential for, and scale and nature of, any effects from the construction of the transmission line.
53. Second, in relation to the loss of native vegetation, Technical Appendix C of the EES proceeds on a highly conservative assumption about the number of native trees that may be lost along Boiler Swamp Road. In accordance with Mr Galbraith’s evidence about the likely presence of roots beneath Boiler Swamp Road, it is highly likely that losses of native trees along the road will be materially lower than has been assumed in Technical Appendix C. Even on the conservative assumption that all of the assumed losses are in fact realised, in the context of the size of the Park, the loss of that number of trees would be not have a substantial effect on the ecological and recreational values of the Park.
- 54 Third, the evidence about terrestrial, arboreal and aquatic fauna as relevant to the Park is that, while there are a number of threatened species known or assumed to be present in the Park, there is no basis to conclude that the Project will have any significant effect on those fauna species. Most relevantly:
 - a) the Yellow-bellied Glider is considered to be present in the Park, but it is highly unlikely that the construction of the transmission line would impact the species, which occupies a vast area of contiguous suitable habitat in the surrounding parks;
 - b) the Southern Toadlet is known to be present in the Park, including in roadside drains, but the Project would not have any direct impacts on habitat for that species, and the proposed mitigation measures are adequate to address any potential indirect impacts on that species; and
 - c) there is a good understanding of which aquatic species are present in the various catchments, but the Project will not have any material effect on those species.
- 55 Fourth, in relation to construction impacts generally, those impacts will be contained in area and duration, and affect only short sections of the road at any one time, given the linear nature of the transmission line. As such, the effects from noise and construction traffic will be limited, and in the Proponent’s submission, ultimately immaterial, in the

context of the overall size of the Park; the vast majority of which will not be impacted at all.

56. Fifth, in relation to recreational values, any effects of the construction of the transmission line will be temporary. There is not expected to be any material impact on the Great South West Walk, for which access will always be maintained at the crossing point over Boiler Swamp Road. While public access to parts of Boiler Swamp Road would be limited during construction, access to other roads within the Park will remain available. There are also no tourist viewpoints or destination locations along Boiler Swamp Road, and consequently the impacts from road closures would not substantially affect the recreational values of the Park.

57. Sixth and finally, the ongoing operation of the transmission line, including any periodic maintenance (expected only to require access to link boxes), cannot reasonably be said to have any impact to the natural, flora and fauna, or recreational values of the Park,

The Proponent requested that the IAC make a specific finding that the transmission line would not ‘substantially affect’ the parks.

Parks Victoria (S151) provided an initial written submission about the consent required under the *National Parks Act 1975* and expanded on this during the Hearing (D394) with reference to the:

- *Parks Victoria Act 2018*
- *Parks Victoria Land Management Strategy 2022*
- *Ngootyoong Gunditj Ngootyoong Mara South West Management Plan 2015*.

Parks Victoria provided an overview of the route options assessment (EES Appendix A Transmission Line Options Assessment) in the context of considering options that did not traverse the Cobboboonee National Park and Forest Park.

Parks Victoria advised it had not concluded whether the Proponent was a ‘public authority’ and would consider this when a formal application was received.

In relation to the discretion under section 27 of the *National Parks Act 1975*, it noted there are no explicit considerations or guidelines, but outlined the matters it would have regard to, including:

...the purposes for which the park is reserved, the objects of the National Parks Act and the protection of the environmental, cultural and recreational values of the park.⁸⁸

It noted the Proponent’s confirmation that the application will be refined and include further detail to address matters raised during the EES process. It will consider that material in its determination of a formal application.

Parks Victoria provided submissions about statutory interpretation and the meaning of ‘substantially affect’, noting that the term is not defined in the Act. It discussed various factors that might influence how the term is applied and the types of impacts that might eventuate. It referred to a proposed water pipeline in the Great Otway National Park and Otway Forest Park as an example where the Minister had determined that a park would be substantially affected by vegetation removal, although the project was subsequently approved by the Governor in Council.

Parks Victoria did not offer any conclusions about the significance of possible affects or whether consent would be granted.

Submitters opposed the location of the transmission line along Boiler Swamp Road and through the Cobboboonee National and Forest Parks. They raised issues about vegetation, fauna, amenity, traffic, tourism and other impacts they believed were inconsistent with the values of the Parks.

⁸⁸ D394, Parks Victoria Hearing Submission, paragraph 57

(v) Discussion

The IAC notes that any impacts associated with the transmission line will primarily occur during construction and potentially decommissioning, depending on whether the transmission line is removed or remains in place. The operational phase is not expected to impact on the Parks.

The IAC's assessment of potential impacts is provided in Part B of this Report, including chapters 5 (Flora), 6 (Fauna) and 13 (Transport). The IAC found that impacts will not be significant and will be acceptable subject to implementing its recommendations, particularly those related to mitigation measures. In this context, the IAC generally agrees with the Proponent's assessment against the objects of the *National Parks Act 1975* and is satisfied the transmission line would not 'substantially affect' the Parks. In forming this view, the IAC notes the transmission line will be underground, within the highly modified environment of an existing road and involve the use of HDD in sensitive locations.

The IAC notes that MM-BS01 requires a CEMP for the works in Boiler Swamp Road to be prepared in consultation with DEECA Regions and Bushfire Forest Services and endorsed by the responsible authority. This would be in addition to any requirements under the *National Parks Act 1975* and *Forests Act 1958* approvals and is supported by the IAC.

Some submitters, including Parks Victoria, referred to the transmission line options described in EES Appendix A. The IAC notes that material but has primarily focussed on the potential impacts of the exhibited option and the significance and acceptability of any impacts. The exhibited option was the subject of comprehensive assessment, evidence and submissions in contrast to the more limited assessment of the other options in EES Appendix A. The IAC has concluded that the exhibited route is acceptable and has not made any findings about the merits or acceptability of other options.

(vi) Findings

The IAC finds, subject to its recommendations:

- The proposed underground transmission line through the Cobboboonee National and Forest Parks will not substantially affect the parks.
- Approvals for the transmission line under the *National Parks Act 1975* and *Forests Act 1958* should be consistent with the relevant IAC recommendations.

18.4 Mineral Resources (Sustainable Development) Act 1990**(i) Introduction**

Clause 35e of the IAC's ToR provide for it to recommend:

...any appropriate conditions that may be lawfully imposed on any approval for the project, including with respect to the structure or content of draft PSA; the content of a work plan or conditions on any approval required for the on-site quarry, if issued under the MRSD Act; or conditions that should be attached to consents under the National Parks Act and the Forests Act if such consents are to be granted.

The Project includes an onsite quarry (as described in Chapter 2.3 of this Report) to be regulated under the *Mineral Resources (Sustainable Development) Act 1990* (MRSD Act).

The *Mineral Resources (Sustainable Development) Amendment Bill 2023* has been passed by parliament and will introduce significant changes to the regulatory framework relating to mines in Victoria.

The amended MRSD Act will take effect on 1 July 2027 and will:

- be named the *Mineral Resources and Extractive Industries Act 1990*
- establish a modern, general duty and risk tiered regulatory framework for mineral and extractive industries
- remove reference to work plans, and the work plan approval process
- retain rehabilitation plans with similar approval mechanisms.

(ii) What did the EES say

The proposed quarry is discussed in EES Chapters 3, 4 and 5, as well as the relevant Technical Appendices.

EES Appendix W includes a Quarry Work Plan Requirements Report (QWPRR) that describes the quarry as follows:

The onsite quarry is proposed to supply road base material required for the construction of the Project which would incorporate hardstand areas, construction pads, upgrades and extensions to the existing roading network. The quarry will only operate to supply material for the Project and will remain available for the life of the Project to supply any materials for ongoing road maintenance during operation. The quarry will be rehabilitated when the Project requirements for material has ceased.⁸⁹

The purpose of the QWPRR is:

...to provide sufficient detail of the proposed quarry for the Project's Environment Effects Statement (EES), to allow the Minister for Planning and regulators to understand the potential environmental impacts of the quarry and to make any recommendations deemed appropriate.⁹⁰

It is not intended to meet the statutory requirements of a Work Plan.

The QWPRR explains the requirements of the MRSD Act but not the new *Mineral Resources and Extractive Industries Act 1990*. It says the quarry would require the preparation of a Work Plan to obtain a Work Authority from the Minister for Resources for an extractive industry. The Project is exempt from requiring a planning permit for the quarry under Section 77T of the Act, because an EES is being prepared for the Project, including the quarry.

The exhibited EMF includes various mitigation measures that are relevant to the quarry, including:

- MM-AQ01 Dust suppression
- MM-NV03 Quarry Work Plan
- MM-TP02 Traffic Management Plans
- MM-QU01 Quarry Supply
- MM-QU02 Imported Materials Management Plan
- MM-QU03 Site access
- MM-QU04 Waste
- MM-QU05 Site Closure and Rehabilitation Plan
- MM-QU06 Stockpile heights
- MM-QU07 Community Engagement Plan
- MM-QU08 Risk Treatment Plans.

⁸⁹ EES Appendix W Quarry Work Requirement Report, section 1.1, page 4

⁹⁰ EES Appendix W Quarry Work Requirement Report, section 1.1, page 4

(iii) The issue

The issue is whether any potential environmental impacts of the quarry are significant and acceptable.

(iv) Evidence and submissions

The Proponent relied on the relevant material in the EES and evidence reports. It proposed minor drafting changes to relevant mitigation measures in the Day 4 EMF together with:

- a new MM-QU09 Quarry Water Management Plan recommended in Mr Hughes' evidence report and discussed in Chapter 7 of this Report
- a requirement in MM-AH01 that the GMTOAC be consulted in relation to the Quarry Work Plan as discussed in Chapter 9 of this Report
- a requirement for a 30 metre wide buffer strip along the Portland – Nelson Road quarry frontage as recommended by Mr Haack and discussed in Chapter 10 of this Report.

The EPA advised it will assess the quarry work plan application when it is referred under either the MRSD Act or the EPA/Earth Resources Regulation Memorandum of Understanding.

There were no specific submissions about the QWPRR or relevant mitigation measures, although there were general concerns about various amenity impacts associated with the Project and by association the quarry.

(v) Discussion

The IAC notes that the QWPRR is intended to inform the EES process and is not a draft Work Plan or intended to meet the requirements of the MRSD Act. For these reasons, the IAC has not reviewed the document in detail, assessed it against the requirements of the MRSD Act or made detailed recommendations about its content. However, it is satisfied the QWPRR provides a useful overview of the quarry's development and operation and identification of key risks and mitigations.

The implications of the changes to the MRSD Act were not explored during the Hearing. After July 2027 the duty holder will be required to determine how they meet their obligations under the new general duty. The IAC is satisfied the EMF provides adequate guidance for appropriate management of quarry impacts regardless of the regulatory tool used for approval and implementation. It recommends the EMF include reference to the amended legislation and a work plan (or equivalent) to provide some flexibility in how this requirement is satisfied.

The IAC supports the relevant mitigation measures in the EMF and refinements proposed by the Proponent. It is satisfied any impacts from the quarry can be appropriately mitigated through compliance with the EMF and further approval through the MRSD Act or future requirements of the *Mineral Resources and Extractive Industries Act 1990*. For these reasons, the IAC makes no specific recommendations in relation to the content of a work plan or conditions on any further approval required for the quarry.

The IAC believes the content relating to preparing a Quarry Work Plan (MM-NV03) should be repositioned as a new MM-QU01 so it is collocated with the other Quarry Work Plan requirements. References to addressing quarry noise impacts can be retained in MM-NV03. These changes are included in the IAC's recommended EMF at Appendix F:1 of this Report.

(vi) Finding and recommendation

The IAC finds, subject to its recommendations:

- The potential impacts from the quarry will not be significant and are acceptable, subject to compliance with the EMF and any further approval that is required.

The IAC recommends:

Environmental Management Framework**Make the following change:**

Relocate the requirement to prepare the Quarry Work Plan from MM-NV03 to a new MM-QU01 to collocate it with the other Quarry Work Plan requirements.

Amend new MM-QU01 (Quarry Work Plan) to provide for a Quarry Work Plan or equivalent.

Include reference to the *Mineral Resources and Extractive Industries Act 1990* as relevant legislation in the relevant primary approvals.

18.5 Other statutory approvals**(i) Environment Protection and Biodiversity Conservation Act 1999 (Cth)**

EPBC Act matters are discussed in Chapters 4, 5 and 6 of this Report.

The IAC is not aware of any matters that would preclude approval under the EPBC Act. The IAC notes this is a matter for the Commonwealth to determine.

(ii) Aboriginal Heritage Act 2006

The Aboriginal Heritage Act requires the approval of a CHMP before the Project can proceed. Chapter 9 discusses the CHMP process, including its status and further actions that are necessary to finalise it.

Based on the material presented to it, the IAC is not aware of any impediments to the CHMP being finalised.

(iii) Flora and Fauna Guarantee Act 1988

The FFG Act lists threatened flora and fauna species and communities and includes requirements for removing listed species. The Project may require a permit or licence from DEECA to take or remove listed flora from public land (such as road reserves) pursuant to Section 48 of the FFG Act.

The IAC is satisfied there are no impediments to approval under this Act, subject to compliance with any relevant mitigation measures.

(iv) Wildlife Act 1975 (Vic)

The Project will require authorisation pursuant to sections 22, 28A and 28G of the *Wildlife Act 1975* should any wildlife be encountered during construction and require salvage. A suitably qualified wildlife handler holding a current management authorisation under the *Wildlife Act 1975* may be engaged to salvage wildlife if required.

The IAC is satisfied there are no impediments to approval under this Act, subject to compliance with any relevant mitigation measures.

(v) Water Act 1989 (Vic)

A Works on Waterways permit is required for works or activities in or over designated waterways or to bore, in accordance with section 67 of the *Water Act 1989*. The Project will cross designated waterways at several different locations. The Project would also require a permit for the taking or use of water from a waterway or groundwater from bores, pursuant to section 51 of the *Water Act 1989*.

Surface water and groundwater are discussed in Chapter 7 of this Report. The IAC is satisfied there are no impediments to approval under this Act, subject to compliance with relevant mitigation measures.

(vi) Road Management Act 2004

The *Road Management Act 2004* requires consent from the relevant road authority to conduct works in, on, or under public roads in the Victorian road network. The relevant road authorities are:

- DTP (coordinating road authority) for Portland - Nelson Road, Bridgewater Road, Madeira Packet Road, and Henty Highway
- DEECA for Boiler Swamp Road
- Glenelg Shire Council for most other roads that could be impacted by the Project.

Any works that are required will be confirmed through the further work required under the EMF, including the TMPs that will be prepared to the satisfaction of the relevant road authorities.

Transport is discussed in Chapter 13 of this Report. The IAC is satisfied there are no impediments to approval under this Act, subject to compliance with relevant mitigation measures.

(vii) Marine and Coastal Act 2018 and Rivers Act 1992

The Proponent and submitters referred to the *Marine and Coastal Act 2018* that requires consent for use, development and works on marine and coastal Crown land (the area 200 metres inland of the high-water mark of the sea). The Project does not include any works in this area and consequently no consent is required.

The *Marine and Coastal Act 2018* also applies to land up to five kilometres inland of the high-water mark (defined as the marine and coastal environment). This area includes sections of the Project, and while no consents are required the objectives of the legislation are relevant. The IAC has discussed the objectives of the *Marine and Coastal Act 2018* further in Chapter 19.2.

Some submitters referred to the *Heritage Rivers Act 1992*. The IAC accepts the Proponent's advice that there is no overlap between the declared Glenelg River area and the Project site. Consequently, no approval is required.

19 Integrated assessment

19.1 Introduction

This Chapter includes the IAC's overarching assessment in relation to:

- the legislative and policy framework
- Ecologically Sustainable Development (ESD)
- the draft evaluation objectives
- the IAC's ToR.

19.2 Assessment against the legislative and policy framework

The relevant legislative and policy framework is described in:

- EES Chapter 2 (Project rationale)
- EES Chapter 5 (Assessment and approvals framework)
- EES Technical Appendix B (Legislation and Policy Report).

Some of the legislative and policy considerations are overarching and others relate to specific impacts and approvals. This Chapter addresses the overarching considerations and Part B of this Report includes the IAC's assessment of specific environmental effects against relevant legislation and policy requirements.

(i) Climate change, renewable energy and biodiversity

The issue

The key issue is whether the Project strikes an acceptable balance between action on climate change and renewable energy, and biodiversity protection.

Evidence and submissions

The Proponent made extensive submissions on how the Project would contribute to the government's ambitious climate change and renewable energy legislation and policy. It said there is broad legislative and policy support for the Project and the Project will play an important role in contributing to Victoria's legislated renewable energy and emissions reduction targets.⁹¹

It advised the State government had released Joint Minister's Statement *A better approach to managing the biodiversity impacts of renewable energy* which recognises the challenges in balancing the transition to renewable energy with managing biodiversity values and that robust environmental assessments are needed to avoid, mitigate or manage impacts.

The Proponent said the disbenefits of the Project:

...were comparatively minimal and the various impacts have been minimised through design, and the proposed mitigation measures. To the extent that there are residual disbenefits that are harder to mitigate, those disbenefits need to be balanced against the overwhelmingly positive environmental benefit of the Project that is its contribution to reducing greenhouse gas emissions".⁹²

⁹¹ Proponent's Part A, Part B and closing submissions

⁹² D386, Proponent's closing submissions, page 22

In relation to renewable energy and climate change legislation and policy, the Proponent said there will be inevitable trade-offs and the IAC should reject any proposition the location is fundamentally inappropriate. It said:

It will not be possible to realise the legislated outcomes without impacts of the type that are at issue in this case arising.

...

While it is understandable that some members of the community are concerned about the nature and extent of change envisaged by this Project, that is an inevitable consequence of realising the vision called for by State and Federal policy.⁹³

In response to questions from the IAC about the potential loss of electricity production resulting from proposed curtailment strategies, the Proponent provided an assessment of potential generation loss (see Table 24) and explained:

- It is difficult to precisely estimate the impact of curtailment on the financial viability of the Project.
- This is in part because the relationship between reduced energy production and lost revenues is not linear.
- The value of electricity at sunset is generally far greater than at any other time, due to the increase in demand on the system in the evening, and the loss of the large solar generation fleet across the National Electricity Market.
- The value of electricity at times of low wind generation is also high because more expensive gas peaking plants turn on to meet demand.
- Increasing the cut in speed beyond 4.5 m/s at multiple turbines may have a significant impact on Project financial viability.

Table 24 Generation loss from low wind speed curtailment

Cut-in wind speed	Generation loss under Table 5 scenario (MWh/yr)
4.5 m/s (as per Table 5 of Appendix AA of the EES)	2,636
6 m/s	21,963
7.5 m/s	64,167

Source: D148 (RFI 14 and 15)

The Proponent called Mr Bolt to provide evidence on energy policy. Mr Bolt was satisfied the Project was consistent with the legislative and policy framework and would contribute to energy security, greenhouse gas emissions abatement and lower electricity prices. He highlighted the urgency of developing renewable energy to address climate change and concluded that it would be more difficult to achieve renewable energy and emissions reductions interim targets if the Project is not approved.

Mr Glossop described the Commonwealth and State government's commitments to action on climate change and support for renewable energy. He noted the Glenelg Planning Scheme lends considerable support for renewable energy and that one purpose of the Planning Scheme is "to support responses to climate change". He said the planning policy framework provides considerable but not unqualified support for the Project and provides guidance on interpreting other competing policy such as relating to coastal landscapes.

⁹³ D484, Proponent's closing (reply) submissions, page 51

As discussed in Chapter 17.3, Mr Morrison gave evidence for Save our Surroundings Riverina that was critical of energy policy.

Many submitters supported renewable energy, and associated benefits of emissions reduction and climate change mitigation, and acknowledged the tension with possible environmental disbenefits including biodiversity and visual impacts.

Some submitters were critical of energy policy and said the Project would not have a material impact on emissions. Others were satisfied the Project was consistent with energy policy.

Discussion

Action on climate change is critical and underpins an urgent need to facilitate appropriate renewable energy projects.

Australia is a signatory to the Paris Agreement and has given effect to this through the *Climate Change Act 2022* (Cth) which includes objects to:

- advance an effective and progressive response to the urgent threat of climate change drawing on the best available scientific knowledge
- set out emissions reduction targets which contribute to holding the increase in global average temperature to well below 2 degrees Celsius above pre-industrial levels.

The *Climate Change Act 2022* (Cth) establishes national net greenhouse gas emissions reductions targets. On 18 September 2025, after the Hearing, the federal government adopted a revised interim target of 62-70 per cent below 2005 levels by 2035, with the ultimate target of net zero by 2050. Victoria also has an ambitious legislated commitment to reach net zero emissions by 2045.

The Project is clearly consistent with climate and energy legislation and policy. The EES stated it was expected to produce approximately 2,000 gigawatt hours of renewable electricity and emissions reduction of 2.4 million tonnes per year. With consideration of the policy objectives of Victoria's *Climate Change Act 2017* (Vic) (section 22), the IAC is satisfied the Project will:

- reduce the State's emissions
- build resilience in the State's energy infrastructure
- manage the State's natural wind resources
- promote the resilience of ecosystems and biodiversity (discussed further below)
- promote and support transition to a net zero emissions economy
- promote intergenerational equity, support community resilience and overall result in a net community benefit.

As required by the 'principles of informed decision making' of the *Climate Change Act 2017* (Vic) (section 23), the IAC is satisfied the EES has adequately taken into account the best practicably available information regarding potential impacts of climate change and the potential contribution of the Project to emissions.

That said, while the IAC accepts the Project will result in emissions reduction benefits, it was not presented with detailed information regarding embodied emissions associated with Project construction. It relies on the evidence of Mr Bolt that "*Wind energy has a large quantity of embodied emissions but has a quick payback period and provides other long-term emissions benefits compared to fossil fuels*".⁹⁴

⁹⁴ D55, Mr Bolt Expert Witness Statement

As discussed in Chapter 17.3, the IAC is required to assess the Project against the current renewable energy policy framework.

In assessing the Project, the tension between protection of biodiversity values and action on climate change was very real. The IAC accepts the benefit of the Project in the context of the governments' legislated commitment to net zero emissions. These benefits are a significant factor in balancing policy objectives, however any environmental effects must be acceptable. The IAC has not taken lightly its responsibility to assess whether the Project achieves an acceptable policy balance.

The greatest area of concern to the IAC is whether biodiversity effects are acceptable, in particular fauna effects and the aggregate and synergistic effects given the ecologically sensitive location of the Project. This is said in the context that biodiversity is critical to the health and wellbeing of the planet and people, there is a clear legislative and policy framework in place for biodiversity protection, and action on climate change is required to mitigate negative impacts on many biodiversity values.

As discussed in Chapter 5.9 of this Report, the IAC considers that from a biodiversity perspective the location is not ideal for a wind farm. The Project introduces significant risk and will require active management to address those risk and ensure effects are acceptable. The IAC has paid particular attention to:

- the adequacy of actions proposed to avoid, minimise and offset specific impacts
- whether residual effects are acceptable.

The IAC's recommendations are informed by the precautionary principle. It recommends removing of a five of turbines to protect flight movements for Brolga, Australasian Bittern and other threatened birds, unless the pre-commissioning monitoring demonstrates there is adequate certainty the risk is low if the turbines are retained. In the context of the assessment undertaken in the EES and the information presented in evidence and submissions, the IAC considers this a proportionate response to the level of risk and uncertainty.

While the location entails a degree of environmental risk, the IAC has concluded there will be no significant biodiversity impacts and overall residual effects will be acceptable if effectively mitigated. If the IAC considered residual biodiversity impacts could not be appropriately mitigated or offset this would have impacted its overall findings about whether the Project is acceptable.

The IAC understands the recommendation to remove some turbines may create some uncertainty about the Project's renewable energy outputs and potentially overall viability of the Project. Ultimately this is a matter for the Proponent to consider.

Overall, the IAC is satisfied the assessment of environment effects is adequate, and subject to its recommendations, the Project complies with and strikes an appropriate balance between potentially competing policy that includes support for action on climate change and renewable energy and protection of biodiversity.

(ii) Other legislation and policies

As described in Chapter 18.5 of this Report, no approvals or consents are required for the Project under the *Marine and Coastal Act 2018* however insofar as the land is within the 'marine and coastal environment' (within 5 kilometres of the high-water mark) the objectives of the legislation are relevant. The Proponent submitted the Project has been designed in accordance with section

7 of the Act that sets out the objectives of the planning and management of the marine and coastal environment.

The IAC agrees with the Proponent that:

- the Project will make appropriate use of the resources in the marine and coastal environment, including importantly the wind resource;
- the Project will assist the resilience of the local ecosystems and community to climate change, as one element of the response that seeks to mitigate the worst effects of climate change;
- there has been significant consultation with the local community in respect of the Project, including specific consultation with the Gunditj Mirring, which will continue as the EMF is implemented; and
- the ecology fund proposed by the Proponent could be used for projects that build scientific understanding of the marine and coastal environment.⁹⁵

The IAC is satisfied that, subject its recommendations, the Project is consistent with the guiding principles of the *Marine and Coastal Act 2018* which relate to integrated coastal zone management, ecosystem based planning, ecologically sustainable development, evidence-based decision making, precautionary principle, proportionate and risk based approach to management and regulation and adaptive management.

As discussed in other Chapters of this Report, the IAC has considered, as relevant, the objects of the *National Parks Act 1975* and the vision, goals and strategies in the *Ngootyoong Gunditj Ngootyoong Mara South West Management Plan May 2015*. In assessing specific environmental effects the IAC has placed significant weight on protecting the amenity and natural experience of the national and coastal parks.

The IAC is satisfied that, subject its recommendations, the Project adequately takes into consideration the *National Parks Act 1975* in relation to:

- protection of the natural environment and biodiversity (see Chapters 4, 5 and 6)
- landscape and visual impacts (see Chapter 10)
- managing archaeological, geological, historic values (see Chapters 8 and 9)
- use, amenity and enjoyment of parks by the public (see Chapters 12, 14, 15 and 16).

This finding is contingent on the mitigations and comprehensive offsets recommended by the IAC in response to landscape and visual impacts.

The IAC has addressed issues relating to approvals of the transmission line within the Cobboboonee National Park and Cobboboonee Forest Park, along Boiler Swamp Road, and has concluded that, subject to its recommendations, the proposed underground transmission line will not substantially affect the parks.

As discussed in Part B and Chapter 18 of this Report, the IAC has concluded that, subject to its recommendations, Project is consistent with and supports other relevant legislation and policy.

(iii) Glenelg Planning Scheme

The Project is consistent with and supports the purpose of the Glenelg Planning Scheme and planning policy in that it:

⁹⁵ D484, Proponent's closing (reply) submissions, page 69

- Traditional Owners have been consulted with and there is a commitment to ongoing engagement
- it implements State, regional and local policies
- it supports responses to climate change.

Clause 71.02-3 (Integrated decision making) requires planning and responsible authorities to integrate planning policies to balance conflicting objectives in favour of net community benefit and sustainable development.

The IAC is satisfied the Project will deliver net community benefit, with consideration of the legislative and policy drivers and environmental and other benefits summarised in this Report. As described by Mr Glossop:

Considering the Commonwealth and State governments' policy and legislative objectives to reduce carbon emissions, and the associated strength of the policy which exists in the Planning Scheme today, the Project's negative impacts on the qualities of the coastal interface of the site would not warrant preventing this Project from proceeding.

I also note that the evidence of all of the witnesses is that the impacts (where they exist) are either acceptable, acceptable subject to certain conditions or are positive.⁹⁶

Sustainable development (ESD) is discussed in Chapter 19.3.

(iv) Findings

The IAC finds, subject to its recommendations, the Project:

- strikes an acceptable balance between policy relating to action on climate change and renewable energy, and biodiversity protection
- is consistent with legislation and policy relating to marine and coastal protection and national and coastal parks
- is supported by other legislation and policies.

19.3 Ecologically sustainable development

Clause 35b. of the IAC's ToR require it to have regard to the principles and objectives of ESD. The *Ministerial Guidelines for assessment of environmental effects under the Environment Effects Act 1978* (DTP, 2023) state:

Ecologically sustainable development maintains the ecological processes on which life depends both now and into the future, in a way that safeguards the welfare of future generations.

The relevant legislation and regulations refer to ESD in various forms. The Glenelg Planning Scheme includes strategies to:

- facilitate energy infrastructure projects that help diversify local economies and improve sustainability and social outcomes (Clause 19.01-1S Energy)
- plan for and sustainable manage the cumulative impacts of alternative energy development (Clause 19.01-2R Renewable Energy – Great South Coast).

The IAC has assessed the Project against the principles of ESD as described in section 3A of the EPBC Act as a guide (see Table 25).

⁹⁶ D88, Mr Glossop Expert Witness Statement paras 144-145

Table 25 IAC's assessment against the principles of ESD

Principles of ESD (based on section 3A of the EPBC Act)	IAC's assessment
Decision-making processes should effectively integrate both long-term and short-term economic, environmental, social and equitable considerations	The Project provides for both long-term and short-term economic, environmental and social benefits. On balance the Project will provide local, regional and State economic benefits particularly during construction and social effects are acceptable (see Chapter 15). Biodiversity effects are acceptable (see Chapters 4, 5 and 6) subject to the IAC's recommendations, and the Project will make a positive contribution to emissions reduction and climate change mitigation (see Chapter 19.2). Action on climate change in particular will provide benefits relating inter-generational equity.
If there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation	The IAC is satisfied the information and assessment informing the EES is adequate, subject to its recommendations for further avifauna survey work (Chapter 5) and detail design work required to implement the EMF (see consolidated list of recommendations in Chapter 19.5).
The principle of inter-generational equity - that the present generation should ensure that the health, diversity and productivity of the environment is maintained or enhanced for the benefit of future generations	The IAC is satisfied the Project supports the principle of inter-generational equity. Subject to its recommendations on individual impacts (see Part B of this Report) the environmental effects are acceptable. The Project will contribute to climate change mitigation with associated benefits for biodiversity protection and the health and wellbeing of future generations.
The conservation of biological diversity and ecological integrity should be a fundamental consideration in decision-making	The Project has been designed and refined in response to environmental values and constraints. The IAC is satisfied the consideration of biodiversity and ecological integrity has informed the Project design. The consideration of biodiversity and ecological integrity has been fundamental and central to the IAC's assessment, and its recommendations ensure this assessment informs the final Project design. Subject to its recommendations, the IAC is satisfied the Project will adequately avoid, minimise and offset environmental effects.
Improved valuation, pricing and incentive mechanisms should be promoted	The Project appropriately promotes a range pricing and incentive mechanisms including an ecology fund of \$1,000,000 per year for protecting endangered species and offsets for SBWB mortalities (see Chapter 5), offsets for native vegetation (see Chapter 4) and a community shared benefits strategy (see Chapter 15).

Overall, subject to its recommendations, the IAC considers on balance the Project satisfies the objectives and principles of ESD and considers it likely ecological processes will be protected and maintained now and into the future. The Project will respond to climate change objectives, facilitate emissions reduction and contribute to safeguarding the future for people, flora and fauna and ecological systems.

19.4 Assessment against the evaluation objectives

Table 26 summarises the IAC’s assessment of whether the Project meets the evaluation objectives and provides a cross reference to the relevant discussion in this Report.

Table 26 IAC’s assessment against the evaluation objectives

Evaluation objective	IAC response
<p>Biodiversity and habitat</p> <p>To avoid or minimise potential adverse effects on biodiversity values within the project site and its environs, including native vegetation, listed species and ecological communities other protected species and habitat for these species.</p>	<p>The Project will acceptably avoid or minimise potential adverse effects on biodiversity values, subject to applying the IAC’s recommendations. Adverse effects on biodiversity values will be appropriately avoided, minimised or offset.</p> <p>Native vegetation impacts are appropriately assessed, and mitigation measures provide for refinement as required in response to Project refinement. Threatened species impacts are acceptable. The IAC is satisfied appropriate offsets can be secured.</p> <p>Other than for the Australasian Bittern, the IAC has found the Project is not likely to have significant effects on fauna including:</p> <ul style="list-style-type: none"> - effects on SBWB and threatened bird species are acceptable and are not likely to compromise recovery of the species - effects on Brolga are acceptable and with implementation of the BMCP the Project should have a net zero impact on the Victorian Brolga population - effects on mammals, reptiles and aquatic fauna are acceptable and not likely to compromise recovery of any threatened species. <p>In relation to Australasian Bittern, while significant effects are likely, the effects are likely to be acceptable and will not compromise the recovery of the species. The IAC is satisfied that offsets are available will be required to compensate for any losses.</p> <p>While the Project is proposed to be located in a biodiversity sensitive area, the IAC is satisfied the potential effects can be appropriately managed and are acceptable. Potential impacts of the underground transmission line on Cobboboonee National and Forest Parks will not be significant and are acceptable.</p> <p>The IAC has found effects on MNES are unlikely to be significant and are acceptable.</p> <p>Taking precautionary approach the IAC recommends:</p> <ul style="list-style-type: none"> - removal of turbines 12, 34, 35, 42 and 112 to ensure movement corridors are adequate for Brolga and Australasian Bittern, unless pre-commissioning monitoring demonstrates to the satisfaction of the Minister, in consultation with DEECA, that the risk to the species is low - if the central option is adopted for the internal transmission line, it should be constructed underground unless pre-commissioning monitoring demonstrates Australasian Bittern are unlikely to fly through this area - changes to requirements of the BBAMP and role of the IEA. <p>Refer to Chapters 4, 5 and 6</p>
<p>Cultural heritage</p>	<p>The Project will acceptably avoid or minimise potential adverse effects on</p>

Evaluation objective	IAC response
<p>To avoid or minimise adverse effects on Aboriginal and historic cultural heritage and associated values.</p>	<p>cultural heritage values, subject to applying the IAC’s recommendations.</p> <p>While further investigations are necessary and are underway the IAC is satisfied the EES appropriately assessed Aboriginal cultural heritage effects and effects can be appropriately managed.</p> <p>Historic cultural heritage effects are appropriately assessed and can be suitably managed.</p> <p>Refer to Chapter 9</p>
<p>Catchment values and hydrology</p> <p>To maintain the functions and values of aquatic environments, surface water and groundwater quality and stream flows and prevent adverse effects on protected beneficial uses.</p>	<p>The Project will acceptably maintain the functions of catchment values and hydrology and prevent adverse effects on protected beneficial uses, subject to applying the IAC’s recommendations.</p> <p>While there are some potential for impacts for surface water, groundwater during construction these can be acceptably managed.</p> <p>There are no likely impacts during operations.</p> <p>The likelihood of impacts on GDEs is low and the EMF includes appropriate mitigation measures.</p> <p>The IAC has found effects on the Ramsar site are unlikely to be significant and are acceptable.</p> <p>Refer to Chapters 6, 7 and 8</p>
<p>Landscape and visual</p> <p>To minimise and manage potential adverse effects on landscape and visual amenity.</p>	<p>The Project will acceptably minimise and manage potential adverse effects on landscape and visual values, subject to applying the IAC’s recommendations. This finding is contingent on the mitigations and comprehensive offsets recommended by the IAC in response to landscape and visual impacts.</p> <p>Overall the IAC found:</p> <ul style="list-style-type: none"> - the LV CIA methodology was appropriate and suitably conservative - for the majority of specific areas and sites the impacts would not be significant and, subject to the mitigation measures, impacts are acceptable. <p>Some residual landscape character and visual impacts within national and coastal parks are unacceptable when considered in isolation from the broader Project benefits. This includes parts of the ocean beach foreshore, GSWW and Lake Mombeong, which have high visual sensitivity to visual impact. In these locations impacts would be significant and cannot be effectively mitigated.</p> <p>Residual impacts can be partly offset through strengthened mitigation measures including planting and new/updated visitor infrastructure. The IAC recommends a package of mitigations and offsets be approved by the responsible authority, and for offsets to be provided within any the affected national and coastal parks.</p> <p>On other landscape and visual impact matters:</p> <ul style="list-style-type: none"> - Project lighting and shadow flicker impacts have been appropriately assessed and are acceptable. - Cumulative impacts are not significant and are acceptable. - Additional plantings in national and coastal parks should be maintained by the Proponent for 10 years.

Evaluation objective	IAC response
	Refer to Chapter 10
<p>Land use and socioeconomic To avoid and minimise adverse effects on land use, social fabric of the community, local infrastructure, aviation safety and to neighbouring landowners during construction, operation and decommissioning of the project.</p>	<p>The Project will acceptably avoid or minimise potential adverse effects on land use and socioeconomic values, subject to applying the IAC’s recommendations.</p> <p>This includes for air quality, noise and vibration, land use and planning, social and economic impacts and safety, hazard and risk.</p> <p>Regarding land use and planning the IAC found while the Project site has various positive features that make it suitable for a wind farm, there are likely to be negative offsite impacts that can be managed.</p> <p>The IAC recommends:</p> <ul style="list-style-type: none"> - applying HAA noise limits to campgrounds in natural areas surrounding the Project - renaming the Community Enhancement Plan to Community Benefit Program and requiring community involvement in its management and governance and an updated assessment of accommodation supply - amending bushfire mitigation measures to require consideration of the Risk Management Plan model requirements in the CFA Guidelines and to refer to automatic shut down of turbines. <p>Refer to Chapters 11, 12, 14, 15 and 16</p>
<p>Community amenity, safety, roads and transport To avoid and minimise adverse effects for community amenity and safety, with regard to construction noise, vibration, dust, traffic and transport, operational turbine noise and fire risk management.</p>	<p>The Project will acceptably avoid or minimise potential adverse effects on community amenity, safety, roads and transport values, subject to applying the IAC’s recommendations.</p> <p>In addition to the recommendations detailed above, the IAC recommends updating the EMF to include a reference to the traffic evidence in addition to the TIA.</p> <p>Refer to Chapters 13, 14 and 16</p>

19.5 Response to Terms of Reference

(i) Clause 35

Clause 35 of the ToR details what analysis and findings the IAC’s report must contain. Table 27 summarises the IAC’s response to Clause 35 including the relevant Report reference. The detailed information and analysis supporting the IAC’s conclusions are included in Part B of this Report.

Table 27 IAC’s response to ToR Clause 35

Terms of Reference	IAC response and findings	Report reference
35a) analysis and conclusions with respect to the environmental effects of the project and their significance and	Subject to the IAC’s recommendations, overall the Project’s environmental effects are not expected to be significant and can be acceptably managed through the recommended EMF, Incorporated Document and other recommendations.	Parts B and C, and Appendices F:1 and F:2.

Terms of Reference	IAC response and findings	Report reference
acceptability	<p>The IAC has assessed some individual effects as significant and unacceptable, however in the context of Project benefits it considers the effects can be offset or partially offset and the residual impacts are acceptable. Specifically, this relates to:</p> <ul style="list-style-type: none"> - impacts on Australasian Bittern (see Chapter 5.4) - landscape and visual impacts on some parts of the southern beach foreshore, GSWW and Lake Mombeong (see Chapter 10). <p>The IAC has identified a key area of biodiversity sensitivity for avifauna and has recommended turbines 12, 34, 35, 42 and 112 be removed unless pre-commissioning monitoring demonstrates the risk to Brolgas and Australasian Bittern is low (see Chapter 5.3 and 5.4).</p> <p>The IAC has recommended the southern internal transmission line option be adopted or the central option, subject to undergrounding all or part of the central option and consideration of any other impacts (see Chapter 17.1).</p>	
35b) findings on whether acceptable environmental outcomes can be achieved, having regard to legislation, policy, best practice, and the principles and objectives of ecologically sustainable development	Subject to its recommendations, the IAC considers acceptable environmental outcomes can be achieved.	Parts B and C
35c) recommendations and/or specific measures that it considers necessary and appropriate to prevent, mitigate or offset adverse significant environmental effects	<p>The IAC has identified specific measures to prevent, mitigate or offset adverse significant environmental effects. Table 29 includes a summary of the IAC's recommendations. As described above, the IAC has assessed some individual effects as significant and unacceptable, however in the context of overall Project benefits the effects can be offset or partially offset and the residual impacts acceptable. Specifically this relates to:</p> <ul style="list-style-type: none"> - impacts on Australasian Bittern (see Chapter 5.4) - landscape and visual impacts on some parts of the ocean beach foreshore, GSWW and Lake Mombeong (see Chapter 10). <p>Other recommendations are intended to refine the Project to respond to best practice, avoid or further minimise risk and improve compliance with the draft evaluation objectives.</p>	Part B and Appendices F:1 and F:2.
35d) recommendations	The IAC recommends turbines 12, 34, 35, 42 and 112 be	Part B (in

Terms of Reference	IAC response and findings	Report reference
relating to the project alternatives considered through the EES and any feasible modifications to the design or management of the project that would offer improved environmental outcomes, particularly in relation to reducing/mitigating significant environmental effects	<p>removed unless pre-commissioning monitoring demonstrates the risk to Brolgas and Australasian Bittern is low (see Chapters 5.3 and 5.4).</p> <p>The IAC has recommended the southern internal transmission line option be adopted or the central option, subject to undergrounding all or part of the central option and consideration of any other impacts (see Chapter 17.1).</p> <p>Other recommendations are intended to refine the Project to respond to best practice, avoid or further minimise risk and improve compliance with the draft evaluation objectives.</p>	particular Chapters 5 and 17.1)
35e) recommendations for any appropriate conditions that may be lawfully imposed on any approval for the project, including with respect to the structure or content of draft PSA; the content of a work plan or conditions on any approval required for the on-site quarry, if issued under the MRSD Act or conditions that should be attached to consents under the <i>National Parks Act</i> and the <i>Forests Act</i> if such consents are to be granted	<p>Table 29 includes a summary of IAC's recommendations.</p> <p>The IAC finds, subject to its recommendations:</p> <ul style="list-style-type: none"> - the draft PSA and Incorporated Document are appropriate to facilitate the Project - the EMF will provide an appropriate framework for managing the Project - potential impacts on Cobboboonee National and Forest Parks will not be significant and are acceptable - potential impacts from the quarry will not be significant and are acceptable. <p>The IAC is not aware of any matters that would preclude any other relevant statutory approvals.</p>	Parts B and Chapter 18
35f) recommendations as to the structure and content of the proposed environmental management framework, including with respect to monitoring of environmental effects and contingency plans and site rehabilitation	The IAC's recommended EMF includes recommendations relating to monitoring effects, contingency measures and site rehabilitation.	Part B and Appendices F:1 and F:2.
35g) specific findings and recommendations about the predicted impacts on matters of MNES and their acceptability, including appropriate	The IAC finds likely effects on MNES are not significant, other than for the Australasian Bittern, and subject to its recommendations the IAC is satisfied any effects are acceptable and do not preclude the Project being approved.	Chapters 4, 5 and 6 and Appendix F:1

Terms of Reference	IAC response and findings	Report reference
controls and environmental management		

(ii) Clause 36

Clause 36 of the ToR details what information and details of process the IAC’s report should include. Table 28 identifies where this information is located in the IAC’s Report.

Table 28 IAC’s response to ToR Clause 36

Clause 36 Report requirements	Report reference
a) information and analysis in support of the IAC’s findings and recommendations	Parts B and C
b) a list of all recommendations, including cross-references to relevant discussions in the report	Table 29
c) a description of the public hearing conducted by the IAC, and a list of those persons consulted with or heard	Chapter 1 and Appendix C
d) a list of all submitters in response to the exhibited EES and draft PSA	Appendix B
e) list of the documents tabled during the proceedings	Appendix D

(iii) Clause 36b

Clause 36b of the ToR requires the IAC to list all recommendations, including cross-referencing relevant sections of this Report. Table 29 includes this information.

Table 29 IAC’s response to ToR Clause 36b

IAC recommendation	Report reference
Environmental Management Framework	
Flora	Chapter 4.3
Amend MM-BD01 (Native vegetation) to change the title to Native Vegetation Plan and to make it clear the Native Vegetation Removal Report and Biodiversity Assessment should be updated.	
Amend MM-BD02 (Assessment of tree health along Boiler Swamp Road) to require the surveys to be undertaken to the satisfaction of Department of Energy, Environment and Climate Action.	
Amend MM-BD06 (Boiler Swamp Road assessment of losses) to require root investigations be informed by a suitably qualified and experienced arborist and an updated Native Vegetation Removal Report.	
Fauna (Southern Bent-wing Bat Management)	Chapter 5.2
Amend MM-BD11 (Southern Bent-wing Bat Management) to refine the drafting and add or amend the following requirements:	
- include an objective to ensure the Project results in a net benefit for the Southern Bent-wing Bat	
- require post-construction monitoring of bat activity at the nacelle for at least two years	
- require use of trained detection dogs for mortality monitoring unless it can be	

demonstrated other methods will be more effective

- require fuel management in the areas under pine canopy around turbines
- include a cumulative impact trigger for the SBWB and a requirement that exceedance of the trigger results in staged curtailment across the whole wind farm unless the mortalities are restricted to one group of turbines. The process for determining the curtailment area must be set out in the BBAMP
- specify a benchmark and confidence limits for the proportion of total mortalities or injuries detected through monitoring, and provide for an increase in the curtailment speed if this benchmark cannot be achieved
- align monitoring requirements with the performance level.

Fauna (Australasian Bittern)

Chapter 5.4

Amend MM-BD10 (Australasian Bittern) to add a requirement for a before-after control-impact (BACI) study to provide a better understanding of potential wind farm impacts to movement behaviour and habitat use by the Australasian Bittern.

Amend MM-BD13 (Improved powerline visibility) to add a requirement for a review to be undertaken every five years to determine whether more effective diverters have become available and whether their use is warranted taking account of the results of mortality monitoring.

Landscape Character and Visual Amenity (The Discovery Bay Coastal Park)

Chapter 10.3.4

Revise MM-LV01 (Public view locations in national and coastal parks) to require that a package of mitigations and offsets be approved by the responsible authority and to enable offsets to be provided within any or all the affected national and coastal parks.

Landscape Character and Visual Amenity (National Parks)

Chapter 10.3.5

Revise MM-LV01 (Public view locations in national and coastal parks) to broaden the areas where mitigation and offsets might be provided.

Landscape Character and Visual Amenity (Local roads and agricultural land)

Chapter 10.3.7

Revise MM-LV03 (On-site landscaping plan) to require analysis of the utility and possible location and depth of retained plantation buffers along Portland-Nelson Road.

Landscape Character and Visual Amenity (Maintaining mitigation and offset planting)

Chapter 10.3.11

Amend MM-LV01 (Public view locations in national and coastal parks) to require the Proponent maintain additional plantings for 10 years.

Landscape Character and Visual Amenity (Shadow Flicker)

Chapter 10.3.12

Amend MM-LV06 (Shadow flicker assessment) to require:

- the pre-construction shadow flicker assessment to determine potential effects of shadow flicker on existing dwellings and to identify any opportunities to further minimise impacts, and to refine drafting
- refine drafting relating to landholder agreements.

Noise and vibration (Noise and vibration assessment)

Chapter 12.3

Amend MM-NV05 (Pre-construction wind turbine noise assessment) and MM-NV06 (Post-construction noise assessment) to apply High Amenity Area noise limits to campgrounds in natural areas surrounding the Project.

<p>Noise and vibration (Construction noise and vibration)</p> <p>Amend MM-NV01 (Construction noise and vibration management plan) to require refer to good environmental work practices, consistent with EPA Publication 1834.1 <i>Civil construction, building and demolition guide</i>, 12 September 2023.</p>	Chapter 12.4
<p>Transport</p> <p>Amend MM-TP02 (Traffic management plans) to include a reference to updated material in Ms Dunstan’s evidence report (D79).</p>	Chapter 13.2
<p>Socio-economic</p> <p>Amend MM-SE02 (Shared benefits strategy) to rename the Community Enhancement Plan to Community Benefit Program and to require community involvement in its management and governance</p> <p>Amend MM-SE04 (Workforce Accommodation Management Plan) to require an update assessment of accommodation supply and to clarify the demand reduction step.</p>	Chapter 15.2
<p>Bushfire</p> <p>Renumber the bushfire mitigation measures.</p> <p>Amend MM-BF03 (Risk Management Plan) to require consideration of the model requirements in the Country Fire Authority <i>Design Guidelines and Model Requirements, Renewable Energy Facilities</i> (as amended from time to time) and to refer to automatic shut down of turbines.</p> <p>Amend MM-BF04 (Operational Fire Emergency Management Plan) to refer to automatic shut down of turbines.</p>	Chapter 16.4
<p>Decommissioning</p> <p>Require the Decommissioning Environmental Management Plan be prepared to the satisfaction of the responsible authority.</p>	Chapter 17.2
<p>Environmental Management Framework</p> <p>Approve the Environmental Management Framework included at Appendix F:1 of this Report, subject to reviewing it for consistency and to address any consequential changes resulting from other recommendations in this Report.</p>	Chapter 18.2
<p>Mineral Resources (Sustainable Development) Act 1990</p> <p>Relocate the requirement to prepare the Quarry Work Plan from MM-NV03 to a new MM-QU01 to collocate it with the other Quarry Work Plan requirements.</p> <p>Amend new MM-QU01 (Quarry Work Plan) to provide for a Quarry Work Plan or equivalent.</p> <p>Include reference to the <i>Mineral Resources and Extractive Industries Act 1990</i> as relevant legislation in the primary approvals.</p>	Chapter 18.4
Incorporated Document	
<p>Flora</p> <p>Amend Clause 7.16 to require the final offset strategy include details of the proposed security mechanism and to be agreed by DEECA.</p>	Chapter 4.3
<p>Southern Bent-wing Bat</p> <p>Amend the Bird and Bat Adaptation Management Plan requirements to:</p> <ul style="list-style-type: none"> - include an objective to ensure the Project results in a net benefit to the 	Chapter 5.2

Southern Bent-wing Bat

- incorporate the recommendations in Chapter 5.7 of this Report.

Brolgas

Chapter 5.3

Amend the Brolga Monitoring and Compensation Plan requirements to:

- require pre-commissioning to inform movement corridor width and management measures
- require a before-after control-impact study
- ensure compensatory measures include impacts from habitat displacement.
- provide for the IEA to have a similar role in reviewing the Brolga Monitoring and Compensation Plan to that specified for the Bird and Bat Adaptive Management Plan.
- Amend to incorporate the recommendations in Chapter 5.7 of this Report.

Australasian Bittern

Chapter 5.4

Amend the Bird and Bat Adaptive Management Plan requirements to:

- include an objective for the Project to result in a net benefit to the Australasian Bittern
- include benchmarks with confidence limits for the Australasian Bittern specifying the proportion of total mortalities or injuries that must be detected through monitoring
- add the potential for advanced detection technology to be used for collision detection
- incorporate the recommendations in Chapter 5.7 this Report.

Impacts on other birds

Chapter 5.5

Amend the Bird and Bat Adaptive Management Plan requirements to:

- add the potential for advanced detection technology to be used for collision detection
- to include benchmarks with confidence limits for threatened birds specifying the proportion of total mortalities or injuries that must be detected through monitoring
- recognise that mortality of one Orange-bellied Parrot would constitute a significant impact and an offset would need to be provided in consultation with Department of Energy, Environment and Climate Action and Department of Climate Change, Energy, the Environment and Water (C'th)
- incorporate the recommendations in Chapter 5.7 this Report.

Bird and Bat Adaptive Management Plan

Chapter 5.7

Amend the Bird and Bat Adaptive Management Plan requirements to:

- include an objective to ensure operation of the Project results in a net benefit to the Southern Bent-wing Bat and the Australasian Bittern
- require it to be revised and re-approved following completion of pre-commissioning monitoring
- include measurable performance indicators to support the objectives
- require 18 months of pre-commissioning monitoring to allow sufficient time for training of detection technology and provide a full year of data
- provide for the option of using advanced detection technology during

operation, and revise considerations for deciding whether the technology should be used

- require a monitoring program for the life of the project
- include acceptable benchmarks and confidence limits for mortality monitoring for key fauna species
- provide for the Minister for Planning to require specified revisions.

Independent Environmental Auditor

Amend the Independent Environmental Auditor requirements to:

- require the Independent Environmental Auditor review the revised Bird and Bat Adaptive Management Plan and the Brolga Monitoring and Compensation Plan and undertake ongoing monitoring of implementation, including assessment against the objectives of the plans
- require the Independent Environmental Auditor's findings be made public within 30 days of being report to the Minister for Planning.

Draft Glenelg Planning Scheme Amendment C116gelg

Amend draft Glenelg Planning Scheme Amendment C116gelg subject to reviewing it for consistency and to address any consequential changes resulting from other recommendations in this Report and to: Chapter 18.1

- include the recommended Incorporated Document at Appendix G:2
- modify the Specific Controls Overlay Schedule 10 mapping as identified by Mr Glossop (D88)
- modify the Schedule to Clause 72.01 to establish the Minister for Planning as responsible for enforcement under the Specific Controls Overlay
- include an instruction sheet and revise the explanatory report as recommended by Mr Glossop (Document 88)
- update the Specific Controls Overlay Schedule number.

Review the recommended Kentbruck Green Power Hub Project Incorporated Document at Appendix F:2 for consistency and to address any consequential changes resulting from the recommendations in this Report.

Other recommendations

Brolgas

Chapter 5.3

Remove the following turbines unless pre-commissioning monitoring demonstrates to the satisfaction of the Minister for Planning, in consultation with Department of Energy, Environment and Climate Action, that the risk to Brolgas is low: Turbines 12, 34, 35 and 42.

Australasian Bittern

Chapter 5.4

Remove the following turbines unless pre-commissioning monitoring demonstrates to the satisfaction of the Minister for Planning, in consultation with the Department of Energy, Environment and Climate Action, that the risk to Australasian Bittern is low: Turbines 12, 34, 35, 42 and 112.

Internal 275 kV transmission line options

Chapter 17.1

Adopt the underground southern option for the internal 275 kV transmission line or alternatively the central option subject to:

- a) undergrounding all or parts of the central option to address bird impacts as

required by the recommended Incorporated Document

- b) considering other potential impacts arising from undergrounding all or part of the central option, including impacts on Aboriginal cultural heritage.
-

PART D: APPENDICES

Appendix A Terms of Reference



Version: February 2025

The Kentbruck Green Power Hub Project Inquiry and Advisory Committee (IAC) is appointed to inquire into, and report on, the likely environmental effects of the proposed Kentbruck Green Power Hub (the project) in accordance with these terms of reference.

The IAC is appointed pursuant to:

- section 9(1) of the *Environment Effects Act 1978* (EE Act) as an inquiry; and
- part 7, section 151(1) of the *Planning and Environment Act 1987* (P&E Act) as an advisory committee, to consider the draft planning scheme amendment (PSA) C116GELG.

Name

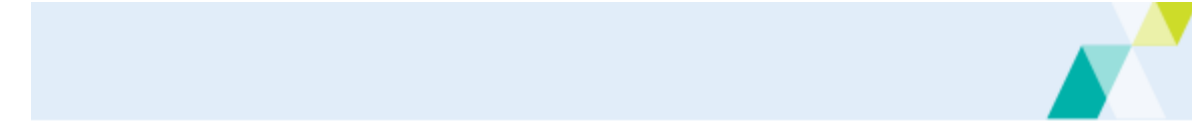
1. The IAC is to be known as the 'Kentbruck Green Power Hub Project IAC'.

Skills

2. The IAC should consist of members with expertise in:
 - a. ecology (particularly for bats and avifauna), including population ecology of threatened species and associated data deficiencies;
 - b. native vegetation and general biodiversity;
 - c. Aboriginal cultural values and cultural heritage; and
 - d. land use policy (including infrastructure works in national parks and on public land).
3. The IAC will comprise an appointed Chair (IAC Chair), a Deputy Chair and other appropriately qualified members.

Purpose of the IAC

4. The IAC is appointed by the Minister for Planning (the Minister) under section 9(1) of the EE Act to hold an inquiry into and report on the environmental effects of the project. The IAC is to:
 - a. review and consider the environment effects statement (EES), the other exhibited documents, and submissions received in relation to the project, with a focus on matters where there is potential for significant environmental effects, in particular for biodiversity, Aboriginal cultural heritage, water, amenity and land-use;
 - b. consider and report on the significance and acceptability of likely environmental effects of the project, having regard to relevant policy and legislation and relevant evaluation objectives in the EES scoping requirements;
 - c. consider and report on potential significant impacts on relevant matters of national environmental significance protected under the *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (EPBC Act), including the significance and acceptability of residual impacts;
 - d. identify any additional mitigation measures and/or project modifications beyond those identified in the EES the IAC considers necessary and effective to avoid, mitigate or manage the significant environmental effects of the project consistent with relevant policy and legislation; and
 - e. advise on how these modifications and measures should be implemented through the necessary approvals and consents for the project.

- 
5. The IAC is also appointed as an advisory committee under section 151(1) of the P&E Act to:
 - a. review the draft planning scheme amendment (PSA) C116GELG, which has been prepared to apply a Specific Controls Overlay (SCO) and establish planning approval for the project under an incorporated document;
 - b. consider issues raised in public submissions received in relation to the draft PSA; and
 - c. recommend any changes to the draft PSA that it considers necessary.
 6. The IAC must produce a report of its findings and recommendations to the Minister on the environmental effects and draft PSA, to inform:
 - a. the Minister's assessment under the EE Act, which will be considered by statutory decision makers for the project; and
 - b. the Minister's consideration of the draft PSA under the P&E Act in due course.

Background

Project outline

7. The Kentbruck Green Power Hub Project comprises the development of:
 - a. a wind energy generation facility within a radiata pine plantation and agricultural land, 30 kilometres north-west of Portland and three kilometres east of Nelson, Victoria; and
 - b. a new 275kV transmission line through Cobboboonee National Park and Cobboboonee Forest Park to connect the wind farm to the existing 275kV/500kV Heywood Terminal Station.
8. The project area, which encompasses all elements of the project, covers an area of approximately 8,350 hectares.
9. The key components of the project include:
 - a. 105 wind turbines;
 - b. on-site electrical substations;
 - c. weather stations;
 - d. on-site quarry;
 - e. 26.6km 275kV underground transmission line;
 - f. concrete batching plants;
 - g. power and water supply infrastructure; and
 - h. site facilities including site offices and car park facilities.
10. The project's proponent is Neoen Australia Pty Ltd (Neoen), which is responsible for preparing technical studies, consulting with the public and stakeholders and preparing an EES and draft PSA.

EES assessment process

11. In response to a referral under the EE Act from the proponent, the then Minister for Planning determined on 25 August 2019 that an EES was required for the project and issued his decision with procedures and requirements for the preparation of the EES as specified in **Attachment 1**.
12. The EES was prepared by the proponent in response to the EES scoping requirements issued by the Minister for Planning on 1 February 2020.
13. The EES (including the draft PSA) was placed on public exhibition for thirty (30) business days. This public comment process is in accordance with the procedures and requirements issued for this EES by the Minister. Neoen is responsible for public notice of EES exhibition.

Commonwealth assessment process

14. Because of its likely significant impacts on matters of national environmental significance, the project was determined to be a controlled action requiring assessment and approval under the EPBC Act on 7 November 2019. The relevant controlling provisions under the EPBC Act are listed Ramsar wetlands

(Sections 16 and 17B), threatened species and communities (sections 18 & 18A) and listed migratory species (sections 20 & 20A).

15. Under the EPBC Act bilateral agreement between the Australian and Victorian governments, the Victorian EES process is serving as the accredited assessment process to address EPBC Act assessment requirements for this project. The assessment of environmental effects to be made by the Victorian Minister for Planning will be provided to the Commonwealth Minister for Environment and Water to inform the approval decision under the EPBC Act.

Planning approval process

16. The IAC is to consider and provide advice on draft PSA C116GELG that proposes to facilitate the use and development of facilities and infrastructure associated with the project, including a wind energy facility and an underground transmission line. The PSA is proposed to apply a SCO to the wind farm footprint and the transmission line and regulate the use and development of project facilities and infrastructure within the SCO in accordance with an incorporated document proposed to be included in the Glenelg Planning Scheme.


Other approvals

17. The project may require other statutory approvals and/or consents, as outlined in the EES, including the following key approvals:
 - a. an approved work plan and work authority under the *Mineral Resources (Sustainable Development) Act 1990* (MRSD Act);
 - b. an approved cultural heritage management plan under the *Aboriginal Heritage Act 2006*;
 - c. Minister for Environment's consent pursuant to section 27 of the *National Parks Act 1975* to allow for construction and operation of the proposed transmission line within Cobboboonee National Park;
 - d. a licence pursuant to section 52(1C)(f) of the *Forests Act 1958* for the proposed transmission line within Cobboboonee Forest Park;
 - e. consents under the *Road Management Act 2004*, to conduct works in, on, or under roads;
 - f. approvals under the *Water Act 1989* for the taking or use of groundwater, to undertake works on a waterway or to install a bore;
 - g. a permit to remove listed flora and fauna from public land under section 48 of the *Flora and Fauna Guarantee Act 1988*; and
 - h. an authority to take or disturb wildlife under the *Wildlife Act 1975*.

Process

Stage 1 – Submissions

18. Submissions on the EES and draft PSA are to be provided in writing on or before the close of submissions.
19. Submissions will be collected by the office of Planning Panels Victoria (PPV) through the Engage Victoria platform. All submissions must state the name and address of the person making the submission. Submissions will be collected and managed in accordance with the *'Guide to Privacy at PPV'*.
20. Petition responses will be treated as a single submission and only the first names from a petition submission will be registered and contacted.
21. Pro-forma submitters will be registered and contacted individually if they provide their contact details. However, the IAC should encourage pro-forma submitters who want to be heard at the hearing to present as a group, given their submissions raise the same issues.
22. All written submissions and other supporting documentation or evidence received through the course of the IAC process may be published online, unless the IAC specifically directs that the submission or other material, or part of it, is to remain confidential.

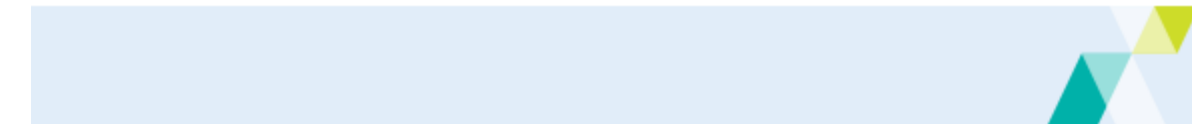
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23. Electronic copies of each submission on the EES and draft PSA are to be provided to the proponent, Department of Transport and Planning (DTP) (Impact Assessment and Renewables Planning), Glenelg Shire Council and the Gunditj Mirring Traditional Owners Corporation.
 24. PPV will retain any written submissions and other documentation provided to the IAC for a period of five years after the time of its appointment.

Stage 2 – Public hearing

25. The IAC must hold a public hearing and may make other such enquiries as are relevant to undertaking its role.
26. Prior to the commencement of the public hearing, the IAC must hold a directions hearing to make directions it considers necessary or appropriate as to the conduct, scope or scheduling of the public hearing, including the preparation and publication of a Request for Further Information report if required.
27. When it conducts a public hearing, the IAC has all the powers of an advisory committee that are specified in section 152(2) of the P&E Act.
28. The IAC may inform itself in any way it sees fit, but must review and consider:
 - a. the exhibited EES and draft PSA;
 - b. all submissions and evidence provided to the IAC by the proponent, state agencies, local councils and submitters;
 - c. the views (if known) of Traditional Owners and Registered Aboriginal Parties;
 - d. any information provided by the proponent and parties that respond to submissions or directions of the IAC; and
 - e. any other relevant information that is provided to, or obtained by, the IAC.
29. The IAC must conduct its process in accordance with the following principles:
 - a. the public hearing will be conducted in an open, orderly and equitable manner, in accordance with the principles of natural justice;
 - b. the public hearing will be conducted with a minimum of formality and without legal representation being necessary for parties to be effective participants; and
 - c. the IAC process and hearing itself is to be exploratory and constructive, with adversarial behaviour discouraged and with cross-examination/questioning to be regulated by the IAC in the context of these three principles.
30. The IAC may limit the time of parties appearing before it.
31. The IAC may direct that a submission or evidence is confidential in nature and the hearing be closed to the public for the purposes of receiving that submission or evidence.
32. The IAC may conduct a public hearing when there is a quorum of at least two of its members present or participating through electronic means, one of whom must be the IAC Chair or Deputy Chair.
33. If directed by the IAC, an audio recording of the hearing must be procured by the proponent. If recorded, the audio recording will be provided to PPV as a weblink and would be made publicly available as soon as practicable after the conclusion of each day of the hearing, or otherwise as directed by the IAC.
34. Any other recording of the hearing by any other person or organisation may only occur with the prior consent of, and strictly in accordance with, the directions of the IAC.

Stage 3 – Report

35. The IAC must produce a written report for the Minister for Planning containing its:
 - a. analysis and conclusions with respect to the environmental effects of the project and their significance and acceptability;

- 
- b. findings on whether acceptable environmental outcomes can be achieved, having regard to legislation, policy, best practice, and the principles and objectives of ecologically sustainable development;
 - c. recommendations and/or specific measures that it considers necessary and appropriate to prevent, mitigate or offset adverse significant environmental effects;
 - d. recommendations relating to the project alternatives considered through the EES and any feasible modifications to the design or management of the project that would offer improved environmental outcomes, particularly in relation to reducing/mitigating significant environmental effects;
 - e. recommendations for any appropriate conditions that may be lawfully imposed on any approval for the project, including with respect to the structure or content of draft PSA; the content of a work plan or conditions on any approval required for the on-site quarry, if issued under the MRSD Act; or conditions that should be attached to consents under the National Parks Act and the Forests Act if such consents are to be granted;
 - f. recommendations as to the structure and content of the proposed environmental management framework, including with respect to monitoring of environmental effects and contingency plans and site rehabilitation; and
 - g. specific findings and recommendations about the predicted impacts on matters of national environmental significance and their acceptability, including appropriate controls and environmental management.
36. The report should include:
- a. information and analysis in support of the IAC's findings and recommendations;
 - b. a list of all recommendations, including cross-references to relevant discussions in the report;
 - c. a description of the public hearing conducted by the IAC, and a list of those persons consulted with or heard;
 - d. a list of all submitters in response to the exhibited EES and draft PSA; and
 - e. a list of the documents tabled during the proceedings.

Timing

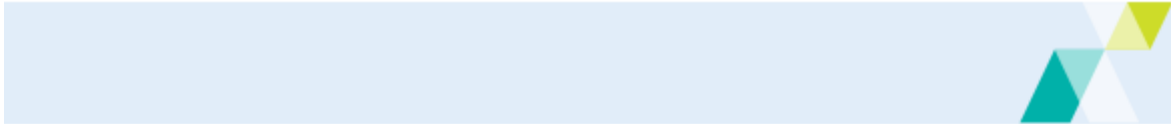
- 37. The IAC should hold a directions hearing no later than 20 business days from the final date of the exhibition period.
- 38. The IAC should commence the hearing no later than 50 business days from the final date of exhibition period.
- 39. The IAC must submit its report in writing to the Minister for Planning within 40 business days from its last day of its proceedings.
- 40. The DTP's Impact Assessment Unit must liaise with PPV to agree on the directions hearing and hearing dates.

Minister's assessment

- 41. The Minister for Planning will make an assessment of the environmental effects of the project after considering the IAC's report as well as the EES, submissions and any other relevant matters.
- 42. PPV will notify submitters of the release of the Minister for Planning's assessment and IAC report.

Fee

- 43. The fees for the members of the IAC will be set at the current rate for a panel appointed under part 8 of the P&E Act.
- 44. All costs of the IAC, including the costs of obtaining any expert advice, technical administration and legal support, venue hire, accommodation, recording proceedings and other costs must be met by the proponent.

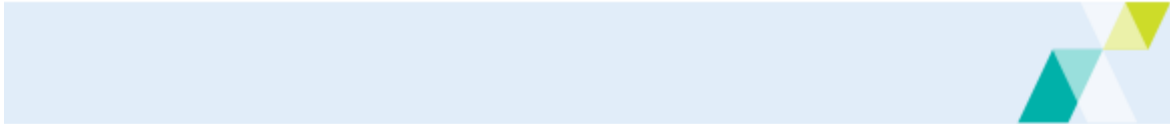


Miscellaneous

- 45. The IAC may apply to the Minister for Planning (or their delegate) to vary these terms of reference in writing, at any time before submission of its report. This includes to seek variation to the required hearing or reporting timeframes.
- 46. The IAC may retain specialist expert advice, additional technical support, or legal counsel to assist if considered necessary.
- 47. PPV is to provide any necessary administrative support to the IAC. The proponent is to provide any necessary administrative or technical support to the IAC in relation to the conduct of the hearing.

Dr Bruce Abernethy
Executive Director, State Planning Assessment and Facilitation

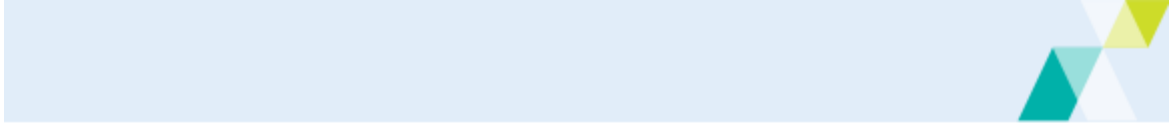
Date: 26/2/2025



The following information does not form part of the Terms of Reference.

Project Management

- 48. For matters regarding the inquiry process, please contact Planning Panels Victoria, by phone (03) 5381 9457 or email Planning.Panels@transport.vic.gov.au.
- 49. For matters regarding the EES process please contact the Impact Assessment Unit in DTP by phone (03) 8622 7633 or email environment.assessment@transport.vic.gov.au.



Attachment 1

REFERRAL NUMBER 2019-05

DECISION ON PROJECT: The Kentbruck Green Power Hub Project**Decision under section 8B(3)(a) of the *Environment Effects Act 1978***

Assessment through an environment effects statement (EES) under the *Environment Effects Act 1978* **is required** for the reasons set out in the attached Reasons for Decision.

Procedures and requirements under section 8B(5) of the *Environment Effects Act 1978*

The procedures and requirements applying to the EES process, in accordance with both section 8B(5) and the *Ministerial guidelines for assessment of environmental effects under the Environment Effects Act 1978* (Ministerial Guidelines), are as follows.

- (i) The EES is to document the investigation and avoidance of potential environmental effects of the proposed project, including for any relevant alternatives, as well as associated environmental mitigation and management measures. In particular, the EES needs to address:
 - a. effects on biodiversity and ecological values within, near and downstream of the project site including native vegetation, listed communities and species (flora and fauna) under the *Flora and Fauna Guarantee Act 1988* and *Environment Protection and Biodiversity Conservation Act 1999*;
 - b. effects on surface water environments and related beneficial uses, including as a result of changes to stream flows, discharge of sediment and acid formation from disturbance of wetlands (including but not limited to Long Swamp and Glenelg and Discover Bay Ramsar Site);
 - c. effects on groundwater that may result in adverse changes to groundwater dependent ecosystems or effect the ecological character of the Glenelg and Discovery Bay Ramsar site.
 - d. effects on Aboriginal and non-Aboriginal cultural heritage values;
 - e. effects on state and regional landscape values and national parks;
 - f. effects on local amenity values (e.g. visual, noise) , including non-neighbouring landholders;
 - g. effects on socio-economic environment, at local and regional scales, including increased traffic movement and indirect effects of construction on the capacity of local community infrastructure; and
 - h. effects from a cumulative perspective, including threatened flora and fauna, social and amenity values, with particular consideration of the currently operating and already approved wind farm projects in the region.
- (ii) The matters to be investigated and documented in the EES will be set out in detail in scoping requirements prepared by the Department of Environment, Land, Water and Planning (the department). Draft scoping requirements will be exhibited for 15 business days for public comment, before being finalised and then issued by the Minister for Planning.
- (iii) The level of detail of investigation for the EES studies should be consistent with the scoping requirements issued for this project and be adequate to inform an assessment of the potential environmental effects (and their acceptability) of the project and any relevant alternatives, in the context of the Ministerial Guidelines.
- (iv) The proponent is to prepare and submit to the department a draft EES study program to inform the preparation of scoping requirements.
- (v) The department is to convene an inter-agency technical reference group (TRG) to advise the proponent and the department, as appropriate, on scoping and adequacy of the EES investigations and documentation during the preparation of the EES, as well as coordination with statutory approval processes.
- (vi) The proponent is to prepare and submit to the department its proposed EES consultation plan for consulting the public and engaging with stakeholders during the preparation of the EES.

REFERRAL NUMBER 2019-05

- Once completed to the satisfaction of the department, the EES consultation plan is to be implemented by the proponent, having regard to advice from the department and the TRG.
- (vii) The proponent is also to prepare and submit to the department its proposed schedule for the studies, preparation and exhibition of the EES, following confirmation of draft scoping requirements. This is to enable effective management of the EES process on the basis of an agreed alignment of the proponent's and department's schedules, including for TRG review of technical investigations and the EES documentation.
 - (viii) The proponent is to apply appropriate peer review and quality management procedures to enable the completion of EES studies and documentation to an acceptable standard.
 - (ix) The EES is to be exhibited for a period of no less than 30 business days for public comment, unless the exhibition period spans the Christmas–New Year period, in which case 40 business days will apply.
 - (x) An inquiry will be appointed under the *Environment Effects Act 1978* to consider and report on the environmental effects of the proposal.

Notification

The following parties (proponent and relevant decision-makers) are to be notified of this decision in accordance with sections 8A and 8B(4)(a)(i) of the *Environment Effects Act 1978*:

- Neoen Australia Pty Ltd (proponent)
- Minister for Energy, Environment and Climate Change
- Secretary of Department of Environment, Land, Water and Planning
- Minister for Planning
- Executive Director of Aboriginal Victoria
- Executive Director of Heritage Victoria
- Glenelg Shire Council
- Environment Protection Authority
- Glenelg Hopkins Catchment Management Authority
- Parks Victoria



RICHARD WYNNE MP
Minister for Planning

Date: 25/8/19

Appendix B Submitters to the EES

No.	Submitter	No.	Submitter
1	Christopher Monie	32	Susan Picard
2	Vivien Holyoake	33	Daniel Mole
3	Roger Armstrong	34	Michael Davis
4	Clayton	35	Charles Fredericks
5	Trevor Atherton	36	Michael Hunter
6	Aaron Campbell	37	Bonita Silva
7	Sarah Kay	38	Tim Walls
8	Simon Donald	39	Jason Dawes
9	Denette Lomas	40	Rob Tow
10	Letitia Kavanagh	41	Kostya Vallance
11	Dale Baldwin	42	Warwick Biggs
12	Monika Jovanovic	43	Coralie Young
13	Stuart	44	Jennifer Stinson
14	Bruce Keen	45	South West Trades & Labour Council
15	Carla Jovanovic	46	Andrew Stephenson
16	Shelley Williams	47	Kate Hogarth
17	S M Henderson	48	Susan Jensen
18	Angela Berry	49	Lachlan Mason
19	Camilla Jackson	50	Edith Fox
20	Portland Community Garden Inc	51	Zac Ray
21	Wayne Barrett	52	Geoff Morris
22	Mark Iddon	53	Stephen Martinich
23	Raymond Camilleri	54	Tracy Wairoa
24	Anthony Jones	55	Robyn Neilson
25	Tom Collins	56	Hamilton Field Naturalists Club Incl
26	Jasmine Laubsch	57	Joe O'Connor
27	Darryl Paterson	58	Jack
28	Peter Carr	59	Keppel Prince Engineering
29	Alan Jones	60	Donna Anderson
30	Rod Barrett	61	Dr Heather Bulth
31	Rod Gray	62	Viva-Lyn Lenehan

No.	Submitter	No.	Submitter
63	Jonathan Taylor	94	Jeffrey Cownie
64	Alcoa Portland Aluminium Pty Ltd	95	Ron Molloy
65	Megan Rowsell	96	Richard Gray
66	Emma Griffiths	97	Lynn Gilbert
67	Tim Owen	98	Jordan Oakley
68	John Kite	99	Tracey Belinda Simmonds
69	Calvin Hokin	100	Helen Veronica Oakley
70	Jenifer Anne Headlam	101	Daniel Robinson
71	Rainforest Reserves Australia	102	Tim Lovell
72	Kylie	103	Rick Jordan
73	Frances Thompson	104	John Keiller
74	Andrew Bryant	105	John Rymill
75	Malcolm Lockwood	106	Brooke Stephenson
76	Allan Geraldine	107	R S Mitchell
77	Brigita Keiller	108	John McBratney
78	Mardi Weber	109	Susan Dennis
79	SEA-Southwest Environment Alliance	110	Wendy Cutting
80	Ashton Campbell	111	Andrew Ward
81	Julienne	112	Kim Cawthorne
82	Hamish Cumming	113	Angela June Raphael
83	Donna Pratt	114	Suzy Marks
84	Margaret Christina Loras	115	Janeen Samuel
85	Nathanial Boersma	116	Graeme Vorrath
86	Andrew Flower	117	Donald Wilson
87	Nelson Coastcare Inc	118	Oliver Richard Hosking
88	The Department of Transport and Planning	119	Paul Jensen
89	Mary Styles	120	Sue Morris
90	Ewan Thomas	121	Shirley Taunt
91	Suzanne Guerin	122	Mardi Bawden
92	Simon	123	Bob King
93	Deni	124	Nature Glenelg Trust

No.	Submitter	No.	Submitter
125	Bob Menzel	156	John Sandford Rhodes
126	Claire Isaacson	157	Jennifer Rhodes
127	Angela Munro	158	Nora Kavanagh
128	Ray Cowling	159	Peter and Christine Rhodes
129	Environment Protection Authority (EPA)	160	Max Lomas
130	Nyal Chivell	161	Robin Gardner
131	Stephen Toumbourou	162	Ian Malcol Eather
132	Viona Lowenthal	163	Committee for Portland
133	Matt Small	164	Rory
134	John Harrington	165	Reto Zollinger
135	Glenda Shomaly	166	Lisa McDonald
136	Victorian National Parks Association	167	Country Fire Authority
137	Michelle Beddows	168	Stephen Benbow
138	Jonathan Melling	169	Maxine Walker
139	Patrick John O'Brien	170	Ausnet
140	Trevor McKinnon	171	Clean Energy Council
141	Nicole Mojonier	172	Stephen Liddicut
142	Julie Andrew	173	Ian Cunningham
143	Chris	174	Gordon Stokes
144	Miss Traill's House. National Trust NSW	175	Serge Zingl
145	Kim Kurray	176	Maurice Schinkel
146	David Struth	177	Parks Victoria
147	Mark Laurie	178	Australian Speleological Federation
148	Nick and Roxanne Chipman	179	Gunditj Mirring Traditional Owners Aboriginal Corporation
149	Gresham House Special Asset Management	180	Suzanne White
150	Susan Thomas	181	Karen Oldaker on behalf of Nelson and surrounding community petition
151	Stephanie Ros	182	Victorian Speleological Association Inc
152	Jackie Manly	183	Glenelg Shire Council
153	Paul Drew	184	Harvey McBain
154	Catherine Bawden	185	Daniel Cordner
155	Andrew Francis	186	Lou Baxter

No.	Submitter	No.	Submitter
187	Louise Thomas	201	BirdLife South East South Australia
188	Alexina (Lex) Chalmers OAM	202	Save Our Surroundings Riverina
189	Department of Energy, Environment and Climate Action	203	Cassandra Hlava
190	Sandra Fairthorne	204	Samuel Stokes
191	The Southern Bent-wing Bat National Recovery Team	205	Eloise Ross
192	Nicola Bail	206	H Crawford
193	Birdlife Australia	207	Uncle Ken Jones
194	Wendy Morecroft	208	Limestone Coast Landscape Board
195	Bushwalking Victoria Inc	209	Hamish Mcdonald
196	Douglas Doug Munro	210	Hayne Meredith
197	Shea Rotumah	211	Jules Malseed-Harris
198	Sue Henry	212	George Turner
199	Yass Landscape Guardians Inc	213	Alex Fitcher
200	John	214	Jonathan Tuck

Appendix C Parties to the IAC Hearing

Submitter	Represented by
Neoen Australia Pty Ltd (Proponent)	<p>Barnaby Chessel SC, Alexander Guild, and Jordan Wright of Counsel, instructed by Joshua Dellios, Andrew Harwood and Dani Davidovits of Minter Ellison, who called expert evidence on:</p> <ul style="list-style-type: none"> - Energy policy from Richard Bolt of Richard Bolt Consulting Pty Ltd - Surface water from Ben Hughes of Water Technology - Groundwater and groundwater dependant ecosystems (GDEs) from Jon Fawcett of CDM Smith - Arboriculture from Rob Galbraith of Galbraith & Associates - Ecology from Matthew Gibson of Biosis - Ecology from Aaron Organ of Ecology and Heritage Partners - Ecology from Mark Venosta of Biosis - Aboriginal cultural heritage from Ricky Feldman of Andrew Long & Associates - Social impacts from Glenn Weston of public place - Landscape and visual impact from Peter Haack of Peter Haack Consulting - Bushfire from Mark Potter of Fire Risk Consultants - Bushfire from Graeme Taylor of Fire Risk Consultants - Planning from John Glossop of Glossop Town Planning - Aviation from Ian Jennings of Chiron Aviation Consultants - Noise from Christophe Delaire of Marshall Day Acoustics - Traffic from Charmaine Dunstan of Traffix Group
DTP Impact Assessment Unit	Rob Piccinin and Talia Schlen
Department of Energy, Environment, and Climate Action	Greg Tobin and Xander Nguyen Meacham of Harwood Andrews Lawyers
Parks Victoria	Greg Tobin and Xander Nguyen Meacham of Harwood Andrews Lawyers
Glenelg Shire Council	Matthew Berry and David Dwight
Australian Speleological Federation	Dr Clare Buswell
Birdlife Australia	Andrew Witheford
Birdlife South East South Australia	Cassandra Hlava
Committee for Portland	Steve Garner and John Weichert
Country Fire Authority	Matt Allen

Nature Glenelg Trust	Mark Buchmann
Save Our Surroundings Riverina	Lynette LaBlack, who called expert evidence on: <ul style="list-style-type: none"> - Wind farm wakes, drying landscapes and carbon positive nature from Ivan Kennedy, Professor Emeritus Agricultural & Environmental Chemistry - Aerial fire Fighting from Grant Piper, Aeronautical Engineer - Energy policy analysis from Aidan Morrison of Centre for Independent Studies
Victorian National Parks Association	Jordan Cook
Yass Landscape Guardians Inc	John McGrath
Alexina (Lex) Chalmers OAM	
Andrew Ward	
Catherine Bawden	
Dr Heather Builth	
Frances Thompson	
George Turner	
Gordon Stokes	
Hamish Cumming	
Hayne Meredith	
Jack	
Jennifer Rhodes	
John Keiller	
John Sandford Rhodes	
Jonathan Tuck	
Jules Malseed-Harris	
Karen Oldaker	
Kim Kurray	
Kylie	
Letitia Kavanagh	
Lou Baxter	
Mark Iddon	
Mark Laurie	
Mary Styles	
Maurice Schinkel	
Max Lomas	

Nick and Roxanne Chipman

Paul Drew

Raymond Camilleri

Rod Barrett

Sandra Fairthorne

Serge Zingl

Shea Rotumah

Shirley Taunt

Stephen Liddicut

Susan Dennis

Tracy Wairoa

Viva-Lyn Lenehan

Warwick Biggs

Appendix D Document list

No.	Date	Description	Provided by
1	26 February 2025	Letter to Inquiry and Advisory Committee (IAC) – Administrative errors in exhibited Environment Effects Statement (EES) documents	Neoen Australia Pty Ltd (Neoen; Proponent)
2	26 February 2025	Email from Proponent to project mailing list regarding EES document updates (dated 19 February 2025)	Proponent
3	26 February 2025	Email from Proponent to project mailing list regarding EES document updates (dated 25 February 2025)	Proponent
4	26 February 2025	Letter from Proponent to Department of Transport and Planning (DTP) Impact Assessment Unit - Administrative errors in exhibited EES documents	Proponent
5	26 February 2025	Draft letter from Proponent to submitters outlining errors and corrections to exhibited EES documents (without prejudice)	Proponent
6	28 February 2025	Email from PPV to Proponent - Errors or omissions to the EES documents for exhibition	Planning Panels Victoria (PPV)
7	6 March 2025	Letter to IAC - Notification of extension of EES exhibition	DTP Impact Assessment Unit
8	6 March 2025	Letter from DTP Impact Assessment Unit to Proponent – Public comment extension (dated 5 March 2025)	DTP Impact Assessment Unit
9	6 March 2025	Proponent - Neoen EES notice on changes to exhibition documents and extension - dated 5 March 2025	PPV
10	4 April 2025	Directions Hearing notification	PPV
11	9 April 2025	Kentbruck Green Power Hub IAC - Requests to be heard and key issues	PPV
12	10 April 2025	Email to IAC - Procedural matter environmental presentations	Ms Dennis
13	10 April 2025	Email to IAC - Procedural matter site visit locations	Ms Thompson
14	13 April 2025	Email to IAC - Procedural matter site visit request	Nature Glenelg Trust
15	14 April 2025	Email to IAC - Procedural matter site visit	Ms Styles
16	14 April 2025	Email to IAC - Questions to be raised at the Directions Hearing	Mr Cumming
17	15 April 2025	Email to IAC - Procedural matters Shaw River, Memorandum of Understanding, turbine groupings and maps of roads	Mr Schinkel
18	15 April 2025	Email to IAC - Procedural matters conflict of interest, DEECA and subject matter experts	Nature Glenelg Trust

No.	Date	Description	Provided by
19	15 April 2025	Letter to IAC - Procedural matters draft directions, access and requested documentation	Proponent
20	15 April 2025	Email to IAC - Procedural matters visual and noise impacts	Mr Liddicut
21	16 April 2025	Email to IAC - Procedural matters site visit	Mr Tuck
22	17 April 2025	Email to IAC - Procedural matters Hearing	DEECA and Parks Victoria
23	17 April 2025	Request for Information	PPV
24	21 April 2025	Email to IAC - Procedural matters visual impacts	Mr Liddicut
25	22 April 2025	Email to IAC – Procedural matters proposed directions	Mr Cumming
26	24 April 2025	IAC Directions and Distribution List (v1)	PPV
27	28 April 2025	Letter to IAC – Proponent response to Direction 4 and other requested matters, with attachments: a) Indicative hearing timetable	Proponent
28	28 April 2025	Letter to IAC – Nominations for site visit (Direction 15)	Mr Munro
29	28 April 2025	Email to IAC – Confirmation of experts (Direction 3)	Save Our Surroundings – Riverina (SoS)
30	29 April 2025	Email to IAC – Nominations for site visit (Direction 15)	DEECA and Parks Victoria
31	29 April 2025	Letter to IAC – Nominations for site visit (Direction 15)	Proponent
32	29 April 2025	Email to IAC – Nominated attendees for site visit (Direction 15)	Glenelg Shire Council (Council)
33	29 April 2025	Email to IAC – Request to attend site visit (Direction 15) and other matters	Mr Turner
34	29 April 2025	Email to IAC – Further clarification of experts (Direction 3)	SoS
35	30 April 2025	Letter to IAC – Request for leave to vary Direction 24	Proponent
36	30 April 2025	Email to IAC – Request to attend site visit (Direction 15)	Ms Thompson
37	30 April 2025	Hearing Timetable (v1)	PPV
38	30 April 2025	Email to IAC – Nominations for site visit (Direction 15)	Mr Turner
39	1 May 2025	Letter to IAC - Response to matters raised by Nature Glenelg Trust (Direction 13)	DEECA
40	2 May 2025	Letter from Proponent - Document Sharing Platform details (Google Drive) (Direction 6)	Proponent
41	2 May 2025	Attachment 1 - Instructions for Document Sharing Platform (Google Drive)	Proponent
42	5 May 2025	Email to IAC - Request for copy of Sheldon 2004 report	Ms Lenehan

No.	Date	Description	Provided by
43	6 May 2025	Email to IAC - Request for raw data of EES Technical Appendix D Brolga Impact Assessment	Ms Lenehan
44	6 May 2025	Letter to IAC - Revised indicative hearing timetable	Proponent
45	6 May 2025	Attachment 1 - Revised indicative hearing timetable (updated Document 27a)	Proponent
46	7 May 2025	Email to Proponent - Response to request (D42) for copy of Sheldon 2004 report	PPV
47	7 May 2025	Letter to IAC - Responses to Direction 19 (Shaw River, updated maps, Google Earth and powerlines)	Proponent
48	7 May 2025	Attachment 1 - Correct location and depiction of Shaw River (Direction 19(a)) (corrected)	Proponent
49	7 May 2025	Attachment 2 - Updated network maps of tracks public and smaller roads (Direction 19(b))	Proponent
50	7 May 2025	Google Earth KGPH Project layers (<i>file not compatible with Engage Vic</i>)	Proponent
51	7 May 2025	Letter to IAC - Part A submission and expert evidence (Directions 20 and 24)	Proponent
52	7 May 2025	Part A Submission (Direction 20)	Proponent
53	7 May 2025	Expert Evidence statement of Ian Jennings (Aviation)	Proponent
54	7 May 2025	Expert Evidence statement of Mark Potter and Graeme Taylor (Bushfire)	Proponent
55	7 May 2025	Expert Evidence statement of Richard Bolt (Energy policy)	Proponent
56	7 May 2025	Email to Proponent - Response to request (D43) for raw data of Appendix D Brolga Impact Assessment	PPV
57	7 May 2025	Email to IAC - Comments on response from DEECA	Nature Glenelg Trust
58	8 May 2025	R Sheldon 2004 Honours thesis: Characterisation and modelling of Brolga (<i>Grus rubicundus</i>) flocking habitat in South-Western Victoria: Relationships between habitat characteristics, Brolga	Proponent
59	11 May 2025	Email to IAC - Request in regard to site visit pick up location	Ms Thompson
60	12 May 2025	Email to IAC - Site visit arrangements	Mr Turner
61	12 May 2025	Letter to IAC - Site inspection itinerary, RFI and expert evidence	Proponent
62	12 May 2025	Site Inspection Itinerary (Direction 17)	Proponent
63	12 May 2025	Technical Note 1 - RFI 1 – Construction staging (Direction 18)	Proponent

No.	Date	Description	Provided by
64	12 May 2025	Expert Evidence statement of Ricky Feldman (Aboriginal Cultural Heritage)	Proponent
65	12 May 2025	Expert Evidence statement of Rob Galbraith (Arboriculture)	Proponent
66	12 May 2025	Expert Evidence statement of Matt Gibson (Ecology)	Proponent
67	12 May 2025	Expert Evidence statement of Mark Venosta (Ecology)	Proponent
68	12 May 2025	Expert Evidence statement of Jon Fawcett (Groundwater and GDEs)	Proponent
69	12 May 2025	Expert Evidence statement of Peter Haack (Landscape and Visual)	Proponent
70	12 May 2025	<p>Peter Haack - High resolution images from Landscape and Visual Impact Assessment (LVIA) - Figures 1 to 31</p> <ol style="list-style-type: none"> a. Figure 1 Project location b. Figure 2 Project layout c. Figure 3 Landscape designations d. Figure 4 Significant Landscape Overlays SLO1, SLO2 and SLO3 e. Figure 5 Panorama photo locations f. Figure 6 Photo panorama sheet 1 g. Figure 7 Photo panorama sheet 2 h. Figure 8 Photo panorama sheet 3 i. Figure 9 Photo panorama sheet 4 j. Figure 10 Photo panorama sheet 5 k. Figure 11 Photo panorama sheet 6 (<i>file too large for uploading to Engage Vic</i>) l. Figure 12 Photo panorama sheet 7 (<i>file too large for uploading to Engage Vic</i>) m. Figure 13 Photo panorama sheet 8 (<i>file too large for uploading to Engage Vic</i>) n. Figure 14 Photo panorama sheet 9 (<i>file too large for uploading to Engage Vic</i>) o. Figure 15 Photo panorama sheet 10 (<i>file too large for uploading to Engage Vic</i>) p. Figure 16 Photo panorama sheet 11 (<i>file too large for uploading to Engage Vic</i>) q. Figure 17 Photo panorama sheet 12 (<i>file too large for uploading to Engage Vic</i>) r. Figure 18 Aerial photo locations s. Figure 19 Aerial photo sheet 1 t. Figure 20 Aerial photo sheet 2 u. Figure 21 Aerial photo sheet 3 v. Figure 22 Aerial photo sheet 4 w. Figure 23 Landscape Character Areas x. Figure 24 ZTV Visibility y. Figure 25 ZTV Diagram for hub height z. Figure 26 ZTV Diagram for tip height 	Proponent

No.	Date	Description	Provided by
		<ul style="list-style-type: none"> aa. Figure 27 Influence of distance on visibility bb. Figure 28 Murra Warra wind turbines cc. Figure 29 Key view locations dd. Figure 30 Residential dwelling detail (east and west) ee. Figure 31 Cumulative visual impacts 	
71	12 May 2025	<p>Peter Haack - High resolution images from LVIA - Figures 32 to 50:</p> <ul style="list-style-type: none"> a. Figure 32 SEE and SEE wind turbine layout comparison b. Figure 33 Photomontage locations c. Figure 34 Photomontage kk03 90-degree field of view d. Figure 35 Photomontage kk03 40-degree field of view e. Figure 36 Photomontage kk10 90-degree field of view (<i>file too large for uploading to Engage Vic</i>) f. Figure 37 Photomontage kk10 40-degree field of view g. Figure 38 Photomontage n2 90-degree field of view (<i>file too large for uploading to Engage Vic</i>) h. Figure 39 Photomontage n2 40-degree field of view i. Figure 40 Photomontage n3 90 degree field of view (<i>file too large for uploading to Engage Vic</i>) j. Figure 41 Photomontage n3 40-degree field of view (<i>file too large for uploading to Engage Vic</i>) k. Figure 42 Photomontage n5 90-degree field of view (<i>file too large for uploading to Engage Vic</i>) l. Figure 43 Photomontage n5 40-degree field of view (<i>file too large for uploading to Engage Vic</i>) m. Figure 44 Photomontage pl1 90-degree field of view (<i>file too large for uploading to Engage Vic</i>) n. Figure 45 Photomontage pl1 40-degree field of view (<i>file too large for uploading to Engage Vic</i>) o. Figure 46 Photomontage pl18 90-degree field of view (<i>file too large for uploading to Engage Vic</i>) p. Figure 47 Photomontage pl18 40-degree field of view (<i>file too large for uploading to Engage Vic</i>) q. Figure 48 Photomontage pl20 90-degree field of view r. Figure 49 Photomontage pl20 40-degree field of view s. Figure 50 Photomontage pl25 90-degree field of view (<i>file too large for uploading to Engage Vic</i>) t. Figure 51 Photomontage pl25 40-degree field of view (<i>file too large for uploading to Engage Vic</i>) 	Proponent
72	12 May 2025	<p>Peter Haack - High resolution images from LVIA - Figures 52 to 65:</p>	Proponent

No.	Date	Description	Provided by
		<ul style="list-style-type: none"> a. Figure 52 Photomontage pl26 90-degree field of view b. Figure 53 Photomontage pl26 40-degree field of view c. Figure 54 Photomontage pl27 90-degree field of view <i>(file too large for uploading to Engage Vic)</i> d. Figure 55 Photomontage pl27 40-degree field of view <i>(file too large for uploading to Engage Vic)</i> e. Figure 56 Photomontage pl28 90-degree field of view <i>(file too large for uploading to Engage Vic)</i> f. Figure 57 Photomontage pl28 40-degree field of view <i>(file too large for uploading to Engage Vic)</i> g. Figure 58 Photomontage pl29 90 degree field of view <i>(file too large for uploading to Engage Vic)</i> h. Figure 59 Photomontage pl29 40-degree field of view <i>(file too large for uploading to Engage Vic)</i> i. Figure 60 Photomontage Dwelling 5 location 1 j. Figure 61 Photomontage Dwelling 5 location 1 40-degree field of view k. Figure 62 Photomontage Dwelling 5 location 2 l. Figure 63 Photomontage Dwelling 5 location 2 40-degree field of view m. Figure 64 Photomontage Dwelling 6 <i>(file too large for uploading to Engage Vic)</i> n. Figure 65 Photomontage Dwelling 6 40-degree field view 	
73	12 May 2025	<p>Peter Haack - High resolution images from LVIA - Figures 66 to 93:</p> <ul style="list-style-type: none"> a. Figure 66 Wireframe diagram locations b. Figure 67 Wireframe diagrams wf1 and wf2 c. Figure 68 Wireframe diagrams wf3 and wf4 d. Figure 69 Wireframe diagrams wf5 and wf6 e. Figure 70 Wireframe diagrams wf7 and wf8 f. Figure 71 Wireframe diagrams wf8 photo overlay g. Figure 72 Wireframe h. Figure 73 Wireframe diagrams wf11 and wf12 i. Figure 74 Wireframe diagrams wf13 and wf14 j. Figure 75 Wireframe diagrams wf14 photo overlay k. Figure 76 Photomontage kk03 with blue sky insert <i>(file too large for uploading to Engage Vic)</i> l. Figure 77 Photomontage kk10 with blue sky insert <i>(file too large for uploading to Engage Vic)</i> m. Figure 78 Photomontage n2 with blue sky insert <i>(file too large for uploading to Engage Vic)</i> n. Figure 79 Photomontage n3 with blue sky insert <i>(file too large for uploading to Engage Vic)</i> o. Figure 80 Photomontage n5 with blue sky insert <i>(file too large for uploading to Engage Vic)</i> 	Proponent

No.	Date	Description	Provided by
		<ul style="list-style-type: none"> p. Figure 81 Photomontage pl1 with blue sky insert <i>(file too large for uploading to Engage Vic)</i> q. Figure 82 Photomontage pl18 with blue sky insert <i>(file too large for uploading to Engage Vic)</i> r. Figure 83 Photomontage pl20 with blue sky insert s. Figure 84 Photomontage pl25 with blue sky insert <i>(file too large for uploading to Engage Vic)</i> t. Figure 85 Photomontage pl26 with blue sky insert u. Figure 86 Photomontage pl27 with blue sky insert <i>(file too large for uploading to Engage Vic)</i> v. Figure 87 Photomontage pl28 with blue sky insert <i>(file too large for uploading to Engage Vic)</i> w. Figure 88 Photomontage pl29 with blue sky insert <i>(file too large for uploading to Engage Vic)</i> x. Figure 89 Transmission line option 1A y. Figure 90 Transmission line option 2A Sheet 1 of 4 z. Figure 91 Transmission line option 2A Sheet 2 of 4 aa. Figure 92 Transmission line option 2A Sheet 3 of 4 bb. Figure 93 Transmission line option 2A Sheet 4 of 4 <p>e diagrams wf9 and wf10</p>	
74	12 May 2025	<p>Peter Haack – Expert evidence statement – Appendix E - Comparative analysis of three wind turbine heights (high resolution figures):</p> <ul style="list-style-type: none"> a. KGPH - 3d_Turbine heights - Beach view 01 b. KGPH - 3d_Turbine heights - Beach view 02 c. KGPH - 3d_Turbine heights - Beach view 03 	Proponent
75	12 May 2025	<p>Peter Haack – Expert evidence statement – Appendix F - Additional photo simulations and wireframe 3D model views (high resolution figures):</p> <ul style="list-style-type: none"> a. KGPH - 3d_01 - Cape Bridgewater - Bare Earth b. KGPH - 3d_02 - Pritchards River view - Pointcloud c. KGPH - 3d_03 - Saunders River view – Pointcloud d. KGPH - photosim - P00 - Donovans.i LiDAR e. KGPH - photosim - P00 - Donovans.ii Proposed f. KGPH - photosim - P13 - Jones Lookout.i LiDAR g. KGPH - photosim - P13 - Jones Lookout.ii Proposed h. KGPH - photosim - P20 - Beach Nobles North.i LiDAR i. KGPH - photosim - P20 - Beach Nobles North.ii Proposed j. KGPH - photosim - P20 - Beach Nobles South.i LiDAR k. KGPH - photosim - P20 - Beach Nobles South.ii Proposed l. KGPH - photosim - P21 - Beach Oxbow.i LiDAR m. KGPH - photosim - P21 - Beach Oxbow.ii Proposed 	Proponent

No.	Date	Description	Provided by
		n. KGPH - photosim - R02.i LiDAR	
		o. KGPH - photosim - R02.ii Proposed	
		p. KGPH - photosim - R10.i LiDAR	
		q. KGPH - photosim - R10.ii Proposed	
		r. KGPH - photosim - Simsons Landing.i LiDAR	
		s. KGPH - photosim - Simsons Landing.ii Proposed	
76	12 May 2025	Expert Evidence statement of Christopher Delaire (Noise)	Proponent
77	12 May 2025	Expert Evidence statement of Glenn Weston (Social)	Proponent
78	12 May 2025	Expert Evidence statement of Ben Hughes (Surface water)	Proponent
79	12 May 2025	Expert Evidence statement of Charmaine Dunstan (Traffic)	Proponent
80	12 May 2025	Email from IAC to Submitter 73 - Response in regard to site visit pick up location request	PPV
81	12 May 2025	Email from IAC to Proponent - Submitter 73 site visit pick up location request	PPV
82	12 May 2025	Email from IAC to Submitter 212 - Response in regard to site visit arrangements request	PPV
83	12 May 2025	Letter to IAC - Aaron Organ ecology evidence	Proponent
84	12 May 2025	Expert Evidence statement of Aaron Organ (Ecology)	Proponent
85	13 May 2025	Email to IAC - Request for an extension to provide expert evidence	SoS
86	14 May 2025	Email to SOS Riverina - Response to request (D85) for an extension to provide expert evidence	PPV
87	14 May 2025	Letter to IAC - John Glossop planning evidence	Proponent
88	14 May 2025	Expert Evidence statement of John Glossop (Town planning)	Proponent
89	14 May 2025	Email to IAC - Site visit arrangements	Mr Turner
90	15 May 2025	Email to Submitter 212 - Response to site visit arrangements	PPV
91	15 May 2025	Email to Proponent - Request from Submitter 212 site visit arrangements	PPV
92	15 May 2025	Letter to IAC - Google earth overlays, road network and conflict of interest	Mr Turner
93	16 May 2025	Hearing Timetable (v2)	PPV
94	19 May 2025	Email to IAC – Query regarding documentation	Ms Thompson
95	19 May 2025	Expert Evidence statement of Ivan Kennedy (windfarm wakes, drying landscapes and carbon positive nature)	SoS
96	19 May 2025	Letter from NSW Department of Planning, Housing and Infrastructure to Ivan Kennedy	SoS

No.	Date	Description	Provided by
97	19 May 2025	Expert Evidence statement of Grant Piper (aerial fire fighting)	SoS
98	19 May 2025	Expert Evidence statement of Grant Piper – supporting presentation	SoS
99	19 May 2025	Expert Evidence statement of Grant Piper - CV	SoS
100	19 May 2025	Expert Evidence statement of Aidan Morrison (energy policy analysis)	SoS
101	19 May 2025	Email to IAC - Update regarding Submitter 212 site visit arrangements query	Proponent
102	19 May 2025	Letter to IAC - Responses to RFI, other materials, timetable correction and DEECA information	Proponent
103	19 May 2025	Technical Note 2 - RFI 2 - Transmission Line Options	Proponent
104	19 May 2025	Technical Note 3 - RFI 3 - Met monitoring masts	Proponent
105	19 May 2025	Technical Note 4 - RFI 6 - Evaluation objectives	Proponent
106	19 May 2025	Technical Note 5 - RFI 10 - Dr Van Harten peer review	Proponent
107	19 May 2025	Technical Note 6 - RFI 23 - R Loyn peer review	Proponent
108	19 May 2025	Technical Note 7 - RFI 27 - Aboriginal cultural heritage	Proponent
109	19 May 2025	Technical Note 8 - RFI 42 & 43 - Electromagnetic Interference	Proponent
110	19 May 2025	Technical Note 9 - Constructability report	Proponent
111	19 May 2025	Technical Note 10 - Mortality monitoring in a plantation setting	Proponent
112	20 May 2025	Email to IAC - Response to Submitter 62 request for raw data	Proponent
113	20 May 2025	Email to IAC - Video to support unaccompanied visits to key restored wetland sites	Nature Glenelg Trust
114	20 May 2025	<i>The role of historical sources in the restoration of Long Swamp, Discovery Bay, Victoria</i> - Bachmann, M. R.	Nature Glenelg Trust
115	20 May 2025	<i>Restoration journey of the Piccaninnie Ponds Karst Wetlands, South Australia</i> - Bachmann, M. R.	Nature Glenelg Trust
116	20 May 2025	Wetland restoration case studies from the Discovery Bay Coast in South Australia and Victoria - AABR Forum	Nature Glenelg Trust
117	20 May 2025	Email to Submitter 73 - Response to query regarding documentation	PPV
118	20 May 2025	Email to IAC - Unaccompanied Wind Farm Tour Melbourne to Portland	Proponent
119	20 May 2025	Unaccompanied Wind Farm Tour Melbourne to Portland	Proponent

No.	Date	Description	Provided by
120	20 May 2025	Google Earth layer - Unaccompanied Wind Farm Tour Melbourne to Portland (<i>file not compatible with Engage Vic</i>)	Proponent
121	20 May 2025	Email to Submitter 212 - Response to query on Google earth overlays, road network and conflict of interest	PPV
122	20 May 2025	Email to Proponent - Matters raised by submitter 212 in Document 92	PPV
123	20 May 2025	Email to IAC - Request for Transmission Line Basis of Design Report	Mr Turner
124	21 May 2025	Email to IAC – Proponents response to request for raw data	Ms Lenehan
125	21 May 2025	Letter from Proponent to Submitter 172 – Response to request for additional photo montages from public locations	Proponent
126	21 May 2025	Attachment 1 – Email from Submitter 172 and list of locations	Proponent
127	21 May 2025	Attachment 2 – Peter Haack’s response to Submitter 172’s list	Proponent
128	21 May 2025	Email to Proponent - Request for Transmission Line Basis of Design Report	PPV
129	21 May 2025	Email to IAC - Request regarding spatial data format	Mr Turner
130	22 May 2025	Email to IAC - Flora and fauna clarification and further information requested	Mr Cumming
131	22 May 2025	Hearing Timetable (v3)	PPV
132	22 May 2025	Letter to IAC - Part B submission, RFI responses and other materials	Proponent
133	22 May 2025	Part B submission	Proponent
134	22 May 2025	Part B submission - Attachment A - response to IAC RFIs	Proponent
135	22 May 2025	Part B submission - Attachment B - response to specific issues raised in submissions table	Proponent
136	22 May 2025	Part B submission - Attachment C - response to government agency and authority submissions	Proponent
137	22 May 2025	Technical Note 11 - Neighbour agreements	Proponent
138	22 May 2025	Technical Note 12 - Campground data	Proponent
139	22 May 2025	Technical Note 12 (Campground data) – Attachment 1 - Campground data analysis	Proponent
140	22 May 2025	Technical Note 12 (Campground data) – Attachment 2 – Raw data hike-in campgrounds	Proponent

No.	Date	Description	Provided by
141	22 May 2025	Technical Note 12 (Campground data) – Attachment 3 – Raw data main campgrounds	Proponent
142	22 May 2025	Technical Note 13 - Substation works within Brolga breeding buffer	Proponent
143	22 May 2025	Technical Note 15 - Offset strategy	Proponent
144	22 May 2025	Technical Note 15 (Offset strategy) - Attachment: Report of available native vegetation credits	Proponent
145	22 May 2025	Technical Note 15 (Offset strategy) - Attachment: Preliminary assessment of biodiversity offset sites	Proponent
146	22 May 2025	Addendum evidence statement of Rob Galbraith (Arboriculture)	Proponent
147	22 May 2025	Technical Note 14 - RFI 47 - Draft Planning Scheme Amendment	Proponent
148	22 May 2025	Technical Note 17 - RFI 14 and 15 - Southern Bent-wing Bat cost of curtailment	Proponent
149	22 May 2025	Technical Note 18 – RFI 13, 17, 21 and 22 - Matt Gibson (Ecology) responses	Proponent
150	22 May 2025	Technical Note 19 – RFI 16, 17 and 22 - Mark Venosta (Ecology) responses	Proponent
151	22 May 2025	Email to IAC – Preliminary matter – Regarding Mr Bolt’s evidence addressing Ramsar concerns	Mr Schinkel
152	22 May 2025	Email to IAC - Documents referred to in Document 66	Proponent
153	22 May 2025	ARI Technical Report 389 – Assessment, mitigation and monitoring of onshore wind turbine collision impacts on wildlife	Proponent
154	22 May 2025	Foraging flights of the Southern Bent-wing Bat during two seasons Fact Sheet 2025	Proponent
155	22 May 2025	Email to IAC – Requesting to provide figure in Technical Note 18 – RFI 13 on a confidential basis	Proponent
156	22 May 2025	Email to IAC – Preliminary matter – Regarding incorrect reference in Document 52	Mr Schinkel
157	22 May 2025	Letter to IAC – Further response to Directions 21 and 22	Proponent
158	22 May 2025	Day 1 version – Environmental Management Framework (EMF)	Proponent
159	22 May 2025	Day 1 version – Incorporated Document	Proponent
160	22 May 2025	Expert Recommendations Summary Table	Proponent
161	23 May 2025	Letter to IAC – Response to Direction 14	Environment Protection Authority

No.	Date	Description	Provided by
162	23 May 2025	Email to IAC – Response to Submitter 212 request for Transmission Line Basis Design Report	Proponent
163	23 May 2025	Downer (2022) <i>Kentbruck Energy Park Transmission Line Basis of Design Report</i> . Melbourne: Downer 2022	Proponent
164	23 May 2025	Letter to IAC – Questions for Expert Witnesses	DEECA & Parks Victoria
165	23 May 2025	Email from Proponent to IAC – Responses to matters raised by Submitter 212 in Document 92	Proponent
166	23 May 2025	Kentbruck Green Power Hub Special Control Overlay (<i>file not compatible with Engage Vic</i>)	Proponent
167	23 May 2025	Kentbruck Green Power Hub All Infrastructure (<i>file not compatible with Engage Vic</i>)	Proponent
168	23 May 2025	Kentbruck Green Power Hub Quarry Location (<i>file not compatible with Engage Vic</i>)	Proponent
169	23 May 2025	Hearing Submission	DTP Impact Assessment Unit
170	24 May 2025	Email from Submitter 62 to IAC – Clarification on conflict of interest of DEECA in reduced Broлга Buffer	Ms Lenehan
171	24 May 2025	Letter from DEECA to IAC – Release and Publication of further materials	DEECA
172	24 May 2025	Wind Farm mitigation expert elicitation 2025 Summary Report	DEECA
173	24 May 2025	ARI Technical Report 394 Estimating the potential effectiveness of wind farm mitigations using structured expert elicitation	DEECA
174	24 May 2025	Comparison of pre and post construction wind farm survey results 2025 Summary Report	DEECA
175	28 May 2025	Flight height patterns of a critically endangered insectivorous bat impact by wind turbine collision - Determining flight height of Southern Bent-wing Bats	DEECA
176	24 May 2025	Letter to IAC – Release of DEECA materials	Proponent
177	25 May 2025	Email to IAC – Clarification required on Broлга Buffer permissioning by DEECA	Ms Lenehan
178	25 May 2025	Opening submission reference materials	Proponent
179	26 May 2025	Email to IAC – Requesting further clarification from the Proponent regarding the Downer (2022) Report	Mr Turner
180	26 May 2025	Email to IAC Attachment - Screenshot from Downer (2022) Report	Mr Turner

No.	Date	Description	Provided by
181	26 May 2025	Email to IAC – Requesting DEECA provide names of windfarms listed in Comparison of pre and post construction wind farm survey results 2025 Summary Report	Ms Lenehan
182	26 May 2025	[CONFIDENTIAL] Technical Note 18 – RFI 13 – Figure 2: Distribution of Southern Bent-wing Bat and locations of known maternity caves	Proponent
183	27 May 2025	Questions for Expert Witness Rob Galbraith	DEECA & Parks Victoria
184	27 May 2025	Questions for Expert Witness Jon Fawcett	Parks Victoria
185	27 May 2025	Letter to IAC – Further response to RFI, expert presentations, hydrology and RAMSAR and native vegetation submissions and Accompanied site visit map book	Proponent
186	27 May 2025	Technical Note 20 - RFI 21 - Native Vegetation (A Organ response)	Proponent
187	27 May 2025	Expert Evidence Summary Presentation - Ben Hughes (Surface water)	Proponent
188	27 May 2025	Expert Evidence Summary Presentation - Jon Fawcett (Groundwater and GDE)	Proponent
189	27 May 2025	Submission on Ramsar Hydrology	Proponent
190	27 May 2025	Attachment to RAMSAR and Hydrology submission - RAMSAR site Management Plan (DELWP, 2017)	Proponent
191	27 May 2025	Attachment to RAMSAR and Hydrology submission – Matters of National Environmental Significance impact guidelines (MNES Guidelines) (Commonwealth, 2013)	Proponent
192	27 May 2025	Submission on Native vegetation	Proponent
193	27 May 2025	Attachment to native vegetation submission – Guidelines for the removal, destruction or lopping of native vegetation (NV Guidelines) DELWP, 2017	Proponent
194	27 May 2025	Attachment to native vegetation submission – Permitted clearing of native vegetation Biodiversity assessment handbook - v1.0 (Assessment Handbook)	Proponent
195	27 May 2025	Attachment to native vegetation submission - Australian Standard 4970-2009 Protection of Trees Development sites (AS 4970)	Proponent
196	27 May 2025	Accompanied site inspection Map book - Part A	Proponent
197	27 May 2025	Accompanied site Inspection Map book - Part B	Proponent
198	27 May 2025	Email to IAC – Request for Clarification regarding consideration of change in KGPH ownership	Ms Styles

No.	Date	Description	Provided by
199	28 May 2025	Email to IAC – Request for reference Biosis Report	Ms Lenehan
200	28 May 2025	Email to IAC – Request for a copy of Brett Lane and Associates (BLA 2018) Database	Ms Lenehan
201	28 May 2025	Email from IAC to Submitter 89 – Response regarding request for clarification for consideration of change in KGPH ownership	PPV
202	28 May 2025	Questions for Expert Witness Ben Hughes	Parks Victoria
203	28 May 2025	Email from Proponent to IAC - Approximate SCO widths along Boiler Swamp Rd	Proponent
204	28 May 2025	Screenshots of SCO width at example locations on Boiler Swamp Road	Proponent
205	28 May 2024	Email from Proponent to IAC - Low thermal resistivity cementitious grout fact sheet	Proponent
206	28 May 2024	BluCem EA55 – Low thermal resistivity cementitious grout	Proponent
207	28 May 2025	Email to IAC – Questions of clarification regarding pre and post construction wind farm survey results 2025 Summary Report	Ms Lenehan
208	29 May 2025	Email to IAC - Follow up request for clarification on Brolga buffer permissioning by DEECA	Ms Lenehan
209	29 May 2025	Letter to IAC - Release and Publication of Handbook for the development of renewable energy in Victoria	DEECA
210	11 June 2025	Handbook for the development of renewable energy in Victoria - DEECA 29 May 2025 (Corrected version)	DEECA
211	29 May 2025	Letter from Submitter 73 – Submissions requesting further information from Proponent	Ms Thompson
212	30 May 2025	Email to IAC – Technical Note 21 and Bushfire history	Proponent
213	30 May 2025	Technical Note 21 – Wind Energy Facility resources	Proponent
214	30 May 2025	Bushfire History 1900 – 2024 prepared by Mr Potter	Proponent
215	2 June 2025	Letter to IAC – Submissions on matters raised at Day of the Hearing regarding Boiler Swamp Road, Cobboboonee National Park transmission line construction impact	Mr Turner
216	2 June 2025	Responses of Ben Hughes (surface water) to Parks Victoria’s questions dated 28 May 2025	Proponent
217	3 June 2025	Email to IAC – Questions of clarification regarding proposed wind tower numbering for site visit map book and other matters	Mr Turner
218	3 June 2025	Attachment to email to IAC – Bushwalking news email	Mr Turner
219	5 June 2025	Email to IAC – Questions of clarification on Direction 37 – Questioning of experts	Mr Cumming

No.	Date	Description	Provided by
220	5 June 2025	Email to Submitter 82 and Parties – Response to questions of clarification on Direction 37 – questioning of experts	PPV
221	5 June 2025	Letter to IAC – Late request to be heard from Submitter 196	Mr Munro
222	5 June 2025	Letter to IAC – RFI responses and other materials	Proponent
223	5 June 2025	Technical Note 16 – Technology for monitoring detection and curtailment	Proponent
224	5 June 2025	Attachment 1 to Technical Note 16 – Identiflight	Proponent
225	5 June 2025	Attachment 2 to Technical Note 16 – DHI Muse	Proponent
226	5 June 2025	Technical Note 22 – Responses to RFIs 5, 9, 11, 12, 18, 19, 21, 22 and 24 - A Organ (Ecology) responses	Proponent
227	5 June 2025	Technical Note 23 – RFI 5 and 8 (Sensitive ecological receptors and SBWB)	Proponent
228	5 June 2025	Technical Note 24 – RFI 20 – Bird and Bat Adaptive Management Plan (BBAMP)	Proponent
229	5 June 2025	Attachment 1 to Technical Note 24 – Updated draft BBAMP (D228)	Proponent
230	5 June 2025	Technical Note 25 – CIS and VTP	Proponent
231	5 June 2025	Attachment A to Technical Note 25 – CIS Tender 1 Guidelines	Proponent
232	5 June 2025	Attachment B to Technical Note 25 – Email from VicGrid of 30 May 2025	Proponent
233	5 June 2025	RFI response table	Proponent
234	6 June 2025	Email to IAC – Submissions regarding potential conflicts of interest and attendance of DEECA subject-matter experts	Nature Glenelg Trust
235	6 June 2025	Email to IAC – notification of additional fauna and flora records available in VBA	Mr Tuck
236	6 June 2025	Hearing Timetable (v4)	PPV
237	6 June 2025	Victorian Biodiversity Atlas, Survey Reports – NGT Incidental records – Glenelg River Estuary and Long Swamp – May 2025	Mr Tuck
238	6 June 2025	Victorian Biodiversity Atlas, Survey Reports – NGT Incidental records – Glenelg River Estuary and Long Swamp – June 2025	Mr Tuck
239	6 June 2025	Letter to IAC – Material filed on 6 June 2025	Proponent
240	6 June 2025	Technical Note 26 - Brolga submitter requests	Proponent
241	6 June 2025	Attachment 1 to Technical Note 26 - B Lane search results (2018)	Proponent

No.	Date	Description	Provided by
242	6 June 2025	Technical Note 27 - Percentage impact to wetlands	Proponent
243	6 June 2025	Submissions on arboreal, terrestrial and aquatic fauna	Proponent
244	6 June 2025	Submissions on biodiversity and draft BBAMP	Proponent
245	6 June 2025	Expert Evidence Summary Presentation - M Gibson (Native vegetation)	Proponent
246	6 June 2025	Expert Evidence Summary Presentation - M Gibson (Terrestrial, arboreal and aquatic fauna)	Proponent
247	6 June 2025	Expert Evidence Summary Presentation - A Organ (Ecology)	Proponent
248	10 June 2025	Glenelg Planning Scheme – Clause 12.01 Biodiversity	Proponent
249	10 June 2025	Glenelg Planning Scheme – Clause 52.32 Wind Energy Facility	Proponent
250	10 June 2025	Glenelg Planning Scheme – Schedule to Clause 52.32 Wind Energy Facility	Proponent
251	10 June 2025	EPBC Act_ Environmental Offsets Policy 2012	Proponent
252	10 June 2025	Assessors handbook Applications to remove, lop or destroy native vegetation – V1.1 October 2018	Proponent
253	10 June 2025	Email to IAC – Seeking clarification regarding Proponents response to D211	Ms Thompson
254	10 June 2025	Email to IAC – question regarding VC212 Planning Provision	Ms Lenehan
255	10 June 2025	Letter to IAC – Response to Direction 10	Proponent
256	10 June 2025	Submissions on Australasian Bittern and Brolga	Proponent
257	10 June 2025	Submissions on Southern Bent-wing Bat	Proponent
258	10 June 2025	National Recovery Plan for the Australasian Bittern <i>Botaurus poiciloptilus</i> , Commonwealth of Australia, 2022	Proponent
259	10 June 2025	National Recovery Plan for the Southern Bent-wing Bat <i>Miniopterus orianae bassanii</i> , DELWP, 2020	Proponent
260	10 June 2025	Interim Guidelines for the Assessment, Avoidance, Mitigation and Offsetting of Potential Wind Farm Impacts on the Victorian Brolga Population, 2011 (DSE, revision 1, 2012)	Proponent
261	10 June 2025	Conservation advice - Australasian Bittern, Threatened Species Scientific Committee under the EPBCA, 18 January 2019	Proponent
262	10 June 2025	Conservation advice - Southern Bent-wing Bat, Threatened Species Scientific Committee under the EPBCA, 14 June 2021	Proponent
263	10 June 2025	Expert Evidence Summary Presentation - M Gibson	Proponent

No.	Date	Description	Provided by
		(SBWB)	
264	10 June 2025	Expert Evidence Summary Presentation - M Venosta (Ecology)	Proponent
265	10 June 2025	Summary of changes to the updated draft BBAMP	Proponent
266	10 June 2025	Breeding home range movements of pre-fledged broлга chicks, <i>Antigone rubicunda</i> (Gruidae) in Victoria, Australia e Implications for wind farm planning and conservation – Veltheim et al 2019	Ms Lenehan
267	10 June 2025	Partial migration of Brolgas (<i>Antigone rubicunda</i>) within a restricted range is revealed by GPS tracking – Veltheim et al 2022	Ms Lenehan
268	10 June 2025	Interim Guidelines for the Assessment, Avoidance, Mitigation and Offsetting of Potential Wind Farm Impacts on the Victorian Broлга Population, 2011 (DSE, revision 1, 2012)	Ms Lenehan
269	10 June 2025	Fact-checking the Internal Govt Memo	Ms Lenehan
270	10 June 2025	Broлга RMIT Professor Stone - Comment on Biosis Collision Risk Modelling	Ms Lenehan
271	10 June 2025	Berrybank Wind farm Broлга Report 1 and Preamble insert	Ms Lenehan
272	10 June 2025	Codrington and Yambuk Post Completion Report - with preamble email	Ms Lenehan
273	10 June 2025	Stockyard Hill Wind Farm Broлга Report – Documents for release p23 44 Including preamble insert	Ms Lenehan
274	10 June 2025	Brolgas nesting HVP Rennick Pine Plantation	Ms Lenehan
275	10 June 2025	DEECA GPS Tracking Red Bird Confirmed Breeding 2024	Ms Lenehan
276	10 June 2025	<i>Flora and Fauna Guarantee Act 1988</i> No.119 BROLGA	Ms Lenehan
277	10 June 2025	Email from Submitter 82 to IAC - Supporting document for questions of experts	Mr Cumming
278	10 June 2025	Email to IAC – question of clarification regarding MM-BD07 reference to AS4970.2009 requirement	Ms Styles
279	10 June 2025	Technical Note 28 - Update on investigations of offset Blocks 6 and 7	Proponent
280	10 June 2025	Technical Note 29 - RFI 23 - Broлга peer review comments (R Loyn)	Proponent
281	10 June 2025	How far are birds, bats, and terrestrial mammals displaced from onshore wind power development – a systematic review – Tolvanen et al 2023	Mr Cumming
282	10 June 2025	Several groups of birds and mammals avoid wind turbines – Natural Resources Institute Finland	Mr Cumming

No.	Date	Description	Provided by
283	10 June 2025	Bird displacement by wind turbines: Assessing Current Knowledge and Recommendations for future studies – Marques 2021	Mr Cumming
284	10 June 2025	Stockyard Hill Wind Farm Bird & Bat Impact assessment – Biosis 2016	Mr Cumming
285	10 June 2025	Documents as per OVIC decision	Mr Cumming
286	10 June 2025	CSIRO Publishing Action Plan Australian Birds	Mr Cumming
287	10 June 2025	Salt Creek and Dundonnell Brolga nesting	Mr Cumming
288	10 June 2025	Dundonnell Wind Farm First Year Annual Report – Biosis - 2022	Mr Cumming
289	10 June 2025	Dundonnell 2014 Brolga assessment Vol2 Annex M DDWF Brolga Report	Mr Cumming
290	10 June 2025	Dundonnell Wind Farm Bat and Avifauna Management Plan Year 1 Report Final	Mr Cumming
291	10 June 2025	Salt Creek Wind Farm BAM Plan Year 1 Report - endorsed	Mr Cumming
292	10 June 2025	Salt Creek Wind Farm BAM Plan Year 2 Report submitted	Mr Cumming
293	10 June 2025	Biosis Bent-wing bat curtailment Portland	Mr Cumming
293	12 June 2025	Bennett et al (2022) Curtailment as a successful method for reducing bat mortality at a southern Australian (full article of D293)	Proponent
294	10 June 2025	Email to IAC – Regarding the Proponents response to D211	Ms Thompson
295	11 June 2025	Email to IAC - Clarification to question regarding VC212 (D254)	Ms Lenehan
296	11 June 2025	VC212 Planning Provision - Explanatory Report	Ms Lenehan
297	11 June 2025	Addendum of R Galbraith – regarding updated AS 4970:2025	Proponent
298	12 June 2025	Penshurst Wind Farm: Targeted Fauna assessment report (draft), May 2011 - Biosis Report	Ms Lenehan
299	12 June 2025	Brett Lane Associates 2008 superseded by signed 2010 statement - Brolga Breeding Nesting Sites including unpublished data 20 July 2009	Ms Lenehan
300	12 June 2025	Movements behaviour and ecology of the brolga, <i>Antigone rubicunda</i> , at multiple spatial and temporal scales - Phd Thesis – Veltheim 2018	Ms Lenehan
301	13 June 2025	Letter to IAC – Notice to ask questions of expert witness on Brolga impact assessment and attached email chain	Mr Turner
302	13 June 2025	Hearing Timetable (v5)	PPV

No.	Date	Description	Provided by
303	13 June 2025	Email referred to by A Organ during Hearing – Email correspondence between EHP and M Herring on 10 April 2025	Proponent
304	13 June 2025	Letter to IAC – Notice to ask questions of expert witness on visual impact and attachments	Mr Turner
305	13 June 2025	Letter to IAC – Material filed on 13 June 2025	Proponent
306	13 June 2025	Technical Note 30 - Acid Sulfate Soils	Proponent
307	13 June 2025	Technical Note 32 - RFI 34 - Turbine colour	Proponent
308	13 June 2025	Technical Note 33 - RFI 33 - Shadow Flicker	Proponent
309	13 June 2025	Technical Note 34 - RFI 40 - SLO1	Proponent
310	13 June 2025	Submissions on other birds	Proponent
311	13 June 2025	Municipal Reference Document, Glenelg Shire	Proponent
312	13 June 2025	State Overview Report, September 2006	Proponent
313	13 June 2025	Coastal Spaces Recommendations Report, April 2006	Proponent
314	13 June 2025	Addendum report of Peter Haack (Landscape and Visual)	Proponent
315	13 June 2025	Attachment to addendum of P Haack - Photosimulation of view from Portland-Nelson Road to the Project and Wind monitoring mast	Proponent
316	13 June 2025	Attachment to addendum of P Haack - Photosimulation of view from Portland-Nelson Road to the Southwest and the Project	Proponent
317	13 June 2025	Attachment to addendum to P Haack - Photosimulation of view from the residence at 611 Bridgewater Lakes Road to Northwest	Proponent
318	13 June 2025	Attachment to addendum of P Haack - Wireframe 3D model view - View from the residence at 611 Bridgewater Lakes Road to Northwest	Proponent
319	13 June 2025	Attachment to addendum of P Haack - Wireframe 3D model view from Portland-Nelson Road to the Project and Wind Monitoring mast	Proponent
320	13 June 2025	Attachment to addendum of P Haack - Wireframe 3D model view from Port-Nelson Road to the Southwest and the Project	Proponent
321	13 June 2025	Expert Evidence Summary Presentation - M Gibson (Other birds & GFF)	Proponent
322	13 June 2025	EPBC Act Policy Statement 3.21 Industry guidelines for avoiding assessing and mitigating impacts on EPBC Act listed migratory shorebirds species	Proponent
323	16 June 2025	Letter to IAC – Material filed on 16 June 2025	Proponent

No.	Date	Description	Provided by
324	16 June 2025	Submissions on social impact	Proponent
325	16 June 2025	Submissions on Aboriginal cultural heritage	Proponent
326	16 June 2025	Expert evidence summary presentation of R Feldman (Aboriginal Cultural Heritage)	Proponent
327	16 June 2025	Expert evidence summary presentation of G Weston (Social impacts)	Proponent
328	16 June 2025	Email to IAC – Questions for Proponent regarding powerline bird deflector product	Ms Styles
329	16 June 2025	Email to IAC – Questions on migratory bird evidence	Mr Biggs
330	16 June 2025	Technical Note 31 – RFI 36 – Landscape character and visual amenity mitigation measures	Proponent
331	16 June 2025	Letter to IAC – Submissions on Boiler Swamp and attached National Park Plan 112 and Cobboboonee Forest Park Plan	Mr Turner
332	17 June 2025	ARI Technical Report 302 Investigation of existing post construction monitoring at Victorian wind farms	Proponent
333	17 June 2025	Updated Species concern list for Victoria – relevant to onshore wind energy facilities (2024) – DEECA	Proponent
334	17 June 2025	Letter to the IAC – Material filed on 17 June 2025	Proponent
335	17 June 2025	Submissions on bushfire	Proponent
336	17 June 2025	Submissions on landscape, visual, shadow flicker and blade glint	Proponent
337	17 June 2025	Panel Report – Glenelg Planning Scheme Amendment C52	Proponent
338	17 June 2025	Expert evidence summary presentation - P Haack (landscape & visual)	Proponent
339	17 June 2025	Assessment of IDF Avian Detection System – Feb 2022	DEECA & Parks Victoria
340	17 June 2025	Cattle Hill Wind Farm – Annual Environmental Review 2024	DEECA & Parks Victoria
341	17 June 2025	Expert evidence summary presentation - M Potter & G Taylor (bushfire)	Proponent
342	17 June 2025	Glenelg Municipal Toolkit	Proponent
343	17 June 2025	White -throated Needletail – CEC talk 15 May 2025	Proponent
344	18 June 2025	Questions for Mr Organ, Mr Venosta and Mr Gibson on migratory birds	Mr Cumming
345	18 June 2025	Expert evidence summary presentation - J Glossop (planning)	Proponent
346	18 June 2025	Submissions on land use and planning	Proponent
347	18 June 2025	Hearing Timetable (v6)	PPV

No.	Date	Description	Provided by
348	18 June 2025	<i>CFA Design Guidelines and Model Requirements, Renewable Energy Facilities v4, August 2023</i>	Proponent
349	18 June 2025	Background Report: Coastal Spaces Landscape Assessment study	Proponent
350	18 June 2025	P Haack response document to Tabled Document 304	Proponent
351	18 June 2025	Expert evidence presentation of P Haack (version shared on screen on 18.06.25)	Proponent
352	19 June 2025	Delburn Wind Farm Panel Report	Proponent
353	19 June 2025	Letter to IAC – Regarding Visual Impact expert evidence and Glenelg River declared Heritage River area	Mr Turner
354	20 June 2025	Email to IAC – Response to electromagnetic interference impacts and land mobile radio systems used by the CFA	Proponent
355	20 June 2025	Letter to IAC - Submission of aviation and noise documents	Proponent
356	20 June 2025	Expert evidence summary presentation - Ian Jennings (Aviation)	Proponent
357	20 June 2025	Video on slide 14 of Ian Jennings aviation presentation (<i>file not compatible with Engage Vic. But note a link to the video can be found in D355</i>).	Proponent
358	20 June 2025	Submissions on aviation	Proponent
359	20 June 2025	Submissions on noise	Proponent
360	20 June 2025	Technical Note 35 - Turbine numbering coordinates and elevations	Proponent
361	20 June 2025	Expert evidence summary presentation - Christopher Delaire (Noise)	Proponent
362	22 June 2025	Email to Proponent - Questions on additional montages undertaken by Peter Haack	Mr Liddicut
363	23 June 2025	Letter from DEECA & PV to Proponent - Further information installation of infrastructure Boiler Swamp Rd - 5 June 2025	Proponent
364	23 June 2025	Email from DEECA & PV to the Proponent - Follow up of questions - 10 June 2025	Proponent
365	23 June 2025	Letter from Proponent to DEECA & PV - Response to questions installation of infrastructure Boiler Swamp Rd - 13 June 2025	Proponent
366	23 June 2025	Letter to the IAC - Material filed on 23 June 2025	Proponent
367	23 June 2025	Expert evidence summary presentation - Charmaine Dunstan (Traffic)	Proponent
368	23 June 2025	Submissions on traffic	Proponent

No.	Date	Description	Provided by
369	23 June 2025	Screenshots of VBA uploads shared by M Gibson on 10 June 2025	Proponent
370	23 June 2025	Appendix O and L locations shared on screen by the Proponent	Proponent
371	23 June 2025	Email to IAC - Questions for Charmaine Dunstan (Traffic)	Mr Schinkel
372	23 June 2025	Email to IAC - Documents for reference in questioning Charmaine Dunstan (Traffic)	Mr Turner
373	23 June 2025	Letter to IAC - Wind turbine locations D360	Mr Turner
374	23 June 2025	Google worksheet cross reference turbine ID numbering for Appendix M, O and L (<i>file not compatible with Engage Vic</i>)	Mr Turner
375	23 June 2025	Google earth data layer updated for the turbine locations Appendix M	Mr Turner
376	24 June 2025	Email from PPV - Response to Submitter 62 request for copy of Venosta et al 2011	PPV
377	24 June 2025	Email to IAC - Request for extension to provide revised EMF and PSA	DEECA
378	25 June 2025	Day 2 version - Environmental Management Framework (EMF)	Proponent
379	25 June 2025	Day 2 version - Incorporated Document	Proponent
380	25 June 2025	Table of changes proposed to the Proponent's updated draft Bird and Bat Adaptive Management Plan (BBAMP)	Proponent
381	25 June 2025	Technical Note 36 - Lake Mombeong landscape mitigation measures	Proponent
382	25 June 2025	Letter to IAC - Road transport impact & Great South West Walk	Mr Turner
383	25 June 2025	Analysis of Aaron Organ on pre and post construction assessment and monitoring materials	Proponent
384	25 June 2025	Response of Mr Gibson to analysis of Mr Organ on pre and post construction results	Proponent
385	25 June 2025	Response of Mr Venosta to analysis of Mr Organ on pre and post construction results	Proponent
386	25 June 2025	Closing submission	Proponent
387	25 June 2025	Technical Note 37 - Reconciliation of DTP condition requests	Proponent
388	25 June 2025	Technical Note 38 - Trees impacted on Boiler Swamp Rd	Proponent
389	26 June 2025	Response to outstanding requests for information (RFI)	Proponent
390	27 June 2025	Hearing Timetable (v7)	PPV

No.	Date	Description	Provided by
391	27 June 2025	Email to IAC - No longer available to appear at hearing	Ms Builtth
392	29 June 2025	Letter to IAC - Withdrawal of submission	Mr Munro
393	30 June 2025	Hearing submission	DEECA
394	30 June 2025	Hearing submission	Parks Victoria
395	30 June 2025	Email to IAC - Clarification on identify of Proponent	Ms Thompson
396	30 June 2025	Email to Submitter 73 - Response to clarification on identify of Proponent	PPV
397	30 June 2025	Email to Submitter 196 - Confirming withdrawal of submission	PPV
398	30 June 2025	Letter to IAC - updated RFI response table and correction to EMF (D378)	Proponent
399	30 June 2025	RFI response table as at 30 June 2025	Proponent
400	30 June 2025	Day 2A version - Environmental Management Framework (EMF)	Proponent
401	30 June 2025	Email to IAC - Additional materials for Park Victorias submission	Parks Victoria
402	30 June 2025	Colac Pipeline Upgrade EPBC self-assessment report Barwon Water - 31 Aug 2022	Parks Victoria
403	30 June 2025	2022-09343-Correction-Notice - Variation of conditions Colac Pipeline Upgrade	Parks Victoria
404	30 June 2025	Hearing Statement with Appendices (Victorian Civil and Administrative Tribunal case and draft conditions)	Council
405	1 July 2025	Hearing submission	Country Fire Authority (CFA)
406	1 July 2025	Hearing submission	Committee for Portland
407	2 July 2025	Updated statement of Ivan Kennedy	SoS
408	2 July 2025	Has Seasonal Ocean Calcification Been Overlooked as a Cause of the Increasing Keeling Curve – published 10 June 2025	SoS
409	2 July 2025	Slides from Aidan Morrison	SoS
410	2 July 2025	Letter to IAC - Response on UK Institute of Air Quality Management guidance	Proponent
411	2 July 2025	Response from AECOM regarding 2024 IAQM Guidance dated 1 July 2025	Proponent
412	3 July 2025	Cranes of the World – P Johnsgard – February 1983	Ms Lenahan

No.	Date	Description	Provided by
413	3 July 2025	Attachment B - Brolga Movements and Spatial Requirements During Breeding, south-west Victoria dated November 2013	Mr Cumming
414	3 July 2025	Stockyard Hill Wind Farm Panel Report	Mr Cumming
415	3 July 2025	Understanding AGL's Utilisation of habitat by Brolga within the vicinity of the Macarthur wind farm 2013, by Hamish Cumming, dated 2 December 2014	Mr Cumming
416	4 July 2025	Wildlife Survey Swansons Lane – October 2023	Ms Lenehan
417	4 July 2025	Article - The 'rule' Aussies must follow if they see one of world's rarest creatures	Mr Cumming
418	4 July 2025	Ararat Wind Farm – Bird and Bat Monitoring Program – First Year annual report April 2017 to March 2018	Mr Cumming
419	4 July 2025	Ararat Wind Energy Facility – Panel Report – September 2010	Mr Cumming
420	8 July 2025	Hearing submission (updated)	Nature Glenelg Trust
421	6 July 2025	Hearing presentation	Nature Glenelg Trust
422	6 July 2025	Letter from Proponent – Concerns in regard to Natural Glenelg Trust materials	Proponent
423	7 July 2025	Hearing submission	BirdLife South East South Australia
424	7 July 2025	Hearing presentation	BirdLife South East South Australia
425	7 July 2025	Kentbruck Green Power Hub Community Information - Brochure Friday 12 August 2022	Ms Lenehan
426	7 July 2025	Email to Parties - Invited comments from Council and CFA	PPV
427	7 July 2025	Letter to IAC - Emails between MinterEllison and M Herring - 9 and 10 April 2025	Proponent
428	7 July 2025	Email to Save our Surroundings Riverina – Response to letters from CASA regarding obstacle lighting of Wind Turbine	PPV
429	7 July 2025	Email to IAC - Assistance provided to Proponent	Mr Tuck
430	7 July 2025	Hearing presentation (updated)	Birdlife Australia
431	7 July 2025	Hearing presentation	VNPA
432	7 July 2025	Hearing submission	Mr Stokes

No.	Date	Description	Provided by
433	7 July 2025	Links to videos in hearing presentation	Nature Glenelg Trust
434	7 July 2025	Hearing presentation	Mr Cumming
435	7 July 2025	Animation of Veltheim GPS data from VBA south of Skipton Nov 2010 to Dec 2011 (<i>file not compatible with Engage Vic</i>)	Mr Cumming
436	8 July 2025	Hearing submission	Ms Thompson
437	9 July 2025	Hearing submission (updated)	Mr Liddicut
438	8 July 2025	Hearing document (groupings)	Mr Liddicut
439	9 July 2025	Hearing submission (updated B3)	Ms Lenehan
440	9 July 2025	Hearing presentation (updated B3)	Ms Lenehan
441	8 July 2025	Hearing presentation	Mr Meredith
442	8 July 2025	Hearing submission video link	Mr Rhodes
443	8 July 2025	Revised submission	CFA
444	8 July 2025	Email to Submitter 191 - IAC response to request to accept another submission	PPV
445	8 July 2025	Hearing submission	Mr Meredith
446	9 July 2025	Hearing submission	Mr Schinkel
447	9 July 2025	Attachment 1 - 2025-02010 Executive Order POTUS	Mr Schinkel
448	9 July 2025	Attachment 2 - S2025-01966 Memorandum POTUS	Mr Schinkel
449	9 July 2025	Attachment 3 - 2020-8667-Referral-Decision	Mr Schinkel
450	9 July 2025	Letter to Proponent regarding questions Nature Glenelg Trust submission	PPV
451	9 July 2025	Comments on Proponents Day 2A Environmental Management Framework (D400)	Council
452	9 July 2025	Hearing Cockatoo audio (<i>file not compatible with Engage Vic</i>)	Jack
453	14 July 2025	Hearing presentation (updated)	Mr Tuck
454	9 July 2025	Hearing submission	Ms Chalmers
455	9 July 2025	Hearing presentation	Ms Dennis
456	9 July 2025	Letter to DEECA seeking comment on particular matters	PPV
457	10 July 2025	Hearing submission	Yass Landscape Guardians Inc
458	10 July 2025	Comments on Proponents EMF and Incorporated Document	Parks Victoria
459	10 July 2025	Hearing submission	Ms Bawden

No.	Date	Description	Provided by
460	11 July 2025	Hearing submission	Ms Fairthorne
461	11 July 2025	Email to IAC - Comments on Proponents Day 2 EMF and Incorporated Document	DEECA
462	11 July 2025	DEECA - Day 2 version - EMF	DEECA
463	11 July 2025	DEECA - Day 2 version - Incorporated Document	DEECA
464	11 July 2025	Hearing Timetable (v8) and Directions	PPV
465	11 July 2025	Email to Nature Glenelg Trust - IAC Response to supplementary material on Southern Bent-Wing Bat	PPV
466	11 July 2025	Email Submitter 62 - IAC Response to request for DEECA clarification	PPV
467	11 July 2025	Hearing presentation - Attachment 2 - Climate-related Disclosures—Australian Sustainability Reporting Standard AASBS2_09-24	Mr Turner
468	11 July 2025	Hearing presentation - Attachment 3 - Australian Aluminium Council Submission to DCCEEW Response to Safeguard Mechanism Reform 24 Feb 2023	Mr Turner
469	11 July 2025	Hearing presentation - Attachment 4 - transcript William Oplinger, ALCOA President & CEO Alcoa Melbourne Mining Club Transcript 1 May 2025	Mr Turner
470	11 July 2025	Hearing presentation - Attachment 5 - transcript Meg O'Neill CEO & MD, Woodside Energy Melbourne Mining Club Transcript 6 Feb 2025	Mr Turner
471	11 July 2025	Hearing presentation - Attachment 6 - AS4970:2025 Protection of Trees on Development sites	Mr Turner
472	11 July 2025	Hearing presentation - Attachment 7 - Lower Glenelg National Park Proposed Management Plan Dec 1988 (extracts from)	Mr Turner
473	11 July 2025	Hearing presentation - Attachment 8 – Land Conservation Council Victoria, report on South Western Study Area August 1972 (extracts from)	Mr Turner
474	11 July 2025	Hearing presentation - Attachment 9 – Hansard, <i>Heritage Rivers Act 1992</i> , Member for Portland, Dr Napthine, House of Assembly	Mr Turner
475	11 July 2025	Hearing presentation - Attachment 10 - Australian Taxation Office, Corporate Tax Transparency report for Portland Smelter Owners	Mr Turner
476	11 July 2025	Hearing presentation - Attachment 11 – Landscape Character Types of Victoria: With Frames of Reference for Scenic Quality Assessment, Mike Leonard, Richard Hammond. 1984(extracts from)	Mr Turner

No.	Date	Description	Provided by
477	11 July 2025	Hearing presentation - Attachment 13 - Press Releases and Media Articles relating to Portland Smelter establishment, electricity contracts, operation, sustainability and future	Mr Turner
478	13 July 2025	Hearing presentation - Attachment 14 - Victorian Civil and Administrative Tribunal planning permit appeal decision for Cape Bridgewater Windfarm - Hislop & Ors v Glenelg SC Hislop & Ors (VICCAT 1138 15 Oct 1998)	Mr Turner
479	13 July 2025	Hearing recording (<i>file not compatible with Engage Vic</i>)	Ms Kurray
480	14 July 2025	Hearing presentation	Mr Turner
481	14 July 2025	Closing submission	DEECA
482	21 July 2025	Day 3 version – EMF (tracked and clean versions)	Proponent
483	21 July 2025	Day 3 version - Incorporated Document (tracked and clean versions)	Proponent
484	21 July 2025	Email to IAC - Response to question on interference occurring with radios	CFA
485	23 July 2025	Closing (Reply) Submissions	Proponent
486	23 July 2025	Attachment 1 - Golden Plains Incorporated Document (May 2022)	Proponent
487	23 July 2025	Attachment 2 - Statement of Emma Williams (2021)	Proponent
488	23 July 2025	Attachment 3 - Closing Submission - Kaiwaikawe Wind Farm - conditions	Proponent
489	23 July 2025	Attachment 4 - Closing Submission - Kaiwaikawe Wind Farm - decision	Proponent
490	23 July 2025	Attachment 5 - Closing Submission - M Gibson additional response to submissions	Proponent
491	23 July 2025	Updated Submissions Summary Table	Proponent
492	23 July 2025	Updated Expert Recommendations Summary Table	Proponent
493	23 July 2025	M Gibson response to IAC questions in D450 regarding NGT submission	Proponent
494	23 July 2025	A Organ response to IAC questions in D450 regarding NGT submission	Proponent
495	31 July 2025	Comments on Proponent Day 3 EMF and Incorporated Document	EPA
496	31 July 2025	Comments on Proponent Day 3 EMF and Incorporated Document	DEECA
497	31 July 2025	Comments on Proponent Day 3 EMF and Incorporated Document	Parks Victoria

No.	Date	Description	Provided by
498	31 July 2025	Comments on Proponents Day 3 EMF and Incorporated Document	Mr Meredith
499	7 August 2025	Day 4 version – EMF (tracked and clean versions)	Proponent
500	7 August 2025	Day 4 version - Incorporated Document (tracked and clean versions)	Proponent
501	7 August 2025	Response to Day 3 version comments	Proponent
502	8 September 2025	Email to Proponent – Query in regard to MM-BF03	PPV
503	16 September 2025	Letter from Proponent – Response to query in regard to MM-BF03	Proponent

Appendix E Strategic context

Relevant legislation

Table 30 details the key legislation for each of the draft evaluation objectives. Relevant legislation and regulations are discussed as relevant to each environmental effect chapter in Part B of this Report.

Table 30 Draft evaluation objectives and key legislation

Draft evaluation objective	Key legislation	Relevant EES chapter
Biodiversity and habitat To avoid or minimise potential adverse effects on biodiversity values within the project site and its environs, including native vegetation, listed species and ecological communities other protected species and habitat for these species	<i>Environment and Biodiversity Protection Act 1999 (Cth)</i> <i>Planning and Environment Act 1987 (Vic)</i> <i>Flora and Fauna Guarantee Act 1988 (Vic)</i> <i>Wildlife Act 1975 (Vic)</i> <i>Catchment and Land Protection Act 1994 (Vic)</i> <i>National Parks Act 1975 (Vic)</i> <i>Forests Act 1958 (Vic)</i> <i>Marine and Coastal Act 2018 (Vic)</i>	Chapter 7 Biodiversity Chapter 9 Surface water, groundwater and groundwater dependent ecosystems
Cultural heritage To avoid or minimise adverse effects on Aboriginal and historic cultural heritage and associated values	<i>Aboriginal Heritage Act 2006 (Vic)</i> <i>Heritage Act 1995 (Vic)</i> <i>Planning and Environment Act 1987 (Vic)</i>	Chapter 11 Cultural heritage
Catchment values and hydrology To maintain the functions and values of aquatic environments, surface water and groundwater quality and stream flows and prevent adverse effects on protected beneficial uses	<i>Environment Protection and Biodiversity Conservation Act 1999 (Cth)</i> <i>Water Act 1989 (Vic)</i> <i>Environment Protection Act 2017 (Vic)</i> <i>Marine and Coastal Act 2018 (Vic)</i>	Chapter 9 Surface water, groundwater and groundwater dependent ecosystems Chapter 10 Soil contamination and acid sulfate soils
Landscape and visual To minimise and manage potential adverse effects on landscape and visual amenity	<i>Planning and Environment Act 1987 (Vic)</i> <i>Marine and Coastal Act 2018 (Vic)</i>	Chapter 12 Landscape character and visual amenity
Land use and socio-economic To avoid and minimise adverse effects on land use, social fabric of the community, local infrastructure, aviation safety and to neighbouring landowners during construction, operation and decommissioning of the project	<i>Planning and Environment Act 1987 (Vic)</i> <i>Public Health and Wellbeing Act 2008 (Vic)</i>	Chapter 16 Land use and planning Chapter 17 Socio-economic Chapter 18 Safety, hazard and risk
Community amenity, safety, roads and transport To avoid and minimise adverse effects for community amenity and safety, with regard to construction noise, vibration, dust, traffic and transport, operational turbine noise and fire risk management	<i>Environment Protection Act 2017 (Vic)</i> <i>Planning and Environment Act 1987 (Vic)</i> <i>Road Management Act 2004 (Vic)</i> <i>Transport Integration Act 2010 (Vic)</i> <i>Road Safety Act 1986 (Vic)</i> <i>Country Fire Authority Act 1958 (Vic)</i> <i>Emergency Management Act 2013 (Vic)</i>	Chapter 13 Air quality Chapter 14 Noise and vibration Chapter 15 Transport Chapter 18 Safety, hazard and risk

Source: EES Chapter 5

Climate change

The *Climate Change Act 2022* (Cth) includes the following objectives at section 3:

- (aa) to advance an effective and progressive response to the urgent threat of climate change drawing on the best available scientific knowledge; and
- (a) to set out Australia's greenhouse gas emissions reduction targets which contribute to the global goals of:
 - (i) holding the increase in the global average temperature to well below 2°C above pre-industrial levels; and
 - (ii) pursuing efforts to limit the temperature increase to 1.5°C above pre-industrial levels; and
- (b) to promote accountability and ambition by requiring the Minister to:
 - (i) prepare annual climate change statements; and
 - (ii) cause copies of those statements to be tabled in each House of the Parliament; and
- (c) to ensure that independent advice from the Climate Change Authority informs:
 - (i) the preparation of annual climate change statements; and
 - (ii) the greenhouse gas emissions reduction targets to be included in a new or adjusted nationally determined contribution.

It establishes the following net greenhouse gas emissions reductions targets:

- 62-70 per cent below 2005 levels by 2030
- zero by 2050.

The *Climate Change Act 2017* (Vic) (sections 22 and 23) requires government decision making to take into account the relevant policy objectives and principles, as detailed below:

- Policy objectives:
 - (a) to reduce the State's greenhouse gas emissions consistently with the long-term emissions reduction target and interim emissions reduction targets; and
 - (b) to build the resilience of the State's infrastructure, built environment and communities through effective adaptation and disaster preparedness action; and
 - (c) to manage the State's natural resources, ecosystems and biodiversity to promote their resilience; and
 - (d) to promote and support the State's regions, industries and communities to adjust to the changes involved in the transition to a net zero greenhouse gas emissions economy, including capturing new opportunities and addressing any impacts arising from the need to reduce greenhouse gas emissions across the economy; and
 - (e) to support vulnerable communities and promote social justice and intergenerational equity.
- Principles of informed decision making:
 - (a) should be based on a comprehensive analysis of the best practicably available information about the potential impacts of climate change that is relevant to the decision, policy, program or process under consideration; and
 - (b) should take into account the potential contribution to the State's greenhouse gas emissions.

The *Climate Change Act 2017* (Vic) establishes a long-term emissions reduction of net zero by 2050, and requires interim targets be set every 5 years. Current targets include:

- 28-33 per cent below 2005 levels by 2025
- 45-50 per cent below 2005 levels by 2030
- 75-80 per cent below 2005 levels by 2035
- net zero by 2045.

Section 20 of the *Climate Change Act 2017* (Vic) states:

The Government of Victoria will endeavour to ensure that any decision made by the Government and any policy, program or process developed or implemented by the Government appropriately takes account of climate change if it is relevant by having regard to the policy objectives and the guiding principles.

The *Planning and Environment Act 1987* objectives include:

2(da) to provide for explicit consideration of the policies and obligations of the State relating to climate change, including but not limited to greenhouse gas emissions reduction targets and the need to increase resilience to climate change, when decisions are made about the use and development of land.

The Glenelg Planning Scheme includes the following policy provisions relating to climate change:

- Clause 1 (Purposes of the Planning Scheme) includes the purpose “to support responses to climate change”
- Clause 11 (Settlement) states that planning should as far as practicable contribute to climate change adaptation and mitigation
- Clause 13 (Environmental risks and amenity) seeks for planning to prepare for and respond to the impacts of climate change
- Clause 13.01-1S (Natural hazards and climate change) seeks to minimise the impacts of natural hazards and adapt to the impacts of climate change through risk-based planning and requires consideration of “climate science report prepared under Part 6 of the *Climate Change Act 2017 (Vic)*”
- Clause 19 (Infrastructure) states that infrastructure planning “should avoid, minimise and offset environmental impacts, and incorporate resilience to natural hazards, including future climate change risks”.

Victoria’s Climate Change Strategy (May 2021) is the first in a series of five yearly roadmap to help achieve net-zero emissions and climate resilience by 2045. It includes actions to transition to clean energy, invest in innovative technologies, safeguard the role of the natural environment in reducing emissions and to support business and communities to cut emissions and thrive in a net-zero emissions future.

The *Great South Coast Regional Growth Plan* (May 2014) identifies potential impacts of climate change and the need to address challenges across the environment, economy and social sectors.

Renewable Energy

The Victorian *Renewable Energy (Jobs and Investment) Act 2017 (Vic)* legislates the following renewable energy generation targets:

- 25 per cent by 2020
- 40 per cent by 2025
- 65 per cent by 2030
- 95 per cent by 2035.

The Glenelg Planning Scheme includes:

- Clause 19.01-1S (Energy supply) seeks to facilitate the appropriate development of energy supply infrastructure and includes as a Policy guideline a requirement to consider the emissions reduction targets specified in the *Climate Change Act 2017 (Vic)* and adaptation plans prepared under the act.
- Clause 19.01-2S (Renewable energy) seeks to support the provision and use of renewable energy in a manner that ensures appropriate siting and design considerations are met,

and it includes a strategy to “*support wind energy facilities in locations with consistently strong winds throughout the year*”

- Clause 19.01-2R (Renewable Energy – Great South Coast) includes a strategy to “*plan for and sustainably manage the cumulative impacts of alternative energy development*”
- Clause 52.32 (Wind Energy Facility) seeks to facilitate the establishment and expansion of wind energy facilities, in appropriate locations, with minimal impact on the amenity of the area.

Clause 19.01-2S includes policy documents:

- *Policy and Planning Guidelines for Development of Wind Energy Facilities in Victoria* (Department of Environment, Land, Water and Planning, November 2021)
- *Community Engagement and Benefit Sharing in Renewable Energy Development in Victoria* (Department of Environment, Land, Water and Planning, July 2021).

Key strategic documents include:

- *2025 Victoria Transmission Plan* (VicGrid, 2025) which sets out the State Government’s long-term transmission development plan to enable Victoria’s transition to renewable energy, identifying priority projects and investment pathways to support reliability, affordability, and the achievement of legislated renewable energy targets.
- *Victorian Transmission Plan Guidelines* (VicGrid, 2024) which provides the framework for preparing transmission development plans in Victoria, outlining the assessment process, consultation requirements, and criteria to ensure future transmission investment supports renewable energy integration and community benefit.
- *2024 Integrated System Plan* (Australian Energy Market Operator, 2024) outlines a 25-year roadmap for the transition of the National Electricity Market power system, charting the optimal pathway to replace coal with renewable energy, storage, and transmission investment.
- *Cheaper, Cleaner, Renewable: Our Plan for Victoria’s Electricity Future* (2024) which sets out the State Government’s plan to achieve the legislated renewable energy targets, with an expectation for installed capacity to increase from 20.5 Gigawatts in 2024 to 33.8 Gigawatts by 2030 and 42.2 Gigawatts by 2035.
- *Great South Coast Regional Growth Plan* (May 2014) which seeks to position the region for economic growth and identifies renewable energy as a significant opportunity.

Wind Energy Guidelines

While Clause 19.01-2S refers to the 2021 version of the Wind Energy Guidelines, the Proponent and its experts relied on the more recently released 2023 version. The 2023 document was considered by the IAC in its assessment however it is not incorporated into the Glenelg Planning Scheme and does not apply to the Project.

The *Planning Guidelines for Development Wind Energy Facilities*, DTP, September 2023 (Wind Energy Guidelines) include:

- a framework for assessing wind energy projects
- a set of consistent operational performance standards
- a framework for regulation of wind turbine noise
- advice about inappropriate locations for wind energy facilities.

In identifying suitable locations for wind energy facilities the Wind Energy Guidelines state:

Wind energy facilities should not lead to unacceptable impacts on critical environmental, cultural or landscape values. Critical values are those protected under Commonwealth and Victorian legislation and assets of state or regional significance, mapped and recognised through planning schemes, including the Planning Policy Framework.⁹⁷

Assessment of location suitability needs to consider:

- environmental values
- significant landscape values
- Aboriginal cultural heritage
- exclusion from National Parks, State Parks, Coastal Parks and other high-quality environmental and landscape locations
- exclusion from locations required for population growth
- dwellings and accommodation within one kilometre.

The Wind Energy Guidelines state that wind energy facilities must be assessed against planning policy and other matters in the *Planning and Environment Act 1987*. Specifically:

A responsible authority should endeavour to balance environmental, social and economic matters in favour of net community benefit and sustainable development.

Relevant matters for consideration when assessing wind energy facility proposals include:⁹⁸

- contribution to government policy objectives
- amenity of the surrounding area, including noise, blade glint and shadow flicker and electromagnetic interference
- landscape and visual impact
- flora and fauna
- aircraft safety
- construction impacts and decommissioning.

Biodiversity

The objects of the EPBC Act include (among others) to provide for the protection of the environment, especially aspects that are matters of Matters of National Environmental Significance (MNES) and promote ecologically sustainable development.

The FFG Act provides a framework for conserving threatened species and ecological communities and managing processes that may threaten biodiversity in Victoria.

The Glenelg Planning Scheme includes:

- Clause 02.03-2 (Environmental and landscape values) notes that “*Glenelg has a wealth of natural resources of regional, national and international significance including plant and animal species on land, waterways, wetlands and the sea*” and it notes that Council seeks to protect significant environments and landscapes, natural and coastal areas, native vegetation and to retain habitat
- Clause 12 (Environmental and landscape values) states planning should help protect the health of ecological systems and the biodiversity they support, must implement principles of ecologically sustainable development and should protect, restore and enhance sites and features of biodiversity value

⁹⁷ Wind Energy Guidelines, page 7

⁹⁸ Wind Energy Guidelines, Section 5

- Clause 12.01-1S (Protection of biodiversity) seeks to protect and enhance Victoria’s biodiversity and includes strategies to (among other things):
 - ensure decision making takes into account the impacts of land use and development on Victoria’s biodiversity, including cumulative impacts and fragmentation of habitat,
 - avoid impacts of land use and development on important areas of biodiversity
 - assist in the establishment, protection and re-establishment of links between important areas of biodiversity.
 - Clause 12.01-1L (Protection of biodiversity) includes a strategy retain particular eucalyptus trees as important for survival of the South-eastern Red-tailed Black Cockatoo.
- Clause 12.01-2S (Native vegetation management) seeks to ensure that there is “*no net loss to biodiversity as a result of the removal, destruction or lopping of native vegetation*” and establishes a three-step approach for decision making: avoid, minimise and offset.

Key strategies and guidelines include:

- *Protecting Victoria’s Environment – Biodiversity 2037* (DELWP, 2017) is Victoria’s long term plan to stop the decline of biodiversity and achieve overall biodiversity improvement over the next 20 years. It states that a healthy natural environment is critical for life sustaining services for humans and underpins many activities that generate value for Victorians.
- It includes priorities and targets, and intends to “*instigate biodiversity response planning at scales appropriate to how species operate, and to cost-effectively benefit the maximum number of species*”. It emphasises the links between relevant legislation including the *Planning and Environment Act 1987*, FFG Act and the *Climate Change Act 2017* (Vic). It states:

The land use planning framework, for example, provides a good opportunity to ensure that biodiversity is integrated early in decision-making processes.

Clause 02.03-2 (Environmental and landscape values) seeks to “*encourage development that is subordinate to the natural, visual and environmental landscape character and significance*”

Marine and coastal environment and national/coastal parks

The Project is within the marine and coastal environment, as defined by section 5 of the *Marine and Coastal Act 2018*. Accordingly, the Project must consider the objectives of planning and management of the marine and coastal environment including to (among others):

- protect and enhance the marine and coastal environment
- promote the resilience of marine and coastal ecosystems, communities and assets to climate change
- respect natural processes in planning for and managing current and future risks to people and assets from coastal hazards and climate change
- promote a diversity of experiences in the marine and coastal environment
- promote the ecologically sustainable use and development of the marine and coastal environment and its resources in appropriate areas
- improve community, user group and industry stewardship and understanding of the marine and coastal.

The *Marine and Coastal Act 2018* includes guiding principles relating to integrated coastal zone management, ecosystem based planning, ecologically sustainable development, evidence-based

decision making, precautionary principle, proportionate and risk based approach to management and regulation and adaptive management.

The national and coastal parks in the Project area are managed under the *National Parks Act 1975*. The objects of the act include (among others) to make provision for the:

- preservation and protection of the natural environment, indigenous flora and fauna and features of scenic or archaeological, ecological, geological, historic or other scientific interest in those parks
- use of parks by the public for the purposes of enjoyment, recreation or education and for the encouragement and control of that use.

The Glenelg Planning Scheme includes:

- Clause 12.02-1S (Protection of the marine and coastal environment) seeks to protect and enhance the marine and coastal environment, and includes strategies (among others) to:
 - enhance ecological values
 - protect and enhance the overall extent and condition of native habitats and species diversity distribution
 - minimise direct, cumulative and synergistic effects on ecosystems and habitats
 - protect and enhance natural features, landscapes, seascapes and public visual corridors
- reference to a range of relevant Policy guidelines and Policy documents, detailed in other chapters of this Report.

The *Marine and Coastal Policy* (March 2020) sets objectives and guiding principles for the planning and management of the state's marine and coastal environment. It identifies drivers of change, including climate change, and sets out a planning and decision pathway to guide application of the *Marine and Coastal Act 2018*, including application of the guiding principles. The *Marine and Coastal Strategy 2022* supports implementation of the vision of the policy with a five-year action plan.

Ngootyoong Gunditj Ngootyoong Mara South West Management Plan (May 2015) is the approved management plan for a network of parks and reserves in south-west Victoria, including the national and coastal parks in the Project area. The applies to more than 130 parks and reserves and sets strategic direction for the protection of cultural landscapes, biodiversity and visitor values.

Appendix F Recommended project documentation

F:1 Recommended Environmental Management Framework

The following EMF includes the IAC's recommended changes based on the Proponent's final version (D499)

[Tracked Added](#)

~~Tracked Deleted~~

19 Environmental management framework

IAC Notes:

- [prepare as a stand-alone document \(separate to the EES\)](#)
- [make any consequential changes resulting from the IAC's recommendations, including numbering and cross-references](#)
- [insert Table of Contents and table with abbreviations and glossary](#)
- [review for consistency.](#)

19.1 Introduction

This Environmental Management Framework (EMF) has been developed to provide a transparent and consistent framework for managing environmental risk and mitigating adverse effects of the Kentbruck Green Power Hub (the Project). Development of this EMF was guided by the *Scoping Requirements for Kentbruck Green Power Hub Environment Effects Statement* (Scoping Requirements), as described in **Section 19.1.1**, and relevant legislation, policy and guidelines including the statutory approvals and consents that will be required for the Project.

The EMF outlines clear accountabilities for the delivery of the Project in accordance with the mitigation measures (MMs) and compliance with relevant environmental laws, approvals, approval conditions, environmental management plans (EMPs) and procedures. Successfully implemented, the EMF will ensure that the environmental risks and potential impacts of the Project are effectively managed.

Each technical assessment prepared for this Environment Effects Statement (EES) provides recommendations for appropriate MMs to be adopted by the Project. The measures proposed to be adopted by the Project are detailed in **Chapters 7–18** of this EES and have informed preparation of this EMF.

The EMF also outlines the procedures to be followed for the preparation, review, approval and implementation of environmental management plans and procedures. It provides for the regular review and updating of these plans and procedures, as well as independent monitoring, auditing, and reporting of compliance. The roles and responsibilities of key stakeholders are defined to ensure that there are clear accountabilities for the implementation of environmental management requirements for the Project.

19.1.1 EES scoping requirements

This chapter responds to Section 3.7 of the Scoping Requirements, which requires that an EMF be prepared as part of the EES documentation to provide a transparent framework with clear accountabilities for managing and monitoring the environmental effects and hazards associated with the construction and operational phases of the Project.

The Scoping Requirements specify that the EMF will describe baseline environmental conditions to allow evaluation of the residual environmental effects of the Project, as well as the efficacy of applied environmental management and contingency measures. The entity responsible for approval of management/environmental plans will also be identified. These two requirements are addressed in **Section 19.3** and **Section 19.4.1**, respectively.

In accordance with Section 3.7 of the Scoping Requirements, the EMF described in this chapter includes the following:

- The context of required approvals and consents (see **Section 19.2**)
- The proposed environmental management system (EMS) to be adopted (**Section 19.6**)

- Organisational responsibilities and accountabilities for environmental management (**Section 19.3**)
- An environmental risk register to be maintained during Project implementation (**Section 19.4**)
- The environmental management measures proposed in the EES (**EES Chapters 7-18**) [and modified through the EES assessment process](#) to address specific issues, including commitments to mitigate adverse effects and enhance environmental outcomes (see **Section 19.4**).

An important aspect of the EMF is ongoing community consultation, stakeholder engagement and communications during construction and operation of the Project. The EMF also sets the procedures for the following:

- Complaints recording and resolution.
- Auditing and reporting of performance including compliance with relevant statutory conditions and standards.
- Review of the effectiveness of the EMF for continuous improvement.

~~Neoen Australia Pty Ltd~~ (The Proponent) has prepared a Community and Stakeholder Engagement Plan (CSEP) which details the stakeholders relevant to the Project and how the Proponent has and will continue to engage with each stakeholder throughout the Project's lifetime. The CSEP sets out the strategy and procedure for identifying and engaging with stakeholders, enabling matters raised to be considered and addressed as appropriate, to ensure interests and concerns are adequately reflected in the final design and operational approach of the Project and regulatory compliance requirements for stakeholder consultation are met. The EMF requires that the CSEP be kept up-to-date throughout the Project's lifetime. Further information about the Proponent's engagement approach and activities is provided in **EES Chapter 6 Community and stakeholder engagement**.

Section 19.4 of this EMF lists the mitigation measures proposed in earlier chapters of the EES (**EES Chapters 7–18**) to address specific issues. Each of the relevant management plans will describe the proposed objectives, indicators, and monitoring requirements to manage and address the Scoping Requirements.

19.2 Statutory approvals and consents

An overview of the statutory approvals and consents required for the Project is provided in **Table 19.1**. Detailed information on the assessment framework is provided in **EES Chapter 5 Assessment and approvals framework**. All necessary consents will be obtained at the appropriate project phase and in accordance with the requisite legislation.

Table 19.1: Statutory approvals and consents required for the Project

Act	Statutory approval	Approval authority	Relevance to EMF
Primary Approvals			
<i>Environment Protection and Biodiversity Conservation Act 1999</i> (EPBC Act)	EPBC Act approval	Commonwealth Minister for the Environment and Water	Approval under the EPBC Act will set out conditions for the Project to comply with, which will be included in the relevant management plans and sub-plans prepared for the Project.
<i>Planning and Environment Act 1987</i>	Planning Scheme Amendment (Specific Controls Overlay and Incorporated	Victorian Minister for Planning (the Minister)	The Planning Scheme Amendment (PSA), if approved by the Minister, will introduce a Specific Controls Overlay into

Act	Statutory approval	Approval authority	Relevance to EMF
	Document) to the Glenelg Planning Scheme (the Planning Scheme)		the Planning Scheme, and give effect to an Incorporated Document.
<i>Aboriginal Heritage Act 2006 (AH Act)</i>	Cultural Heritage Management Plan (CHMP)	Gunditj Mirring Traditional Owners Aboriginal Corporation (GMTOAC)	An approved CHMP will include conditions to manage impacts of the Project and protect Aboriginal cultural heritage. This will be implemented for the construction phase of the Project and referenced in sub plans required by the EMF.
<i>Mineral Resources (Sustainable Development) Act 1990 (MRSD Act) / Mineral Resources and Extractive Industries Act 1990</i>	Quarry Work Plan (QWP)	Department Head, DEECA	The QWP will detail construction and operational requirements of Earth Resources Regulation Victoria (DEECA). This plan sits outside of the conditions of the Incorporated Document and is prepared by the Proponent to operate in conjunction with the approved management plans.
<i>National Parks Act 1975 (NP Act)</i>	Consent to allow for construction and operation of the transmission line within Cobboboonee National Park	Parks Victoria	The Project is seeking consent from Parks Victoria under section 27 of the NP Act for the development and operation of the portion of the transmission line to which this act applies. This consent application will be prepared on the basis that the relevant mitigation measures outlined in this EMF will apply to the development of the transmission line and will be reflected in the consent (along with any other conditions imposed by Parks Victoria).
<i>Forests Act 1958</i>	Licence to allow for construction and operation of the transmission line within Cobboboonee Forest Park	Victorian Minister for Environment and Climate Action	The Project is seeking a licence under the <i>Forests Act 1958</i> for a portion of the transmission line corresponding with land to which this act applies.
Secondary Approvals			
<i>Flora and Fauna Guarantee Act 1988 (FFG Act)</i>	Permit to take FFG listed flora	Secretary, DEECA	Measures to manage impacts on species listed under the FFG Act are detailed in management plans and sub-plans in the EMF

Act	Statutory approval	Approval authority	Relevance to EMF
			and are also included in the conditions of the Incorporated Document.
<i>Wildlife Act 1975</i>	Permit required to remove, salvage, capture or relocate fauna	Secretary, DEECA	Fauna management sub-plans are identified in this EMF and are also included in the Incorporated Document plans and sub-plans.
<i>Water Act 1989</i>	<ul style="list-style-type: none"> Permit for the taking or use of water from a waterway or groundwater from bores Permit to undertake works on a waterway or to a bore	Victorian Minister for Water	Procedures and measures for limiting impacts on waterways are contained within the plans and associated management sub-plans described in the EMF.
<i>Road Management Act 2004</i>	Consents to conduct works in, on, or under roads.	Head, Transport for Victoria for Portland-Nelson Road, Bridgewater Road, Madeira Packet Road and Henty Highway DEECA (formerly DELWP) for Boiler Swamp Road Glenelg Shire Council for all other roads.	Operation on these nominated roads and management of traffic is included in a Traffic Management Plan nominated in this EMF.

The *Environment Protection Act 2017* (EP Act) came into effect in July 2021. The EP Act includes a general environmental duty (GED) that applies to all Victorians. The GED is a statutory obligation under the EP Act.

The approach described in this EMF has been prepared to address this requirement and to ensure environmental management of the Project is undertaken in a manner which is consistent with the GED.

19.2.1 Incorporated document

Delivery of the Project would be facilitated primarily by the insertion of an Incorporated Document into the Glenelg Planning Scheme through a planning scheme amendment.

The purpose of the Incorporated Document is to facilitate the use and development of the Project which includes a wind energy facility and utility installation (transmission line) on land shown as Specific Controls Overlay (SCO~~19XX~~) of the Planning Scheme and is made pursuant to section 6(2)(j) of the P&E Act. A draft Incorporated Document is attached at **Appendix A of Planning Scheme Amendment documents (EES Technical Appendix Y)**.

[Clause 7.1 of the draft Incorporated Document requires Development Plans to be prepared to the satisfaction of the Minister for Planning prior to commencement of any buildings and works associated with the Project \(excluding the preparatory buildings and works under Clauses 7.32 and 7.33 of the draft Incorporated Document\).](#)

Clause 7.8 of the draft Incorporated Document requires preparation of an EMF for the Project to the satisfaction of the Minister for Planning prior to the commencement of any buildings or works associated with the Project (excluding preparatory works permitted under Clauses 7.32~~6~~ and 7.33~~7~~ of the draft Incorporated Document). Clause 7.8 of the draft Incorporated Document requires that the EMF include management measures that are applicable to the design, construction, and operations of the Project.

~~Clause 7.1 of the draft Incorporated Document requires Development Plans to be prepared to the satisfaction of the Minister for Planning prior to commencement of any buildings and works associated with the Project (excluding the preparatory buildings and works under Clauses 7.32 and 7.33 of the draft Incorporated Document).~~ Clause 7.8 of the draft Incorporated Document requires that the EMF include the processes and indicative timing for development of a Construction Environmental Management Plan (CEMP), an Operational ~~sal~~ Environmental Management Plan (OEMP), a Decommissioning Environmental Management Plan (DEMP) and associated sub-plans.

19.2.2 Governance framework

The Proponent is responsible for preparation of the EES and obtaining primary statutory approvals for the Project, including approval under the EPBC Act, and for the PSA, CHMP, and QWP. ~~The Proponent is responsible for preparing the final EMF following assessment of the EES and prior to or alongside the issuing of Project primary approvals by the relevant statutory authorities.~~ The draft EMF will be placed on public exhibition alongside the EES package.

[The Proponent is responsible for preparing the final EMF following assessment of the EES and prior to or alongside the issuing of Project primary approvals by the relevant statutory authorities.](#) The final EMF will contain a consolidated list of mitigation measures. The final mitigation measures, and the associated regime of plans, controls, and responsibilities, will be given statutory weight through the PSA including the ~~i~~Incorporated ~~d~~Document.

Subject to secondary approval determinations, the Proponent will introduce the Project to the market for construction and operation. Secondary approvals, design, construction, operation and decommissioning phase management measures will be the responsibility of the Proponent and its contractors to implement and monitor.

While details have not yet been confirmed, the Proponent will likely enter into one or more design and construct contracts with contractor(s) that have existing environmental management systems (accredited to *AS/NZS ISO 14001:2016 Environmental management systems – Requirements with guidance for use*). The contractor (or contractors) appointed would be required to prepare a CEMP, OEMP and DEMP consistent with this EMF and their own environmental management system.

The CEMP, OEMP and DEMP would be required to be prepared in a manner that meets, at a minimum, the requirements of all relevant environmental laws, approvals, approval conditions, this EMF and the MMs. The Proponent would be responsible for ensuring the requirements of these approvals and the EMF are implemented.

19.3 Roles and responsibilities

The Proponent will be responsible for overseeing and engaging contractors and technical specialists across the life of the Project.

As detailed in [EES Chapter 6 \(Volume 1\)](#), the Proponent will be responsible for implementing consultation and engagement activities throughout the Project's lifecycle. The Proponent will be

responsible for reporting compliance and / or environmental management performance to all relevant regulators, as required, under each approval or relevant statutory instrument.

The roles and responsibilities of the key stakeholders relevant to the environmental management of the Project are outlined in **Table 19.2**.

Table 19.2: Environmental management roles and responsibilities

Role	Responsibilities
Victorian Minister for Planning	<ul style="list-style-type: none"> • Prepare an assessment on the potential environmental effects of the project. • Review the MMs and recommend adoption by relevant regulatory agencies in statutory approvals as part of their assessment of the EES. • Approve the PSA and conditions of the Project's Incorporated Document. • Review and approve the Project's EMF as required by the Incorporated Document. • Receive regular audit and monitoring reports to comply with the EMF and associated environmental management plans. • Where relevant, administer and enforce approvals as responsible authority for the administration and enforcement of the Incorporated Document through the PSA.
Commonwealth Minister for the Environment	<ul style="list-style-type: none"> • Assess and decide on EPBC Act matters. • Review and approve environmental management plans under the EPBC Act approval, as required. • Receive audit or monitoring reports, as required.
Gunditj Mirring Traditional Owners Aboriginal Corporation (GMTOAC)	<ul style="list-style-type: none"> • Assess and approve the Project CHMP as the Registered Aboriginal Party (RAP).
Proponent— Neeen	<ul style="list-style-type: none"> • Obtain applicable statutory approvals detailed in EES Chapter 5 Assessment and approvals framework and summarised in Section 19.2. • Revise and update the EMF and mitigation measures in response to the relevant matters and recommendations contained in the Minister's assessment of the EES • Mandate compliance with the EMF in Project contracts • Develop and maintain an EMS in accordance with AS/NZS ISO 14001 • Implement its responsibilities under the EMF • Review, approve and implement Project management plans. • Monitor compliance with the approved MMs and approval conditions across all Project approvals. • Provide summary reports regarding compliance with the EMF to the Minister for Planning. • Liaise with regulators, experts and other agencies as required. • Conduct stakeholder engagement and community consultation activities as required.
Proponent, contractors and consultants	<ul style="list-style-type: none"> • Comply with legislative and approval requirements, including the approved EMF. • Develop and implement a Project-specific EMS or apply an existing or adapted corporate EMS to the specific activities relevant to the Project

	<p>works that are the subject of the Project contract, certified to AS/NZS ISO 14001 and, to the extent relevant, consistent with the Proponent’s EMS.</p> <ul style="list-style-type: none"> • Develop environmental management documentation and management plans in accordance with legislative and approval requirements, including the EMF. • Obtain from regulatory authorities any additional permits and approvals required to design, construct and operate the Project works. • Conduct monitoring, auditing and reporting as required. • Comply with the EMS and relevant legislative and approval requirements. • Receive audit reports from the Independent Environmental Auditor (IEA), conduct internal compliance audits and, provide compliance reporting to authorities and undertake any corrective compliance activities as required.
Independent Environmental Auditor (IEA)	<ul style="list-style-type: none"> • Prior to the commencement of works, verify that the Proponent/Project contractors have complied with the relevant requirements in MMs and the EMF and the Incorporated Document. • Conduct audits of the Proponent/contractor works, as required by the MMs and EMF, at specified intervals to assess compliance with the relevant management plans. • Prepare audit reports for the Proponent containing the results of audits and recommend corrective and preventative actions as required. • Submit reports to the Proponent, contractors and other stakeholders where applicable.
Regulators and agencies	<ul style="list-style-type: none"> • Review, assess and make determinations on permits and approvals. • Review, comment and where necessary approve relevant plans and documents as required by the EMF.

19.4 Environmental assessment and management

19.4.1 Baseline data

The baseline environmental conditions to be used to monitor and evaluate the residual environmental effects of the Project are summarised in each technical assessment chapter of the EES ([EES Chapters 7–18](#)). Each technical chapter is supported by one or more specialist technical study. These reports provide a more detailed description of the existing (pre-development) conditions on site and have been attached to this EES as appendices ([EES Technical Appendices C–W](#)).

The baseline data and existing conditions will be incorporated into the EMS to inform monitoring and evaluation of the residual environmental effects.

19.4.2 Risk assessment

An environmental risk register ~~will~~ [must](#) be developed by the Proponent prior to construction commencing to identify environmental impacts and risks of the proposed activities and assess the mitigation measures to ensure impacts and risks ~~will be~~ [are](#) managed to ‘as low as reasonably practicable’ (ALARP). The risk assessment process ~~will~~ [must](#) be consistent with the Australian and New Zealand Standard for Risk Management (AS/NZS ISO 31000:2018, Risk Management – Principles and Guidelines).

The environmental risk register ~~will~~ [must](#) be regularly reviewed and updated in response to changes to design, construction or operational activities, work methods, new technology, legislation and policy, or the occurrence of incidents or complaints.

19.4.3 Mitigation measures

Impact assessments were undertaken as part of the 20 technical studies prepared for this EES, involving an assessment of the nature and extent of identified impacts that the Project may have on the existing environment. Several factors were taken into consideration when determining the significance of potential impacts on social and environmental values, including the magnitude, spatial extent, and duration of potential impacts.

MMs were recommended to the Proponent by each technical specialist based on the results of each impact assessment, aiming to avoid, minimise, manage, or offset potential environmental, social and safety impacts. The Proponent has reviewed the recommended mitigation measures in the EES technical studies and has adopted a comprehensive set of measures to manage potential impacts from the Project, as described throughout [EES Chapters 7–18 of the EES](#) and collated in **Table 19.3**. The Project ~~will~~ [must](#) be delivered in accordance with these proposed mitigation measures.

The mitigation measures in **Table 19.3** are listed in the same order that they appear in the EES chapters.

Table 19.3: Mitigation measures

Measure ID	Mitigation Measure	Relevant Work Area	Phase	EES Location
Environment Management				
MM-EMF1	<p>Environment Management System</p> <p>Develop, implement and maintain an Environmental Management System (EMS) for use through the design, construction and operation of the Project that conforms with AS/NZS ISO 14001:2016 Environmental Management Systems – requirements with guidance for use.</p>	All areas	Pre-construction Construction Operation	Chapter 19
MM-EMF2	<p>Environment Management Framework</p> <p>Develop, implement and maintain an Environment Management Framework (EMF) as described in this document and in any applicable clauses of the Incorporated Document.</p> <p>Prepare and implement a Construction Environmental Management Plan (CEMP), Operational Environmental Management Plan (OEMP), and Decommissioning Environmental Management Plan (DEMP), and other plans, as required by the mitigation measures and in accordance with the EMF.</p>	All areas	All phases	Chapter 19
MM-EMF03	Deliver Project in accordance with an Environment Management System EMS and EMF.	All areas	All phases	Chapter 19
Construction on Boiler Swamp Road				
MM-BS01	<p>Construction Environmental Management Plan Boiler Swamp Road</p> <p>Before development starts, a Construction Environmental Management Plan for Boiler Swamp Road (BSRCEMP) will must be developed to the satisfaction of DEECA Regions and Bushfire Forest Services and be endorsed by the responsible authority. The BSRCEMP may be varied with the written consent of the responsible authority. The BSRCEMP must address the following matters:</p> <ul style="list-style-type: none"> • Prior to the commencement of works, detailed design drawings must be submitted to and approved by the responsible authority. 	Boiler Swamp Road	Pre-construction Construction Operation	Chapter 4

Measure ID	Mitigation Measure	Relevant Work Area	Phase	EES Location
	<ul style="list-style-type: none"> • Installation of transmission lines, link bays and joint boxes to be provided at a minimum of 750mm below road surface or culverts as applicable. • Link bays and joint box locations to be clearly marked adjacent to the road for future machine operators know locations of bays and boxes. • Any deterioration of Boiler Swamp Road standard (as per dilapidation surveys) due to installation of transmission lines or associated infrastructure in the short-term (1 year) and long-term (5 years) to be reinstated in consultation with DEECA Bushfire Forest Services including provision of compaction techniques, re-sheeting plans (etc). • The Proponent must lodge with DEECA Bushfire Forest Services a bond or bank guarantee to the satisfaction of DEECA Bushfire Forest Services as security for the satisfactory completion and maintenance along Boiler Swamp Road. The bond may be reduced to the satisfaction of DEECA Bushfire Forest Services from time to time commensurate with outstanding works. DEECA Bushfire Forest Services may call on the security in the event of non-compliance with the requirements relating to and maintenance along Boiler Swamp Road. • The Proponent must repair, at their own cost and to the satisfaction of DEECA Bushfire Forest Services, any damage to public roads, infrastructure or assets caused by construction, maintenance or operational activities associated with the construction of the transmission line on Boiler Swamp Road. • How emergency access will be provided along the entirety of Boiler Swamp Road, as needed, during the months of January and February inclusive, and on days declared as having an Extreme or Catastrophic Fire Danger Rating. Access arrangements for declared fire danger days must be developed in consultation with DEECA Bushfire Forest Services, to determine appropriate techniques and operational requirements for ensuring access to the Heavy Strategic Fire Access Road. • How access will be provided to facilitate emergency management activities, 			

Measure ID	Mitigation Measure	Relevant Work Area	Phase	EES Location
	<p>including but not limited to bushfire response, planned burn operations, and land management activities such as baiting. The nature, extent, and timing of access must be determined in further consultation with DEECA Bushfire Forest Services to ensure alignment with regional emergency management and land management priorities.</p>			
Biodiversity				
MM-BD01	<p>Native Vegetation Plan</p> <p>Before any native vegetation is removed, a Native Vegetation Plan (NVP) will must be prepared in consultation with the Victorian Department of Energy, Environment and Climate Action, (DEECA Regions) and to the satisfaction of the responsible authority.</p> <p>The NVP will must:</p> <ul style="list-style-type: none"> • Include an updated final Native Vegetation Removal Report and Biodiversity Assessment Report or similar which identifies the extent of native vegetation removal approved by the Incorporated Document, including losses determined in accordance with MM-BD06, and the associated offset requirements, in accordance with the <i>Guidelines for the removal, destruction or lopping of native vegetation</i> (DELWP 2017). • Identify: <ul style="list-style-type: none"> ○ Native vegetation to be removed ○ Any current mapped wetlands that are present on the site ○ All areas of native vegetation to be retained ○ Native tree protection zones of trees to be retained ○ Native vegetation protection zones (no-go zones) for native vegetation to be retained ○ Areas to be rehabilitated following disturbance activities ○ Measures to be used during construction to protect native vegetation to be retained including no-go areas and fencing. 	All areas	Pre-construction Construction	Chapter 7

Measure ID	Mitigation Measure	Relevant Work Area	Phase	EES Location
	<ul style="list-style-type: none"> • Identify where construction activities are limited to zones or corridors to avoid or minimise impacts on native vegetation and habitat. • Provide measures to ensure that: <ul style="list-style-type: none"> ○ Activities within 'no-go zones' areas of native vegetation will be effectively protected and retained ○ Any tree or vegetation protection zone associated with the permitted use and/or development is adequately protected, except with the written consent of the Minister. <p>Specific measures to be included in the NVP include:</p> <ul style="list-style-type: none"> • Before development starts, all persons undertaking the vegetation removal or works on site must be made aware of all relevant permit conditions and associated statutory requirements or approvals. • Before development starts, a native vegetation protective on fence ing must be erected <u>progressively (as the construction is undertaken)</u> around all patches of native vegetation and scattered trees to be retained on site. This fence will <u>must</u> protect the tree by demarcating the tree protection zone and must be erected at a radius of 12 x the diameter at a height of 1.3 metres (m) to a maximum of 15 m but no less than 2 m from the base of the trunk of the tree. The fence must be constructed of star pickets/ chain mesh/ or similar. The fence must remain in place until all works are completed to the satisfaction of the responsible authority. • Except with the written consent of the responsible authority, within the area of native vegetation to be retained and any tree or vegetation protection zone associated with the permitted use and/or development, the following is prohibited: <ul style="list-style-type: none"> ○ Vehicular or pedestrian access ○ Trenching or soil excavation ○ Storage or dumping of any soils, materials, equipment, vehicles, 			

Measure ID	Mitigation Measure	Relevant Work Area	Phase	EES Location
	<p>machinery or waste products</p> <ul style="list-style-type: none"> ○ Entry and exit pits for the provision of underground services ○ Any other actions or activities that may result in adverse impacts on retained native vegetation. <p>To prevent the spread of weeds and pathogens, all vehicles must be made free of soil, seed and plant material before being taken to the works site and again before being taken from the works site, during and on completion of the Project.</p>			
<p>MM-BD02</p>	<p>Assessment of tree health along Boiler Swamp Road</p> <p>If the proponent wishes to be eligible to reconcile offset credits provided against actual native vegetation losses, the following surveys must be carried out on trees adjacent to Boiler Swamp Road to assess for tree health (to the satisfaction of DEECA):</p> <ul style="list-style-type: none"> • A pre-construction survey to benchmark tree health will must be conducted to provide a benchmark assessment. This will involve assessment of tree health, structure and ULE. • A post-construction survey will must be conducted within 6 months of the completion of construction. The purpose of this assessment is survey for any immediate impacts on tree health, and to re-assess the level of Tree Protection Zone impacts, using accurate data on the actual extent of excavation. • A further post-construction survey will must be conducted between 24 and 30 months following completion of construction. <p>The purpose of this assessment is to compare changes in tree health and assess the extent of any tree deaths that can be attributed to the construction of the transmission line. If more offset credits were secured pursuant to the final offset strategy required by the Incorporated Document than what was needed as determined by the further post-construction survey conducted between 24 and 30 months after completion of construction, offset requirements can be reconciled with the agreement of DEECA Regions.</p>	<p>Transmission line</p>	<p>Pre-construction Operations</p>	<p>Chapter 7</p>

Measure ID	Mitigation Measure	Relevant Work Area	Phase	EES Location
MM-BD03	<p>Tree Protection Zones</p> <p>Trees not requiring direct removal will must be protected in appropriately marked Tree Protection Zones in accordance with AS 4970:2025 <i>Protection of trees on development sites</i>.</p>	All areas	Construction	Chapter 7
MM-BD04	<p>Tree pruning</p> <p>Any tree pruning required will must be undertaken by an experienced arborist to ensure unnecessary damage does not occur to the tree. Understorey vegetation will must be protected during tree pruning.</p> <p>Any pruning to the canopy or major structural branches of any tree to be retained must be undertaken in accordance with Australian Standard 4373-2007 – <i>Pruning of Amenity Trees</i>.</p>	All areas	Construction, Operation	Chapter 7
MM-BD05	<p>Weed and pest animal control</p> <p>Best practice methods for weed and pest animal control, such as vehicle and machinery hygiene, will must be implemented in collaboration with relevant landowners and land management authorities. These methods will must be documented in the Biosecurity Management Plan (BMP), to be prepared as part of the CEMP.</p> <p>The BMP will must be prepared to the satisfaction of the responsible authority and in consultation with Agriculture Victoria, and DEECA Regions and Parks Victoria where it relates to works associated with the underground transmission line in the Cobboboonee National Park and Cobboboonee Forest Park.</p> <p>The BMP must include:</p> <ul style="list-style-type: none"> • Procedures to prevent biosecurity risks, which may include (but are not limited to): <ul style="list-style-type: none"> ○ The cleaning of all plant and equipment before transport onto and off the site. ○ The use of material/products on site which are free of invasive plants 	All areas	Pre-construction Construction Operation Decommissioning	Chapter 7

Measure ID	Mitigation Measure	Relevant Work Area	Phase	EES Location
	<p>and animals.</p> <ul style="list-style-type: none"> ○ A protocol for effective identification of biosecurity risks, early intervention to manage biosecurity risks, ongoing monitoring of biosecurity risks, trace-backs, and integrated control measures when entry, establishment or spread of specific risk targets is identified. ○ A requirement to comply with approved government or industry standards and procedures for the identification, prevention and management of biosecurity risks that apply from time to time. <p>The BMP may be prepared in sections or stages.</p>			
<p>MM-BD06</p>	<p>Boiler Swamp Road assessment of losses</p> <p>Construction activities for the underground transmission line along Boiler Swamp Road will must be limited to the existing road formation.</p> <p>Before any native vegetation is removed and before the preparation of the Native Vegetation Plan required by MM-BD01 a report must be prepared to the satisfaction of DEECA Regions addressing:</p> <ol style="list-style-type: none"> 1. the precise alignment of the transmission line within Boiler Swamp Road; 2. the location of joint boxes and associated infrastructure; 3. the proposed construction methodologies to be implemented along the proposed alignment, which may include integrated trenching wheel, horizontal directional drilling or other methodologies; 4. the results of root investigations that have been undertaken to inform the proposed alignment; 5. confirmation that no Apple Jack <i>Eucalyptus splendens</i> will be impacted in accordance with the assessment methodology in the AS4970:2025, <i>Protection of trees on development sites</i>; and 6. a statement of native vegetation losses associated with the proposed alignment and methodology having regard to the root investigations. <p>The root investigations to inform the proposed alignment will must be based on</p>	<p>Transmission line</p>	<p>Pre-construction Construction</p>	<p>Chapter 7</p>

Measure ID	Mitigation Measure	Relevant Work Area	Phase	EES Location
	<p>testing at the edges of the proposed construction corridor in the proximity of representative trees beside Boiler Swamp Road and may utilise 3D ground penetrating radar, hydro-trenching or other method. The root investigation program must take into account the size and species of the trees investigated and stratification along the road, and must be informed by an suitably qualified and experienced arborist. The proposed root investigation program must be approved by DEECA Regions prior to commencement of investigations. The NVP required by MM-BD01, including the updated final Native Vegetation Removal Report and updated Biodiversity Assessment Report, must be consistent with, and take account of, the report prepared pursuant to this mitigation measure.</p> <p>The transmission line will must be installed in accordance with the development plan approved by the Minister report except with the written consent of DEECA Regions.</p> <p>Any horizontal directional drilling will must be done in accordance with AS 4970:2025 <i>Protection of trees on development sites</i>, including ensuring directional drilling is at a depth of 750 millimetres or greater.</p>			
MM-BD07	<p>Pre-clearance surveys</p> <p>Pre-clearance surveys will must be undertaken prior to removal of native vegetation in areas with known occurrences of significant species, including but not limited to Dune Fan-flower (<i>Scaevola calendulacea</i>), One-flower Early Nancy (<i>Wurmbea dioica</i>), Hairy Boronia (<i>Boronia pilosa</i>), Wiry Bossiaea (<i>Bossiaea cordigera</i>), Rough Daisy-bush (<i>Olearia asterotricha</i>), Tiny Violet (<i>Viola sieberiana</i>), Leafy Greenhood (<i>Pterostylis cucullata</i>) and Western Golden-tip (<i>Goodia medicaginea</i>).</p> <p>Pre-clearance surveys will must also investigate the potential occurrence of threatened species including but not limited to:</p> <ul style="list-style-type: none"> • Heath Mouse (<i>Pseudomys shortridgei</i>) (within the plantation) • Striped Worm-lizard (<i>Aprasia striolata</i>) (within the plantation) • Eastern Bearded Dragon (<i>Pogona barbata</i>) (within the plantation) • Southern Toadlet (<i>Pseudophryne semimarmorata</i>) (drainage lines along Boiler 	All areas	Pre-construction Construction	Chapter 7

Measure ID	Mitigation Measure	Relevant Work Area	Phase	EES Location
	<p>Swamp Road)</p> <ul style="list-style-type: none"> Portland Burrowing Crayfish (<i>Engaeus strictifrons</i>) (wetlands in the north-east wind farm site) Hairy Burrowing Crayfish (<i>Engaeus sericatus</i>) (wetlands in the north-east wind farm site) Yellow-bellied Glider (<i>Petaurus australis australis</i>) (trees adjacent to Boiler Swamp Road). The focus of these surveys will must be on trees with potential hollows. <p>The surveys will must be undertaken by an appropriately qualified and experienced ecologist and at an appropriate time of year for each species to maximise the probability of detection.</p> <p>Any known locations, or locations identified in pre-clearance surveys will must be marked, and treated as no go-zones if the location is within 30 metres of construction activities. If any threatened flora species are recorded within the previously unsurveyed areas, these areas will must be avoided, and subsequently addressed within the CEMP for the Project, including updating mapping.</p>			
MM-BD08	<p>Rehabilitation of temporary disturbance areas</p> <p>Temporary disturbance areas, such as those associated with the turbine laydown areas and construction compounds, will must be rehabilitated as soon as possible following cessation of the disturbing activity. The sites will must be planted with appropriate locally indigenous species, unless otherwise agreed with the landowner or land manager (e.g. disturbed areas of pine plantation would be returned to the forestry company for reintegration into their operations). Rehabilitated areas will must be monitored, with adaptive management applied in locations where rehabilitation has involved planting of locally indigenous species to control weeds and ensure successful establishment of final vegetation type.</p> <p>Areas to be rehabilitated, and the rehabilitation arrangements as agreed with relevant landowners, will must be detailed in the Project’s CEMP.</p>	All areas	Construction Operation	Chapter 7

Measure ID	Mitigation Measure	Relevant Work Area	Phase	EES Location
MM-BD09	<p>Flora and fauna management</p> <p>Prior to the commencement of construction, the Proponent will must develop a Flora and Fauna Management Plan (FFMP) in consultation with DEECA Regions and to the satisfaction of the responsible authority.</p> <p>The FFMP will must include the following requirements:</p> <ul style="list-style-type: none"> • Pre-clearance targeted flora and fauna surveys must be undertaken for flora species listed under the <i>Flora and Fauna Guarantee Act 1988</i> (Vic) and the <i>Environment Protection and Biodiversity Conservation Act 1999</i> (Cth) within areas requiring removal of native vegetation. • Pre-clearance surveys will must be undertaken for native vegetation with known occurrences of listed species and will must include surveys of hollows. • All habitat to be retained is to be clearly marked on construction drawings. • All habitat to be retained is to be clearly marked on the ground (e.g. with temporary fencing and flagging, as well as signage) where located in close proximity to the development footprint, and designated as 'no-go zones'. • Specific measures to be implemented to avoid, minimise and mitigate potential impacts on State and Commonwealth endangered listed species. • Specific measures to be implemented in relation to trees with hollows. • Measures to further minimise and mitigate impacts on native fauna during construction and habitat clearance, including salvage and relocation if required. • Procedures for wildlife handling at locations requiring removal of native vegetation, including removal of trees with large hollows. <p>Matters covered in the BBAMP and the BMCP do not need to be covered in the FFMP.</p>	All areas	Pre-construction Construction	Chapter 7
MM-BD10	<p>Australasian Bittern</p> <p>Any works, such as road construction, but excluding works for the main substation, within Brolga (<i>Antigone rubicunda</i>) breeding buffers (as the majority of known and</p>	All areas	Pre-Construction Construction	Chapter 7

Measure ID	Mitigation Measure	Relevant Work Area	Phase	EES Location
	<p>suitable habitat for Australasian Bittern (<i>Botaurus poiciloptilus</i>) is already within Brolga breeding buffers) will must be conducted outside the Australasian Bittern breeding season (October to February). This requirement does not apply where it can be demonstrated to the satisfaction of DEECA Regions that the Brolga breeding buffers are not suitable breeding habitat for the Australasian Bittern.</p> <p>A pre-construction survey will must be conducted in December, January, February, March, and April to confirm breeding has finished before any works, but excluding works for the main substation, are commenced, noting that Australasian Bittern breeding season extends to February.</p> <p>A plan to manage works for the main wind farm substation will must be prepared to the satisfaction of DEECA Regions prior to commencement of construction of these works. The plan will must be implemented if breeding activity is observed during pre-construction or construction surveys. The plan will must:</p> <ul style="list-style-type: none"> • identify a buffer distance around the works site for the main wind farm substation • require monitoring of relevant wetlands • be implemented if breeding activity is observed within that buffer distance during pre-construction or construction surveys • require monitoring of relevant wetlands, detail measures to avoid and minimise potential disturbance, including by requiring access to the site during breeding season from Portland-Nelson Road via Blacks Road and Mt Kincaid Road, and by staging the most potentially disruptive works outside the breeding season to the extent practicable. The plan will also identify a buffer distance around the works site for the main wind farm substation, and will be implemented if breeding activity is observed within that buffer distance during pre-construction or construction surveys. <p>The following measures will must also be implemented and must be documented in the BBAMP:</p> <ul style="list-style-type: none"> • Undertake surveys to identify presence and to estimate numbers of 			

Measure ID	Mitigation Measure	Relevant Work Area	Phase	EES Location
	<p>Australasian Bitterns in wetland habitats within proximity to the Project Area, to provide a baseline for monitoring. The locations and timing for surveys will must be set out in the BBAMP and developed in consultation with DEECA Regions.</p> <ul style="list-style-type: none"> • Undertake a before-after control-impact (BACI) study to provide a better understanding of potential wind farm impacts to movement behaviour and habitat use by Australasian Bittern. • A contingency plan will must be developed for stopping or adaptive works within Brolga breeding buffers if Australasian Bitterns are observed, and the observation is confirmed by a qualified ecologist, within suitable breeding wetland habitat and engaging in breeding activity. • For nocturnal construction works that would occur within 200 metres of potential Australasian Bittern habitat during the breeding season, investigate and implement measures to minimise light spill. <p>Monitoring technologies, such as GPS/satellite/camera-based tracking of movements will must also be used in pre-commissioning monitoring to further inform potential adaptive management strategies for Australasian Bittern. Where these are identified as being available and effective, they will must be included in the BBAMP to be prepared for the Project.</p>			
MM-BD11	<p>Southern Bent-wing Bat Management Plan</p> <p>The following measures and measures will must be included in the BBAMP to manage potential impacts on Southern Bent-wing Bat unless otherwise agreed to by DEECA Regions the responsible authority:</p> <ul style="list-style-type: none"> • The BBAMP must ensure the Project results in a net benefit for the Southern Bent-wing Bat. • The BBAMP must include post-construction monitoring of bat activity at the turbine nacelle along with monitoring of temperature, wind speed and rainfall. Monitoring must continue for at least two years or a period specified by the Minister, in consultation with DEECA. • The BBAMP must include intensive carcass monitoring across the wind farm, 	Wind farm	Pre-construction Operation	Chapter 7

Measure ID	Mitigation Measure	Relevant Work Area	Phase	EES Location
	<p>particularly in the early stages of operation.</p> <ul style="list-style-type: none"> • Turbines selected for monitoring will <u>must</u> consider stratification by habitat type (plantation and farmland), distribution throughout the wind farm site and proximity to known caves. • <u>Carcass monitoring must use trained detection dogs unless it can be demonstrated other methods will be as effective.</u> • <u>The BBAMP must specify a benchmark and confidence limits for the proportion of total mortalities or injuries detected through monitoring. The BBAMP must provide for an increase in the curtailment speed if this benchmark cannot be achieved.</u> • Frequency of monitoring will be at least monthly during the monitoring period <u>must be sufficient to achieve the above benchmark.</u>, and the <u>plan BBAMP will must</u> consider pulse surveys during peak activity periods, including autumn and spring. • Within plantation areas the ideal searchable area for carcass searches will <u>must</u> include both cleared areas (50 metre radius) and areas under the pine canopy. This will need to be considered in the development of the search regime (including searcher efficiency and carcass retention trials) and mathematical approaches to extrapolating findings will need to be customised to the study. <u>The BBAMP must provide for fuel management in the areas under pine canopy to improve searcher efficiency.</u> • The plan <u>BBAMP will must</u> specify a sequence of actions to be undertaken if Southern Bent-wing Bat (Miniopterus orianae bassanii) mortalities are recorded, including intensification investigations, and potentially low-wind speed curtailment of specific turbines. • <u>The BBAMP must include a cumulative impact trigger for the Southern Bent-wing Bat and a requirement that exceedance of the trigger results in staged curtailment across the whole wind farm unless the mortalities are restricted to one group of turbines or specific turbines. The process for determining the curtailment area must be set out in the BBAMP.</u> 			

Measure ID	Mitigation Measure	Relevant Work Area	Phase	EES Location
MM-BD12	<p>Seasonal Nocturnal Low wind speed curtailment</p> <p>Seasonal nocturnal low wind speed curtailment for Southern Bent-wing Bat will must be developed during finalisation of the BBAMP and include at a minimum unless otherwise agreed to by DEECA:</p> <ul style="list-style-type: none"> • Daily timing: 30 minutes following sunset to 3 hours before sunrise. • Seasonal timing: September–November and February–April (5 months). • Climatic conditions: Temperatures above 10°C and not raining. • Cut-in wind speed: 4.5 metres/second. <p>Seasonal nocturnal low wind speed curtailment will must be included in the BBAMP.</p>	Wind farm	Pre-construction Operation	Chapter 7
MM-BD13	<p>Improved powerline visibility</p> <p>The overhead powerline along Portland-Nelson Road and south of Portland-Nelson Road will must be marked with standard commercially available bird diverters to increase visibility to birds and bats. Overhead powerlines along Portland-Nelson Road and south of Portland-Nelson Road will must be marked with diverters visible at night to avoid and minimise Australasian Bittern collisions as this species is most likely to move over the wind farm between dusk and dawn when moving seasonally between inland and coastal habitats. The type and spacing of diverters must also be informed by the desirability of minimising visual impacts from diverters (although not at the expense of the primary need to minimise the risk of bird and bat collisions), and black and white diverters should be used if appropriate.</p> <p>A review must be undertaken every five years to determine whether more effective diverters have become available and whether their use is warranted taking account of the results of mortality monitoring.</p>	Wind farm	Construction Operation	Chapter 7
Brolga				
MM-BR01	<p>Construction during Brolga breeding season</p> <p>Construction activity will must not be undertaken within Brolga (<i>Antigone rubicunda</i>) breeding buffers when Brolga pairs are present and engaging in breeding activity</p>	All areas	Pre-construction Construction	Chapter 8

Measure ID	Mitigation Measure	Relevant Work Area	Phase	EES Location
	<p>(mating displays, nest building, incubating, with unfledged chicks), until chicks fledge and the families dispersed from the buffers. This includes but is not limited to cable installation and road construction but excludes the main substation works. Brolga breeding buffers are as per the buffers shown in Figure 37a of the Flora and Fauna Existing Conditions and Impact Assessment (EES Technical Appendix C)</p> <p>If a new site is found within 3 kilometres of the Project footprint, a breeding buffer will must be determined and construction activity (as described above) will must stop within the new breeding buffer during the breeding season. The breeding buffer will must be developed using the methodology outlined in the Brolga Impact Assessment (EES Technical Appendix D).</p> <p>Construction activity (as described above) will must also not occur within the Brolga breeding buffers during the breeding season (July–November) even if Brolgas have not been observed during pre-clearance surveys, to ensure construction does not prevent Brolgas from breeding in those areas in any given season. Although Brolga breeding season is generally July to November, numbers can vary annually and so the following adaptive mitigation approaches will must be implemented during construction:</p> <ul style="list-style-type: none"> • Pre-construction clearance surveys will must be undertaken at all known and suitable breeding wetlands within the Brolga breeding buffers. • Construction in proximity to any wetlands with breeding activity will must be postponed while breeding activity is detected. • Monthly monitoring of known and suitable breeding wetlands within the Brolga breeding buffers with triggers to cease construction while breeding Brolgas are detected in proximity to such wetlands. • Monitoring will must be undertaken at a minimum distance of 400 metres to avoid undue disturbance on breeding pairs. <p>A plan to manage works for the main wind farm substation will must be prepared to the satisfaction of DEECA Regions prior to commencement of construction of these works. The plan will must be implemented if breeding activity is observed during pre-construction or construction surveys. The plan will must require monitoring of relevant</p>			

Measure ID	Mitigation Measure	Relevant Work Area	Phase	EES Location
	<p>wetlands, detail measures to avoid and minimise potential disturbance, including by requiring access to the site during breeding season from Portland-Nelson Road via Blacks Road and Mt Kincaid Road, and by staging the most potentially disruptive works outside the breeding season to the extent practicable.</p>			
Surface Water				
MM-SW01	<p>Dewatering</p> <ul style="list-style-type: none"> Water collected from excavated areas will must be recycled and reused for construction activities such as dust suppression. Dewatering activities will must be managed in accordance with a Dewatering Plan (DWP) to be prepared as part of the CEMP. The DWP will must adopt a management hierarchy that prioritises the prevention of discharges into surface waters as far as is reasonably practicable. The relevant suggested measures outlined in Environment Protection Authority Victoria (EPA) Publication: <i>1834: Civil Construction, Building and Demolition Guide (2020)</i> will must also be incorporated into the CEMP. Any water discharge must meet the background water quality determined in accordance with the SEWQMP (see MM-SW09). Water resulting from dewatering activities will must be tested for potential contaminants. Ponded stormwater and rainwater collected in excavations may be suitable for onsite treatment, reuse or discharge, subject to water quality testing results. Water from excavated areas will must not be discharged into or within 50 metres of a watercourse, drainage pathway or wetland without prior treatment. Where deemed suitable, discharge of collected water to land will must be to areas of low gradient to avoid soil erosion or sedimentation of land or water. Discharges to land will must also avoid areas that are saturated or at risk of 	All areas	Construction	Chapter 9

Measure ID	Mitigation Measure	Relevant Work Area	Phase	EES Location
	<p>becoming inundated.</p> <ul style="list-style-type: none"> Sediment control devices will <u>must</u> be used where required, to remove suspended soils and dissipate flow. These devices may include sediment fences or basins. Groundwater that is contaminated by Acid Sulfate Soils (ASS) will <u>must</u> be tested and discharged or disposed in accordance with protocols outlined in MM-CA03. 			
MM-SW02	<p>Surface water run-off</p> <ul style="list-style-type: none"> Prior to commencement of construction, a surface water quality monitoring and adaptive management program will <u>must</u> be prepared and implemented to ensure the effectiveness of controls that are implemented to mitigate potential risks to surface waters, and detail additional and/or improved measures that would be implemented should those controls fail or are not be effective to eliminate or minimise risks of harm to surface waters. Monitoring of surface waters will <u>must</u> be conducted upstream and downstream of works areas prior to construction, during construction and post-construction at the appropriate frequency (i.e. weekly during watercourse crossings works) to understand any changes to water quality in line with EPA Publication 1896: <i>Working within or adjacent to waterways</i>. All construction works will <u>must</u> be carried out in accordance with industry best practice guidelines including the IECA International Erosion Control Association Best Practice Erosion, and Sediment Control Guidelines and EPA Publication 1834: <i>Civil Construction, Building and Demolition Guide</i>, EPA Publication 1894: <i>Managing Soil Disturbance</i>, and EPA Publication 1895: <i>Managing stockpiles</i>. The CEMP is to <u>must</u> include a Sediment, Erosion and Water Quality Management Plan (SEWQMP) for all work areas (see MM-SW09). The SEWQMP will <u>must</u> outline the erosion and sediment mitigation measures to be implemented for each work area. Erosion and sediment control measures will <u>must</u> include: 	All areas	Pre-construction Construction	Chapter 9

Measure ID	Mitigation Measure	Relevant Work Area	Phase	EES Location
	<ul style="list-style-type: none"> ○ Sediment control devices such as bunding or silt fences around stockpiled material, earthworks and disturbed areas. ○ Clean water diversion around disturbed or unvegetated areas. <p>The SEWQMP will must be developed in consultation with the Glenelg Hopkins Catchment Management Authority (GHCMA).</p>			
MM-SW03	<p>Watercourse Trenching</p> <ul style="list-style-type: none"> • All trenched waterway crossings will must be carried out in accordance with industry best practice guidelines including the IECA International Erosion Control Association Best Practice Erosion and Sediment Control Guidelines and EPA Publications 1834: <i>Civil Construction, Building and Demolition Guide</i> and 1896: <i>Working within or adjacent to waterways</i>. • Waterway crossing works and reinstatement will must be carried out in consultation with the Glenelg Hopkins Catchment Management Authority GHCMA. As outlined in the CEMP, a Works on Waterways Licence will be lodged with the GHCMA as part of the design process for works on Designated Waterways. • Trench crossing works will must be programmed for dry or low flow conditions, such that works are preferentially scheduled for drier months of the year and lowest flow of the waterway and works are avoided when high rainfall events are expected. • Cabling will must be assembled and prepared so that it can be installed as quickly as practicable once trenching over a watercourse has been completed. • The exposed trench within a watercourse and riparian zones will must be reinstated immediately following the installation of the cable, including providing suitable compaction and revegetation. • Waterway reinstatement will must be designed to avoid future erosion. This may include the use of riprap made of stones to stabilise the waterway. If necessary, a geofabric will must be provided to prevent erosion and scour 	All areas	Construction	Chapter 9

Measure ID	Mitigation Measure	Relevant Work Area	Phase	EES Location
	<p>until the vegetation has established.</p> <ul style="list-style-type: none"> • Visual monitoring for changes in turbidity will must be undertaken downstream of the trench during flow events, if the trench has not been reinstated. • For 12 months after completion of trenching works, trenched waterways will must be visually inspected following significant rainfall/flow events. If during these visual inspections waterway reinstatement works are observed to be not performing appropriately (i.e. erosion is occurring), rectification measures will must be developed and implemented in a timely manner. 			
MM-SW04	<p>HDD watercourse crossings</p> <ul style="list-style-type: none"> • The proposed horizontal directional drilling (HDD) profile design and work method statement will must be submitted to the Glenelg Hopkins Catchment Management Authority-GHCMA and approved prior to the commencement of HDD works. • HDD watercourse crossings are located at Wild Dog Creek (PFI 18736259), Surrey River (PFI 18736259), Surrey River (PFI 18735897) and Surrey River (PFI 8810426). • Risk of frac-out will must be assessed in accordance with industry best practice guidelines to determine likelihood of occurrence (e.g. modelling). • Drilling profiles will must be adjusted where the risk of frac-out is considered likely. • Drilling fluid properties will must be monitored during HDD operations to reduce the risk of frac-outs (e.g. mud weight, viscosity, pressure). • Drilling equipment and configuration will must be appropriate for the proposed HDD operation to prevent frac-out. • Pollution prevention strategies will must be in accordance with EPA Publications 1834: <i>Civil Construction, Building and Demolition Guide</i> and 1896: <i>Working within or adjacent to waterways</i>, and the IECA International Erosion 	Transmission Line	Pre-construction Construction	Chapter 9

Measure ID	Mitigation Measure	Relevant Work Area	Phase	EES Location
	<p>Control Association <i>Best Practice Erosion and Sediment Control Guidelines</i>.</p> <ul style="list-style-type: none"> • Sediment control devices such as silt fences will must be used to remove suspended solids from waterways and dissipate flow where required. • Earth bunds and/or drainage channels will must be placed around the upper edges of drill sites and work areas to divert natural run-off around and away from the site and prevent mixing with drilling compound run-off. • Sump pits will be constructed at the bottom of the drill site. The sump pits will must be positioned to capture run-off from the drilling compound. Materials collected in the sump pit will be assessed and managed in accordance with industry best practice guidelines for HDD operations. • An earth bund or silt fence will must be placed around the sump pit to contain any spillage. • All facilities utilised in the surface mud handling (mixing, cleaning and pumping) during the HDD activities will must be bunded. 			
MM-SW05	<p>Fuel and chemical spills</p> <ul style="list-style-type: none"> • The storage of fuels and chemicals will must comply with the requirements of the <i>Dangerous Goods (Storage and Handling) Regulations (2022)</i>, EPA Guideline 1698: <i>Liquid Storage and Handling Guidelines</i> and EPA Publication 1834: <i>Civil Construction, Building and Demolition Guide</i>. • Fuels and chemicals stored on site will must be minimised. • Fuels or other potentially contaminating material will must not be stored in areas that are subject to inundation (e.g. floodplains), and at least 50 metres from sensitive receptors, such as waterways, wetlands and drainage pathways. • Fuel storage facilities will must be bunded. • Spill kits will must be available at locations where machinery/plant are operating and at refuelling points and fuel and chemical storage locations. 	All areas	Construction Operation	Chapter 9

Measure ID	Mitigation Measure	Relevant Work Area	Phase	EES Location
	<ul style="list-style-type: none"> Spills of hazardous materials will must be rendered safe and, where required, collected and transported by licensed contractors for disposal at appropriately licenced facilities, including cleaning materials, absorbents and contaminated soils. Staff training will must include spill management procedures. Refuelling of vehicles, plant and equipment (excluding handheld machines) will must be undertaken in a designated refuelling area with appropriate measures to contain spills. Refuelling of vehicles, plant and equipment will must not occur within 50 metres of a watercourse, drainage pathway or wetland. Measures to manage and monitor fuel and chemical spills will must be incorporated into the Hazardous Substance Management Plan, which will form part of the CEMP and Operation Environmental Management PlanOEMP. 			
MM-SW06	<p>Changes to flow regime during construction</p> <ul style="list-style-type: none"> The SEWQMP (see MM-SW09) will must outline the flood risk management measures for each work area. The CEMP and SEWQMP (see MM-SW09) must be informed by flood and hydraulic surface water modelling undertaken in accordance with MM-SW10. Construction compounds, drilling compounds, laydown areas and material storage areas will must be located outside of floodplains and areas that are subject to inundation (outside the 1 % Annual Exceedance Probability flood extent), where it is practical given other Project commitments and constraints. Where this is not considered practical, site design optimisation will must minimise the extent of works and storage in the floodplain / areas subject to inundation. Excavation material, topsoil and trench spoil will must not be stockpiled, stored or placed in areas that are flood prone or subject to inundation. 	All areas	Pre-construction Construction	Chapter 9

Measure ID	Mitigation Measure	Relevant Work Area	Phase	EES Location
	<ul style="list-style-type: none"> Site activities, facilities, infrastructure and materials will must be set back from drainage pathways and waterways to the satisfaction of the Glenelg Hopkins Catchment Management Authority GHCMA and, in the absence of regulatory requirements, in accordance with International Erosion Control Association <i>Best Practice Erosion and Sediment Control</i> Gguidelines. 			
MM-SW07	<p>Changes to flow regime during operation</p> <ul style="list-style-type: none"> Proposed infrastructure will must be designed to maintain existing levels of flood protection associated with overland flow paths (considering flood levels, flows and velocities) through compliance with Glenelg Hopkins Catchment Management Authority (GHCMA) requirements for flooding and overland flows. Permanent surface structures will must be designed to allow a set back from waterways and drainage pathways and to maintain existing flow regimes. Modifications to existing flow pathways (e.g. drainage diversions) will must be carried out to the satisfaction of the GHCMA and Glenelg Shire Council. 	All areas	Pre-construction Operation	Chapter 9
MM-SW08	<p>Stormwater management at operational facilities and roads</p> <ul style="list-style-type: none"> Stormwater produced at operation and maintenance facilities and on access tracks will must be reused on site as much as where possible. A water collection and treatment system will must be implemented to ensure that stormwater discharges meet the background water quality determined in accordance with the SEWQMP (see MM-SW09). Stormwater treatments will be incorporated into the Project design for the operation and maintenance facilities and access tracks to capture surface run-off and reduce pollutants in accordance with the <i>Best Practice Environmental Management Guidelines</i> (CSIRO 1999). Surface water discharges <i>Best Practice Environmental Management Guidelines</i> be designed in consultation with Glenelg Hopkins Catchment Management Authority GHCMA to ensure there is no adverse impact on the 	Wind farm site	Design Operation	Chapter 9

Measure ID	Mitigation Measure	Relevant Work Area	Phase	EES Location
	<p>capacity, quality and integrity of the receiving waterway.</p> <ul style="list-style-type: none"> • Polluted and/or sediment laden run-off must not be discharged directly or indirectly into drains without written consent from the relevant drainage authority. 			
<p>MM-SW09</p>	<p>Sediment, Erosion and Water Quality Management Plan</p> <p>The SEWQMP will must outline the surface water monitoring and contingency measures for the construction phase, including a monitoring program (including, as a minimum, visual monitoring during construction activities and consideration of weather conditions) of sediment management measures, and a complaint investigation and response plan.</p> <p>This contingency plan will must be aligned with industry best practice guidelines and will include a broad range of measures that will must be adopted during the event of an exceedance or failure of a mitigation measure. Aspects of the contingency plan would consider the following:</p> <ul style="list-style-type: none"> • methods to prevent water entering excavations. • controls to be implemented when a storm event is forecast. • measures to ensure that waterways and floodplains retain sufficient flood detention capacity to moderate peak water flows. • a flood warning system. <ul style="list-style-type: none"> clean up procedures, including disposal of excess water. notification of relevant authorities if unplanned incidents occur that could pose a risk to the environment. <p>The SEWQMP must include provision for a baseline water quality assessment to be undertaken prior to the commencement of construction.</p> <p>The SEWQMP must be informed by flood and hydraulic surface water modelling undertaken in accordance with MM-SW10.</p>	<p>All areas</p>	<p>Pre-construction Construction</p>	<p>Chapter 9</p>

Measure ID	Mitigation Measure	Relevant Work Area	Phase	EES Location
MM-SW10	<p>Flood and hydraulic surface water modelling</p> <p>Prior to finalisation of design, flood and hydraulic surface water modelling will must be undertaken for the Project area, including the transmission line alignment. This flood modelling will must be based on topographic data and will be reviewed by GHCMA. This modelling will must inform the CEMP and SEWQMP.</p>	All areas	Pre-Construction	Chapter 9
Groundwater				
MM-GW01	<p>Turbine Location</p> <p>To minimise the risk of final foundation locations intersecting groundwater, turbine locations should where practicable avoid areas with an inferred depth to groundwater of less than 6 metres below ground surface .</p>	Wind farm site	Design Pre-construction Construction	Chapter 9
MM-GW02	<p>Groundwater avoidance and contingency measures Dewatering Plan</p> <p>Dewatering activities will must be managed in accordance with the DWP (see MM-SW01). If groundwater may be intersected at a turbine foundation location, the following hierarchy of contingency measures will must be undertaken:</p> <ul style="list-style-type: none"> • If practicable, the turbine will must be moved by micro-siting to higher ground to avoid groundwater intersection. • If relocation micro-siting is not practicable, a DWP will must be developed specific to each turbine location that could include but not be limited to: <ul style="list-style-type: none"> ○ Assessment of drawdown and dewatering volumes, based on a site specific risk assessment of impacts to groundwater receptors. ○ Monitoring well installation, groundwater level monitoring and groundwater quality monitoring to be based on drawdown estimates. ○ Discharge of foundation dewatering to ground and down hydraulic gradient of the turbine to reduce drawdown and minimise loss of groundwater flow within the system (subject to groundwater quality and regulatory approvals) (see MM-GW05). ○ Triggers and actions to be identified such as cessation of dewatering. 	Wind farm site	Pre-construction Construction	Chapter 9

Measure ID	Mitigation Measure	Relevant Work Area	Phase	EES Location
MM-GW03	<p>Water supply investigation</p> <p>Additional water supply investigations as part of a groundwater take and use application to must be undertaken in consultation with Southern Rural Water. Water supply extraction bores must to be located along Nelson-Portland Road and within the deeper Upper-Mid Tertiary Aquifer (UMTA) to reduce potential impacts on groundwater users; in consultation with Southern Rural Water. Groundwater allocation to must be short-term and temporary transfer only (in the order of 2–3 years during construction).</p>	Wind farm site	Pre-construction Construction	Chapter 9
MM-GW04	<p>Registered bore locations</p> <p>Visually confirm the location of registered and unregistered bores. Prior to construction establish potential for damage or loss of access to existing bores in consultation with the landholder/bore owner. Agree to make good arrangements between the Proponent and the landholder/bore owner if required.</p>	All areas	Pre-construction Construction Operation	Chapter 9
MM-GW05	<p>Groundwater contamination management</p> <p>The following measures will must be implemented if contaminated groundwater is encountered:</p> <ul style="list-style-type: none"> If groundwater is extracted from the area near Test Pit TP05 (at -38.162525°,141.294842°, as identified in Figure F2a of Environmental Site Investigation (EES Technical Appendix I) during construction activities, it will must be tested prior to discharge to determine whether it must be remediated or sent offsite for disposal or can be discharged to land. Assessment must be completed under in accordance with the EP Act, the <i>National Environment Protection (Assessment of Site Contamination) Measure 1999 (amended 2013)</i> and associated guidance documents. If groundwater is encountered in current or former pine plantations, groundwater must be sampled and characterised prior to disposal in accordance with the GED under the EP Act and regulatory approvals. Processes for groundwater management, including sampling and characterisation prior to disposal, will must be set out in the DWP (see MM- 	Wind farm site	Construction Decommissioning	Chapter 9

Measure ID	Mitigation Measure	Relevant Work Area	Phase	EES Location
	<p>GW02SW01).</p> <ul style="list-style-type: none"> If there any are observations of odour, discolouration, sheen, or other signs of potential contamination in extracted groundwater, the abstraction of groundwater will must cease. Groundwater will must then be sampled and tested to confirm whether additional management measures and remediation are required, and whether abstraction can re-commence. <p>Groundwater that is contaminated by ASS will must be tested and discharged or disposed in accordance with protocols outlined in the ASSMP (see MM-CA03). Specific measures to manage contaminated groundwater (if intersected) will must be included in the DWP (see MM-GW02SW01).</p> <p>Groundwater contamination management must have regard to groundwater quality monitoring undertaken in accordance with MM-GW06.</p>			
MM-GW06	<p>Groundwater level and quality monitoring program</p> <p>A groundwater level and quality monitoring program will must be developed prepared and included in the CEMP to assess for effects on groundwater levels from foundation dewatering (if encountered) and groundwater supply extraction. This will must be informed by baseline data results and include trigger levels and contingency measures.</p> <p>It will must also be informed through consultation with Southern Rural Water during the groundwater take and use licence application and reflect conditions likely to be attached to any temporary licence agreed by Southern Rural Water.</p> <p>A groundwater level and quality monitoring program is to be developed generally in accordance with the indicative program provided in the Groundwater Impact Assessment (EES Technical Appendix G). This will provide additional baseline (pre-construction) data and confirm ‘natural’ variations in groundwater levels.</p> <p>Baseline monitoring of groundwater levels will must start 12 months prior to the commencement of water supply pumping and will must include:</p> <ul style="list-style-type: none"> Continuous groundwater level monitoring (e.g. hourly) via data loggers at monitoring wells MW01 to MW09 and MB01. 	Wind farm site	Pre-Construction Construction	Chapter 9

Measure ID	Mitigation Measure	Relevant Work Area	Phase	EES Location
	<ul style="list-style-type: none"> Monthly download of data logger and manual gauging at MB01. Quarterly downloading of data loggers and manual gauging of groundwater levels at all other monitoring wells. Quarterly download of State Observation Bores 101246 & 65058 from WMIS website. Quarterly collation of surface water/wetland data (available from Glenelg Hopkins Catchment Management Authority GHGMA). Monthly download of water extraction rates and volumes from production bore(s) and pump run hours. <p>Baseline monitoring of groundwater quality should be undertaken quarterly for at least 1 year to account for seasonal variability and should include analysis for chemicals of interest such as organochlorine and pH.</p> <p>It is anticipated that mMonitoring during the Project’s construction phase will <u>must</u> be similar in scope to the baseline monitoring. Construction phase monitoring will <u>must</u> be finalised based on <u>in</u> consultation with Southern Rural Water and other stakeholders during the groundwater take and use licence application process.</p> <p>Results of baseline and construction monitoring will <u>must</u> inform the need for <u>and scope of</u> post-construction monitoring and the scope of any such monitoring, although no residual impacts were identified for the operational phase of the Project.</p> <p>The groundwater level <u>and quality</u> monitoring program will <u>must</u> also consider any overlaps with surface water components. Ongoing communication and sharing of information regarding groundwater level and surface water level between the Proponent and the Glenelg Hopkins Catchment Management Authority GHGMA <u>GHGMA</u> will <u>must</u> be undertaken.</p>			
Groundwater Dependent Ecosystems				
MM-GD01	<p>GDE Monitoring and Management Plan</p> <p>A Groundwater Dependent Ecosystem Monitoring and Management Plan (GDEMMP) will <u>must</u> be developed prior to construction commencing in collaboration</p>	Wind farm site	Pre-construction Construction	Chapter 9

Measure ID	Mitigation Measure	Relevant Work Area	Phase	EES Location
	<p>consultation with the Glenelg Hopkins Catchment Management Authority (GHCMA), Southern Rural Water, and DEECA Regions and to the satisfaction of the responsible authority. The GDEMMP will must include:</p> <ul style="list-style-type: none"> • At least daily groundwater level data collection (via data loggers) in pairs of target bores along the swamp edge and inland to measure changes to hydraulic gradient. Key bores include pairs MW05 and MW06, and MW07 and MW08. • At least daily groundwater levels data collection (via data loggers) in two “background” bores to measure natural variations so that any deviations from natural variations in the target bores can be identified. Key background bores would be MW01 and MW09. • Monitoring of these bores will must begin at least 12 months before pumping commences so that baseline conditions (and natural variations in hydraulic gradient) can be determined. • Before pumping commences, target trigger levels will must be developed (based on the seasonal baseline condition monitoring) so that changes to the hydraulic gradient outside of natural variations triggers contingency measures, such as temporary cessation of pumping, reduction in pumping volumes or introduction of an intermittent pumping schedule, to be determined prior to pumping commencing. • Measures to ensure the hydraulic gradient to the Glenelg Estuary and Discovery Bay Ramsar site is maintained throughout the life of the groundwater extraction (construction – 2 years) and during system recovery (additional 2 years) via a monitoring plan with triggers and a set of contingencies. Ensure that assumptions underpinning the GDEMMP are updated as pumping progresses if drawdown varies from predictions. • Assessment against trigger levels and comparison of drawdown vs predicted drawdown will must happen at a minimum biannual frequency. <ul style="list-style-type: none"> ○ At least daily groundwater level data collection (via data loggers) in 		Operation	

Measure ID	Mitigation Measure	Relevant Work Area	Phase	EES Location
	<p>MB01 to compare actual drawdown values to predicted drawdown. In the first 6 months of pumping the actual compared to predicted will must be assessed at a minimum monthly basis so that the predictions can be validated and updated. After this period, biannual assessment in line with the target and background bore assessments.</p> <ul style="list-style-type: none"> Data loggers will must be downloaded at a minimum of quarterly frequency and validation manual water level readings taken so that dataloggers errors can be noticed and corrected in a timely manner. 			
Contamination & Acid Sulfate Soils				
MM-CA01	<p>Management of contaminated soil</p> <p>If soils are to be moved offsite for reuse, treatment or disposal, soil sampling will must be undertaken in accordance with the EPA Publication IWRG702: <i>Soil Sampling</i> to ensure the appropriate hazard categorisation is applied.</p> <p>A designated application will must be made to EPA to reclassify soils within Cobboboonee National Park and Forest Park where the concentration of nickel exceeds the upper fill material criteria of EPA Publication 1828.8: <i>Waste disposal categories – characteristics and thresholds</i>, as the nickel is considered to be naturally occurring background levels.</p>	All areas	Construction Decommissioning	Chapter 10
MM-CA02	<p>Management of unknown contamination</p> <p>In the event that unknown contamination is uncovered during Project construction works, the following measures will must be undertaken:</p> <ul style="list-style-type: none"> Cessation of ground disturbance at the unknown contamination location and within the immediate vicinity, and isolation of the area (if required). Assessment of the unknown material by an experienced environmental or health and safety practitioner (depending on the nature of the material) and appropriate disposal or treatment of the material. Assessment of the site contamination in accordance with EPA guidelines and determination and implementation of appropriate remedial action (if 	All areas	Construction Decommissioning	Chapter 10

Measure ID	Mitigation Measure	Relevant Work Area	Phase	EES Location
	<p>required).</p> <ul style="list-style-type: none"> ○ Where potentially impacted waste soils are encountered they must be sampled and categorised in accordance with EPA Publications IWRG702 and 1828.2 and managed in accordance with regulations. <p>These measures will must be outlined in the Project’s CEMP.</p>			
<p>MM-CA03</p>	<p>Acid Sulfate Soil Management Plan</p> <p>A detailed Acid Sulfate Soil ASS Management Plan (ASSMP) will must be developed in conjunction with the CEMP and implemented to manage Acid sulfate soils (ASS) and any associated waters. Development of the ASSMP will must be guided by the <i>Victorian Best Practice Guidelines for Assessing and Managing Coastal Acid Sulfate Soils</i> (Department of Sustainability and Environment, October 2010) and the National Acid Sulfate soils guidance (https://www.waterquality.gov.au/issues/acid-sulfate-soils).</p> <p>The ASSMP will must include (but not be limited to) the following:</p> <ul style="list-style-type: none"> ● Project overview, including overview of proposed disturbance works. ● Description of the site and environmental setting, including topography, hydrology and geology, groundwater characteristics, land use and presence of sensitive receptors. ● Summary of the ASS investigations and assessment undertaken in the Project Area, including spatial distribution and expected occurrence of ASS associated with the Project, and potential impacts. ● Timing of planned Project works and environmental management activities. ● Description of the ASS management strategies that will be used to minimise impacts from the Project works, including strategies for: <ul style="list-style-type: none"> ○ Avoiding or minimising disturbance of ASS and preventing oxidation of metal sulfides. ○ Planned treatment or neutralisation of ASS and any run-off or acidic leachate that might be generated, and potential reuse of treated ASS or disposal of ASS. 	<p>All areas</p>	<p>Pre-Construction Construction Decommissioning</p>	<p>Chapter 10</p>

Measure ID	Mitigation Measure	Relevant Work Area	Phase	EES Location
	<ul style="list-style-type: none"> ○ Water management, including onsite and offsite water table management before, during and after disturbance, and containment of run-off or acidic leachates. ○ Treatment for reduction or neutralisation of acidity, spoil management including offsite reuse or disposal, water management, monitoring, record keeping, reporting and EPA consultations and approvals. ● Soil and water monitoring requirements, and treatment validation. ● Reporting requirements and record keeping relating to excavation/backfill locations and volumes, treatment methods and volumes, monitoring, laboratory analysis monitoring and incidents. ● Contingency procedures to manage potential impacts/incidents, including trigger levels, and remedial and restorative actions. ● Consultation with relevant stakeholders and authorities and approval process associated with the ASSMP. ● Further assessment of ASS to permit calculation of limiting rates. <p>If removing and disposing of ASS offsite, disposal must occur at a lawful place that is permitted to accept N123 Waste ASS or Potential ASS, and that if the Waste ASS/Potential ASS has contaminants above fill material thresholds, it can be classified as N120 which is a reportable priority waste.</p>			
MM-CA04	<p>Spoil Management</p> <p>Management control measures relating to handling and stockpiling of spoil, movement and transport of spoil, and the reuse or disposal of spoil materials will <u>must</u> include:</p> <ul style="list-style-type: none"> ● Implementation of dust control measures during excavation and land disturbance activities. These may involve minimising excavation and movement of soils in windy conditions, minimising movement of vehicles on exposed areas, and dampening down stockpile soils and vehicle tracks. ● Managing surface run-off during or after rain events and preventing 	All areas	Construction	Chapter 10

Measure ID	Mitigation Measure	Relevant Work Area	Phase	EES Location
	<p>potentially contaminated stormwater or run-off from entering waterways through construction of silt fences and other measures. If generation of water is expected as part of the control measures implemented (e.g. run-off or dewatering of excavations) a SEWQMP will <u>must</u> be implemented as part of the CEMP.</p> <ul style="list-style-type: none"> • Management of unknown or unexpected contaminated wastes that may be uncovered during excavation works (see MM-CA02). • The stockpiling area for placement of excavated material will <u>must</u> be in a stable area, as far from waterways as possible or areas subject to waterlogging or ponding. Stockpiles will <u>must</u> be appropriately managed to prevent dust generation (via wind erosion) or stormwater run-off, in accordance with EPA Publication 1895: <i>Managing stockpiles</i>. This will involve: <ul style="list-style-type: none"> ○ Covering (if necessary) or spraying the stockpiles to keep the soil damp to mitigate wind erosion (dust generation). ○ Construction of silt fences and other measures to capture and prevent run-off from the area. ○ Establishment of exclusion zones or barriers to prevent access and contact with soil by unauthorised people. • Specifically in relation to spoil management associated with construction of the underground transmission line beneath Boiler Swamp Road, excess spoil that needs to be removed would initially be laid on tarpaulins at existing road intersections within the Parks (where no impact to native vegetation would occur), then transported at the end of each day to either an agreed location within the Parks (identified in consultation with DEECA Regions and Parks Victoria), or if no location within the Parks is identified, to an offsite laydown areas to be reused elsewhere for wind farm construction or offsite disposal at an appropriate licensed facility. Disposal locations would be identified in the CEMP to be prepared in consultation with relevant authorities. • Stockpiling of excavated materials in designated areas until the material is 			

Measure ID	Mitigation Measure	Relevant Work Area	Phase	EES Location
	<p>reinstated to the excavation as backfill (if appropriate to do so).</p> <ul style="list-style-type: none"> • Stockpiling for an extended period of time will must be avoided in order to mitigate potential environmental impacts such as dust and odour generation and stormwater and sediment run-off. The timing and methodology of backfill will must be carefully considered. Subsequent compaction of backfill will must reinstate a finished trafficable surface. • Contaminated or potentially contaminated soil and excavated materials will must be stockpiled separately to non-odorous and visibly ‘clean’ soils, on hardstand or high-density polyethylene sheeting, and considered as contaminated until the contamination status is assessed by sampling and analysis of the stockpiled material for offsite disposal. Contamination assessment will must be undertaken by a suitably experienced environmental practitioner. Exposure to contaminated spoils will must be minimised as described above (e.g. covering, exclusion zones, and silt fences). • In the event that offsite disposal of excavated spoils is planned (e.g. spoils are not considered appropriate for reuse, or surplus spoils remain): <ul style="list-style-type: none"> ○ Stockpiles will must be sampled and analysed for waste characterisation and categorisation purposes in accordance with EPA Publication IWRG702: <i>Soil Sampling</i> prior to removal from site. ○ Contaminated spoil must be collected and transported by an authorised/licenced waste contractor utilising the Waste Tracker scheme. ○ Vehicles transporting waste material onsite will must operate in a manner to prevent loss of materials during loading, transport and unloading activities. Odorous waste must be covered during transportation. <p>Records of excavated soil and stockpile movements, including (but not limited to) the location of materials excavated, quantities, descriptions of materials encountered, laboratory test certificates, waste assessment and categorisation reports, disposal</p>			

Measure ID	Mitigation Measure	Relevant Work Area	Phase	EES Location
	location, and waste receipts (from the waste transporter), will must be maintained by the site owner and operator through the Waste Tracker system.			
MM-CA05	<p>Contamination management</p> <p>The CEMP will must set out the controls for the transportation, storage and management of fuels and any chemicals to be used during construction, maintenance and decommissioning of the Project. This will must include but not be limited to:</p> <ul style="list-style-type: none"> • Maintenance of oil leaks and servicing of operational fluid will must take place prior to equipment delivery to site. Any greasing of machinery or minor or emergency servicing that cannot be undertaken off-site will be carried out in a designated area that has an impermeable drained and bunded floor which can collect hydrocarbons/solvents, wastewater or other liquids, preventing soil and water contamination on and off site. • Any spillage or leakage and resultant contaminated soil (if any) will must be removed and disposed of using approved waste management providers as soon as practicable. • Any fuel, oil and other chemicals that are to be stored on site will must be stored in suitable containers and on hardstand floors (e.g. shipping containers, concrete) contained within a bunded area, protected from stormwater incursion. <p>Spill kits will must be located in accessible areas near where any hazardous substances or chemicals are securely stored and/or used, and in mobile fuel refuelling vehicles.</p>	All areas	Pre-Construction Construction Operation Decommissioning	Chapter 10
MM-CA06	<p>Pre-construction peat-assessment</p> <p>Once locations of the turbines and other infrastructure have been finalised, a pre-construction peat assessment will must be undertaken to determine whether peat exists in proposed excavation areas (e.g. for turbines, substations and underground reticulation) and whether specific fire mitigation measures are required. This peat assessment will must be limited to low-lying high risk areas of the Project Area where excavation is required, in farmland in the wind farm site east of Portland-Nelson, and</p>	All areas	Pre-Construction Construction	Chapter 10

Measure ID	Mitigation Measure	Relevant Work Area	Phase	EES Location
	<p>within farmland in the transmission line corridor east of Cobboboonee Forest Park. These high risk areas have been identified through the Environmental Site Investigation (EES Technical Appendix I) and are summarised in EES Chapter 10 Soil contamination and acid sulfate soils. The peat assessment will must build upon the work already done to confirm the low-lying areas that would be of higher risk of peat occurrence. Test pitting will must be done in areas where infrastructure is proposed within these high risk areas to confirm the presence of peat.</p> <p>If peat is found in areas to be excavated, this will must trigger implementation of the Peat Management Plan (PMP), which will must be developed as part of the CEMP. The PMP will must detail the safe work practices to be implemented when working in areas with peat and the remediation works required if these areas are to be disturbed.</p>			
Aboriginal Cultural Heritage				
MM-AH01	<p>GMTOAC Consultation</p> <ul style="list-style-type: none"> • Continue consultation and involvement where practicable with Gunditj Mirring Traditional Owners Aboriginal Corporation (GMTOAC), before the commencement of construction, including but not limited to: <ul style="list-style-type: none"> ○ the inclusion in the CEMP of measures to ensure cultural safety and cultural awareness during construction; ○ the preparation of the Cultural Heritage Management Plan (CHMP 17822) (MM-AH02); ○ the preparation of the NVP (MM-BD01); ○ the preparation of the ASSMP (MM-CA06) and the PMP (MMCA03); ○ the preparation of the BBAMP; ○ the preparation of the CEMP (Project EMF), including the DWP (MM-GW02) and the SEWQMP (MM-SW09); ○ the preparation of the NMP (MM-NV07); ○ the preparation of the QWP (MM-QU01NV03); 	All areas	All phases	Chapter 11

Measure ID	Mitigation Measure	Relevant Work Area	Phase	EES Location
	<ul style="list-style-type: none"> ○ the investigation and implementation of potential mitigation <u>and offsets</u> to minimise visual effects on key public view locations (MM-LV01). ● Continue consultation and involvement where practicable with Gunditj Mirring Traditional Owners Aboriginal Corporation (GMTOAC), during the construction and operational phases, including but not limited to: <ul style="list-style-type: none"> ○ the inclusion in the OEMP of measures to ensure cultural safety and cultural awareness during operation; ○ the provision of a copy of the monitoring report and any other reports as relevant prepared as part of the monitoring program of the BBAMP the preparation of the FMP (MM-BF06). ● GMTOAC Research Principles and Guidelines must be employed to ensure that Gunditjmarra Country and cultural values are respected and protected. ● Where reasonably practicable, consult and involve GMTOAC in future rehabilitation works. ● Maintain meaningful and respectful consultation with GMTOAC in relation to potential project opportunities for further GMTOAC coordination and participation during rehabilitation works. 			
MM-AH02	<p>CHMP 17822</p> <p>Prepare, gain approval, and implement contingencies of the Cultural Heritage Management Plan in accordance with the <i>Aboriginal Heritage Act 2006</i>.</p>	All areas	All phases	Chapter 11
MM-AH03	<p>Exclusion zones</p> <p>Avoidance of previously registered and identified Aboriginal places (being those that were registered before the assessment document in <u>EES Technical Appendix J: Aboriginal Cultural Heritage Technical Report</u>) that through establishing an exclusion zone around the known extent of the Aboriginal place via a buffer around the place extent with protective fencing. The extent of the buffer will <u>must</u> be determined in further consultation with GMTOAC. Furthermore, consultation with GMTOAC will</p>	All areas	Construction	Chapter 11

Measure ID	Mitigation Measure	Relevant Work Area	Phase	EES Location
	<p><u>must</u> determine if the protective temporary fencing must remain in place during operation and decommissioning/rehabilitation phases of works.</p> <p>Protective fencing will <u>must</u> be suitable temporary fencing (e.g. with concrete pads and wire chain mesh (or similar)) that must be erected prior to the commencement of ground disturbing works associated with the construction phase in the Project Area. GMTOAC will <u>must</u> further undertake an inspection of the protective fencing prior to the commencement of the construction phase of works in the Project Area to ensure that the Aboriginal places are avoided by proposed works.</p>			
Historic Heritage				
MM-HH01	<p>Site Induction</p> <p>All employees/contractors involved in ground disturbing works will <u>must</u> be provided with an historic heritage awareness induction. The inductions will <u>must</u> be provided by a suitably qualified heritage practitioner who is knowledgeable about the history of the region and the Proponent’s legal obligations for heritage protection, and will <u>must</u> provide the following information:</p> <ul style="list-style-type: none"> • Background history of the region. • Heritage sites in the vicinity of the Project Area. • Guidance on identifying small artefacts and archaeological deposits. • Employee/contractor obligations for heritage protection under the relevant legislation. • Steps to be taken if unexpected archaeological material is encountered during Project activities, including who to report these finds to (see MM-HH03). 	All areas	Construction Decommissioning	Chapter 11
MM-HH02	<p>Avoidance of historical heritage items</p> <p>The Proponent will <u>must</u> implement the following measures to ensure that impacts on identified heritage sites within the study area are avoided:</p> <ul style="list-style-type: none"> • All employees/contractors involved in ground disturbing works within 100 metres (m) of a known heritage site will <u>must</u> be provided with an historic 	All areas	Construction Decommissioning	Chapter 11

Measure ID	Mitigation Measure	Relevant Work Area	Phase	EES Location
	<p>heritage awareness induction (see MM-HH01).</p> <ul style="list-style-type: none"> Known heritage sites will must be marked on design and construction plans. Any micro-siting of Project infrastructure will must avoid direct impacts on heritage sites. Heritage sites within 10 m of Project works will must be marked with suitable exclusion fences, bunting or similar. Signage will must be used to clearly indicate that marked sites are to be avoided. A qualified heritage advisor will must be engaged to inspect ground disturbing works to ensure that avoidance measures are being implemented. If impacts on the curtilage of recorded historic places such as the Former Kentbruck School (H7121-0053) cannot be avoided, the Proponent will must seek to obtain the following approvals for the Project Consent approval from Heritage Victoria under the <i>Heritage Act 2017</i> (relevant to sites listed on the Victorian Heritage Inventory). <p>Applications for the above approvals will must be prepared by a qualified and experienced archaeologist. The applications will must describe the Project’s historic heritage investigative methodology, reporting requirements, and artefact discard and management policy. The Proponent will must comply with any conditions required by the consent/planning approvals.</p>			
MM-HH03	<p>Unexpected discovery of historic sites</p> <p>The <i>Heritage Act 2017</i> requires mandatory reporting of any archaeological site that is identified via the submission of site cards to Heritage Victoria (HV). If any excavation or damage occurs to an archaeological site, an application for Consent must be submitted to and approved by HV. In this event, the Proponent will must not recommence works until a decision is made by HV and in accordance with any relevant heritage approval regarding the heritage status of the site.</p> <p>If any unexpected archaeological artefacts or features are identified during Project works, the Proponent will must implement the following unexpected discovery procedure:</p>	All areas	Construction Operation Decommissioning	Chapter 11

Measure ID	Mitigation Measure	Relevant Work Area	Phase	EES Location
	<ul style="list-style-type: none"> • Works in the vicinity of the finds will must cease. • The location of the finds will must be marked off and no work will commence in the area until it has been assessed. • A qualified heritage professional will must be engaged to assess the material and determine if it is a significant archaeological place. • If so, HV will must be contacted, a site card will must be submitted for listing of the site on the Victorian Heritage Inventory, and a Consent application will must be submitted if the site cannot be avoided by the Project works. <p>The CEMP will must include procedures to be implemented if an unknown historic heritage site, value or object is identified during works associated with the Project. The procedures will must include guidelines for the collection or salvage of historic heritage objects.</p>			
Landscape Character & Visual Amenity				
MM-LV01	<p><u>Public view locations in national and coastal parks</u></p> <p><u>A Landscape Character and Visual Amenity Mitigation and Offset Plan must be prepared in consultation with Parks Victoria and to the satisfaction of the responsible authority.</u></p> <p><u>The plan must investigate and provide for the implementation of mitigation measures to minimise visual effects on key public viewing locations within affected national and coastal parks, including but not limited to:</u></p> <ul style="list-style-type: none"> - <u>the coastal section of the Great South West Walk between Nelson and Lake Mombeong</u> - <u>Lake Mombeong campground and the associated inland track section of the Great South West Walk</u> - <u>Swan Lake campground and the associated coastal access track section of the Great South West Walk</u> - <u>other sections of the Great South West Walk that are impacted by the Project.</u> 	All areas	Design Construction Operation	Chapter 12

Measure ID	Mitigation Measure	Relevant Work Area	Phase	EES Location
	<p><u>Potential mitigation measures include but are not limited to additional plantings to increase screening at sensitive viewpoints.</u></p> <p><u>The plan must also investigate and provide for the implementation of offset works or strategies where impacts are not able to be fully mitigated. Offset works or strategies could include, but are not limited to, the installation of new infrastructure (such as an additional jetty and user facilities at Lake Mombeong), the upgrade of existing infrastructure to improve visitor experiences, or associated environmental programs, to offset residual impacts. Offsets can be provided in any of the affected national or coastal parks.</u></p> <p><u>Any additional planting must be supported by a maintenance plan to be implemented by the Proponent (which identifies scheduled inspections, management and replacement plantings) for a period of 10 years.</u></p> <p>Public view locations</p> <p>Consultation with Parks Victoria to investigate and implement potential mitigation to minimise visual effects on key public view locations, including: coastal section of the Great South West walk between Nelson and Lake Mombeong; Lake Mombeong campground and the associated inland track section of the Great South West walk; and, Swan lake campground and the associated coastal access track section of the Great South West Walk. Mitigation works shall consider additional planting strategies to increase levels of screening at specific sensitive viewpoint and/or to install/upgrade existing infrastructure at these locations (including investigation of an additional jetty and user facilities at Lake Mombeong) to improve the sites, or environmental programs, as a way to offset potential impacts. Any additional planting must be supported by a maintenance plan (which would identify scheduled inspections, management, replacement plantings) for a period of 3 years.</p>			
MM- LV02	<p>Offsite Landscape screening</p> <p>Soft landscape works (tree and shrub planting) will must be offered to the following non-involved dwellings within 10 km of wind turbines where the Project would result in Moderate - High to High visual effects: R1, R3, R4, R6, R8 and R10 (as identified in</p>	All areas	Design Construction	Chapter 12

Measure ID	Mitigation Measure	Relevant Work Area	Phase	EES Location
	<p>Figure 30 of EES Technical Appendix L: Landscape and visual impact assessment), Landscape works will <u>must</u> aim to filter or screen views toward wind turbines.</p> <p>The landscaping works will <u>must</u> consider any zone and/or overlay planning requirements (including requirements of the Bushfire Management Overlay where applicable).</p> <p>The implementation of landscaping works will <u>must</u> be based on a reasonable and feasible approach to provide substantive screening of wind turbines, and to offer property owners the opportunity to opt in, or out of landscaping mitigation works to cater for individual visual mitigation preferences.</p> <p>Off-site landscape works will <u>must</u> be facilitated through an off-site landscaping program, which will <u>must</u> be prepared as part of the EMF. The off-site landscaping program will <u>must include</u>:</p> <ul style="list-style-type: none"> • include a methodology for determining: <ul style="list-style-type: none"> ○ The type of landscaping treatments to be proposed ○ A timetable for establishing and maintaining the landscaping for at least two years. • include a process for making offers to the relevant affected landowners to undertake landscaping on the landowner’s land. • include a process for recording: <ul style="list-style-type: none"> ○ Offers that have been made to landowners ○ Whether or not the offers are accepted ○ When and how offers are actioned following acceptance. • include a process for the preparation and provision of progress reports regarding the implementation of the off-site landscaping program to be provided to the responsible authority. <p>The off-site landscaping program:</p> <ul style="list-style-type: none"> • Must be <u>approved and</u> implemented to the satisfaction of the responsible 			

Measure ID	Mitigation Measure	Relevant Work Area	Phase	EES Location
	<p>authority</p> <ul style="list-style-type: none"> Must not be altered or modified without the written consent of the responsible authority. 			
MM-LV03	<p>On-site landscaping plan</p> <p>Development of an on-site landscaping plan to screen substations, buildings, the quarry and lower infrastructure and potentially turbines. This plan would include:</p> <ul style="list-style-type: none"> details of plant species to be used, and a maintenance and monitoring program. within the plantation, a 30 metre wide buffer strip of plantation retained along the Portland-Nelson road frontage of the quarry to provide additional landscape screening of the quarry. other areas of retained plantation to mitigate visual impacts of turbines along Portland-Nelson Road. <p>The on-site landscaping program:</p> <ul style="list-style-type: none"> Must be approved and implemented to the satisfaction of the responsible authority Must not be altered or modified without the written consent of the responsible authority. <p>The on-site landscaping plan must be informed by an assessment of retaining areas of the plantation along Portland-Nelson Road to mitigate visual impacts associated with the turbines. The assessment should consider the utility, location and depth of areas that might be retained.</p>		<p>Design</p> <p>Construction</p> <p>Operation</p>	Chapter 12
MM-LV04	<p>Infrastructure design and materials</p> <p>Electrical infrastructure, and associated buildings and structures would must be designed to have non-reflecting surface finishes and appropriate colour finishes that considers the existing visual backdrops.</p>	All areas	Design	Chapter 12
MM-LV05	<p>Lighting</p>	All areas	Construction	Chapter 12

Measure ID	Mitigation Measure	Relevant Work Area	Phase	EES Location
	<p>Permanent project lighting associated with the Operations and management facility and terminal station and temporary lighting associated with construction areas is to must be installed in accordance with Australian Standard AS 4282: Control of the obtrusive effects of outdoor lighting. These measures include:</p> <ul style="list-style-type: none"> ensuring lighting is baffled and directed to the ground installing motion-trigger mechanisms to reduce the duration of lighting. installing perimeter landscaping to intervene in views to lighting from identified sensitive receptors (residential dwellings). 		Operation	
MM-LV06	<p>Shadow flicker assessment</p> <p>A pre-construction shadow flicker assessment will must be undertaken prior to construction once the final turbine layout has been determined, to determine potential effects of shadow flicker on existing dwellings (existing as at the date of EES Technical Appendix M: Shadow Flicker and Blade Glint) and to identify any opportunities to further minimise impacts. The methodology used in the assessment is to be generally in accordance with the methodology used in EES Technical Appendix M. There must not be an increase in exceedances of the 30 hour per annum requirement referred to in the <i>Planning Guidelines for the Development of Wind Energy Facilities in Victoria</i> (DTP, September 2023) for any existing dwellings above that assessed in EES Technical Appendix M, unless an agreement is entered into with the relevant landowner waiving that requirement. The assessment is to be undertaken to the satisfaction of the responsible authority.</p> <p>Any agreements entered into that waive the 30 hour per annum requirement must apply for the life of the wind energy facility, to the satisfaction of the responsible authority, and will be provided to the responsible authority upon request.</p>	Wind farm site	Design Pre-construction	Chapter 12
MM-LV07	<p>Non-reflective coating</p> <p>All wind turbine blades must be coated with a non-reflective finish to avoid possible effects of blade glint on surround dwellings in accordance with the Victorian</p>	Wind farm site	Design	Chapter 12

Measure ID	Mitigation Measure	Relevant Work Area	Phase	EES Location
	Department of Transport and Planning <i>Policy and Planning Guidelines for the Development of Wind Energy Facilities in Victoria</i> (DTP, September 2023), and to the satisfaction of the responsible authority.			
Air Quality				
MM-AQ01	<p>Dust suppression</p> <p>A site-specific Dust Management Plan (DMP) (sub-plan of the CEMP) will must identify potential and existing dust sources and outline best practice design controls and management practices to minimise dust. These measures will must include, but not be limited to:</p> <ul style="list-style-type: none"> • Watering of unsealed roads to reduce wheel generated dust. • Use of water sprays to reduce wind erosion from material stockpiles and exposed areas. • Restricting vehicle speeds to 20 kilometres per hours near sensitive areas such as dwellings. • Use of water sprays as required for material transfer operations and quarry activities (e.g., drilling rock, crushing and screening). • Site-specific dust control measures for dust producing activities. • Monitoring of forecast and real time local wind parameters (e.g., wind speed, wind direction) and adjustment of dust generating activities, as required, to reduce impact on sensitive receptors. • Sequencing of vegetation removal within the quarry work authority area where feasible to minimise the amount of disturbed land exposed to wind erosion. • Rehabilitation and revegetation of inactive stockpiles and disturbed areas to reduce wind erosion. • Implementation of a complaint investigation and response plan. • Contingency measures where dust plumes are identified during visual 	All areas	Pre-construction Construction Decommissioning	Chapter 13

Measure ID	Mitigation Measure	Relevant Work Area	Phase	EES Location
	<p>monitoring and/or the project receives dust related complaints.</p> <ul style="list-style-type: none"> Dust management training would be undertaken for construction workforce as part of the site-specific induction, outlining controls to be implemented during construction to manage potential air quality impacts. Regular visual monitoring of dust, with results recorded in a dust management database. Regular monitoring of the effectiveness of dust control measures. If dust controls are found to be ineffective, these would be reviewed (internally and / or by an external dust specialist, if required) and amended as necessary. <p>Dust suppression will must be used where construction or decommissioning activities occur in unpaved work areas, where there are spoil and aggregate stockpiles, and during the loading and unloading of dust generating materials, as required. Dust suppression methods may include water sprays, water carts or other devices and will must be implemented in accordance with the applicable practices and systems identified in EPA Publication 1823: <i>Mining and quarrying – Guide to preventing harm to people and the environment</i>.</p>			
MM-AQ02	<p>Vehicle movements</p> <p>Vehicular movement will must be restricted by keeping vehicles, plant and equipment within the construction footprint and on designated roads and tracks and in accordance with the applicable practices and systems identified in EPA Publication 1834: <i>Civil construction, building and demolition guide</i>.</p>	All areas	Construction Operation Decommissioning	Chapter 13
MM-AQ03	<p>Vehicle movements on unsealed tracks</p> <p>Crushed rock will must be placed on unsealed access tracks where required and as agreed with relevant stakeholders, to prevent disturbance of exposed soil surfaces by moving vehicles and operating plant.</p>	All areas	Construction Decommissioning	Chapter 13
MM-AQ04	<p>Vehicle speed limits</p> <p>Vehicle speed limit will must be restricted to 40 kilometre per hour (km/hr) on unsealed access tracks and 20 km/hr within 50 metres of the Glenelg Estuary and</p>	All areas	Construction Decommissioning	Chapter 13

Measure ID	Mitigation Measure	Relevant Work Area	Phase	EES Location
	Discovery Bay Ramsar site and dwellings on unsealed access tracks.			
MM-AQ05	<p>Transport of loads</p> <p>Vehicles used for construction and decommissioning activities with the potential for loss of loads (such as dust or litter), will <u>must</u> be covered when not being loaded or unloaded.</p>	All areas	Construction Decommissioning	Chapter 13
MM-AQ06	<p>Weather monitoring</p> <p>Weather conditions will <u>must</u> be monitored for extreme heat and wind events (e.g. using systems such as Bureau of Meteorology forecasts), with construction and decommissioning works modified if conditions are likely to result in air quality impacts on sensitive receptors.</p>	All areas	Construction Decommissioning	Chapter 13
MM-AQ07	<p>Dust monitoring</p> <p>Dust emissions from vehicles will <u>must</u> be observationally monitored along unsealed access tracks. If dust is observed to leave the construction footprint, works will <u>must</u> be modified or stopped until the dust hazard is reduced to a manageable level.</p>	All areas	Construction Decommissioning	Chapter 13
MM-AQ08	<p>Vehicle emissions and equipment maintenance</p> <p>Vehicles will <u>must</u> be fitted with appropriate emission control equipment, maintained frequently, and serviced in accordance with manufacturer specifications, to minimise vehicle exhaust emissions. Idling will <u>must</u> be avoided where possible.</p> <p>Plant and equipment will <u>must</u> be maintained in good condition to minimise spills and air emissions that may cause nuisance.</p>	All areas	Construction Decommissioning	Chapter 13
MM-AQ09	<p>Odorous soils</p> <p>In the event that odorous soils are uncovered during construction, the following measures will <u>must</u> be implemented:</p> <ul style="list-style-type: none"> • Cessation of ground disturbance works at the location and within the immediate vicinity. • Assessment of site contamination and determination of appropriate 	All areas	Construction	Chapter 13

Measure ID	Mitigation Measure	Relevant Work Area	Phase	EES Location
	<p>management actions in consultation with suitably qualified personnel.</p> <ul style="list-style-type: none"> EPA will must be notified as soon as reasonably possible if odorous material is found to be contaminated. <p>Refer to the mitigation measures for managing contaminated soils (MM-CA).</p>			
Noise and vibration				
MM-NV01	<p>Construction Noise and Vibration Management Plan</p> <p>Before commencement of development, a Construction Noise and Vibration Management Plan (CNVMP) will must be prepared to address the effects of:</p> <ul style="list-style-type: none"> construction noise at receivers, including natural areas, as defined under the Environment Reference Standard, including state and national parks, related to on-site activities and off-site traffic movements; and construction vibration associated with any activities expected to occur at less than 100 metres from a receiver. <p>The CNVMP will must include:</p> <ul style="list-style-type: none"> A clear overview of the proposed construction program and the protocols for minimising noise exposure and its duration; Demonstrate all reasonably practicable measures proposed to fulfil the GED under the EP Act, accounting for guidance under EPA Publication 1834.1 <i>Civil construction, building and demolition guide</i> (EPA Publication 1834.1). Confirmation that construction activity, including vehicle movements on site, will must generally be restricted to normal working hours as specified in EPA Publication 1834.1, other than unavoidable works, low-noise works, or managed-impact works, that must occur outside normal working hours. A description of the process for selecting appropriate plant, which may include low noise emission plant, including a schedule of noise emission data for the major plant items to be used for construction of the Project, and a comparison of the data with the noise emission ranges set out in AS 2436 	All works	Pre-Construction Decommissioning	Chapter 14

Measure ID	Mitigation Measure	Relevant Work Area	Phase	EES Location
	<p><i>Guide to Noise and Vibration Control on Construction, Demolition and Maintenance Sites (Reconfirmed 2016).</i></p> <ul style="list-style-type: none"> • A requirement for maintenance of site equipment and infrastructure to minimise noise emissions, particularly with respect to site access tracks where surface deterioration can lead to excess impact noise from the carriages of heavy vehicles. • Define all unavoidable work and low-noise managed-impact works which may occur outside of normal working hours, such as out of hours deliveries or turbine installation activities that are subject to weather constraints. • Details relating to proposed routing and timing of construction traffic, including protocols to minimise noise along local roads to the extent reasonably practicable. • Details of the measures to be implemented to address noise characteristics such as tonality, impulsive noise and low frequency noise, including consideration of residential receivers and noise levels in natural areas. • The proposed scheduling of any out of hours works, and provide evidence to support that low managed-impact works meet the criteria defined in EPA Publication 1834.1. • Identify specific activities which warrant notification of neighbouring residents in advance of the work occurring, such as unavoidable works outside of normal working hours and activities with potential to cause perceptible vibration. • Identify specific activities and construction stages which warrant notification of Parks Victoria of noise impacts on natural areas of state and national parks. • Protocols for raising awareness of the proximity of natural areas where natural soundscapes are valued and implementing good environmental working practices that minimise impacts on these areas. <p>The CNVMP will must be prepared in consultation with Parks Victoria.</p>			

Measure ID	Mitigation Measure	Relevant Work Area	Phase	EES Location
	<p>An environmental auditor appointed under Part 8.3 the <i>Environment Protection Act 2017</i> (Vic) would be engaged to prepare a report verifying the CNVMP as against the EP Regulations and MMs under the EMF. Both the CNVMP and the auditor's verification report must be made available to EPA on request.</p> <p>The CNVMP must be submitted and approved by the Victorian Minister for Planning prior to development commencing.</p>			
MM-NV02	<p>Concrete batching plant</p> <p>All temporary concrete batching plants will must be designed and operated in accordance with the general management measures in EPA Publication 1806: <i>Reducing risk in the premixed concrete industry</i> to minimise industrial noise emissions and not emit unreasonable noise.</p> <p>This includes not exceeding the noise limits set under the Part 5.3 Division 3 of the <i>Environment Protection Regulations 2021</i> (Vic) (EP Regulations) and the incorporated Noise Protocol (EPA Publication 1826.4 <i>Noise limit and assessment protocol for the control of noise from commercial, industrial and trade premises and entertainment venues</i>).</p> <p>Operations will must minimise the risk of harm from noise emissions so far as reasonably practicable; and unreasonable noise, is not emitted having regard to the factors in part (a) of the definition of unreasonable noise in section 3(1) of the EP Act this includes considering the risk associated with low frequency noise as assessed in the Noise guidelines: assessing low frequency noise (EPA Publication 1997) (as amended or replaced from time to time).</p>	Wind farm	Design Construction	Chapter 14
MM-NV03	<p>Quarry Work Plan</p> <p>Before commencement of development, a Quarry Work Plan (QWP) will be prepared in consultation with relevant authorities and endorsed as part of the Work Authority. The QWP will be generally consistent with the Quarry Work Plan Requirements Report (Appendix W) and The Quarry Work Plan (QWP) (MM-QU01) (or equivalent) will must document all reasonable practical reasonably practicable mitigation measures to be implemented the EP Act and achieving the noise limits determined in accordance with</p>	Quarry	Pre-Construction	Chapter 14

Measure ID	Mitigation Measure	Relevant Work Area	Phase	EES Location
	<p>the Noise Protocol (EPA Publication 1826.4: <i>Noise limit and assessment protocol for the control of noise from commercial, industrial and trade premises and entertainment venues</i>). This will <u>must</u> include:</p> <ul style="list-style-type: none"> Working hours, equipment noise controls and details of any perimeter screening if/where relevant. Not exceeding the noise limits set under the Part 5.3 Division 3 of the EP Regulations and the incorporated Noise Protocol; minimise the risk of harm from noise emissions so far as reasonably practicable, consistent with the GED; and unreasonable noise, is not emitted having regard to the factors in part (a) of the definition of unreasonable noise in section 3(1) of the EP Act – this includes considering the risk associated with low frequency noise as assessed in the Noise guidelines: assessing low frequency noise (EPA Publication 1997) (as amended or replaced from time to time). 			
MM-NV04	<p>Pre-construction noise assessment of substations</p> <p>Prior to installing the substation plant and any enclosing structures, a pre-construction noise assessment is to be submitted to the Responsible Authority demonstrating that the substations are expected to achieve the noise limits determined in accordance with EPA Publication 1826.4: <i>Noise limit and assessment protocol for the control of noise from commercial, industrial and trade premises and entertainment venues</i>, and it complies with the EP Regulations.</p> <p>The assessment will <u>must</u> take account of reasonably practicable measures to fulfil the GED under the EP Act, including:</p> <ul style="list-style-type: none"> the feasibility of selecting transformers with sound power levels which are lower than the standard maximum values determined in accordance with <i>AS 60076-10:2009 Power transformers – Part 10: Determination of sound levels</i> consideration of the risk associated with low frequency noise based on the advice contained in Noise guidelines: assessing low frequency noise (EPA Publication 1997) (as amended or replaced from time to time). 	Wind farm	Pre-construction	Chapter 14

Measure ID	Mitigation Measure	Relevant Work Area	Phase	EES Location
MM-NV05	<p>Pre-construction wind turbine noise assessment</p> <p>Prior to installing the wind turbines, a pre-construction noise assessment would be completed and approved by the responsible authority. This assessment would be undertaken to assess the final project layout and equipment selection to ensure that the noise criteria are achieved at all non-stakeholder dwellings under all wind speeds prior to construction commencing.</p> <p>The pre-development noise assessment will must be based on the final wind turbine layout, representative noise emission data for the final selected turbine model, background monitoring at Lake Mombeong campground (subject to the consent of Parks Victoria), and the location of all receivers around the wind farm (existing or approved noise sensitive receivers at the date of the wind farm’s approval) and application of High Amenity Area noise limits at campgrounds in surrounding natural areas. The pre- development noise assessment will must identify all involved receivers where noise agreements have been established. The pre-development noise assessment will must be prepared in accordance with the assessment and documentation requirements of New Zealand Standard 6808:2010 Acoustics – Wind farm noise (NZS 6808).</p> <p>The pre-construction noise assessment will must be accompanied by a report prepared by an environmental auditor appointed under Part 8.3 the EP Act that verifies if the acoustic assessment undertaken for the purpose of the pre-construction noise assessment has been conducted in accordance with NZS 6808.</p>	Wind farm	Pre-construction	Chapter 14
MM-NV06	<p>Post-construction Nnoise Aassessment</p> <p>A post-construction noise assessment will must be undertaken by a suitably qualified and experienced acoustic consultant to demonstrate operation of the Project is compliant with applicable noise limits, including High Amenity Area noise limits at campgrounds in surrounding natural areas. The assessment will must be undertaken in accordance with the EP Regulations and the NMP prepared under MM-NV07.</p> <p>An environmental auditor appointed under Part 8.3 the EP Act would be engaged to prepare a report verifying the post-construction noise assessment in accordance with</p>	Wind farm	Operation	Chapter 14

Measure ID	Mitigation Measure	Relevant Work Area	Phase	EES Location
	<p>the EP Regulations and MMs under the EMF. Both the post-construction noise assessment and the auditor’s verification report will <u>must</u> be provided to the EPA within 10 days of the completion of the auditor’s verification report.</p>			
<p>MM-NV07</p>	<p>Noise Management Plan</p> <p>Prior to installing the wind turbines, a Noise Management Plan (NMP) will <u>must</u> be prepared as required by regulation 131E of the EP Act.</p> <p>In addition to the requirements of regulation 131E, the NMP will <u>must</u> also document:</p> <ul style="list-style-type: none"> • a procedure for the preparation of annual statements in accordance with regulation 131F • a procedure for undertaking wind turbine noise monitoring in accordance with regulation 131G • a procedure for complaints management in accordance with regulation 131E(2(a)). • a schedule of sound power level testing which will <u>must</u> be undertaken to verify that the emissions of the installed turbines are consistent with the findings presented in the pre-construction noise assessment. • reasonable and practicable measures to support the objective of the Environment Reference Standard, by minimising the risk of intrusive noise characteristics to surrounding natural areas at designated trails and other visitor locations within the Lower Glenelg National Park and Discovery Bay Coastal Park. <p>The NMP must also consider the guidance of EPA-DTP Publication 3011 <i>Wind Energy Facility Turbine Noise – Technical Guideline</i>.</p>	<p>Wind farm</p>	<p>Pre-construction</p>	<p>Chapter 14</p>
<p>MM-NV08</p>	<p>Noise Monitoring</p> <p>Regular wind turbine noise monitoring would be undertaken in accordance with regulation 131G of the EP Regulations and as detailed in the NMP.</p>	<p>Wind farm</p>	<p>Operation</p>	<p>Chapter 14</p>

Measure ID	Mitigation Measure	Relevant Work Area	Phase	EES Location
MM-NV09	<p>Annual Statement</p> <p>Annual statements would be prepared annually in accordance with regulation 131F of the EP Regulations and as detailed in the NMP.</p>	Wind farm	Operation	Chapter 14
MM-NV10	<p>Decommissioning Noise and Vibration Management Plan</p> <p>Prior to decommissioning, a Decommissioning Noise and Vibration Management Plan (DNVMP) would be prepared and submitted to the responsible authority for endorsement. This plan would include:</p> <ul style="list-style-type: none"> • An assessment of the potential impacts of decommissioning noise and vibration from Project activities • Outline the proposed decommissioning program and how the proposed management controls are compliant with the requirements defined by EPA Publication 1834.1. • Outline all unavoidable works, low-noise impact and managed-impact works that may occur outside normal working hours • Outline the proposed scheduling of any out of hours works to minimise noise and vibration impacts. • An environmental auditor appointed under Part 8.3 the EP Act would be engaged to prepare a report verifying the DNVMP as against the EP Regulations and MMs under the EMF. Both the DNVMP and the auditor's verification report must be made available to the EPA on request. 	All areas	Decommissioning	Chapter 19
Transport				
MM-TP01	<p>Transport Communications Plan</p> <p>A Transport Communications Plan (TCP) will must be developed and will must contain consultation requirements relating to potential traffic and transport impacts for the lifetime of the Project. The TCP will must address as appropriate the findings from the Transport Impact Assessment (EES Technical Appendix P) and subsequently the Traffic Management Plans (TMPs) (see MM-TP02).</p>	All areas	All phases	Chapter 15

Measure ID	Mitigation Measure	Relevant Work Area	Phase	EES Location
	<p>The TCP will <u>must</u> ensure construction, operations and decommissioning related information is shared with the local community, including updates on road closures and associated detours, collaborating with other road users to negotiate road access and potential impacts, and ensuring the impact of construction on access to other infrastructure is <u>is</u> communicated to affected stakeholders. This will <u>must</u> include providing the Project schedule, anticipated traffic implications and the volume of construction activities.</p> <p>Aims of the TCP include:</p> <ul style="list-style-type: none"> • To proactively communicate the impact of activities that may lead to traffic disruption, including when Boiler Swamp Road may be closed and the associated detours. • To provide a mechanism for collaborating with other road users to manage cumulative impacts on the region. <p>Stakeholder consultation, including but not limited to the Victorian Department of Transport and Planning, Glenelg Shire Council, Green Triangle Forest Products, Parks Victoria, Country Fire Authority (CFA) (and other emergency services), DEECA Regions, the Port of Portland (and any other ports to be used) and other freight industries where appropriate, will <u>must</u> be undertaken to develop the plan. The final plan should <u>must</u> be provided to these listed agencies.</p> <p>Key notifications and agreements may include:</p> <ul style="list-style-type: none"> • Pre-construction stage: <ul style="list-style-type: none"> ○ TMP agreement ○ Dilapidation surveys. • Construction, operation and decommission or re-power stages: <ul style="list-style-type: none"> ○ TMP measures and controls ○ Construction traffic monitoring. ○ Road network monitoring, remediation protocols and maintenance requirements. 			

Measure ID	Mitigation Measure	Relevant Work Area	Phase	EES Location
	<ul style="list-style-type: none"> • Prior to operation: <ul style="list-style-type: none"> ○ Construction close-out meeting. ○ Infrastructure hand-back criteria. 			
MM-TP02	<p>Traffic Management Plans</p> <p>Prior to the commencement of construction (excluding preparatory works), two Traffic Management Plans (TMPs) will <u>must</u> be developed (one each for the wind farm and transmission line) and implemented to minimise disruption (to the extent practicable) to affected local landowners, traffic, car parking, on-road public transport, pedestrian and bicycle movements and existing public facilities during construction and maintenance activities. The TMPs will <u>must</u> be developed in consultation with the relevant road management authorities, be informed and supported by an appropriate level of transport analysis and be endorsed by the relevant road authorities. The TMP's may be varied with the written consent of the relevant road authority. The actions and works identified in the TMPs must be carried out to the satisfaction of the relevant road authorities.</p> <p>The TMPs will <u>must</u> be developed against any relevant planning conditions and in association with key stakeholders for endorsement. Evidence of this endorsement will <u>must</u> be documented within the TMPs.</p> <p>Each TMP will <u>must</u> include:</p> <ul style="list-style-type: none"> • A review of relevant policy, regulatory and protocol requirements which have informed the TMP. • A review of existing conditions of public roads at the time of TMP development to verify conditions identified in the Transport Impact Assessment (TIA) (EES Technical Appendix P) <u>and updated in the Dunstan evidence report presented during the EES Hearing (Document 79)</u>. Those provided as part of the TIA can be used as a baseline. • Approved Project scope, including finalised details on construction extents, staging, vehicle types, final material sources (e.g. quarry and concrete), and 	All areas	All phases	Chapter 15

Measure ID	Mitigation Measure	Relevant Work Area	Phase	EES Location
	<p>peak construction impacts (at this stage of the Project, unknowns are usually verified via multi-disciplinary assessments and when construction/transport contractors are onboarded).</p> <ul style="list-style-type: none"> • The approximate number and type of vehicle movements and times of day when local roads will be used; • Consideration of cumulative impacts of other major projects operating concurrently in the local area, such as the traffic movements associated with pine plantations located within the study area. • Updated traffic data (as contained within the TIA) should be collected to inform the preparation of each TMP. • Traffic surveys of Portland-Nelson Road at the Project area and at Henty Highway between the Port of Portland and Portland-Nelson Road to understand peak times for heavy vehicle movements. • Verification of the site access strategy, including nominated routes for accessing and departing the wind energy facility and site access points (see MM-TP05). • Verification of the port(s) to be used for delivery of major wind turbine and transmission line components. • Final over-dimensional/Oversize overmass (OD/OSOM) route assessments completed by the nominated transport contractor (see MM-TP04) for accessing and departing the wind energy facility, including engineering plans demonstrating whether, and if so how, truck movements to and from the wind energy facility site can be accommodated. Engineering plans should <u>must</u> include: <ul style="list-style-type: none"> ○ the location and detailed design of the connection between internal access tracks and public roads; and ○ a demonstration that safe site distances, turning movements and the avoidance of traffic conflicts at the intersection of internal and public 			

Measure ID	Mitigation Measure	Relevant Work Area	Phase	EES Location
	<p>roads will be achieved.</p> <ul style="list-style-type: none"> • Mitigation measures to be implemented, including site access point requirements (e.g. swept paths and Austroads intersection type requirements according to traffic demands) and any requirements for OD/OSOM delivery along transport routes. This would also identify road section upgrades required and the nature of the upgrade works. • Recommendations regarding the need for road and intersection upgrades to accommodate any additional traffic or site access requirements. Where upgrades are required, the TMP should must include: <ul style="list-style-type: none"> ○ proposed measures to ensure workers enter and exit the wind energy facility site from the designated site entrances. ○ proposed measures to ensure construction vehicles are easily identifiable. ○ the designation of mitigation measures, including the operation hours and speed limits for trucks on routes accessing the wind energy facility which: <ul style="list-style-type: none"> (a) provide for appropriate safety measures around school bus routes and school bus times where relevant; and (b) provide for resident safety. • Reinstatement commitments, including for table drains and verges that may be affected during construction and operational maintenance activities. • Design drawings for all road works will must be sent for review and agreement with the relevant road authorities during detailed design. The drawings must be design to Australian Standards and in accordance with relevant VicRoads guidelines and include: <ul style="list-style-type: none"> ○ the location and detailed design of the connection between the internal access tracks and the public roads. ○ a demonstration that safe sight distances, turning movements, and the 			

Measure ID	Mitigation Measure	Relevant Work Area	Phase	EES Location
	<p>avoidance of traffic conflicts at the intersection of internal roads and public roads will be achieved to the satisfaction of the relevant road authorities.</p> <ul style="list-style-type: none"> ● Road condition and maintenance requirements, such as: <ul style="list-style-type: none"> ○ Dilapidation surveys to provide an existing survey of public roads that may be used for access and designated for construction vehicle routes. ○ Consultation with road asset owners to agree on the extent and requirements of dilapidation surveys, road maintenance criteria, treatments and response timeframes, and post construction survey and asset hand-back agreements. ○ The dilapidation surveys should assess the works that need to be undertaken to remedy any impacts the development has caused to the road pavement and road infrastructure. Works outlined in the dilapidation surveys must be undertaken, completed, and assessed and approved by the Road Quality Auditor, at no cost to the relevant road manager, within an agreed timeframe and to the satisfaction of the relevant road authority. ○ Depending on stakeholder requirements, other considerations may include specific traffic monitoring (maximum daily truck volumes) and bond payments for remedial works. ● Works identified in the endorsed TMP must be carried out to satisfaction of the relevant road authority. ● Access requirements by vehicle type, including any regulator or stakeholder permits. ● Road closure requirements for the management of any temporary or partial closure of roads and traffic lanes to maintain connectivity for local access, pedestrians and cyclists, in accordance with relevant road design standards and in consultation with landholders and any other relevant third parties. Traffic counts may be conducted to investigate suitable times for road and 			

Measure ID	Mitigation Measure	Relevant Work Area	Phase	EES Location
	<p>lane closures. Road closures will <u>must</u> occur in off-peak periods when demands are low where possible (notably for OD/OSOM vehicle deliveries). The number and duration of road closures will <u>must</u> be minimised.</p> <ul style="list-style-type: none"> • Suitable measures to ensure emergency service access (notably for bushfire management) is not restricted due to Project construction or operation activities, especially regarding any road closures on the public road network and within Cobboboonee National Park and Forest Park. These measures will <u>must</u> be agreed upon in consultation with emergency services and relevant road authorities including DEECA Regions. • The designation of appropriate ; construction and transport vehicle routes to and from the Project Area • Construction staging and car parking requirements to ensure no car parking occurs outside of the Project Area and affects local land use or accessibility. If required, car share or shuttle bus provisions will <u>must</u> be considered to reduce the need for single vehicle worker occupancy. • Signage requirements with reference to Australian Standard series AS 1742. Notably for this Project this would include notification of: <ul style="list-style-type: none"> ○ Movement of trucks from site access points to/from major road connections. ○ No-truck access signage to ensure vehicles do not access restricted areas and to aid with wayfinding (notably to the Lower Glenelg National Park to the south of the wind farm site). • Speed limit reductions to be implemented during Project construction. A temporary reduced speed limit in the vicinity of site access points to 70 kilometres per hour is recommended which will allow safe intersection sight distance non-conforming site access points to be safer to utilise. This will <u>must</u> be investigated further as part of the TMP in consultation with relevant stakeholders. • Measures to be undertaken to record traffic volumes of the nominated road 			

Measure ID	Mitigation Measure	Relevant Work Area	Phase	EES Location
	<p>network during construction of the Project Area.</p> <ul style="list-style-type: none"> • Confirmation of working hours during construction. These will need to be agreed with key stakeholders with a remit for the construction contractor to verify local and school bus routes/timings to ensure no conflicts occur. • Other environmental measures to be implemented, such as for dust/sedimentation and noise and vibration. • Monitoring, inspection and auditing requirements, including: <ul style="list-style-type: none"> ▪ The Road Quality Auditor's expertise, duties, role, inspection frequency and reporting requirements, including that the Road Quality Auditor is to be accredited by the Victorian Department of Transport and Planning, and be independent of the Project. ▪ Addendum TMP triggers. ▪ Monitoring and inspection protocols to ensure the integrity of the TMP given it will be viewed as a live document for the duration of the Project. Reviews are typically undertaken on a monthly basis with relevant stakeholders informed of any significant changes. ▪ Auditing can include compliance and road safety audits. • Prior to the endorsement of the TMP, terms of reference for the Road Quality Auditor should <u>must</u> be endorsed by the relevant road authority. The terms of reference may include: <ul style="list-style-type: none"> ▪ program of regular inspections; ▪ frequency of inspection; ▪ frequency of reporting to the developer, Glenelg Shire Council and the Head, TfV; ▪ standards to which all agreed local roads are constructed; ▪ ongoing maintenance and repaid regime during construction of turbines; 			

Measure ID	Mitigation Measure	Relevant Work Area	Phase	EES Location
	<ul style="list-style-type: none"> ▪ procedures for corrective works resulting from non-compliance; ▪ penalties for non-compliance. <p>Control measures provided in the TMPs will must cover the following aspects:</p> <ul style="list-style-type: none"> • Roles and responsibilities, including project management, co-ordination, public consultation, advertising and complaint procedures. • Road authority notification requirements. • Training and site induction requirements. • Contractor liaison protocol. • Roadside native vegetation requirements, including identification protocols and approvals (if required). <p>The control measures should must be amended within a reasonable timeframe, to the satisfaction of the relevant road authority, where there is there is a significant increase in vehicle numbers as determined by the Road Quality Auditor, above the anticipated movements in the TMP; or any change to any endorsed vehicle route identified in the TMP.</p> <p>The relevant road authority may require the appointment of an alternate Road Quality Auditor within 21 days of making a written request, if the appointed Road Quality Auditor is unable to maintain independence to the road authority's satisfaction.</p> <p>Prior to the commencement of each stage of works (such as construction of wind turbine footings, crane hardstand, internal access roads, the substation or transmission towers), road and intersection upgrade works identified in the endorsed TMP relevant to that stage of works must be undertaken and completed and assessed and approved by the Road Quality Auditor to the satisfaction of relevant road authorities.</p>			
MM-TP03	<p>Road safety audits</p> <p>Road safety audits (RSAs) will must be undertaken at various stages of Project development in accordance with Austroads Guide to Road Safety Part 6: Road Safety</p>	All areas	Pre-construction Construction Decommissioning	Chapter 15

Measure ID	Mitigation Measure	Relevant Work Area	Phase	EES Location
	<p>Audit, such as:</p> <ul style="list-style-type: none"> Existing condition audit Preliminary/functional design stage audit Concept design stage Detailed design stage Within 6 months after completion of road works. <p>RSAs will <u>must</u> be completed by accredited Victorian Department of Transport and Planning RSA auditor and be independent of the Project, particularly the design team.</p>			
MM-TP04	<p>OD/OSOM transport route assessments</p> <p>Formal over-dimensional/Oversize overmass transport route assessments will <u>must</u> be completed by the transport contractor engaged by the Proponent. A survey of powerline locations and height along the secondary over-dimensioned route must be completed to inform the route assessment. Impacts of the final routes can then be verified (e.g. removal, raising or clearance of obstructions such as powerlines, structures (bridges and culverts), railway infrastructure and vegetation), and relevant stakeholders will <u>must</u> be engaged to facilitate the safe delivery of materials to the construction sites.</p> <p>Prior to mobilising any over size and over mass vehicles from the Port of Portland to the project site, temporary infrastructure works must be designed in consultation with, and completed to the satisfaction of the Victorian Department of Transport and Planning (Regional Roads Victoria).</p>	All areas	Design Pre-construction Construction	Chapter 15
MM-TP05	<p>Access strategy and design</p> <p>A site access strategy will <u>must</u> be developed and finalised following detailed design, in consultation with all stakeholders, particularly affected landowners. The strategy will <u>must</u> address traffic access and movement requirements and restrictions to local facilitates and amenities (such as tourism locations).</p> <p>The number of site access points to be used for construction of the wind farm may be investigated further to utilise internal access tracks and limit movements between the</p>	All areas	Pre-construction Construction Decommissioning	Chapter 15

Measure ID	Mitigation Measure	Relevant Work Area	Phase	EES Location
	<p>site and Portland-Nelson Road. A wayfinding map should must be included within the strategy which details vehicle access routes through the internal access tracks. The wayfinding map should must be distributed to all workers, and contractors employed for the construction stage of the Project, and to relevant external stakeholders.</p> <p>The strategy should must identify where the use of a spotter to guide over-dimensional/oversize vehicles through the hardstand areas is required.</p> <p>Speed limits along Portland-Nelson Road and the Henty Highway in proximity to the Project site entrances will must be reviewed during detailed design to verify the need to reduce speed limits to ensure that safe intersection sight distances can be achieved and the site can be accessed safely by construction vehicles.</p> <p>Site access gates would be designed and constructed in accordance with VicRoads Guideline Drawing GD4010 'Typical Access to Rural Properties' unless otherwise agreed by the relevant road authority.</p> <p>Once detailed design has been completed, the designs will must be subject to Road Safety Audits, as described in MM-TP03. Locations of advanced street signage, such as at the Cowlands Lower Road access point, should must be identified in to ensure that approaching drivers do not miss access points.</p> <p>It is expected that stormwater drainage management systems including swale drains and pipe culverts may be required as part of any proposed intersection upgrade works, as there is currently no infrastructure in place to divert runoff near the site entrances. This will must be reviewed as part of the detailed design process. See also MM-SW08.</p>			
Socio-Economic				
MM-SE01	<p>Community Engagement Strategy</p> <p>Prior to the commencement of construction, the Proponent will must develop and implement a Community Engagement Strategy (CES) in consultation with the Glenelg Shire Council (GSC) to facilitate ongoing consultation between the proponent and the broader community. The CES would will:</p>	All areas	All phases	Chapter 17

Measure ID	Mitigation Measure	Relevant Work Area	Phase	EES Location
	<ul style="list-style-type: none"> • provide an approach for ongoing engagement with the broader community about the long-term benefits and opportunities of the Project. • outline how the Proponent will maintain a stakeholder database throughout the life of the Project to assist identifying and resolving Project issues experienced by stakeholders efficiently, to put stakeholder ease of communication and issue resolution at the heart of stakeholder relations. • outline procedures and mechanisms for the regular distribution of accessible information about or relevant to the Project. • identify opportunities to provide timely, useful and accurate information regularly about construction activities, schedules and milestones. • include measures to notify affected landowners and neighbours well in advance about any specific construction issues with direct impacts on properties (e.g., traffic management, out-of-hours work) and how they can easily reach the Project team with questions. • detail the mechanisms for advising the community in advance of upcoming works (where necessary) and how the Proponent will work with community to mitigate the negative impacts from construction whenever possible. • be reviewed and adapted based on community feedback so that the communications and engagement approach is fit for purpose and meets the needs of the community. <p>The Proponent will must continue to implement the CES to ensure consistent and consultative engagement with communities throughout the Project’s planning, pre-construction, construction and operation phases. The CES is critical for ensuring social acceptance, strong local partnerships and overall, more successful and sustainable Project outcomes.</p>			
MM-SE02	<p>Shared Benefits Strategy</p> <p>Prior to the commencement of construction, the Proponent will must develop and implement a Shared Benefits Strategy (SBS) in consultation with the Glenelg Shire</p>	All areas	All phases	Chapter 17

Measure ID	Mitigation Measure	Relevant Work Area	Phase	EES Location
	<p>Council (GSC) that establishes an approach to proactively and purposefully share the rewards of the Project with local communities.</p> <p>The SBS will must include three main components:</p> <ol style="list-style-type: none"> 1. A dedicated Community Enhancement Plan Benefit Program, focused on the funding of wider community initiatives or programs in the form of sponsorships or grants at the local and regional level. This component of the SBS will aim to proactively and purposefully share the rewards of the Project with the local community. <u>The program structure must provide for community involvement in management and governance.</u> 2. A Neighbours Benefit Plan, focussed on the needs and interests of the Project’s closest neighbours. The Neighbours Benefit Plan will must provide financial benefits to landowners of residential dwellings within 3.5 km of a wind turbine. Payments will must be annual and based on the distance of the dwelling from turbines and the number of nearby turbines. These payments will must commence at the start of the operations phase and continue for the Project's lifetime. 3. An Aboriginal Participation Plan (refer to MM-SE05), to ensure that the impacts on the Guditjmarra community and the GMTOAC can be appropriately and formally responded to and prioritised. 			
<p>MM-SE03</p>	<p>Local Participation and Social Procurement Strategy</p> <p>Prior to the commencement of construction, the Proponent will must develop a Local Participation and Social Procurement Strategy (LPSPS) in consultation with the Glenelg Shire Council (GSC). The LPSPS will must directly address and respond to the social impacts and opportunities for the Project’s construction workforce. The strategy will must involve the development and implementation of initiatives that would proactively enable the maximisation of local employment and sourcing for the Project’s construction and operational needs.</p> <p>The LPSPS will must include:</p> <ul style="list-style-type: none"> • A Local Employment, Procurement and Training Plan. 	<p>All areas</p>	<p>Pre-construction Construction Operation</p>	<p>Chapter 17</p>

Measure ID	Mitigation Measure	Relevant Work Area	Phase	EES Location
	<ul style="list-style-type: none"> • Actionable targets with associated responsibilities, including mechanisms to involve local stakeholders in the plan’s development and implementation. • Requirements for the provision of information in the pre-construction phase relating to the Project’s construction activities. • Mechanisms for local businesses, job seekers and services to register their capabilities and interest in working with the Project, to be widely shared within the study area. <p>The LPSPS will aim to:</p> <ul style="list-style-type: none"> • Employ local residents preferentially where they have the required skills and experience, and demonstrate a cultural fit with the organisation. • Purchase local non-labour inputs to production preferentially where local producers can be cost and quality competitive. • Include a code of conduct for construction works with regard to behaviour in the contractor induction program. 			
MM-SE04	<p>Workforce Accommodation Management Plan</p> <p>A Workforce Accommodation Management Plan (WAMP) will <u>must</u> be developed in consultation with the Glenelg Shire Council (GSC), Warrnambool City Council and the City of Mt Gambier prior to the commencement of construction and implemented to manage the incoming construction workforce required for construction of the Project. The WAMP will be dependent on the number of incoming workers and their staging and will therefore be developed in accordance with the LPSPS (see MM-SE03). The WAMP will include an updated assessment of accommodation by supply by location and accommodation class, and will be based on availability of separate rooms suitable for occupation by a construction worker.</p> <p>The WAMP will <u>must</u> involve the following steps:</p> <ol style="list-style-type: none"> 1 Identify and, where Consider implementation of practicable, implement demand reduction measures. 2 Secure access to and/or augment existing supply of accommodation for 	All areas	Pre-construction Construction	Chapter 17

Measure ID	Mitigation Measure	Relevant Work Area	Phase	EES Location
	<p>workers, in the following sequence:</p> <p>2a For residual accommodation needs following step 1, develop agreement(s) with existing hotel/motel, serviced apartment and caravan park operators to supply rooms for use by imported staff (focusing on Mt Gambier and Portland). The number of rooms secured would not exceed 25% of current supply in any location (eg Mt Gambier or Portland) over the tourist peak-season (November–March) or 50% for the remainder of the year.</p> <p>2b For accommodation needs not met by 2a, where practicable, develop agreements with existing hotel/motel, serviced apartment and caravan park operators to develop new accommodation capacity. 100% of any new capacity developed in partnership with the Project available for use by imported workers.</p> <p>2c For accommodation needs not met by 2a and 2b develop agreements with existing B&B/holiday rental providers to supply the property for use by imported staff (focusing on Mt Gambier and Portland). The number of properties secured would not exceed 25% of current supply in any location over the tourist peak-season (November–March) or 50% for the remainder of the year.</p> <p>3 Develop a temporary workers camp with capacity to accommodate imported workers not housed via steps 2a, 2b and 2c</p> <p>The WAMP must:</p> <ul style="list-style-type: none"> • Include an explicit goal of keeping construction workers out of the rental market. • Include an updated assessment of accommodation supply by location and accommodation class and based on the availability of separate rooms suitable for occupation by a construction worker • Provide for adjustment of the 25% and 50% caps in consultation with Glennelg Shire Council and if relevant surrounding councils, if justified based on the updated assessment of accommodation supply and confirmed worker 			

Measure ID	Mitigation Measure	Relevant Work Area	Phase	EES Location
	<p>numbers.</p> <ul style="list-style-type: none"> Document engagement with relevant accommodation service providers, as set out above. Include a program to monitor and review the effectiveness of the accommodation measures during construction. <p>Information regarding employment and population level change will <u>must</u> be provided early to GSC and relevant State Government agencies to facilitate early community infrastructure provision responses.</p>			
MM-SE05	<p>Aboriginal Participation Plan</p> <p>Prior to the commencement of construction, the Proponent will <u>must</u> develop, in consultation with the GMTOAC, an Aboriginal Participation Plan (APP) which will aim to:</p> <ul style="list-style-type: none"> Work closely with the Guditj Mirring and broader Guditjmara community to better understand and respond to the Project’s impacts and consequences on cultural values and Native Title rights holders of the Project Area and surrounds. Provide strategies to enhance benefits to the broader Guditjmara community and other Indigenous occupants of the social locality; develop targeted workforce, training (including apprenticeship) and accommodation strategies (where suitable); and be supported by an Aboriginal engagement process. To ensure comprehensiveness and a holistic understanding of cultural values in the region, the APP will aim to encapsulate Guditjmara interests and priorities, to most appropriately set mutually agreed arrangements for working together. This will capture the findings from the cultural values assessment prepared by Guditjmara which has focused on engagement with Guditjmara to understand the Guditj Mirring (Country) of the Project Area and its cultural values. 	All areas	All phases	Chapter 17

Measure ID	Mitigation Measure	Relevant Work Area	Phase	EES Location
	<p>Refer also to the mitigation measures relating to the protection of cultural values (MM-AH01-03).</p> <p>The Proponent will <u>must</u> implement the APP in consultation with the GMTOAC.</p>			
MM-SE06	<p>Complaint Investigation and Response Plan and Complaints Register</p> <p>Prior to the commencement of construction, the Proponent will <u>must</u> develop a Complaint Investigation and Complaint Plan (CIRP).</p> <p>The CIRP will <u>must</u>:</p> <ul style="list-style-type: none"> • Address <u>Respond to</u> all aspects of the construction and operation of the wind energy facility. • Be prepared in accordance with AS/NZS 10002:2014 <i>Guidelines for complaint management in organisations</i>. • Include a process to investigate and resolve complaints (different processes may be required for different types of complaints), <u>and for establishing and managing a Complaints Register</u>. <p>Before development starts, a Complaints Register <u>Throughout the construction and operation of the Project the Complaints Register will must be used to</u> established <u>which</u> records:</p> <ul style="list-style-type: none"> • the complainant's name and address (if provided), including (for noise complaints) any applicable property reference • a receipt number for each complaint, which must be communicated to the complainant • the time and date of the incident, and the prevailing weather and operational conditions at the time of the incident • a description of the complainant's concerns, including (for a noise complaint) the potential occurrence of special audible characteristics • the process for investigating the complaint, and the outcome of the investigation, including the actions taken to resolve the complaint. 	All areas	Pre-construction Construction Operation Decommissioning	Chapter 17

Measure ID	Mitigation Measure	Relevant Work Area	Phase	EES Location
Electromagnetic Interference				
MM-EI01	<p>Exclusion zones</p> <p>Any turbines to be micro-sited will <u>must</u> avoid the second Fresnel zone of the Telstra point-to-point link. If entering the exclusion zone is unavoidable during construction when lifting turbines into place, the link operator (e.g. Telstra) will <u>must</u> be consulted before construction so they can anticipate the potential temporary service degradation and take steps to minimise or negate the impact on their services.</p>	Wind farm	Design Construction	Chapter 18
MM-EI02	<p>Pre and Post Construction Television and Radio Signal Assessments</p> <p>The Proponent will <u>must</u> undertake a pre- and post-construction assessment of the television reception strength at the location of any existing or approved dwellings as at the date of development approval that are within the orange scatter zone (where confirmed to not be using Viewer Access Satellite Television System) for the wind farm layout. The assessments will <u>must</u> be undertaken by an independent television and radio monitoring specialist and include testing at locations to be determined by the television and radio monitoring specialist to enable the average television and radio reception strength to be determined.</p> <p>If the post-construction assessment establishes an unacceptable increase in interference to reception as a result of the wind farm, as determined by the independent television and radio monitoring specialist, measures to restore the affected reception to pre-construction quality will <u>must</u> be undertaken.</p>	Wind farm	Pre-construction Construction Operation	Chapter 18
MM-EI03	<p>AM / FM radio narrowcast and broadcast</p> <p>The Proponent will <u>must</u> undertake a pre- and post-construction assessment of the radio reception strength at the location of any existing or approved dwellings as at the date of development approval that are within 5 kilometres of any turbine. The assessments will <u>must</u> be undertaken by an independent television and radio monitoring specialist and include testing at locations to be determined by the television and radio monitoring specialist to enable the average television and radio reception strength to be determined.</p>	Wind farm	Pre-construction Operation	Chapter 18

Measure ID	Mitigation Measure	Relevant Work Area	Phase	EES Location
	If the post-construction assessment establishes an unacceptable increase in interference to reception as a result of the wind farm, as determined by the independent television and radio monitoring specialist, measures to restore the affected reception to pre-construction quality will must be undertaken.			
MM-EI04	Meteorological radar The Proponent will must continue consultation with the Bureau of Meteorology on the exact terms of the operational limits and/or other technical solutions for the Project to ensure that the Mount Gambier radar can maintain operational efficiency.	Wind farm	Design Operation	Chapter 18
MM-EI05	Defence radio system The wind farm will must conform with <i>AS/NZS 61000.6.4:2012 Electromagnetic compatibility (EMC) Generic standards</i> - Emission standard for industrial environments which means the wind farm will reduce, as much as is practicable, the emission of high frequency noise from the turbines, substation(s) and electronic control equipment.	Wind farm	Design Operation	Chapter 18
Aeronautical				
MM-AI01	Portland Aerodrome The following amendments to the non-precision instrument approaches at Portland Aerodrome must will need to be made for them to remain clear of the Project: <ul style="list-style-type: none"> The 10 Nautical Miles (nm) and 25 nm Minimum Safe Altitudes need to be raised to 2,400 feet (ft). The holding procedure altitude needs to be raised to 2,400 feet. The missed approach procedures need to be raised to 2,400 feet. Both the RWY08 and RWY26 runway approach paths need to be raised to commence at 2,400 feet. Consultation with the Portland Aerodrome operator (Glenelg Shire Council) and the Instrument Approach designer (Airservices Australia) has been undertaken to facilitate these amendments. The required amendments must will need to occur prior to construction of the Project commencing, at the cost of the Proponent.	Wind farm	Pre-construction	Chapter 18

Measure ID	Mitigation Measure	Relevant Work Area	Phase	EES Location
	<p>Airservices Australia will issue an Aeronautical Information Publication – Supplementary [AIP (SUP)] or a NOTAM that provides the location and height of the masts.</p>			
<p>MM-AI02</p>	<p>Air route lowest safe altitude The Lowest Safe Altitudes (LSALT) for the Grid and W519 air routes will need to be raised from 2,200 feet (ft) to 2,400 feet. An application must will be made to Airservices Australia to raise the LSALT for these two air routes before construction of the Project commences.</p>	<p>Wind farm</p>	<p>Pre-construction</p>	<p>Chapter 18</p>
<p>MM-AI03</p>	<p>Meteorological monitoring masts visibility All met masts will must be marked in accordance with the National Airports Safeguarding Framework – <i>Guideline D Managing the Risk to Aviation Safety of Wind Turbine Installations (Wind Farms) /Wind Monitoring Tower</i> to improve visibility as follows:</p> <ul style="list-style-type: none"> • The top one third of the met mast will be painted in alternating contrasting bands of colour. • Marker balls, high visibility flags or high visibility sleeves will be placed on the outer guy wires. • The guy wire ground attachment points will have contrasting colours to the surrounding ground and vegetation. <p>All met masts will must be notified to Airservices Australia in accordance with AC 139.E-01 v1.0. The location of the reported met masts will also be provided to the aerodrome operators at Portland and Nelson, Aerial Application Association of Australia, local aerial applications operators, Police Air Wing, Helicopter Emergency Medical Services (Ambulance Victoria), Forest Fire Management and the Country Fire Authority CFA.</p> <p>AC 139.E-01 and CASR Part 175 require tall structures with a height of 100m or greater to be reported. If the met masts within the constructed turbine area are less than 100m above ground level, they do not need to be reported.</p>	<p>Wind farm</p>	<p>Pre-construction Construction</p>	<p>Chapter 18</p>

Measure ID	Mitigation Measure	Relevant Work Area	Phase	EES Location
	The met masts within the constructed turbine area need to be marked as described above to ensure visibility to aircraft pilots engaged in authorised low level flying. Airservices Australia will issue an Aeronautical Information Publication – Supplementary [AIP (SUP)] or a NOTAM that provides the location and height of the reported masts.			
MM-AI04	Wind turbine design Wind turbine designs that have a conspicuous size and colour will must be used to ensure visibility in the daytime.	Wind farm	Design	Chapter 18
MM-AI05	Reporting tall structures The location of met masts, wind turbines and associated transmission line infrastructure will must be reported to Airservices Australia in accordance with AC 139 E-01 v1.0. Airservices Australia will issue an Aeronautical Information Publication – Supplementary [AIP (SUP)] or a NOTAM that provides the location and height of the masts and turbines. The location of these tall structures will be included in AIP Charts.	All areas	Construction Operation	Chapter 18
Bushfire Risk				
MM-BF01	Construction Fire Emergency Management Plan A Construction Fire Emergency Management Plan (CFEMP) will must be prepared and implemented that includes procedures for preparing for and responding to bushfire emergencies during the construction phase. The CFEMP will must be prepared in consultation with the Country Fire Authority (CFA) and DEECA Regions. At a minimum, the plan will must : <ul style="list-style-type: none"> Be informed by the outcomes of the RMP (see MM-BF04). Include all the relevant information contained within the <i>CFA's Design Guidelines and Model Requirements for Renewable Energy Facilities</i> (as amended from time to time) (CFA Guidelines) pertaining to emergency 	All areas	Pre-construction Construction	Chapter 18

Measure ID	Mitigation Measure	Relevant Work Area	Phase	EES Location
	<p>management planning.</p> <ul style="list-style-type: none"> • Be developed in accordance with AS 3745:2010 <i>Planning for emergencies in facilities</i> • Outline the procedures to be undertaken in accordance with different fire danger ratings. As a minimum, work will must not be undertaken on days of extreme fire danger or higher, unless for emergency incident, repair or maintenance purposes. • Outline the induction and other training requirements for staff and contractors working at the site during the Fire Danger Period. • Establish emergency assembly areas, emergency access points, and emergency evacuation procedures. • Outline the requirements to appoint a person who will provide support to incident management during bushfires. <p>The preparation of the CFEMP must be informed by consultation with the plantation operator to ensure consistency with the fire management plans and processes that apply to the plantation.</p>			
MM-BF02	<p>Fire risk communications</p> <p>The following communication activities will must be undertaken during construction to manage bushfire risk:</p> <ul style="list-style-type: none"> • A communication system will must be developed that operates during the Fire Danger Period which provides the ability to contact all onsite staff and contractors to inform them of bushfire alerts and warnings. • A fire watch position will must be appointed at each construction location during the Fire Danger Period to monitor the surrounding area and regularly ensure hot work activity is being managed safely. • Local Country Fire Authority CFA fire brigades will must be engaged and offered regular Project familiarisation tours to support their understanding of the activities occurring. This activity must be arranged through the local 	All areas	Construction	Chapter 18

Measure ID	Mitigation Measure	Relevant Work Area	Phase	EES Location
	<p>District 4 HQ office.</p> <ul style="list-style-type: none"> A high standard of communication will <u>must</u> be maintained with landowners, relevant stakeholders and the community (see MM-SE01). A primary contact person will <u>must</u> be established for the community to contact with concerns, questions, or issues about the Project during the construction period. 			
<p>MM-BF043</p>	<p>Risk Management Plan</p> <p>A Risk Management Plan (RMP) will <u>must</u> be developed in consultation with CFA, <u>in accordance with the model requirements in the CFA Guidelines (as amended from time to time)</u>, and be finalised prior to construction commencing. The following design <u>and infrastructure</u> measures will <u>must</u> be assessed in the RMP following the selection of the equipment suppliers.</p> <ul style="list-style-type: none"> Fire detection systems, in built fire protection and suppression systems, and remote alarming and notification systems will <u>must</u> be installed in turbines to report potential fire risks. These systems will <u>must</u> be connected to the supervisory control and data acquisition (SCADA) system that provides remote control over the wind farm. Where possible, cameras will <u>must</u> be installed on selected turbines to increase landscape situational awareness and provide early warning of bushfires. An additional camera is to be installed in an area that provides coverage for the eastern and southeastern areas of the Project, which must be connected to the Green Triangle Fire Alliance camera network. Remote <u>and automatic</u> shut down procedures will <u>must</u> be implemented for turbine operations during bushfires or reported faults, or at the request of emergency services. Lightning conductors will <u>must</u> be installed to dissipate electricity to ground and reduce turbine damage and bushfire risk. In addition, the suitability of installing lightning strike detection systems will <u>must</u> be 	<p>All areas</p>	<p>Pre-construction Construction</p>	<p>Chapter 18</p>

Measure ID	Mitigation Measure	Relevant Work Area	Phase	EES Location
	<p>assessed.</p> <ul style="list-style-type: none"> Suitable firefighting equipment to be available onsite or readily accessible. Operator management vehicles will carry firefighting water and basic fire equipment during the declared Fire Danger Period. Static water supplies will must be installed at strategic locations across the Project Area with 45,000 litres installed in each set. <p>Where possible, non-combustible or low combustibility and low flammability liquids including oils and lubricants, will must be used within the turbine nacelles.</p>			
MM-BF054	<p>Operational Fire Emergency Management Plan</p> <p>An Operational Fire Emergency Management Plan (OFEMP) will must be developed in consultation with DEECA Regions and the CFA, and will must:</p> <ul style="list-style-type: none"> Be informed by the outcomes of the RMP (see MM-BF04). For unmanned sites, appropriate monitoring and intervention measures will must be provided to ensure that any shorts, faults, off-gassing, temperature increases above normal parameters and equipment failures with the potential to ignite or propagate fire are rapidly identified and controlled, and any off-gassing, smoke or fire is notified to 000 immediately. In addition, emergency information folders (per the CFA Guidelines, as amended from time to time) will must be located in positions to be agreed with the CFA. These folders must include contact numbers for expert advice to assist emergency responders while awaiting the arrival of onsite personnel. Emergency procedures based on identified risks and hazards at the facility will must be incorporated into the OFEMP, as per the CFA Guidelines (as amended from time to time). Emergency procedures will must include, but not be limited to: <ul style="list-style-type: none"> Bushfire/grassfire. Wind turbine faults and fire. 	All areas	Operation	Chapter 18

Measure ID	Mitigation Measure	Relevant Work Area	Phase	EES Location
	<ul style="list-style-type: none"> ○ Electrical infrastructure faults and fire. ○ Dangerous goods spills/leaks. ● Procedures will <u>must</u> incorporate activities prior to and during days of Catastrophic and Extreme fire danger rating and align with local planning including the Municipal Emergency Management Plan. ● Procedures will <u>must</u> be developed and implemented to identify and respond to the fire danger ratings/Total Fire Ban status during the declared Fire Danger Period. ● Procedures will <u>must</u> be developed and implemented for detecting and responding to bushfire activity within 50 kilometres of the Project (e.g., through the VicEmergency website or ABC local radio) including the ability to monitor for bushfire for at least three days in advance. ● Non-essential personnel will <u>must</u> have limited site access on days with a fire danger rating of Extreme or Catastrophic, and non-essential activities will be limited on these days. ● Bushfire ignition hazards will <u>must</u> be included in any Job Hazard Analysis or similar activity-based risk management process for site activities. ● training requirements will <u>must</u> be outlined in the OFEMP for staff and contractors working at the site during the Fire Danger Period. ● Maintenance activities will <u>must</u> not be undertaken in the cleared area surrounding the turbine towers under elevated fire danger conditions. ● All the information contained within the CFA Guidelines (as amended from time to time) pertaining to emergency management planning will <u>must</u> be incorporated into the Emergency Management Plan. ● The OFEMP will <u>must</u> be developed in accordance with AS 3745:2010 Planning for emergencies in facilities. ● Emergency assembly areas will <u>must</u> be established, and evacuation procedures and emergency access points will be detailed in the OFEMP to be 			

Measure ID	Mitigation Measure	Relevant Work Area	Phase	EES Location
	<p>covered in site inductions.</p> <ul style="list-style-type: none"> A liaison person will must be provided to support incident management for all incidents that require an incident management team. Upon request from a fire service, turbines will must be automatically shut down in the vicinity of reported fires to support firefighting operations. <p>The OFEMP must be reviewed annually and updated as appropriate, in consultation with the CFA and any other relevant emergency services.</p> <p>The preparation of the OFEMP must be informed by consultation with the plantation operator to ensure consistency with the fire management plans and processes that apply to the plantation.</p>			
MM-BF065	<p>Fire Management Plan</p> <p>A Fire Management Plan (FMP) will must be developed in consultation with the CFA for the Project prior to construction and amended as required prior to operation. The FMP may form part of the CFEMP and OFEMP. The FMP will must address fire risks to and from the site and detail the control measures (systems, activities and accountabilities) for the prevention and management of fire. The FMP will must be prepared in accordance with the CFA Guidelines (as amended from time to time). The FMP will must include but not be limited to:</p> <ul style="list-style-type: none"> How emergency access will be provided during critical fire danger periods. Monitoring for fire in the area. Vegetation and fire break management. Wind turbine monitoring and servicing. Peat presence and management (see also MM-CA05). Fire protection systems and equipment inspections and servicing. Hot work permits/processes and other ignition control mechanisms. Internal access roads, gates and fencing maintenance. All activities undertaken during the Fire Danger Period will must be 	All areas	Pre-construction Construction Operation	Chapter 18

Measure ID	Mitigation Measure	Relevant Work Area	Phase	EES Location
	<p>appropriate under the <i>Country Fire Authority Act 1958</i> (Vic), including:</p> <ul style="list-style-type: none"> ○ Compliance with Total Fire Ban Day restrictions ○ Obtaining permits for any hot work activities. ● A response plan and suppression strategies will must be developed to assist firefighters with understanding the risks associated with fires in turbines. ● The Proponent will liaise with the local plantation and Country Fire Authority CFA brigades and groups to assist with familiarising them with the Project’s operations and infrastructure. ● The following maintenance and audit activities will must be undertaken during operation of the Project: <ul style="list-style-type: none"> ○ Regular inspections will must be undertaken of all turbines, substations, and powerlines (including easements). Inspection details and findings will must be recorded. ○ Bushfire preparedness audits will must be developed and implemented to record all “annual” fire danger season preparedness activities and prevention works. ○ Asset protection zones around turbines and buildings will must be maintained. ○ All access roads and tracks used for the Project will must be maintained to meet industry standards for emergency vehicle access. <p>The FMP must be reviewed every three years, and updated as appropriate.</p>			
Quarry Work Plan Requirements				
MM-QU01	<p>Quarry Work Plan</p> <p>A Quarry Work Plan (QWP) (or equivalent) must be prepared before commencement of development in consultation with relevant authorities and endorsed as part of the Work Authority. The QWP must be generally consistent with the approved EMF and include relevant elements of the Quarry Work Plan Requirements Report (EES</p>	Quarry	All phases	Technical Appendix W

Measure ID	Mitigation Measure	Relevant Work Area	Phase	EES Location
	Technical Appendix W .			
MM-QU012	<p>Quarry Supply</p> <p>The onsite quarry is proposed to supply road base material required for the construction of the Project which would incorporate hardstand areas, construction pads, upgrades and extensions to the existing roading network. The quarry will must only operate to supply material for the Project and will remain available for the life of the Project to supply any materials for ongoing road maintenance during operation. The quarry will must be rehabilitated when the Project requirements for material has ceased.</p>	Quarry	All phases	Technical Appendix X
MM-QU023	<p>Imported Materials Management Plan</p> <p>Imported material may be used at the quarry to assist in rehabilitation. Material would typically include soil or “clean fill” sourced from the construction activity within the Project Area. Importing of material be undertaken in accordance with EPA regulations and guidance. All material imported to the quarry will must be managed by an Imported Materials Management Plan (IMMP). Solid inert waste and plastic concrete will must not be accepted at the quarry.</p>	Quarry	Rehabilitation	Technical Appendix X
MM-QU034	<p>Site access</p> <p>Appropriate signage at the quarry access point and adjacent to Portland-Nelson Road will must be installed, as well as appropriate signage to the immediate Work Authority, warning the public of high cliff faces and fall hazards.</p>	Quarry	Construction Operation	Technical Appendix X
MM-QU045	<p>Waste</p> <p>Domestic and industrial waste materials generated by the quarry will must be removed by licenced contractors. Where required, waste will must be disposed of at an appropriately licenced facility, or similar.</p>	Quarry	Construction Operation	Technical Appendix X
MM-QU056	<p>Site Closure and Rehabilitation Plan</p> <p>A Site Closure and Rehabilitation Plan (SCRPlan) will must be developed for the proposed quarry that address all the requirements under Part 2 the <i>Mineral Resources</i></p>	Quarry	Rehabilitation	Technical Appendix X

Measure ID	Mitigation Measure	Relevant Work Area	Phase	EES Location
	<p><i>(Sustainable Development) (Extractive Industries) Regulations 2019.</i></p> <p>The SCRP will <u>must</u> clearly state the rehabilitation objective(s) of the quarry and list the criteria and monitoring for determining the success or otherwise of rehabilitation.</p> <p>The rehabilitation objective will <u>must</u> be to return the site to a landform that is safe, stable, non-polluting and sustainable as an ongoing source of plantation timber. The final landform design and all associated closure criteria and monitoring will <u>must</u> reflect this objective.</p>			
<p>MM-QU067</p>	<p>Stockpile heights</p> <p>Soil stockpiles would <u>must</u> be limited in height to no greater than 2 metres and would be located at the edge of the disturbance area at a location close to extraction crests or the edge of hardstand areas where they would be ultimately used in rehabilitation. Soil stockpiles would be contoured, grassed and stabilised to manage erosion until they are required for use in rehabilitation. There would <u>must</u> be no soil stockpiles post closure as all the soil would be used in rehabilitation.</p> <p>Overburden stockpiles would <u>must</u> be limited in height to a maximum of 12 metres when located within the excavation, or 8 metres if placed on natural ground. As much as possible overburden would be placed in worked-out areas of the excavation and located to not impact the overall risk assessment of the Work Authority. Overburden stockpiles would have 1V:2H side slopes with a contour drain at the base of the dump to direct any runoff into the Work Authority drainage control system. Overburden stockpiles would be contoured and vegetated as required or otherwise stabilised to manage erosion.</p> <p>Product stockpiles would <u>must</u> be located close to the mobile processing plant and have a maximum height of 10 metres.</p> <p>Soil and overburden stripping would <u>must</u> be avoided on hot, dry, windy days, or as much as possible after extended dry periods where the inherent moisture content is very low, to minimise dust generation and potential air quality impacts.</p>	<p>Quarry</p>	<p>Construction Operation</p>	<p>Technical Appendix X</p>

Measure ID	Mitigation Measure	Relevant Work Area	Phase	EES Location
MM-QU078	<p>Community Engagement Plan</p> <p>A Community Engagement Plan (CEP) will must be prepared as part of the QWP and will incorporate matters relating to the quarry to share relevant information about the Work Authority that may affect the community and key stakeholders. Key stakeholders for the Project quarry include the plantation owner (GTFP), Glenelg Shire Council, and ERR. Typical information that is shared includes any proposed changes in operating practices/activities that could potentially result in impacts on the local community.</p> <p>The CEP will must be part of the final approved Work Plan for the quarry.</p>	Quarry	All phases	Technical Appendix X
MM-QU089	<p>Risk Treatment Plans</p> <p>A detailed risk assessment and associated risk treatment plan addressing all the hazards on the site will must be developed to the satisfaction of ERR before the quarry can be approved.</p> <p>The individual risk treatment plans required by the <i>Mineral Resources (Sustainable Development) Act 1990 (Vic)</i> will must identify specific sensitive receptors and discuss the impacts on these sensitive receptors and document the controls and provide monitoring and reporting requirements to mitigate these risks.</p>	Quarry	Construction Operation	Technical Appendix X
MM-QU0910	<p>Quarry Water Management Plan</p> <p>A separate Quarry Water Management Plan (QWMP) will must be prepared for the quarry, including water balance modelling and a determination of the water storage requirements.</p>	Quarry	Pre-Construction	Chapter 9
Independent Environmental Auditor				
MM-IA01	<p>Independent Environmental Auditor</p> <p>1. An IEA will must be appointed to:</p> <ol style="list-style-type: none"> a) review the CEMP, OEMP, DEMP, BMCP and BBAMP for compliance with the EMF and Incorporated Documentand the MMs; b) undertake environmental audits of compliance with and implementation of 	All areas	Pre-construction Construction Operation Decommissioning	Chapter 19

Measure ID	Mitigation Measure	Relevant Work Area	Phase	EES Location
	<p>the MMs, all relevant requirements of the EMF and Incorporated Document, including the CEMP, OEMP, and DEMP, BMCP and BBAMP and prepare audit reports containing the results of the audit;</p> <ul style="list-style-type: none"> c) review the Complaints Register (see MM-SE06) which may highlight trends or non-conformance with applicable MMs; and d) verify there are processes in place to identify opportunities for continual improvement in environmental management and performance of the MMs and EMF. <p>2. The IEA must comprise of a person or persons with expertise, based on qualifications and experience, appropriate to allow the roles specified for an IEA in the EMF to be properly carried out. This would include professionals with expertise in:</p> <ul style="list-style-type: none"> a) ecology and avifauna; b) environmental management during construction. <p>3. A person appointed as an IEA must not be the author of a Project report as required under this EMF or Incorporated Document, and must make an appropriate conflict of interest declaration.</p> <p>4. All costs in relation to the appointment and functions of an IEA are to be paid by the Proponent.</p> <p>5. In respect of the CEMP, OEMP and DEMP, audits must occur every six months during construction and annually for two years after commencement of operation of the Project, or until the responsible authority is satisfied that audits by an IEA are no longer required.</p> <p>6. A six monthly summary report must be provided to the responsible authority and, where specifically stated within MMs, DEECA Regions. The six monthly summary report must summarise the findings of the audits carried out during the reporting period. The summary report must be made public within one month of being provided to the responsible authority.</p> <p>7. A close out report must be provided to the responsible authority at the conclusion of the auditing and reporting period.</p>			

19.5 Environmental management documentation

The Proponent (and its contractors) ~~will be~~ is responsible for preparing and implementing environmental management plans and other Project specific documentation to monitor and control environmental impacts during design, construction, operation, and decommissioning of the Project. The plans will be required to achieve compliance with relevant standards, guidelines and obligations under the Project’s statutory approvals and consents and to reflect the MMs in **Table 19.3**.

The statutory approvals and consents required for the Project ~~will~~ must be implemented through a series of plans that will be required as conditions of the planning authorisation. These are identified in the Incorporated Document at Appendix A of **Planning Scheme Amendment documents (EES Technical Appendix Y)**. Where applicable, the plans and procedures required by the Incorporated Document will be prepared to the satisfaction of the relevant responsible authority and in consultation with the identified relevant agencies and stakeholders, prior to works commencing. Any required amendments to these plans and procedures will be reviewed and approved in accordance with the requirements of the Incorporated Document and the EMF.

Contractors are required to address any non-compliances with these plans and report to the Proponent, who will be responsible for ensuring compliance and associated reporting to the relevant regulators as required. Audits and other reporting by an IEA will also inform the need for amendments or changes to address any non-compliances or address new or altered environmental risks arising from the construction and operation of the Project.

An overview of the key environmental documentation and their relationships is provided in **Figure 19.1**. The key environmental management documents which the Proponent and its contractors will prepare and implement are described in **Table 19.4**.

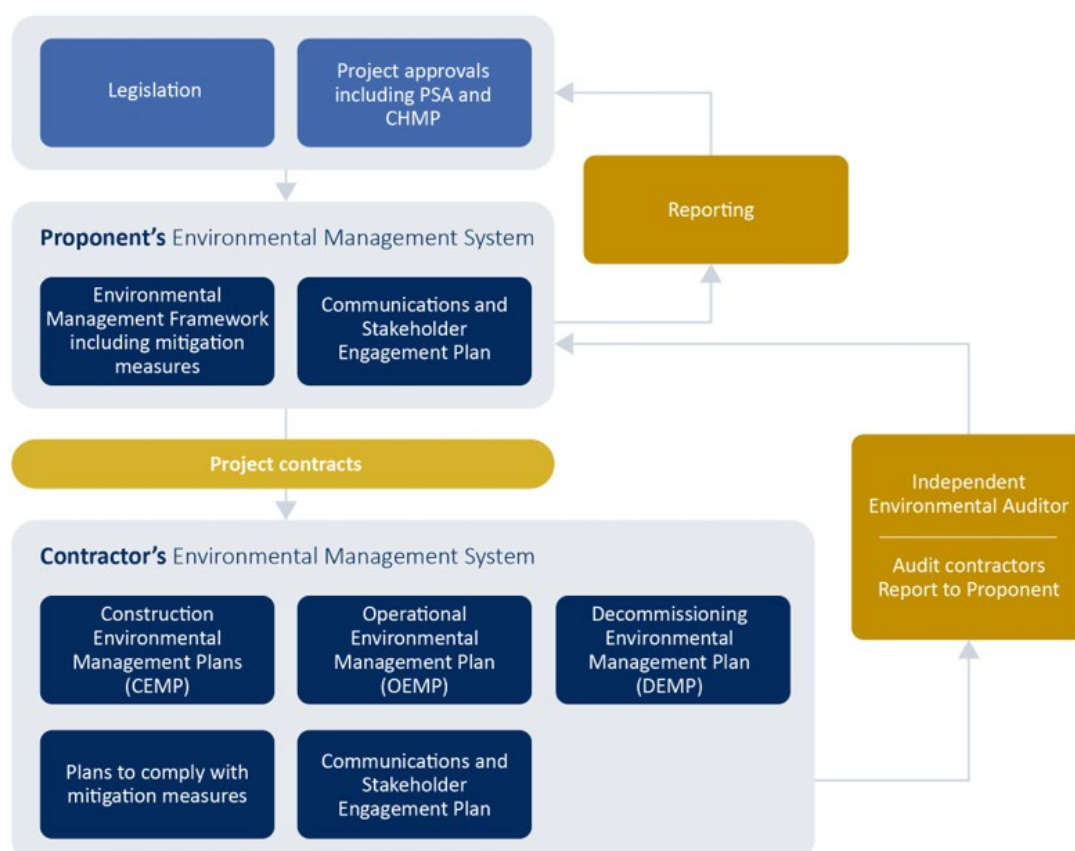


Figure 19.1 Key environmental management documentation

Table 19.4: Environmental management documentation

Key document	Description	Phase (in effect)
Minister’s Assessment of the EES	The Minister’s Assessment of the EES provides an assessment of the acceptability of the environmental effects of the project for statutory decision-makers under Victorian law, which must consider the assessment before deciding whether and how a project should proceed. The Minister’s Assessment informs approval decisions under relevant Victorian and Commonwealth legislation.	Assessment
Incorporated document	The approval of the PSA will insert a Special Controls Overlay and an Incorporated Document into the Glenelg Planning Scheme. The Incorporated Document will set out the relevant conditions for planning and environmental compliance.	Approval
Development Plans	In accordance with Clause 7.1 of the draft Incorporated Document, prior to commencement of any buildings and works associated with the Project, development plans will <u>must</u> be submitted to and approved by the Minister. The plans will be fully dimensioned and drawn to scale and will include the matters referenced in Clause 7.1 of the draft Incorporated Document.	Pre-construction
Environmental Management Framework	The EMF outlines clear accountabilities for the delivery of the Project in accordance with the mitigation measures and compliance with relevant environmental laws, approvals, approval conditions, and environmental management plans and procedures. The proponent will <u>must</u> update the EMF and mitigation measures in response to relevant matters and recommendations contained in the Minister for Planning’s assessment of the EES. The EMF will <u>must</u> be submitted to the Minister for Planning for approval in accordance with Clause 7.8 of the draft Incorporated Document.	Pre-Construction, Construction, Operation, Decommissioning
Construction Environmental Management Plan (CEMP)	<p>The construction contractor(s) will <u>must</u> prepare a CEMP for their package of works, as required by the project contract and in accordance with the EMF and MMs.</p> <p>The CEMP will <u>must</u> include details of processes and responsibilities for:</p> <ul style="list-style-type: none"> • Complying with conditions of approval, relevant legislation, construction-related mitigation measures and environmental components of the Project contract • Identifying, managing and monitoring environmental risks and issues during construction and implementing contingency measures • Using and maintaining plant, equipment, processes and systems to minimise risk of harm from pollution and waste • Ensuring all substances are handled, stored, used, and transported in accordance with relevant EPA 	Construction

Key document	Description	Phase (in effect)
	<p>guidelines</p> <ul style="list-style-type: none"> • Site inductions, training, competency, and awareness to all personnel engaging in activities associated with construction • Communication and reporting during construction • Environmental reporting, monitoring and auditing requirements • Evaluating compliance with legislative and approval requirements, including mitigation measures • Managing complaints, incidents, breaches and taking corrective and preventative action, including associated reporting requirements • Emergency preparedness and response • Review and continuous improvement. <p>Contractors for the Project will be able to prepare one CEMP for their work or individual CEMPs for components of their works. The CEMP will also be able to be prepared in stages. Contractors may also choose to create a series of sub-plans for the CEMP. The CEMP will must be prepared in consultation with stakeholders relevant to the works covered in the plan and as required by any relevant mitigation measure.</p> <p><i>Note – not all plans required by the mitigation measures will be sub-plans to the CEMP. The structure of plans and sub-plans will be determined by the contractor to allow for an integrated approach to addressing and managing impacts across the various plans.</i></p>	
Operational Environmental Management Plan (OEMP)	<p>The operator(s) responsible for commissioning and operation will must develop and implement an OEMP, which would be prepared in accordance with the requirements of the EMF and MMs and address potential environmental impacts of commissioning, operation and maintenance activities associated with the Project.</p> <p>The OEMP will must identify operational activities and contain procedures and responsibilities for:</p> <ul style="list-style-type: none"> • Complying with operational mitigation measures, approval conditions, and relevant legislation • Identifying, managing and monitoring environmental risks and issues during operations and implementing contingency measures • Using and maintaining plant, equipment, processes, and systems to minimise risk of harm from pollution and waste • Ensuring all substances are handled, stored, used, and transported in accordance with relevant EPA 	Operation

Key document	Description	Phase (in effect)
	<p>guidelines</p> <ul style="list-style-type: none"> • Site inductions, training, competency, and awareness to all personnel engaging in activities associated with operations • Communication and reporting during operation • Environmental reporting, monitoring and auditing requirements • Evaluating compliance with legislative and approval requirements, including mitigation measures • Managing complaints, incidents, breaches and taking corrective and preventative action, including associated reporting requirements • Emergency preparedness and response • Review and continuous improvement. <p>The OEMP will <u>must</u> be prepared in consultation with agencies relevant to the operational works covered in the plan and as required by relevant mitigation measures.</p>	
<p>Decommissioning Environmental Management Plan (DEMP)</p>	<p>The operator will <u>must</u> develop a DEMP <u>to the satisfaction of the responsible authority</u>. <u>The DEMP must be prepared</u> in accordance with the requirements of the EMF and MMs and to address potential environmental impacts of decommissioning activities associated with the Project.</p> <p>The DEMP will <u>must</u> identify decommissioning activities and contain procedures and responsibilities for:</p> <ul style="list-style-type: none"> • Complying with decommissioning mitigation measures, approval conditions, and relevant legislation • Identifying, managing and monitoring environmental risks and issues during decommissioning and implementing contingency measures • Using and maintaining plant, equipment, processes, and systems to minimise risk of hard from pollution and waste • Ensuring all substances are handled, stored, used, and transported in accordance with relevant EPA guidelines • Site inductions, training, competency, and awareness to all personnel engaging in activities associated with decommissioning • Communication and reporting during decommissioning • Environmental reporting, monitoring and auditing requirements 	<p>Decommissioning</p>

Key document	Description	Phase (in effect)
	<ul style="list-style-type: none"> • Evaluating compliance with legislative and approval requirements, including mitigation measures • Managing complaints, incidents, breaches and taking corrective and preventative action, including associated reporting requirements • Emergency preparedness and response • Review and continuous improvement. <p>The DEMP will <u>must</u> be prepared in consultation with agencies relevant to the decommissioning works covered in the plan and as required by relevant mitigation measures.</p>	
Bird and Bat Adaptive Management Plan (BBAMP)	<p>In accordance with Clauses 7.19 to 7.24 of the Incorporated Document, prior to construction commencing, the Proponent is required to prepare a Bird and Bat Adaptive Management Plan addressing the measures to be implemented to ensure that operation of the Project does not result in net significant or lasting impacts on the viability or conservation status of identified species of concern. The content of the BBAMP is informed by MMs in the EMF.</p>	Pre-construction, Construction Operation
Brolga Monitoring and Compensation Plan (BMCP)	<p>In accordance with Clauses 7.25 to 7.29 of the Incorporated Document, prior to construction commencing, the Proponent is required to prepare a Brolga Monitoring and Compensation Plan, which has the aim to achieve net zero impact on the Victorian Brolga population.</p>	Pre-construction Construction Operation
Other plans and strategies as required by the mitigation measures	<p>The mitigation measures (see Section 19.4.3) includes requirements to develop and implement management plans and strategies to avoid, minimise and mitigate potential impacts.</p> <p>Where appropriate, the management plans and strategies required by the mitigation measures may be included as sub-plans as part of the CEMP, OEMP, or DEMP, or may be included as stand-alone plans and strategies.</p> <p>The plans include:</p> <ul style="list-style-type: none"> • APP: Aboriginal Participation Plan (MM-SE05) • ASSMP: Acid Sulfate Soil Management Plan (MM-CA03) • BMP: Biosecurity Management Plan (MM-BD05) • BSRCEMP: Construction Environmental Management Plan (MM-BS01) • CEP: Community Engagement Plan (MM-QU078) • CES: Community Engagement Strategy (MM-SE01) 	All phases

Key document	Description	Phase (in effect)
	<ul style="list-style-type: none"> • CIRP: Complaint Investigation and Response Plan (MM-SE06) • CFEMP: Construction Fire Emergency Management Plan (MM-BF01) • CNVMP: Construction Noise and Vibration Management Plan (MM-NV01) • DMP: Dust Management Plan (MM-AQ01) • DNVMP: Decommissioning Noise and Vibration Management Plan (MM-NV10) • DWP: Dewatering Plan (MM-SW01) • FFMP: Flora and Fauna Management Plan (MM-BD09) • FMP: Fire Management Plan (MM-BF-06) • GDEMMP: Groundwater Dependent Ecosystem Monitoring and Management Plan (MM-GD01) • IMMP: Imported Materials Management Plan (MM-QU023) • LPSPS: Local Participation and Social Procurement Strategy (MM-SE03) • NMP: Noise Management Plan (MM-NV07) • NVP: Native Vegetation Plan (MM-BD01) • OFEMP: Operational Fire Emergency Management Plan (MM-BF05) • PMP: Peat Management Plan) (MM-CA06) • QWMP: Quarry Water Management Plan (MM-QU0910) • QWP: Quarry Work Plan (MM-NV031) • RMP: Risk Management Plan (MM-BF04) • SBS: Shared Benefits Strategy (MM-SE02) • SCRP: Site Closure and Rehabilitation Plan (MM-QU056) • SEWQMP: Sediment, Erosion and Water Quality Management Plan (MM-SW02) • TCP: Transport Communications Plan (MM-TP01) • TMP: Traffic Management Plan (MM-TP02) • WAMP: Workforce Accommodation Management Plan (MM-SE04) 	

Key document	Description	Phase (in effect)
Community and Stakeholder Engagement Plan	A Community and Stakeholder Engagement Plan (CSEP) will <u>must</u> be developed and implemented to facilitate ongoing engagement and communications between the Proponent, Project stakeholders, and the broader community throughout the lifetime of the Project. It will <u>must</u> include detailed information on the engagement process, including methods of consultation and records of consultation undertaken. It will <u>must</u> also detail the communications protocols between the Proponent and its contractors.	All phases
CHMP	Construction of the Project will <u>must</u> be undertaken in accordance with the management conditions set out in CHMP 17822 to manage potential impacts on known and unknown Aboriginal places. This plan sits outside of the conditions of the Incorporated Document and is prepared by the Proponent to operate in conjunction with the approved management plans.	All phases

19.6 Environmental management system

The Proponent and its contractors **will must** operate in accordance with their EMSs that are compliant with *Australian and New Zealand Standard AS/NZS ISO 14001*. The purpose of the EMS is to establish a plan-do-check-act system to identify and manage environmental risks and impacts and ensure comprehensive and integrated identification and management of environmental risks and issues throughout the Project's lifetime. The Proponent **will must** review the effectiveness of the EMF for continuous improvement in accordance with its own EMS.

19.6.1 Change management

All contractor plans and documentation **will must** be prepared and approved by the Proponent prior to any works commencing. Where required, contractor management plans **will must** also be subject to regulatory approval from relevant government agencies. Documents **will must** be developed, approved, implemented, and revised as necessary throughout the life of the Project. This may include amendments based on:

- Continuous improvement due to changes in design and work practices.
- Monitoring results.
- Changes to legislation.
- Risks, or as a result of findings from internal or external audits.
- Incidents.
- Complaints.
- Other compliance obligations voluntarily taken by the Proponent.

Contractors will be required to submit all major revisions of environmental documentation to the Proponent for review and approval. Major documentation revisions are considered to be changes that affect work and construction practices, roles and responsibilities, social and environmental risks and overall Project delivery. Changes to any management plans approved by the Minister will be required to be amended and re-submitted and approved by the Minister.

19.7 Evaluating performance and compliance

19.7.1 Compliance

A proactive compliance monitoring system **will must** be implemented to measure ongoing environmental performance during construction, operation and decommissioning. Detailed monitoring requirements **will must** be incorporated into the EMPs (CEMP, OEMP and DEMP) reflecting approval and regulatory requirements. Monitoring frequency and monitoring parameters **will must** be informed by regulatory requirements and the scale of environmental risk. Monitoring **will must** include periodic inspections of construction work areas and operational Project elements to ensure conditions of the Incorporated Document are being implemented and are effective in reducing environmental impacts as set by the EMF.

The Proponent **will must** develop an audit plan, including an audit schedule and audit scopes for each Project contractor. Any non-compliances **will must** be highlighted by an IEA and addressed accordingly by contractors.

The environmental compliance management system to be adopted for the Project may include the following:

- Defining non-conformances.
- Developing and maintaining a register of non-conformances.
- Defining responsibilities and timelines for addressing non-conformances.
- Monitoring, auditing and reporting requirements.

Monitoring results **will must** be reviewed by the Proponent at regular intervals to enable early detection of potential non-compliances (with conditions of the Incorporated Document). This will help identify whether additional or modified monitoring activities are required to address Project risks.

19.7.2 Complaints management

The complaints management process **will must** be implemented prior to construction commencing (other than preparatory works), consistent with *AS/NZS 10002: 2014 Guidelines for Complaint Management in Organisations* and approved by the Minister in accordance with proposed condition 5.63 of the Incorporated Document. The Proponent will aim to respond to comments and complaints in a timely and effective manner to ensure the values, priorities and issues of affected stakeholders are acknowledged and addressed (different processes may be required for different types of complaints).

A Complaint Investigation and Response Plan **will must** be developed that:

- Outlines the process for making and recording complaints and their resolution.
- Provides a range of avenues (e.g. direct phone number, email) for community members to express their concerns or ask questions.
- Specifies response and resolution procedures to ensure timely responses are provided to any complaints raised.

A copy of the Complaints Investigation and Response Plan **will must** be published on the Proponent's Project website and include details for a toll-free telephone number and email contact for complaints to be received. A **C**omplaints **R**egister **will must** be established which records:

- the complainant's name and address (if provided), including (for noise complaints) any applicable property reference
- a receipt number for each complaint, which must be communicated to the complainant
- the time and date of the incident, and the prevailing weather and operational conditions at the time of the incident
- a description of the complainant's concerns, including (for a noise complaint) the potential occurrence of special audible characteristics
- the process for investigating the complaint, and the outcome of the investigation, including the actions taken to resolve the complaint.

A complete copy of the Complaints Register, along with a reference map of complaint locations must be provided to the Minister on each anniversary of the date of the Incorporated Document, and at other times on request by the Minister.

19.7.3 Auditing and reporting

Independent environmental audits **will must** be conducted at regular intervals as specified within the relevant EMP, to monitor compliance of specific construction and operation related plans which includes the CEMP, OEMP, and DEMP. These independent environmental audits are an additional level of compliance monitoring proposed by the Proponent during the development and operation of the Project. The introduction of an IEA as part of the environmental landscape of the Project is a relatively new approach to wind energy facility development and is anticipated to give communities and regulators confidence in environmental management.

This approach is becoming more commonplace in approved incorporated documents for large-scale infrastructure projects, particularly in major transport projects. Recently, this approach has been adopted and accepted by the Minister for the North East Link Project and Suburban Rail Loop East Project, Level Crossing Removal Projects and the Metro Rail Project. The use of an IEA to audit and ensure compliance of a project of this scale is an efficient mechanism to enable construction to

commence, provide certainty that the robust approvals conditions are being adopted, and ensure compliance is being independently assessed

At a minimum, audits ~~will~~ must be conducted in accordance with the following:

- On a monthly basis during the construction phase (Contractor/Neoen Environment teams).
- Following a non-compliance event or reportable incident (a pollution incident that causes or threatens to cause 'material harm' to human health or the environment, defined by the EPA).
- Currency/adequacy of all environmental management documentation.
- Compliance and performance against EMF and MMs over the 12-month period.
- Corrective actions undertaken to meet EMF and MMs over the 12-month period.
- Stakeholder interactions and complaints handling over the 12-month period.
- Implementation of monitoring programs over the 12-month period.
- At the end of the construction phase.

Additional annual independent environmental audits ~~will~~ must be undertaken throughout the Project's lifetime to report on:

- Documentation and record keeping of meeting minutes, incidents, non-conformances, CEMP, OEMP and DEMP audits over the 12-month period (as applicable).
- Summary of monthly audit meeting minutes/reports conducted over the 12-month period.
- Quality of the EMS against AS/NZS ISO 14001.

Conformance and compliance ~~will~~ must be assessed through a range of mechanisms, including inspections, observations of Project works, consultation with the Proponent and its contractors, and reviews of records and meeting minutes, as agreed between the Proponent and an IEA. A register of non-compliances ~~will~~ must be developed and maintained for internal use, with responsibilities and timelines for addressing non-compliances to be outlined to ensure they are being addressed. This register will not be publicly accessible and will only be provided to the relevant authority through reporting, upon request or when a reportable incident occurs.

Once the Project is operational, the Proponent ~~will~~ must report on the Project's operational environmental performance against operation-specific MMs. Monthly meeting minutes and annual reporting of performance against MMs ~~will~~ must be prepared for the purposes of provision to the technical expert to audit Project compliance, and subsequently maintained and archived for the operational life of the Project. An Independent review and update of all operational management plans and associated processes would be undertaken at a five-year frequency to ensure compliance with current legislation.

Decommissioning phase management plans would be prepared towards the end of the Project's operational life. Development of management plans and engagement with statutory authorities ~~will~~ must be undertaken and be guided by the relevant legislation.

The Proponent will be responsible for reporting compliance to the relevant regulators. Reporting and external notification requirements will be outlined in detail within the EMPs including the identification of matters that require reporting, the authority to which the reports ~~will~~ must be submitted, and the timeframe within which the reporting ~~will~~ must occur.

The EMF and management plans will be treated as live documents that allow for continual improvement and adaptive management throughout the construction, operation and decommissioning phases of the Project. As such the EMF will be reviewed for its effectiveness when necessary based on changes to the Project, regulatory regime or as an action from auditing. This review shall generate actions for the continual improvement of the systems and supporting management plans through updates which ~~will~~ must be done in consultation with the Minister.

Contingency measures in the management plans would facilitate adaptive management where required and adhere to the MMs identified in **Table 19.3**. There is potential for unexpected environmental events and incidents to occur during all phases of the Project. Contingency measures will facilitate an efficient and effective response to such events and ~~will~~ **must** be developed and implemented to address these issues in line with relevant regulations, standards and industry best practice guidelines.

F:2 Recommended Incorporated Document

The following Incorporated Document includes the IAC's recommended changes based on the Proponent's final version (D500.)

Note the requirements for climate change and renewable energy the BMCP have been reordered but have not been shown as a tracked change other than the clause numbers.

Tracked Added

~~Tracked Deleted~~



Kentbruck Green Power Hub Project

Proponent 'Day 4 version - clean' (7 August 2025)

GLENELG PLANNING SCHEME

Incorporated Document

**This document is an incorporated document in the
Glenelg Planning Scheme pursuant to section
6(2)(j) of the Planning and Environment Act 1987**

1.0 INTRODUCTION

- 1.1 This document is an Incorporated Document in the Schedules to Clause 45.12 - Specific Controls Overlay (SCO) and Clause 72.04 - Incorporated Documents of the Glenelg Planning Scheme (scheme).

The land identified in Clause 2.0 of this document may be used and developed in accordance with the specific controls contained in Clauses 6.0 and 7.0 of this document.

- 1.2 The controls in Clause ~~6~~7.0 prevail over any contrary or inconsistent provision in the scheme.
- 1.3 The Minister for Planning is the Responsible Authority for this Incorporated Document.

2.0 LAND DESCRIPTION

- 2.1 This document applies to 'the land' that is required for the use and development of the Project (Project) shown as Specific Controls Overlay (SCO~~10XX~~) on the Glenelg Planning Scheme Maps 20SCO, 28SCO, 29SCO and 30SCO

3.0 APPLICATION OF PLANNING SCHEME PROVISIONS

- 3.1. Despite any provision to the contrary or any inconsistent provision in the scheme, pursuant to Clause 45.12 of the scheme:

- a) the land identified in this Incorporated Document may be used and developed in accordance with the specific controls contained in this document; and
- b) no planning permit is required for, and no provision in the scheme operates to prohibit, restrict or regulate the use and development of the land for the purpose of the Project save for the controls contained in this document.

- 3.2. In the event of any inconsistency between the specific controls contained in this document and general provisions of the scheme, the specific controls contained in this document will prevail.

4.0 EXPIRY OF THIS SPECIFIC CONTROL

- 4.1. The controls in this Incorporated Document expire if any of the following circumstances apply:
- The development or any stage of it allowed by this Incorporated Document is not commenced within five (5) years of the gazettal date of Amendment C116gelg to this scheme.
 - The development or any stage of it allowed by this Incorporated Document is not completed within fifteen (15) years of the gazettal date of Amendment C116gelg to this scheme.
 - The use permitted under this Incorporated Document is not commenced within fifteen (15) years of the gazettal date of Amendment C116gelg to this scheme.
- 4.2. The Minister for Planning may extend the period for commencement of the development or any stage of it or use if a request is made in writing before the time for commencement expires or within six months afterwards.
- 4.3. The Minister for Planning may extend the date for the completion of the development or any stage of it if:
- a) a request is made in writing before the time for completion expires or within 12 months after the time for completion expires; and
 - b) the development started lawfully before the approval expired.

5.0 PURPOSE

5.1. The purpose of this incorporated document is to allow the use and development of the land for the Kentbruck Green Power Hub Project (the Project) generally in accordance with the plans approved in Clause 7.0 of this document and subject to the Clause 7.0 conditions of this document.

6.0 PROJECT DEVELOPMENT

6.1. This document allows the use and development of the land for the purposes of the Project, which includes but are not limited to:

- a) The use and development of land for a wind energy facility and utility installation, including a transmission line.
- b) The construction of buildings and carrying out works for ancillary infrastructure including underground and overhead cabling, meteorological monitoring masts, a permanent site compound, quarry, hardstands, transition stations, collector and main substations and access tracks.
- c) The construction of buildings and carrying out of works for temporary ancillary infrastructure including:
 - i. batching plants;
 - ii. laydown areas;
 - iii. stockpiling of excavation materials;
 - iv. constructing and using temporary site workshop(s) and storage administration and amenities buildings;
 - v. installing and relocating utilities and associated services; and
 - vi. construction compounds and facilities.
- d) Construction and display of business identification signs.
- e) The removal, destruction or lopping of trees and native vegetation, including dead vegetation.
- f) The creation and alteration of access to a road in a Transport Zone – Schedule 2 (TRZ2).

6.2. The abovementioned use and development ~~will~~ must be undertaken in accordance with the conditions in Clause 7.0 of this Incorporated Document. The use and development may be completed in stages. Any corresponding obligations arising from the conditions in Clause 7.0 of this Incorporated Document may similarly be satisfied in stages.

7.0 CONDITIONS

The use and development allowed by this Incorporated Document must be undertaken in accordance with the following conditions:

Development Plans

7.1 Prior to commencement of any buildings and works associated with the Project (excluding the ~~preparation~~ preparatory buildings and works under Clauses 7.3~~26~~ and 7.3~~37~~), development plans must be prepared for the Project to the satisfaction of the Minister for Planning.

These development plans must be generally in accordance with the following figures contained in documents that form part of the Kentbruck Green Power Hub Environment Effects Statement (exhibited between 27 January 2025 and 31 March 2025):

- a) Figure 3.2 (Wind Farm Details), Figure 3.3 (Transmission Line Route Details) and Figure 3.4 (Proposed Quarry) contained in Chapter 3; and
- b) Figure 6c.4 of Technical Appendix C: Flora and Fauna Existing Conditions and Impact Assessment, in relation to the 'central' overhead alignment for the internal powerline between Wilson Lower Road and Sandy Hill Road.

The development plans must also respond as appropriate to any design changes arising from the Minister for Planning's assessment of the Kentbruck Green Power Hub Environment Effects Statement.

The development plans must include:

- a) the final location, specifications, materials and finishes of the wind energy facility and utility installation. All cable routes and above ground structures associated with the wind energy facility and utility installation must be shown on these plans;
 - b) a maximum of 105 turbines with the following specifications:
 - i. maximum blade tip height up to 270 metres above ground level;
 - ii. minimum blade clearance from ground level no less than 60 metres; and
 - iii. maximum rotor diameter of up to 190 metres.
 - c) turbine free buffer zones in accordance with Chapter 4 of the *Kentbruck Green Power Hub Environment Effects Statement* (Neoen, 2024);
 - d) the final design and location of any proposed business identification signage;
 - e) the location and extent of native vegetation to be removed under this Incorporated Document;
 - f) no aviation safety lighting on any turbine;
 - g) infrastructure to be designed to maintain existing levels of flood protection associated with overland flow paths;
 - h) all new overhead powerlines ~~including the transmission line~~ to be marked with standard commercially available bird diverters;
 - i) non-reflective colours and finishes of all buildings and works (including turbines) and detail of security lighting throughout the site to minimise the visual impact of the development on the surrounding area;
 - j) elevations to all buildings proposed within the operations and maintenance facility; and
 - k) details of any staging of the development.
- 7.2 Except as permitted under Clauses 6 and 7, the use and development of the Project must be generally in accordance with the approved development plans.
- 7.3 The development plans may be amended or modified from time to time, with the approval of the Minister for Planning.
- 7.4 A development plan may be prepared and approved in stages or parts and may be amended from time to time with the approval of the Minister for Planning.

Micro-siting of turbines

- 7.5 The micro-siting of turbines is permitted without any amendment of the development plans endorsed under Clause 7.1 or written consent of the Minister for Planning provided that:

- a) written advice from a suitably qualified expert(s) as relevant to the infrastructure being micro-sited confirms that the micro-siting will not result in any material adverse change to landscape, vegetation, cultural heritage, visual, shadow flicker, noise, fire risk, groundwater or aviation impacts compared to the approved development plans;
- b) no turbine shown on the development plans endorsed under Clause 7.1 is moved within 1 kilometre of a dwelling that existed as at the date of this incorporated document unless the operator has provided evidence to the satisfaction of the Minister for Planning that the owner of the dwelling has consented in writing to the location of the turbine footprint;
- c) the micro-siting does not result in the removal of any additional native vegetation unless that removal is authorised by a planning permit;
- d) any micro-sited turbine is within an approved location for development under a Cultural Heritage Management Plan approved under the *Aboriginal Heritage Act 2006* (Vic); and
- e) the micro-siting does not move a turbine into a turbine free-buffer zone as shown on the development plans endorsed under Clause 7.1.

7.6 For the purpose of this Clause:

- a) the measurement of any distance between a dwelling and a turbine must be from the centre of the tower at ground level to the closest point of the dwelling.
- b) 'micro-siting of turbines' means:
 - i. an alteration of the siting of a turbine by not more than 100 metres in any direction from the centre of the turbine at ground level as shown on the development plans endorsed under Clause 7.1; and
 - ii. any consequential changes to access tracks, overhead powerlines, underground cabling or other associated buildings and works.

7.7 Within 3 months of the completion of any micro-sited infrastructure, the following must be provided to the Minister for Planning:

- a) plans and global positioning system co-ordinates of any relocated turbines and associated infrastructure;
- b) the written advice referred to in Clause 7.5.

Environmental Management Framework

7.8 Prior to the commencement of any buildings or works associated with the Project (excluding the preparation of buildings and works under Clauses 7.32 and 7.33), an Environmental Management Framework (EMF) must be prepared in consultation with DEECA and approved and endorsed by the Minister for Planning. The EMF must include:

- a) the approvals, consents and related statutory instruments that will underpin environmental management for the Project;
- b) the Mitigation Measures generally in accordance with the Minister's Assessment dated XX December 20XX made pursuant to the *Environment Effects Act 1978* unless otherwise approved by the Minister for Planning. The Mitigation Measures must address the following areas and any other relevant matters:
 - i. Aboriginal cultural heritage
 - ii. Aeronautical
 - iii. Air quality

- iv. Bushfire
 - v. Biodiversity
 - vi. Contaminated land and spoil management
 - vii. Electro-magnetic interference
 - viii. Groundwater
 - ix. Historic cultural heritage
 - x. Landscape character and visual amenity
 - xi. Noise and vibration
 - xii. Socio-economic
 - xiii. Surface water
 - xiv. Transport;
- c) the processes and indicative timing for development of a Construction Environmental Management Plan (CEMP), an Operational Environmental Management Plan (OEMP), a Decommissioning Environmental Management Plan (DEMP), and associated sub-plans and the consultation required with entities responsible for the approval of these documents;
 - d) the processes for monitoring, reporting, auditing and evaluating performance and environmental outcomes, as well as revising Mitigation Measures.;
- 7.9 The EMF submitted to the Minister for Planning for approval under Clause 7 of this Incorporated Document must be accompanied by a statement explaining any differences between it, and the matters set out in the Minister's Assessment under the *Environment Effects Act 1978* dated XX 20XX.
- 7.10 The EMF may be approved in stages and parts to the satisfaction of the Minister for Planning.
- 7.11 The EMF may be amended from time to time, to the satisfaction of the Minister for Planning. An application for approval of an amendment to the EMF must be accompanied by a 'tracked changes' version of the EMF with a schedule explaining the proposed amendment/s.
- 7.12 The Project must be carried out in accordance with the approved EMF including the Mitigation Measures and all plans and procedures required by them.

Noise

- 7.13 The *New Zealand Standard 6808:2010, Acoustics – Wind Farm Noise* applies to dwellings (and the campground at Lake Mombeong) that were present at XX 20XX [insert approval date of PSA C116gelg]

Native vegetation

- 7.14 No more than 8.696 hectares of native vegetation is to be removed under this Incorporated Document.
- 7.15 Before any native vegetation is removed under this Incorporated Document, a Native Vegetation Plan (NVP) prepared in consultation with DEECA must be submitted to and endorsed by the Minister for Planning. When endorsed, the NVP will form part of this Incorporated Document. The NVP must include or address all matters relating to native vegetation removal required by the EMF approved pursuant to Clause 7.8 of this Incorporated Document.

- 7.16 To offset the native vegetation removal described in the endorsed NVP, the developer of the wind energy facility must, prior to commencement of construction, secure a native vegetation offset in accordance with the *Guidelines for the removal, destruction or lopping of native vegetation* (Department of Environment, Land, Water and Planning, 2017). A final offset strategy which includes details of the agreed security mechanism will must be developed in consultation with relevant public land managers and Project stakeholders, including and be agreed by DEECA.
- 7.17 Before any native vegetation is removed, evidence that the required offset has been secured must be submitted to, approved and endorsed by the Minister for Planning. When endorsed, the evidence will form part of the Incorporated Document. This evidence must be one or both of the following:
- a) A security agreement signed by the Proponent and landowner both parties, and a management plan detailing the 10-year management actions and ongoing management of the site, and/or
 - b) An allocated credit extract(s) from the Native Vegetation Credit Register.
- 7.18 In the event that a security agreement is entered into pursuant to condition 7.17(a), an annual offset site report must be submitted to the Minister for Planning by the anniversary date of the execution of the offset security agreement, for a period of 10 consecutive years. After the tenth year, the landowner must provide a report at the reasonable request of a statutory authority.

Brolga Monitoring and Compensation Plan

7.19-7.25 A Brolga Monitoring and Compensation Plan (BMCP) will must be prepared prior to Project construction in accordance with the *Interim guidelines for the assessment, avoidance, mitigation and offsetting of potential wind farm impacts on the Victorian Brolga population* (DSE 2012). The aim objective of the BMCP is to achieve net zero impact on the Victorian Brolga population. The BMCP must be prepared in consultation with DEECA Regions and to the satisfaction of the Minister for Planning.

7.20 Prior to submission to the Minister, the BMCP must be reviewed by the Independent Environmental Auditor (IEA) (appointed pursuant to the EMF approved under this Incorporated Document) to ensure it reflects current operational obligations, relevant legislation and policy. The review must also assess whether the BMCP is suitable to meet the objective in Clause 7.26. The findings of the IEA must be submitted to the Minister with the BMCP.

7.21-7.26 The BMCP must:

- a) Be implemented for the life of the Project.
- b) Include performance indicators to measure performance against the objective in Clause 7.25 and allow for an assessment of whether the objective is being met.
- c) Be informed by the updated population viability analysis required by Clause 7.29 of this Incorporated Document.
- d) Identify the locations of potentially at risk Brolga breeding and migration activities.
- e) Include a plan for a minimum of 18 months of monitoring prior to construction, with consideration of best practice survey methods and areas.
- f) Include a requirement for Brolga movement corridors to be reviewed based on results from pre-commissioning monitoring.

- g) Include recommendations in relation to a mortality rate for Brolga that would trigger the requirement for responsive Mitigation Measures to be undertaken.
- h) Specify who is accountable for implementing the plan and the monitoring required under the plan.
- i) Specify the locations of historical and potential Brolga breeding wetlands that will be enhanced.
- j) Include evidence of landholder agreements to participate in the breeding site enhancement project for its duration.
- k) Include appropriate methods of enhancement.
- l) Where determined to be appropriate by expert advice, include a program of appropriate fox baiting leading up to each breeding season.
- m) Include a before-after control-impact study tracking multiple individuals, within the same breeding season, to understand potential wind farm impacts to movement behaviour, habitat use and breeding success of Brolgas, including whether displacement has occurred.
- n) Include monitoring and reporting requirements, including public reporting after 1 year, 2 years, 5 years, 10 years, 15 years, 20 years, 25 years and 30 years from when the plan is approved, on whether the plan is expected to achieve the net zero impact objective.
- o) Include five yearly performance targets for each enhancement site and the program, consistent with the outcomes of the updated population viability analysis required by Clause 7.29 of this Incorporated Document.

7.22 ~~7.27~~ Implementation of the BMCP must commence before the development starts, and must be to the satisfaction of the Minister for Planning in consultation with DEECA Regions.

7.23 ~~7.28~~ Compensatory measures to achieve net zero impact on the Victorian Brolga population, from modelled collision and/or habitat displacement impacts resulting from the Project operation must include selection and management of wetland habitats to improve Brolga breeding success.

7.24 ~~7.29~~ The population viability analysis must be re-run on the basis of a final Project design to provide an indication of the level of positive management, including increase in Brolga population to account for the estimated mortality from wind farm operation and/or habitat displacement, that would be required to achieve a zero net impact on the south-eastern Australian Brolga population.

7.25 The BMCP may be amended from time to time, to the satisfaction of the Minister for Planning.

Bird and Bat Adaptive Management Plan (BBAMP)

7.26 ~~7.19~~ A Bird and Bat Adaptive Management Plan (BBAMP) ~~will~~ must be developed in consultation with DEECA Regions and to the satisfaction of the Minister for Planning. Once approved, the BBAMP must be placed on the Project website and remain on the website for the length of the operation of the Project. The BBAMP ~~will~~ must be developed prior to construction commencing. ~~The BBAMP must be revised and re-approved following completion of the pre-commissioning monitoring required by Clause 7.20 of this Incorporated Document.~~ The primary objectives is ~~are~~ to ensure operation of the Project:

- a) does not result in net significant or lasting impacts on the viability or conservation status of identified bird and bat species of concern.
- b) results in a net benefit to the recovery of the Southern Bent-wing Bat and the Australasian Bittern.

7.27 ~~7.20~~ The BBAMP must be revised and re-approved following completion of the pre-commissioning monitoring required by Clause 7.21 of this Incorporated Document. Prior to submission to the Minister, the revised BBAMP must be reviewed by the IEA (appointed pursuant to the EMF approved under this Incorporated Document) to ensure it reflects current operational obligations, relevant legislation and policy. The review must also assess whether the BBAMP is suitable to meet the objectives in Clause 7.19. The findings of the IEA must be submitted to the Minister with the revised BBAMP.

7.28 ~~7.21~~ The BBAMP must:

- a) include strategies and activities designed to:
 - i. achieve the objectives in Clause 7.19
 - ii. minimise, manage and mitigate bird and bat mortality arising from the operation of the wind farm; and
 - iii. determine whether the presence, abundance and flight behaviours of species of concern are altered, relative to pre-construction levels, in response to the presence and operation of the wind farm;
- b) include performance indicators to measure performance against the objectives in Clause 7.19 and allow for an assessment of whether the objectives are being met
- c) include anything required by a Mitigation Measure in the EMF approved under Clause 7.8 of this Incorporated Document;
- d) include a plan for a minimum of 18 months of monitoring of species of concern prior to commissioning, with consideration of best practice survey methods and areas of highest sensitivity;
- e) adopt the use of advanced detection technology ~~ical identification~~ (e.g. camera identification systems or a suitable alternative) for the purpose of completing pre-commissioning monitoring for the species of concern;
- f) adopt the use of advanced detection technology ~~ical identification~~ (e.g. camera identification systems or a suitable alternative) for the purpose of identifying operational measures to manage impacts on species of concern (such as monitoring, species and collision detection or curtailment), unless, in consultation with DEECA Regions, it is demonstrated to the satisfaction of the Minister for Planning that, as a result of the pre-commissioning monitoring undertaken:
 - i. alternative measures are suitable for managing impacts; or
 - ii. no measures are required;
- g) in determining the ~~scope of application use~~ of advanced detection technology ~~ical identification (e.g. camera identification systems or any alternative)~~ (for the purpose of operational monitoring, detection and curtailment), or whether ~~alternate alternative~~ measures to the use of the technology are satisfactory, consider: considerations must include
 - i. the objectives for the BBAMP in Clause 7.19 (the primary consideration)
 - ii. the results of the pre-commissioning surveys
 - iii. the risk of harm to threatened species
 - iv. the mitigation hierarchy, as defined in the Handbook for the development of renewable energy in Victoria (DEECA 2025), in applying measures to reduce harm

- v. the cost of the technology and the need for responses ~~to risk~~ to be proportionate to the risk;
- h) require utilisation monitoring for species of concern during operation;
- i) document consultation with, and provide for ongoing coordination with, recovery teams in relation to SBWB adaptation measures;
- j) regard a single Orange-bellied Parrot mortality caused by the Project as a significant impact and provide for an offset to be developed and implemented in consultation with DEECA and the Commonwealth Department of Climate Change, Energy, the Environment and Water;
- k) provide for trials to establish carcass persistence and searcher efficiency, including in the pine plantation, and for the derivation of statistically robust estimates of mortalities based on trial results; ~~and~~
- l) outline how proportionality should be considered in assessing potential Mitigation Measures, including technology; ~~and~~
- m) contain:
- i. A statement of the objectives and overall strategy for minimising bird and bat mortality through design and the operation of the wind energy facility.
 - ii. A procedure for implementation of suitable Mitigation Measures for mortalities.
 - iii. A comprehensive, science-based mortality monitoring program to monitor mortality of listed species and any other bat and avifauna species. The monitoring program must commence when the first turbine is commissioned or such other time as is approved by DEECA Regions and continue ~~for a duration of at least five years~~ the life of the Project. The duration and timing of the monitoring plan may be altered with the written consent of the Minister for Planning and in consultation with DEECA Regions. Outcomes of the monitoring ~~will~~ must be reported to DEECA Regions and be incorporated into the BBAMP to ensure that the management actions are as effective as possible, with impact thresholds to trigger adaptive management responses. This program will:
 - Monitor for blade strikes and collision with overhead powerlines.
 - Identify impact triggers for threatened and non-threatened species requiring a management response to reduce impacts.
 - Include benchmarks and confidence limits for key fauna species, including Southern Bent-wing Bat, Brolga, Australasian Bittern, South-eastern Red-tailed Black Cockatoo and Orange-bellied Parrot, specifying the proportion of total mortalities or injuries that must be detected through monitoring.
 - Conduct surveys at a time interval and sampling frequency agreed with DEECA Regions to ascertain:
 - The species, number, age, sex (where possible) and date of any listed species mortality and any other bat and avifauna species mortality.
 - Seasonal and yearly variation in the number of listed species mortality and any other bat and avifauna species mortality.
 - Whether further detailed investigations of any potential impacts on listed species and any other bat and avifauna species mortality are warranted.

- iv. Procedures for reporting strikes/mortalities of listed species to DEECA Regions within 2 business days of becoming aware of any strike/mortality.
- v. Procedures for reporting strikes/mortalities of bat and avifauna species other than listed species to DEECA Regions monthly.
- vi. Information on the efficacy of searches for carcasses of birds and bats, and, where practicable, information on the rate of removal of carcasses by scavengers so that correction factors can be determined to enable calculations of the likely total number of mortalities.
- vii. Measures to verify whether collision mortalities are within the range predicted during assessment of the Project and to identify ongoing improvement measures.
- viii. Procedures for determining whether further detailed investigations of any potential impacts on native birds and bats are warranted. Any further detailed investigations required are to be undertaken in consultation with DEECA Regions.
- ix. Procedures for periodic reporting, within agreed timeframes, of the findings of the monitoring to DEECA Regions. Such reports must be made publicly available on the project website.
- x. A data sharing agreement to provide georeferenced, time stamped, data that is collected as part of the BBAMP. All data will be entered into a database to be maintained by the wind farm operator. Raw data will be available to relevant regulatory authorities on request.
- xi. Procedures for the regular removal of carcasses likely to attract raptors to areas near turbines.

7.29 ~~7.21~~ Within two months of the completion of each 12 months period during operation or relevant period of mortality monitoring, the operator must submit raw data and the monitoring reports to the Minister for Planning and DEECA Regions, and make the monitoring reports publicly available on the Project's website.

7.30 [The BBAMP may be amended from time to time, to the satisfaction of the Minister for Planning.](#)

Independent Environmental Auditor

7.31 ~~7.22~~ The ~~Independent Environmental Auditor (IEA) (appointed pursuant to the EMF approved under this Incorporated Document)~~ will undertake independent review of the [BMCP and BBAMP](#) content and ongoing monitoring of the plan's implementation to ensure ~~it~~ [they](#) reflects current operational obligations, relevant legislation and policy. [The review must also assess whether the objectives in Clause 7.19 for the BBAMP and Clause 7.25 for the BMCP are being met.](#) Reviews are to be undertaken within 6 months of full commissioning and then every 2 ~~years~~ thereafter. Any recommendations of the IEA for changes to the [BMCP/BBAMP](#) will, subject to the agreement of DEECA Regions and the Minister for Planning, be incorporated into an updated [BMCP/BBAMP](#). The findings of the IEA must be reported to the Minister for Planning and DEECA Regions within 10 days of the IEA completing their assessment and review of the [BMCP/BBAMP](#). [The findings must be made publicly available on the Project's website within 30 days of being reported to the Minister.](#)

7.32 ~~7.23~~ After considering the findings of the monitoring program and [assessment by the IEA, and after](#) consulting with DEECA Regions, the Minister for Planning may:

- i. direct further investigation of impacts on birds and bats. The further investigation must be undertaken to the satisfaction of the Minister for Planning and DEECA Regions.

- ii. [direct that specified revisions are made to the BBAMP or the BMCP. These may include requirements for further monitoring and curtailment, use of detection technology or any other requirements the Minister considers necessary to achieve the objectives in Clauses 7.19 or 7.25.](#)

[7.33](#) ~~7.24~~ The BBAMP may be updated from time to time in consultation with DEECA Regions and to the satisfaction of the Minister for Planning.

Australasian Bittern Offset Plan

[7.34](#) ~~7.30~~ An offset strategy to compensate for mortalities to avoid significant impacts on the population of the Australasian Bittern must be prepared in consultation with DEECA Regions and to the satisfaction of the Minister for Planning. In preparing the offset strategy, consideration should be given to collaboration with other entities working on Australasian Bittern, such as the Australasian Bittern recovery team and the Glenelg Hopkins Catchment Management Authority.

Ecology Fund

[7.35](#) ~~7.31~~ Before development begins, an Ecology Fund Plan ~~will~~ [must](#) be prepared in consultation with DEECA Regions and to the satisfaction of the Minister for Planning. The plan must:^s

- a) detail how the \$1,000,000 annual ecology fund committed to by the Proponent will be secured for the operational life of the Project (30 years);
- b) detail how the ecology fund will be managed by an appropriate governance framework, which, unless otherwise agreed to by DEECA, is to include but is not limited to:
 - i. management by an independent body;
 - ii. the specifics of the independent body and its operation, accountability, roles, and responsibilities; and
 - iii. oversight by an Advisory Committee with an independent chair;
- c) focus on Southern Bent-wing Bat recovery actions, but also to have the ability to assist in recovery actions for other species; and
- d) specify the actions (that may be updated from time to time) that will be funded and how, including recovery actions from the National Recovery Plan for the Southern Bent-wing Bat *Miniopterus orianae bassanii* (DELWP 2020) and the Conservation Advice *Miniopterus orianae bassanii Southern Bent-wing Bat* (~~FSSC~~ [Threatened Species Scientific Committee](#) 2021), as well as any equivalent plans or advices that apply to other species in respect of which actions are funded by the ecology fund.

Preparatory works

[7.36](#) ~~7.32~~ Preparatory works for the Project may commence before the plans and other matters listed in Clause 7 are approved.

[7.37](#) ~~7.33~~ Preparatory works for the Project permitted under Clause 7.32 include but are not limited to:

- a) Works, including vegetation removal, that would not require a permit under the provisions of the Planning Schemes that, but for this Incorporated Document, would apply to the relevant land.
- b) Investigations, surveys, testing and preparatory works to determine the suitability of land.
- c) Creation and use of construction access points.
- d) Establishment of environmental and traffic controls.

- e) Environmental surveys and investigations required as part of the EMF and associated Mitigation Measures and management plans.
- f) Fencing and temporary barriers to enable preparatory works.

END OF DOCUMENT