

Client: Synergy Wind Surveying

Asset Recording Issued: 24/11/2023 Civil Engineering

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Traffic & Transport Engineering (Synergy Wind) **Environmental Consulting** 

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Urban Design 2102213

Project Number: Landscape Architecture Project Management

## **Revision Table**

REV	DESCRIPTION	DATE	AUTHORISED
0	Town Planning Report	26/07/23	B Stewart
1	Town Planning Report with RFI Response Updates	24/11/23	B Stewart

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#### 1. EXECUTIVE SUMMARY

Beveridge Williams & Co Pty Ltd was requested to prepare a planning application report on behalf of Alberton Renewable Energy Pty Ltd (the permit applicant) for a Wind Energy Facility and Utility Installation at Gelliondale, Gippsland and associated approvals. Alberton Renewable Energy P/L (AREPL) is a special purpose vehicle company wholly owned by Synergy Wind Pty Ltd (Synergy Wind / Synergy), who will develop the Gelliondale Wind Farm Project (GWF).

#### **The Proponent**

AREPL and Synergy Wind are Australian development companies that identify and develop viable renewable energy projects. Founded in 2004, it is funded by a group of private investors from Germany with extensive experience in the sector.

Synergy Wind is committed to developing projects in Victoria that promote an increase in the use of renewable energy.

#### **Planning Approval**

This report provides the strategic justification and assessment of the proposal against the planning requirements as listed in the Wellington Planning Scheme pursuant to the relevant statutory and strategic policy provisions. The assessment contained in this report is based on the submitted wind farm layout and a number of technical assessments which have been prepared to accompany the application.

#### Approval under the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act).

A referral of the Gelliondale Wind Farm Project under the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) has been made to the federal Minister for the Environment and Water on 12 June 2023.

The EPBC Referral Decision 'Controlled Action' and assessment approach 'assessment by public environment report' was received on the 17 October 2023.

Guidelines from DCCEEW for Public Environment Report was due for completion 17 November 2023, but it has yet to be received at the time of writing of this report.

#### Approval under the Environment Effects Act 1978 (EE Act)

The Gelliondale Wind Farm Project was referred to the Minister for Planning on 19 December 2022 for a decision as to whether an environmental effects statement (EES) should be prepared. It was determined by the Department that given the earlier larger Alberton Wind Farm proposal over the same but larger study area had already been assessed by the Department, as not warranting an EES to be prepared, the Gelliondale Wind Farm proposal did not warrant a detailed assessment by the Department as to whether an EES was required. The Department was comfortable relying on its previous assessment that no EES was required for the new Gelliondale project layout.

#### The Proposal

The Gelliondale Wind Farm (GWF) Project (the Project) will include 13 wind turbines, adjacent compacted hardstand areas, underground electrical and SCADA cabling, a battery energy storage system (BESS), a substation to connect the project to the existing electricity grid infrastructure at the site, operation and maintenance facilities, construction compounds, one or more permanent meteorological masts, access tracks, access points and associated crossovers, the removal of 1.252 hectares of native vegetation at defined locations, static water supply for fire-fighting purposes, gates, cattle grids, and signage as required.

The proposal contains some similar elements and turbine locations to an earlier proposal known as the Alberton Wind Farm, but is smaller in scale. The Alberton Wind Farm proposed 34 turbines, while the current proposal is for 13 turbines.

The turbines in this proposal will have a maximum overall tip height of 210 metres above ground level, and a rotor diameter of up to 164 metres. The turbine nacelle, containing the generator, will be mounted on tubular steel and/or concrete towers. The maximum rotor size proposed affords a minimum ground clearance area beneath the rotor swept area of 40 metres.

A manufacturer has yet to be nominated to supply the wind turbines, however the consultants' reports that accompany this application have made their assessments based on one of two different wind turbine models: 1. the GE Cypress 6.x-164 (specifically applied for noise, shadow flicker, EMI assessments) and 2. the Vestas V162-6.x (specifically applied for landscape & visual impact assessment). The turbine model was selected on the basis of assessing the worst-case impacts.



Figure 1 - Candidate Wind Turbine 1; GE Cypress 6.x-164; Source: GE

Hub height 128 metres above ground level

Blade length 82 metres (centre of hub to tip of blade)

Rotor diameter 164 metres Ground clearance to rotor 46 metres

Tip height 210 metres above ground level

Generator capacity up to 6.3MW



Figure 2 - Candidate Wind Turbine 2; Vestas V162-6.x; Source: Vestas

## The Vestas V162-6.x as modelled and assessed in this application:

Hub height 129 metres above ground level

Blade length 81 metres (centre of hub to tip of blade)

Rotor diameter 162 metres Ground clearance to rotor 48 metres

Tip height 210 metres above ground level

Generator capacity up to 6.2MW

The Project will also involve constructing access tracks, underground cabling, and electrical infrastructure including a substation and battery energy storage system (BESS) immediately adjacent to the existing 66kV transmission line that passes through the site. There are no new overhead power lines proposed as part of Gelliondale Wind Farm – all of the electricity generated by the wind turbines will run through the underground cabling network to the substation location. The detailed design of the substation and BESS facility will be carried out post approval. However, footprint of these assets is approximately 0.6 hectare for the substation, 0.4 hectare for the BESS facility as shown on the 'Substation Area – Indicative Arrangement' layout plan in Appendix M and on the indicative engineering drawings for the substation and BESS in Appendix P.

AREPL has engaged qualified independent consultants to undertake specialist investigations to ensure the proposed layout plan for the Gelliondale Wind Farm Project meets policy and legislative requirements and minimises any significant impacts on the area and region.

Specialist investigations undertaken include:

- Gelliondale Wind Farm, Flora and Fauna Assessment, Nature Advisory (July 2023). The flora and fauna assessment builds on the body
  of work which was undertaken as part of the previous Alberton Wind Farm proposal in this area, although acknowledging that the site
  investigated for the Alberton Wind Farm was larger.
  - Alberton Wind Farm, Bird and Bat Surveys, Brett Lane & Associates (August 2016) [valid assessment, with updated commentary in the Flora and Fauna Assessment]]
  - Alberton Wind Farm, Targeted Flora Survey, Brett Lane & Associates (November 2016) [valid assessment, with
    updated commentary in the Flora and Fauna Assessment]]
- Landscape Visual Impact Assessment, Hansen Partnership (June 2023)
- Gelliondale Wind Farm Aviation Impact Assessment, Chiron Aviation Consultants (22 May 2023)
- Gelliondale Wind Farm, EMI Assessment, DNV (2 June 2023)
- Cultural Heritage Assessment, Biosis (14 September 2017) & Cultural Heritage Management Plan Approved 15 February 2018. Cultural Heritage Management Plan Amendment, Biosis (20 October 2022), approved 27 October 2022
- *Preliminary Geotechnical Investigation,* Golder Associates (17 January 2017) this report is provided as baseline information for understanding geotechnical matters at the site; the proponent has engaged specialists to undertake specific geotechnical investigations for post approval detailed design.
- Gelliondale Wind Farm, Environmental Noise Assessment, Marshall Day Acoustics (14 July 2023)
- Gelliondale Wind Farm, Background Noise Monitoring, Marshall Day Acoustics (June 2023)
- Gelliondale Wind Farm, Shadow Flicker and Blade Glint Assessment, DNV (23 May 2023)
- Traffic Impact Assessment, Gelliondale Wind Farm, Stantec (1 June 2023)
- Gelliondale Wind Farm– Historical heritage letter of advice, Biosis (31 May 2023)
- Gelliondale Wind Farm and Battery Energy Storage System (BESS) Risk Management Plan (Including Fire Safety Study), Fire Risk Consultants (June 2023)
- Proposed Gelliondale Wind Farm Verification of Gelliondale Wind Farm Environmental (Predictive) Noise Assessment, Arup Australia Pty Ltd (18 July 2023)

## **Summary of Key Matters for Consideration**

Matter	Summary of Assessment
Decision Guidelines	The Gelliondale Wind Farm Project application gives effect to the State and Local Planning Policy Framework and is consistent with the purpose and requirements of zones, overlays and other applicable planning provisions of the Wellington Planning Scheme.
Contribution to Government Policy Objectives	The permit gives effect to the objectives of planning in Victoria and complies with and gives effect to the provision of the Wellington Planning Scheme, in particular Clause 19.01-2S (Renewable Energy).  The approval of the proposal will also help achieve the Victorian Government
	objectives of reducing emissions from electricity generation, supporting the reliability of Victoria's electricity supply and putting downward pressure on electricity prices.
EES	The Gelliondale Wind Farm Project was referred to the Minister for Planning on 19 December 2022 for a decision as to whether an environmental effects statement (EES) should be prepared for the project.
	No EES was required.
Consultation	Consultation has taken place with a range of stakeholders, from near neighbours to statutory authorities, service providers, and the broader community surrounding the Proposed GWF Project.
	Discussion around and a tabulated summary of consultation and engagement activities is included in Part 2 of this report, at 2.3 'Community'.
Amenity of the Are	a and the Surrounding Area
Distance to Neighbour Dwellings & participating landowner dwellings	To confirm compliance of proposed wind turbine locations with setback distances set down in the Policy and Planning Guidelines for the Development of Wind Energy Facilities in Victoria (November 2021) (the Guidelines), precision distance surveys were undertaken by a licenced surveyor to record the exact distance between turbine positions and the seven closest neighbour dwellings.
	The distance survey reports can be found in <b>Appendix S</b> .
	Consent from participating landowners who have dwellings within 1km of turbines have also been provided and can be found in <b>Appendix B</b>

Matter	Summary of Assessment
Flora & Fauna	Nature Advisory Pty Ltd has undertaken flora and fauna assessments, bird utilisation surveys (BUS) and bat surveys over the Project area between 2014 and 2016. This work was mostly done for a larger project over a slightly larger area than the Project, known as Alberton Wind Farm and included surveys over a number of private properties, as well as public road and rail reserves around the township of Alberton West in South Gippsland, Victoria. The project scope has since been reduced and re-named the Gelliondale Wind Farm. This has allowed for an increase in the distance between proposed turbines and forest edges for most turbines, unless other restrictions were in place (distance to dwellings). A proposed turbine between two large forest blocks has been removed to reduce risk to forest species. Additional native vegetation field surveys were undertaken in September 2021, which focused on the reduced Gelliondale project area. An additional survey was undertaken in March 2023 of proposed traffic circle intersections associated with the project.  A total of 1.184 hectares of remnant patch native vegetation are proposed to be removed from the study area including two large trees.  To compensate for this removal, an offset requirement of 0.501 General Habitat Units (GHUs) with a minimum Strategic Biodiversity Score of 0.324 must be secured prior to the removal of native vegetation. Offsets would need to be achieved within the West Gippsland CMA or Wellington or South Gippsland Shire Council areas.
Aboriginal Cultural Heritage and Historic Heritage	A total of 54 previously recorded Aboriginal places are present within the wider geographic region. Whilst no archaeological surveys had previously been completed in the broader Study Area, and no previously recorded sites were located in the Study Area, it exhibits a number of sensitive landforms that are likely to contain Aboriginal cultural heritage. During the surveys undertaken for the Alberton Wind Farm Voluntary CHMP, two new Aboriginal artefact places were identified as well as three additional landforms of sensitivity for undetected cultural heritage. The Project will avoid each of these Aboriginal places and sensitive landforms.  Two landforms of greater sensitivity were identified during the Standard Assessment ground survey: sandy rises and alluvial terraces. Sandy rises, which have developed bordering dunes associated with some of the former wetland basins (probably incorporating extensive older barrier dune material), were noted in two areas to the south of the South Gippsland Highway. A distribution of 39 surface artefacts was recorded.  A total of five locations were selected for Complex Assessment testing, each of which lies in the vicinity of sensitive landforms identified during the Standard Assessment. No Aboriginal cultural heritage was recorded in the subsurface testing.

Matter	Summary of Assessment
	A Notice of Intent to Amend an approved Cultural Heritage Management Plan was lodged with Victorian Aboriginal Heritage Register (CHMP 15167). The original CHMP was for a larger activity area associated with the former proposed Alberton Wind Farm, which has been amended to suit the current proposal. The Amendment was approved by the Gunaikurnai Land and Waters Aboriginal Corporation (as Registered Aboriginal Party (RAP)) on 27 October 2022.
	The full CHMP, as amended and approved, can be found in <b>Appendix H</b> .
	One historic place, the Gelliondale Briquette Plant, is situated near the Gelliondale Wind Farm ProjectProposed GWF Project Area.
	The recorded area of the historical site, which is recorded on the Heritage Register (H1058) and the Heritage Inventory (H8220-0008) lies about 110 metres to the west of the proposed location for wind turbine GWT04. The site is also listed in the Wellington Planning Scheme as being within the Heritage Overlay (H081). The proposed turbine, crane pad and associated infrastructure will not impact on the historical site or fall within HO81.
	A letter of advice from Biosis regarding the status of and interface with the historic heritage site of the Gelliondale Briquette Plant can be found in <b>Appendix R</b> .
Landscape and Visual Amenity	Hansen Partnership Pty Ltd (Hansen) was commissioned by Synergy Wind Pty Ltd to supply landscape and visual impact assessment (LVIA) services for the purpose of supporting this application for a planning permit for the Gelliondale Wind Farm Project.
	Hansen's LVIA is based on an assessment of the landscape character areas in the region, which are described and attributed a 'landscape value' at the various viewpoint locations. The wind farm's visual impact assessment is based on the application layout of the wind energy facility and utilising a 3D model of a wind turbine mounted on the taller of the two hub heights assessed in this application.
	The viewpoints chosen in their study are all in publicly accessible locations at a range of distances and viewing angles to the wind turbines.
	The full report can be found in <b>Appendix E</b> .
Blade Glint and Shadow Flicker	Shadow flicker may occur under certain combinations of geographical position and time of day when the sun's light behind the rotating blades of a wind turbine casts a moving shadow over the surrounding area. From a stationary position the moving shadows cause a periodic flickering of sunlight giving rise to the phenomenon known as 'shadow flicker'.

Matter	Summary of Assessment
	The Policy and Planning Guidelines for the Development of Wind Energy Facilities in Victoria (November 2021) (the Guidelines) impose limits for shadow flicker exposure at dwellings neighbouring a wind energy facility, such that "shadow flicker experienced immediately surrounding the area of a dwelling (garden fenced area) must not exceed 30 hours per year".
	No neighbour dwellings are predicted to experience theoretical shadow flicker durations above the recommended limit of 30 hours per year within 50m of the dwelling.
	Blade glint is not expected to become problematic, as modern wind turbines are generally finished with low reflectivity surfaces, which could also become a condition of any permit issued. A discussion on quantification of blade glint impacts and how this issue is addressed in relevant guidelines is included in the DNV Assessment Report, which can be found in <b>Appendix K</b> .
Noise	An Environmental Noise Assessment has been undertaken by Marshall Day Acoustics for the Project and includes an assessment of the proposed wind farm by comparing conservatively predicted noise levels for a candidate model of wind turbine (the GE Cypress 6.0-164) against the noise limits of NZS6808:2010. A total of two hundred and twenty-seven (227) residential properties have been included in the assessment, including twelve (12) involved receiver dwellings. Compliance with NZS 6808:2010 noise limits is achieved at all wind speeds at all properties (except H09, which is slated to be unoccupied from commencement of construction as it is owned by Synergy Wind Property Holdings Pty Ltd) identified in the vicinity of the proposed Gelliondale Wind Farm Project for the candidate wind turbine model.
	The full Environmental Noise Assessment report can be found in <b>Appendix J</b> .
	The Policy and Planning Guidelines for the Development of Wind Energy Facilities in Victoria (November 2021) highlight the requirement under Clause 52.32-4 for an "environmental auditor appointed under Part 8.3 of the Environment Protection Act 2017 to prepare a report that verifies if the acoustic assessment undertaken for the purpose of the pre-construction (predictive) noise assessment report has been conducted in accordance with the Standard".
	In accordance with the above Synergy Wind engaged Arup Australia Pty Ltd to undertake a review of the Marshall Day Noise assessment and prepare a verification report. The Verification of Gelliondale Wind Farm Environmental (Predictive) Noise Assessment report concludes that the Marshall Day assessment was conducted in accordance with NZS 6808:2010.
	The full verification report can be found in <b>Appendix O</b> .

Matter	Summary of Assessment
Electromagnetic Interference (EMI)	An EMI Assessment was undertaken by DNV for the Project, to independently assess the potential electromagnetic interference (EMI) related impacts associated with the project. This assessment found that turbines at the Project may interfere with point-to-area services such as mobile phone signals, radio broadcasting and terrestrial television broadcasting, particularly in areas already experiencing poor or marginal signal coverage (areas immediately west of the Application Area are identified in the assessment). A range of potential mitigation options are available to rectify any difficulties, should interference to these services be experienced as a result of the operation of the wind farm – these options are detailed further in the Assessment at Appendix G.
	DNV consulted with organisations operating services that may be impacted by the Project (including point-to-multipoint links, emergency services, meteorological radar, and wireless internet) and all responses indicated that the wind farm is unlikely to have any material impact on their services.  A pre-construction reception/signal assessment program is planned by the Proponent to gather feedback from owners of dwellings in the Project vicinity (focussed primarily on areas identified in the EMI Assessment as having poor or marginal signal coverage) which will constitute baseline signal quality data.
	The full report can be found in <b>Appendix G</b> .
Aircraft Safety	Chiron Aviation Consultants undertook an Aviation <i>Impact</i> Assessment and concluded that "the GWF is considered to be a low risk to aviation safety and is therefore not a hazard to aircraft safety".
	The Aviation Impact Assessment (AIA) concludes that:
	<ul> <li>the GWF is a low risk to aviation safety and is therefore not a hazard to aircraft safety</li> <li>The GWF does not require aviation obstacle lighting</li> <li>The GWF will not impact on:         <ul> <li>The Obstacle Limitation Surface (OLS) of any certified aerodromes</li> <li>The Lowest Safe Altitudes (LSALT) for air routes in the vicinity</li> <li>The Procedures for Air Navigation Services – Aircraft Operations (PANS-OPS) protected airspace associated with the Instrument Approach Procedures at Yarram and LaTrobe Valley certified aerodromes</li> <li>The performance of civil Air Traffic Control (ATC) Communications, Navigation Aids and Surveillance (CNS) facilities</li> <li>The performance of Military Air Traffic Control (ATC) Communications, Navigation Aids and Surveillance (CNS) facilities at RAAF East Sale</li> </ul> </li> </ul>

Matter	Summary of Assessment
	Consultation with both Airservices Australia and the Department of Defence confirms that the proposed GWF Project will not have an impact on designed instrument approach procedures, CNS facilities, ATC operations or military facilities.
	The full AIA report can be found in <b>Appendix F</b> .
Geotech	Preliminary geotechnical assessments were carried out by Golder Associates.
	The report highlighted a number of factors which will need to be taken into consideration in relation to footing options and design, crane pad design and road / access track construction.
	The full report can be found in <b>Appendix I</b> .
	To appropriately inform the detailed design and pre-construction processes for the project, the proponent has engaged specialists to undertake detailed geotechnical investigations at various locations for cable design, foundation design, access track and hardstand design, substation and battery pad design, as well as to perform a contamination assessment of the site. These investigations are expected to commence mid-2023.
Traffic Impact Assessment (TIA)	The potential impact on traffic matters as a result of the Project has been considered by Stantec Australia Pty Ltd (formerly Cardno). They found that, having consideration for the base traffic levels and the anticipated traffic generated by the Project during the construction and operation of the Project, it is expected that the Project traffic will be reasonably accommodated by the public roads with negligible impact.
	The Traffic Impact Assessment provides an outline of Traffic Management Plans (TMPs) that are expected to form part of the conditions for any permit issued.
	The TIA contains an over-size, over-mass (OSOM) route assessment of the planned component delivery route from Port Anthony (Barry Beach) to the project site.
	The full report can be found in <b>Appendix L</b> .
	Consultation between the proponent and the facility owners at Port Anthony has confirmed that component delivery from foreign or other Australian ports to Port Anthony can take place directly. Due to the project consisting of only 13 wind turbines, the scheduled component delivery loads are expected to be accommodated on vessels capable of safely navigating the channel depths at Port Anthony. Components brought to Australia on larger vessels that may exceed the navigable depth there can be transferred onto smaller

Matter	Summary of Assessment
	vessels at ports elsewhere (e.g., Hastings, Melbourne, Geelong, Portland, or even Newcastle) before being transferred to road transport at Port Anthony.
Risk Management / Fire Safety Study	The risk of fire in relation to development of the Proposed GWF Project has been assessed in a fire safety study as part of a risk management plan, investigated and compiled by Fire Risk Consultants Pty Ltd in order to address bushfire risk according to the Victoria Planning Provisions, Clause 13.02-15 (Bushfire Planning), through bushfire hazard identification and assessment as recommended as recommended in the CFA document, Design Guidelines and Model Requirements Renewable Energy Facilities.
	The Gelliondale Wind Farm and Battery Energy Storage System (BESS) – Risk Management Plan (Including Fire Safety Study) found that the development can occur safely if the requirements set out in the risk assessment are implemented and development of Fire Management and Emergency Management Plans in consultation with the CFA.
	Specific measures are detailed in the study to aid in the design of critical project components that will prevent and mitigate risk.
	The full Gelliondale Wind Farm and Battery Energy Storage System (BESS) – Risk Management Plan (Including Fire Safety Study) can be found in <b>Appendix Q</b> .
Power / Substation	No new overhead powerlines are proposed for the Gelliondale Wind Farm Project. Power generated by the wind turbines will be transmitted to the Substation via underground cabling. The cable network connects the turbines and crosses within and beneath road and rail reserves where necessary. Details of the land tenure at crossing points are contained in Table 2 of Appendix A.
	Details of the internal reticulation underground cabling and the route to the proposed Substation are shown on layout plans in <b>Appendix M</b> .
	Indicative diagrams of the infrastructure and layout of items at the proposed Substation and battery energy storage system (BESS) locations are provided in <b>Appendix P</b> and also appear on select plans in <b>Appendix M</b> .

#### 2. PLANNING PERMIT APPLICATION – PROPOSED GELLIONDALE WIND FARM PROJECT

#### 2.1 Location & Site Description

The Gelliondale Wind Farm Project is located about 210 kilometres south-east of Melbourne in South Gippsland in the Shire of Wellington, along the South Gippsland Highway, approximately 7 kilometres south-west of Yarram, 3 kilometres west of Alberton and 8 kilometres east of Welshpool. The project is situated on private freehold land spanning some 1500 hectares of cleared agricultural properties.

The district offers many suitable characteristics for a Wind Energy Facility:

- a very good consistent wind resource, confirmed by 26 months of on-site monitoring, utilizing conventional anemometry and SODAR remote sensing, and correlated with data from nearby weather stations.
- relatively low population density and a mix of cleared farmland and natural areas.
- excellent connection to the State electricity grid via a 66kv transmission line running through the site thus avoiding the need for the construction of any new overhead powerlines.
- excellent connection to transport access from the South Gippsland Highway and access to Port Anthony allowing transport of turbines over a short distance compared to other major ports some distance away.

The Proposed GWF Project is located across private properties held by 11 separate landowners. In some locations, associated underground powerline reticulation crosses beneath and lies within public road reserves (highway and local), Crown land parcels, and the former railway/rail-trail corridor reserve that bisects the site in two areas.

The Proposed GWF Project is shown in a series of plans contained within Appendix M. The plans are as follows:

- Project Layout Regional Context / Location in Victoria | May 2023
- Project Layout Local Context / 5km Zone | May 2023
- Project Layout Wind Farm Plan | May 2023
- Project Layout Wind Farm Plan (Aerial View 1) | May 2023
- Project Layout Wind Farm Plan (Aerial View 2) | May 2023
- Land Parcels in Project Area Whole of Site | May 2023
- Crown Land & Highway Crossing Detail | May 2023
- Project layout Substation Details | May 2023
- Substation Area Indicative Arrangement | May 2023
- Project Layout Western Area Detail | May 2023
- Project Layout Western Area Detail (Aerial View) | May 2023
- Project Layout Central Area Detail | May 2023
- Project Layout Central Area Detail (Aerial View) | May 2023
- Project Layout Eastern Area Detail | May 2023
- Project Layout Eastern Area Detail (Aerial View) | May 2023

The Proposed GWF Project comprises:

- 1. 13 wind turbines. Each of the wind turbine structures has a tower, a nacelle (containing the generator), a rotor consisting of 3 blades, and a central hub. The blades will be approximately 80 metres long (82m maximum including the distance from blade base to centre of the hub) giving a rotor diameter of up to 164 metres. The structures will have an overall tip height of a maximum 210 metres and a minimum ground to blade tip clearance of 40 metres. The tubular towers will be of steel and/or concrete construction and will be mounted onto a large concrete pad footing (set largely below ground) and there will also be an adjacent hardstand construction pad beside each wind turbine to facilitate tower and turbine assembly by crane. The final height (maximum of 210 metres from ground to tip) and configuration of the turbines to be installed will be determined following a commercial tendering process that will occur after a Planning Permit is granted. The turbines selected through the commercial tendering process will be generally consistent with the aforementioned dimensions, and all modelling and assessment for the proposal has been based on one or both of the Vestas V162-6.x and/or GE Cypress 6.x-164wind turbine models. The turbines are arranged in a generally curved linear manner across approximately 8.5 kilometres east-west, and 6 kilometres north-south with the structures occupying a very small footprint within this area (less than 0.1% of the land area). Locations and relative positions of the proposed wind turbines is shown on the layout plans in Appendix M, and the coordinate positions are detailed in Appendix N.
- 2. Adjacent compacted hardstand (approx. 80m x 40m) to facilitate construction and crane-assisted assembly of the wind turbine. Hardstand areas are typically lightly excavated, and a working surface is formed up from imported material. The area is utilised as a stable platform for the large cranes used to assemble the tower segments and lift the nacelle and rotor components into place, as well as for lay-down of various components prior to the assembly process. Once construction of the wind farm is complete, the hardstand areas can be backfilled with the excavated topsoil and returned to pasture and remain in situ for activation if needed for any future maintenance requirements of the turbine.
- 3. Underground electrical cables and access tracks link the proposed turbines. Underground cabling and associated trenching between turbine locations, totalling approximately 14 km, would be established within a 3 to 4 metre easement. Underground cables will be installed at a depth of approximately 1.5m below the surface, dependent upon detailed design investigations which will establish electrical resistivity and other relevant factors that will determine the appropriate depth and laying method (open trenching, directional drilling, backfill material used, etc.). Each cable will be shielded by a mechanical protection layer to prevent unintended disturbance of the cable in its trench alignment by any future excavations. Details of the proposed routes of the access tracks and underground cables are included on the layout plans in Appendix M. It is proposed to build approximately 14 km of new and upgraded access tracks to provide all-weather construction and maintenance access to the individual wind turbine locations from the existing public road network. It is proposed that these gravel tracks will be 5.5 metres to 6 metres wide, and will include passing bays as required for construction and for fire response purposes, with these passing bay locations to be determined during detailed design and in consultation with CFA. The arrangement of tracks has been designed to minimise the number and extent of tracks required. Access points coincide with existing road access locations where possible and have been designed to eliminate or reduce any impacts on native vegetation in roadsides. The number of access points has been kept to a minimum. Each access point into the wind farm area is proposed to have ready access to a large supply of standing water, in accordance with advice from CFA.
- 4. Substation and Battery Energy Storage System (BESS). An existing 66kV transmission line bisects part of the Proposed GWF Project site and the wind farm is designed to connect to the main power grid in this location on Coal Mine Road, immediately adjacent to the transmission line, therefore avoiding the requirement to build any new overhead powerlines. The wind turbines will be connected to the proposed Substation by underground cables. Underground cabling and associated trenching will be contained within a 3 to 4 metre wide corridor, and align with existing and new access tracks and other linear infrastructure where possible to minimise impacts. It should be noted at this stage that the Substation design/arrangement and precise connection location within the proposed Substation area is indicative in nature and can only be confirmed during the connection agreement process with Network Service Provider (AusNet Services). A proposed Battery Energy Storage System (BESS) of approximately 40MW capacity is included as part of this application and is immediately adjacent to the substation site. The BESS would be lithium-ion technology housed in 20 isolated units each containing 2MW of battery capacity and its own step-down transformer, all electrically connected to the switchroom component of

the Substation area. The proposed Substation area is large enough to comfortably host the necessary infrastructure needed to connect the wind farm and BESS to the grid, including any ancillary components that may be identified as needed during detailed connection enquiry processes (such as reactive plant, capacitor banks, etc.), as well as facility safety requirements which include setback distances, fire-break areas, and ingress/egress access points to and from the public road network. Diagrams of the indicative arrangement and relative positions of the substation and BESS are include at **Appendix P**.

- 5. **Construction Compounds**. Two areas have been identified as construction compounds of approximately 2.75 hectares (western area, close to proposed substation and O&M areas) to 4.7 hectares (eastern area, with good access from South Gippsland and adjacent to a proposed optional or alternative O&M facility area) to be established to facilitate construction of the wind turbines. Two areas are nominated to provide optionality and flexibility during construction.
- 6. Operations & Maintenance (O&M) Facilities. Two areas are proposed to be made available for O&M facilities, the first is approximately 1.2 hectares in size and located immediately adjacent to (south of) the proposed Substation location, while the second area is approximately 7 hectares in size and is immediately adjacent to and south of the second (eastern area) Construction Compound. O&M Facilities are proposed to contain control and maintenance buildings necessary for efficient day-to-day operation of the wind farm. Two areas are nominated to provide optionality and flexibility during construction and operation.
- 7. One or more meteorological monitoring masts. During detailed design and to inform the installation and commissioning processes, meteorological and power performance testing will be undertaken at carefully chosen locations. This will require the installation of permanent meteorological masts. The mast/s will be guyed lattice towers in the order of 120m in height and will carry anemometers, wind vanes, temperature and pressure meters, and communications equipment. These masts would be installed according to building regulations and reported to the Department of Defence and Airservices Australia as required through standard reporting of tall structures protocols.
- 8. Ancillary components. The Proposed GWF Project will utilise and connect to existing road and other infrastructure, and significant upgrades to any ancillary infrastructure are not anticipated. Some local roads at key intersections may require minor upgrades or specific management to enable the delivery of turbine towers and blades. Impacts on native vegetation at sites outside the wind farm site boundary are detailed in both the Flora & Fauna Assessment and the Traffic Impact Assessment (Appendix D, and Appendix L respectively). The principal access through the site will be from the South Gippsland Highway which is not required to be upgraded. It is likely that gravel, aggregate and concrete requirements will be fulfilled from off-site local resource suppliers, arriving by truck, and that no quarry or concrete batching facility will need to be established as part of the project. Standing water supply is proposed to be placed at access point locations and at the Substation/BESS area in accordance with advice from CFA. Signage will be required at various times and locations for information and safety purposes.

#### Infrastructure and Works Summary

- 13 wind turbines (turbines with a maximum tip height of 210m, a maximum rotor diameter of 164m, , and a minimum ground clearance of 40m) footings of approximately 15 to 18 metre radius at ground level;
- One compacted hardstand beside each wind turbine approximately 80 x 40 metres;
- Access tracks approximately 14km of upgraded and new access track, 5.5 to 6 metres wide, with passing bays included at key locations for construction and fire safety purposes;
- Access points a total of 13 gated entrances/exits at junctions between wind farm access tracks and the public road network, as well as for ingress and egress at the Substation / Battery facility area, Construction Compound/s and O&M facility area/s;
- **Minor works on public roads** (infill of base material to support truck movements at 7 of 10 assessed intersections and 3 x culvert upgrades) along the component delivery route to the project site;

- The **removal of** non-native and **native vegetation (a total of 1.252 hectares)** at access points to the project site and to accommodate component delivery at public road intersections;
- Underground cabling and associated trenching approximately 14km of open trench or directionallydrilled conduit in a 3 to 4 metre wide corridor;
- One electrical Substation immediately adjacent to the existing 66kV transmission line that bisects the project site near Coal Mine Road;
- One Battery Energy Storage System (BESS) subject to ongoing consultation with the network service provider, Ausnet Services, and further design, the Project includes a BESS consisting of lithium-ion battery technology housed in 20 isolated units each containing 2MW of battery capacity and its own step-down transformer and control equipment, all connected to the switchroom component of the Substation area;
- Two Operations & Maintenance (O&M) facilities Necessary control and maintenance buildings on either one of two areas, between 1.2 to 7 hectares (both of these areas will not necessarily be used but impacts for both facilities have been assumed for the relevant investigations);
- **Two Construction Compounds** between 2.75 to 4.7 hectares (both of these compounds will not necessarily be used but impacts for both compounds have been assumed for the relevant investigations);
- One or more meteorological monitoring masts guyed lattice towers in the order of 120m in height above ground level used for detailed design, commissioning and power performance testing purposes;
- A minimum of 6 holding tanks each containing a minimum of 45,000 litres of water for firefighting purposes, to be located at or close to access points leading into the wind farm, as well as additional fire water supply of between 288,000 and 576,000 litres at/near the Battery Energy Storage System (BESS) (water volume figures based on advice from CFA);
- **Signage**, as required for information and safety purposes at key locations throughout construction and operation.

## Required Planning Approvals Table

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#### **WORKS PROPOSED**

#### **REQUIRED APPROVALS**

Wind Energy Facility

Zone Triggers – Farming Zone and Industrial Zone

A planning permit is required under Clause 35.07-1 & 4 of the Farming Zone. Specifically, a wind energy facility is a Section 2 use in the Farming Zone. Approval is also required for building and works. Applications must meet the requirement of clause 52.32 for a Wind Energy Facility.

GWT04 is located in an Industrial Zone (IN1Z) – A planning permit is required under Clause 33.01-1 &4 as a wind energy facility is an innominate Section 2 use and therefore requires a permit for use and buildings and works.

#### **Overlay Triggers**

GWT04 is located in a Design and Development Overlay (DDO1) – A planning permit is required for buildings and works under Clause 43-.2-2 Buildings and Works.

Ancillary works and structures for GWT04 will be located close to the boundary of Heritage Overlay HO81. Planning approval is required under Clause 43.01-1 Buildings and Works for works should they fall within this overlay.

Utility Installation (Substation and storage of power – Battery Energy Storage System)	Planning permit required under Clause 35.07-1 & 4  Specifically, a utility installation is a Section 2 Use in the Farming Zone, approval is also required for building and works.
Removal Of Native Vegetation	A permit is required to remove Native Vegetation as specified in Clause 52.17 unless an exemption applies.
Access to a road in a Principal Road Network zone	A permit is required to create or alter access to a road in a Transport Zone 2.
Wind energy facility	A permit is required to use and develop land for a wind energy facility pursuant to clause 52.32-2.  An application must be accompanied by evidence of the written consent of dwelling owners within one kilometre of a turbine.  The application requirements and guidelines contained in reference

An existing 66Kv electricity transmission line runs through the site and directly adjacent to the proposed substation forming part of the Project. As such, no overhead powerlines are required to be constructed.

The proposed GWF Project will generate approximately 300 GWh of electricity per year, and represents a reduction of 320,000 tonnes of CO2 emissions per year.<sup>1</sup>

In 2017, the State Government announced the Victorian Renewable Energy Target for generation of 25% renewable energy generation by 2020, 40% by 2025, and 50% by 2030.

In October 2022, an intention to legislate updated targets was announced. This would include an updated 65% renewable energy generation target for 2030, and add a 95% renewable energy generation by 2035 target.

The overall objective of the proposed Battery Energy Storage System (BESS)included as part of the Project is to provide the Wind Farm with dispatchable firming resources and enhanced electricity grid and service capabilities, such as fast response to voltage drop conditions and other synchronisation issues in the grid.

The proposed BESS on the Gelliondale Wind farm could potentially unlock additional renewable generation by reducing thermal grid curtailment (TGC) and improving the Marginal Loss factor (MLF) of nearby generators by time shifting generation and alleviating transmission congestion at times when there is surplus energy in the National Electricity Market.

Energy storage targets of at least 2.6GW of storage capacity by 2030 and at least 6.3GW by 2035 are also intended to be legislated.

<sup>&</sup>lt;sup>1</sup> Calculated using Victorian Government guidelines https://www.planning.vic.gov.au/\_\_data/assets/word\_doc/0017/9701/Greenhouse-abatement-figures,-April-2015.doc

By generating enough clean energy from renewable sources to power about 37,000 homes every year, and providing an anticipated 40MW of battery storage capacity, the Proposed GWF Project makes a valuable contribution towards these targets.

It is estimated the proposed GWF Project will generate about 50 jobs during construction, and 10 long-term operational and maintenance jobs.

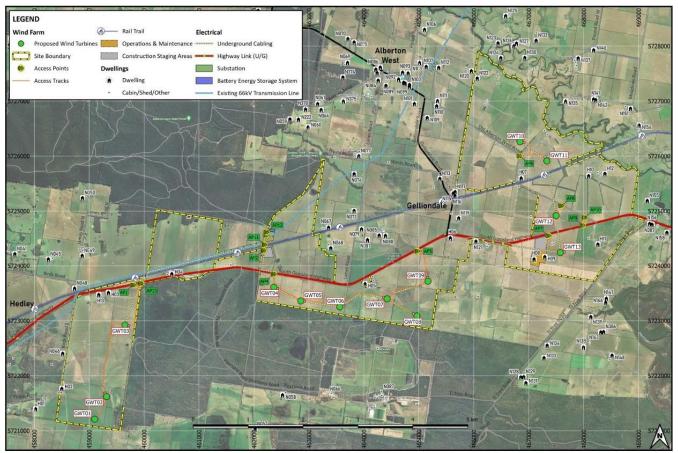


Figure 3 - Site Aerial

Proposed Gelliondale Wind Energy Facility, Proposed Layout, June 2023 (Refer also Appendix M)

## 2.2 Project Background

The Project is a revision of an earlier proposal which was proposed over a larger area of land (3,200 hectares, about double the area of the Project known as the Alberton Wind Farm (Former Project). That project commenced in 2014 when Synergy Wind was approached by a local landowner with an interest in hosting a wind farm and who introduced Synergy to neighbours also interested. From there, the Alberton project grew through contact from interested landowners to neighbours.

In early 2015, preliminary environmental and cultural heritage studies were carried out to understand the Former Project's area and to understand any constraints. These studies, along with wind data and input from landowners to minimise impact on agricultural use and capacity of land, resulted in a preliminary layout of 40 turbines which ensured culturally sensitive locations, native vegetation and flora and fauna issues were identified and considered early in the plan. Site visits were undertaken to identify and record exact locations of neighbouring residents, GPS locations of proposed turbines and confirm the layout plan met landowner needs. The project took on the name of the locality at its centre, and Alberton Wind Farm began to take shape.

In December 2015 and January 2016, group meetings were held with landowners and nearby residents to display the detailed studies (environmental, cultural heritage, noise), illustrate potential impacts and discuss the conceptual layout plan. The session identified residents who found it untenable to live within 1km of a turbine, and as such, a revised layout plan was developed, and further noise assessment undertaken to ensure noise limits were respected in further development of the wind farm layout.

From mid-2015 to mid-2017, a series of detailed site surveys and assessments, and predictive modelling studies were undertaken for birds and bats, migratory shorebirds, flora and fauna, cultural heritage, aviation and electromagnetic interference, noise, shadow flicker and blade glint, visual impacts, transport, geotechnical and grid capacity analysis. These studies enabled the conceptual plan to be further refined to reduce impacts and the process of formal environmental assessment to commence.

In June 2017, under the EPBC Act, a referral was made to the federal Minister for the Environment and Energy. A decision was made under section 75 of the EPBC Act that the Former Project was a controlled action and, as such, it required assessment and a decision about whether approval for it should be given under the EPBC Act.

A referral was made to the Victorian Minister for Planning in 2017, seeking advice as to whether an environment effects statement (EES) for the Former Project was also made and in December 2017, the Minister for Planning determined that, under section 8B(3) of the *Environment Effects Act 1978*, that an EES is not required.

A Cultural Heritage Management Plan for the Former Project was approved by the Registered Aboriginal Party delegate of the Gunaikurnai Land and Waters Aboriginal Corporation in February 2018.

In August 2018 a planning application was made to the Victorian Minister for Planning for the Former Project and in December 2019 the Former Project was granted a planning permit.

In 2020 the decision to grant a planning permit to Alberton Wind Farm was appealed to VCAT, and in October 2020 the decision to grant a permit was set aside due to a technical breach of non compliance with mandatory application requirements.

Key similarities and differences between the Former Project (Alberton WF) and the subject of this application, Gelliondale Wind Farm, are set out below:

Alberton WF	Gelliondale WF
32 turbines (as amended)	13 turbines
200m tip height	Up to 210m tip height
30m ground clearance	Minimum 40m ground clearance (firm figure,
	based on Flora & Fauna advice)
No rotor diameter stated	Up to 164m rotor
	(no increase to what was possible under
	Alberton)
No battery	Battery
Proximity to coastal saltmarsh could not be closer	Deletion of turbines in S/E of Alberton WF area
than 1000m (by permit condition; 2 closest	which were closest to saltmarsh/ coastal habitat.
turbines deleted based on Minister's assessment)	Setback from coastal saltmarsh is now 1500m,
	distance to Ramsar boundary is now over 1900m
Previously 10 turbines along forest edge, each set	Now only 4 turbines along forest edge; 2 are set
back between approx. 130m & 150m	back by approx. 200m, and two are set back
	130m & 138m

In the wake of the VCAT decision, Synergy Wind consulted with project landowners to determine if there was interest in potentially revising the project for a new application. Some land-holdings had changed at the project site, and



opportunities to enhance and improve the project were investigated. An area north of the Jack and Albert Rivers that was host to 5 proposed Alberton Wind Farm turbines (isolated from the main section of the wind farm and requiring new overhead powerlines or prohibitively expensive underground lines) was excised from the project.

A new preliminary 16 turbine project configuration with a possible maximum tip height of 250 metres was designed that adequately addressed many of the interface issues experienced with the Alberton WF project, and the decision was made to proceed with a new project – named for the locality at its centre, the Gelliondale Wind Farm. An introductory 'Project Background' brochure was developed for consultation and engagement purposes.

In June 2021, a pre-application meeting was held with DELWP, and from then a series of environmental and impact assessments were initiated, as well as initial stakeholder and community engagement.

In September 2021 Synergy Wind was invited to provide a briefing to Councillors of Wellington Shire Council, and an updated 'Project Background' brochure was developed and distributed to approximately 400 business and resident addresses.

In December 2021, discussions were first held with Biosis regarding a possible amendment to the Alberton Wind Farm Cultural Heritage Management Plan (CHMP). Consultation with the Gunaikurnai Land and Waters Aboriginal Corporation was instigated and an inception meeting with the Registered Aboriginal Party (RAP) took place in July 2022. A notice to prepare an amendment to an approved CHMP was also lodged, and in October 2022, the amendment application was approved by the RAP.

The results of the various assessments undertaken between late 2021 and May 2023, the amendment process for the approved CHMP, feedback from various sources, and commitment to compliance with the *Policy and Planning Guidelines* for the Development of Wind Energy Facilities in Victoria (November 2021), has resulted in the 13-turbine layout and associated maximum parameters proposed in this application.

#### 2.3 Community

The Gelliondale Wind Farm Project is proposed to exist in a rural community. The Project has involved (participating) land-owners, and it has immediate and near neighbours. Since inception, 'Gelliondale Wind Farm' (now the public name of the Project) has sought to communicate effectively with these neighbours and the broader community. Starting in August 2021, courtesy notification was sent to Councillors of the Coastal Ward of the Wellington Shire Council, and State and Federal elected representatives, informing them of the new project and the simultaneous commencement of engagement with near neighbours, community members and other stakeholders. Phone calls to near neighbours were made, and in accordance with a Community Engagement Strategy commissioned from Clifton Stakeholder Services of Melbourne, information material was produced and delivered to as many recipients as could be found within about 3km of the project site.

The Gelliondale Wind Farm Community Engagement Strategy has been revised and updated several times during the development of the project to this point. This Strategy outlines the approach, methods and tools for effective engagement and communication with the community and other stakeholders throughout the life of the project. It is anticipated that the Strategy will continue to evolve and adapt to community expectations and project realities as development continues and other phases of the project (e.g., construction, operation) commence and progress.

Community and other stakeholders have been offered regular opportunities to engage directly with the project team — either face-to-face, over the phone or via correspondence.

These opportunities have been facilitated through direct phone contact, door knocks, correspondence, project advertisements, public notices, surveys and via the project website. This community and stakeholder engagement activity is ongoing.

In November 2022, Gelliondale Wind Farm opened an information centre in Yarram at 310 Commercial Road to exhibit information and further facilitate community feedback.

Members of the Gelliondale Wind Farm team are at the information centre on Thursdays from 1pm to 6pm to discuss the project and respond to questions. Team members are also available by appointment at a time and place that is convenient to the community member.

The community and other stakeholders may also contact the project team at their convenience via phone 1800 931 871 and email at <a href="mailto:contact@gelliondalewind.com">contact@gelliondalewind.com</a>

Relevant state and federal members of parliament and Wellington Shire councillors and staff have been offered the opportunity for briefings about the project. This will continue during pre-construction, construction and post commissioning.

Gelliondale Wind Farm has actively responded to all media enquiries about the project to-date and this will continue. Gelliondale Wind Farm has engaged media consultants to assist in this role.

As various project milestones are reached Gelliondale Wind Farm has issued (and will continue to issue) media releases to provide an update on the project for the benefit of the community, media, investors and other stakeholders. Gelliondale Wind Farm has also provided updates via local media advertising.

A tabulated summary of key community engagement and consultation activities is provided here:

DATE	METHOD	COMMENTS
May 2021	A4 project brochure developed for stakeholder consultation	
May 2021	Community contact details established – phone and email	
June 2021	Pre-application meeting with DELWP	
August 2021	Initial contact campaign (phone) with nearest residential neighbours	
August 2021	Notification messages sent to LGA Councillors and local elected representatives (State and Federal)	
September 2021	A5 project brochure developed for community distribution	
September 2021	Provide project briefing to Councillors of Wellington Shire	
October 2021	Updated project brochure delivered to residents/businesses within 3km of project site by Australia Post and project team	Approx. 400 contacts
October 2021	Project website launched	
October 2021	Meetings with landowners	
November 2021	Face-to-face and phone meetings with community members	
February 2022	Ongoing landowner discussions	
March 2022	Communication with key stakeholder AusNet	
March 2022	Project website updated to include Q&A section.	

May 2022	Community notice advertisements placed in three local newspapers	Informing of investigative studies underway and ongoing
May 2022	Project website updated with 'News' page	011901119
May 2022	Communication to DELWP and Wellington Shire with	
11107 2022	project update	
May 2022	Meeting with Wellington Shire councillor and members	
	of the Guardians of Nooramunga Coastal Community	
May 2022	Follow-up correspondence to the Guardians of	
,	Nooramunga Coastal Community	
July 2022	Meeting with Wellington Shire Economic Development	
,	Manager in relation to proposed Community Benefit	
	Program	
July 2022	Meeting on Cultural Heritage Management Plan	
,	including with representative of Gunaikurnai Land &	
	Waters Corporation.	
July 2022	Registered mail correspondence with near neighbours.	Background noise
,		monitoring and precision distance survey offer
August 2022	Direct written response to communication from	
	community member	
August 2022	Direct written response to enquiry from The Gippsland	
	Times newspaper	
August 2022	Meeting with DELWP in relation to site assessments and	
	liaison with VicRoads and Wellington Shire.	
September 2022	Correspondence and conversations with landowners (turbine hosts).	
September 2022	Liaison with Wellington Shire staff and local police with project update	
October 2022	Project update – community notice advertisements	Informing of
	placed in three local newspapers	investigative studies drawing to a close
October 2022	Project update posted on 'News' section of website	
November 2022	Project Information Centre opens in Yarram	
December 2022	Community survey prepared and available through	
	project website and from Information Centre.	
December 2022	Project update posted on 'News' section of website;	
	new 'Survey' website page established and survey	
	banner on 'Home' page	
December 2022	Major project mail out including project update,	Approx. 400 contacts -
	Information Centre details and community 'Public	contains new layout
	Opinion Survey'. Addressed mail to near neighbours	information
	and all stakeholders and non-addressed mail to local	
	residents.	
December 2022	Submitted a referral to the Minister of Planning, seeking	
	a determination as to whether an EES is required for the project	
February 2023	Provide project briefing to Councillors of South	
,	Gippsland Shire	
February 2023	Provide project briefing to Gunaikurnai Land & Waters Corporation	
February 2023	Correspondence with CFA regarding fire safety	
	expectations and design advice	

February 2023	Project update media release distributed (published in Gippsland Times and The Bridge)	Included reference to 'Noise Information Session' to be held in March
February 2023	Project update flyer distributed in local community	
February 2023	Project update posted on 'News' section of website	
February 2023	'Public Opinion Survey' prize draw period closes	Survey left open for subsequent entries
March 2023	Pre-referral meeting held with DCCEEW for	
	Commonwealth EPBC referral	
March 2023	'Noise Information Session' held at Project Information Centre	Marshall Day Acoustics expert available to discuss and respond to Q's; about 25 attendees
March 2023	Confirmed status of EES referral submission with	Published on project
	DEECA/IAU (after comprehensive review of referral	website "Project
	material submitted; no re-assessment, no statement required)	Timeline' page in April
April 2023	Short on-air interview with ABC Radio Gippsland	
April 2023	New 'Project Background' brochure developed	
April 2023	Sponsorship and attendance at Tarra Festival in Yarram (Easter weekend)	About 150 individual enquiries fielded from festival attendees. Overwhelmingly positive response.
April 2023	Meeting with West Gippsland Catchment Management Authority	Discussed construction methodologies for access tracks in or adjacent to areas subject to inundation in seasonal and 1-in-100 year flood events
May 2023	Project update media release distributed	Included reference to 'Flora & Fauna Information Session' to be held later in May
May 2023	Project update media release posted on 'News' section of website	
May 2023	'Flora & Fauna Information Session' held at Project Information Centre	Ecological assessment expert from Nature Advisory available to discuss and respond to questions.

As part of the project update campaign of December 2022, a Public Opinion Survey was included and distributed to over 400 individuals and published on the project website.

The Public Opinion Survey has remained open and accessible to attendees at the Project Information Centre and via the project website. Gelliondale Wind Farm will continue to accept submissions and feedback on all matters related to the project and the establishment and structure of the Community Benefit Program.

#### 3. WELLINGTON PLANNING SCHEME - PLANNING REQUIREMENTS

A Wind Energy Facility is assessed against State Planning Policy, local planning policy and other matters specified in Section 60 of the Planning and Environment Act 1987.

The Study Area is located within the Shire of Wellington and is subject to the provisions of the Wellington Planning Scheme, in particular:

- Clause 19.01 has the objective to facilitate appropriate development of energy supply infrastructure. And also supports strategies which:
  - Support the development of energy generation, storage, transmission, and distribution infrastructure to transition to a low-carbon economy.
  - o Facilitate renewable energy generation and storage to meet on-site energy needs.
- Clause 19.01-2S 'Provision of Renewable Energy' requires proposals to be assessed against the Policy and Planning Guidelines for Development of Wind Energy Facilities in Victoria (Guidelines) 2021 (Victorian State Government).
- Clause 52.32 'Wind Energy Facility' which sets out particular planning provisions and requirements for wind energy planning permit applications.
- Clause 52.32-2 'Use and development of land' which requires a planning permit for the use and development of land for the purpose of a wind energy facility and consent from owners within one kilometer of turbines.
- Clause 72.01-1 'Minister is the Responsible Authority' identifies the Minister for Planning is the responsible
  authority for all new planning permit applications for the use and development of land for the purpose of an
  energy generation facility with an installed capacity of 1 megawatt or greater and a Utility installation used
  to:
  - Transmit or distribute electricity.
  - o Store electricity if the installed capacity is 1 megawatt or greater.
- Clause 65 'Decision Guidelines' and Clause 65.01 'Approval of an application or plan' set out matters to be considered by the Responsible Authority.
- Clause 52.17 Native Vegetation
- Clause 52.29 Applies to land adjacent to the Principal Road Network.
- Clause 12.1 Biodiversity seeks to ensure that decision making takes into account the impacts of land use and development on Victoria's biodiversity
- Clause 12.03 Water bodies and Wetlands has the objective to protect and enhance waterway systems including river and riparian corridors, waterways, lakes, wetlands and billabongs
- Clause 12.05-2S has the objective to protect and enhance significant landscapes and open spaces that contribute to character, identity and sustainable environments
- Clause 13.02 has the objective to strengthen the resilience of settlements and communities to bushfire through risk-based planning that prioritises the protection of human life
- Clause 13.05 has the objective to assist the management of noise effects on sensitive land uses.
- Clause 14.01 has the objective to protect the state's agricultural base by preserving productive farmland.
- Clause 15.03 has the objective to ensure the conservation of places of heritage significance.
- Clause 17.01 has the objective to strengthen and diversify the economy.

In applying the Wellington Planning Scheme, Clause 73.03 Land Use Terms of the Victorian Planning Provisions defines a 'wind energy facility' as:

Land used to generate electricity by wind force. It includes land used for:

- a) any turbine, building or other structure or thing used in or in connection with the generation of electricity by wind force
- b) an anemometer.



It does not include turbines principally used to supply electricity for domestic or rural use of the land.

Other supporting infrastructure such as the overhead and underground powerlines and substation, are defined as either a 'utility installation' or a 'minor utility installation', depending on the nature and capacity of the transmission or distribution infrastructure.

## 3.1 Wellington Planning Scheme – Zone & Overlay Controls

#### 3.1.1. Zone Controls

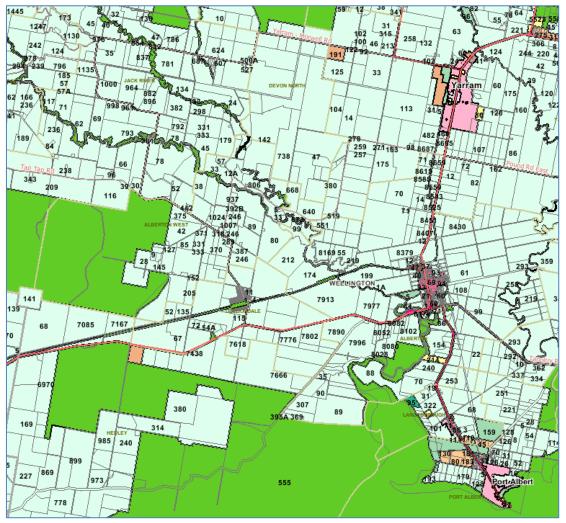


Figure 4 - Zoning Plan

Source: Land.vic.gov.au (Not to scale)

The Study Area is predominately located within the Farming Zone (FZ) apart from one turbine which is located within an Industrial 1 Zone (INZ1). Other zones within the vicinity of the Proposed GWF Project include Public Conservation and Resource Zone (PCRZ) and Transport Zone – Principal Road Network TRZ2. No turbines are proposed to be located within any roads in a road zone however underground cables and new access points are proposed.

#### 3.1.2. Overlay Controls

The Study Area is also partially affected by the following Planning Scheme Overlays (which are detailed in Planning Context Plans at Appendix C):

Overlays where works are proposed within the overlays

- Bushfire Management Overlay (BMO)
- State Resource Overlay Schedule 1 (Gippsland Brown Coalfields) (SRO1)
- Design and Development Overlay Schedule 1 (Industrial Areas) (DDO1)

Overlays where works are proposed adjacent or near to overlays

- Heritage Overlay Schedule 81 (Gelliondale Briquette Plant VHR Number H1058) (HO81)
- Floodway Overlay (FO)
- Land Subject to Inundation Overlay (LSIO)
- Environmental Significance Overlay Schedule 2 (Wetlands) (ESO2)

The following table highlighted the relevant zones and overlays in relation to specific turbines.

Turbine	Zone	Heritage Overlay	Bushfire Management Overlay	State Resource Overlay	Design & Development Overlay	Designated Bushfire Prone Area
GWT01	Farming			Х		Χ
GWT02	Farming		Χ*	Х		Х
GWT03	Farming		Χ*	Х		Х
GWT04	Industrial 1	X**		Х	Х	Χ
GWT05	Farming		Х	Х		Χ
GWT06	Farming		Х	Х		Χ
GWT07	Farming			Х		Х
GWT08	Farming		Χ*	Х		Χ
GWT09	Farming			Х		Χ
GWT10	Farming			Х		Х
GWT11	Farming			Х		Х
GWT12	Farming			Х		Х
GWT13	Farming			Х		Х

X\* - turbines located outside the BMO, but that are close to the BMO boundary where ancillary works and structures may be located within the BMO.

The proposed Wind Energy Facility only triggers a permit the Design and Development Overlay. A permit is not triggered by the Bushfire Management Overlay, nor the State Resource Overlay.

X\*\* - turbines located outside the HO, but that are close to the HO boundary where ancillary works and structures may be located close to the HO.

## 3.2 Wellington Planning Scheme Planning Policy Provisions

Clause	Purpose	Requirement
Clause 35.07 FARMING ZONE	Purpose  To implement the Municipal Planning Strategy and the Planning Policy Framework.  To provide for the use of land for agriculture.  To encourage the retention of productive agricultural land.  To ensure that non-agricultural uses, including dwellings, do not adversely affect the use of land for agriculture.  To encourage the retention of employment and population to support rural communities.  To encourage use and development of land based on comprehensive and sustainable land management practices and infrastructure provision.  To provide for the use and development of land for the specific purposes identified in a schedule to this zone.	Requirement  A Planning permit is required for the use and buildings and works for a wind energy facility in the farming zone.  A wind energy facility is consistent with the purpose of the farming zone.  The Proposed GWF Project will complement the rural use of the land by allowing agricultural uses to continue within the Wind Energy Facility boundaries.
33.01 INDUSTRIAL 1 ZONE	<ul> <li>To implement the Municipal Planning Strategy and the Planning Policy Framework.</li> <li>To provide for manufacturing industry, the storage and distribution of goods and associated uses in a manner which does not affect the safety and amenity of local communities.</li> </ul>	A Planning permit is required for the use and buildings and works for a wind energy facility in the industrial zone.  A wind energy facility is not inconsistent with the purpose of the industrial zone.  The Proposed GWF Project will complement the largely rural use of the land by allowing agricultural uses to continue within the Wind Energy Facility boundaries. The previous industrial use of the land has ceased to operate. Wind farm use is a section 2 use in the zone and amenity has been assessed in this report
36.04 TRANSPORT ZONE	<ul> <li>To implement the Municipal Planning Strategy and the Planning Policy Framework.</li> <li>To provide for an integrated and sustainable transport system.</li> <li>To identify transport land use and land required for transport services and facilities.</li> <li>To provide for the use and development of land that complements, or is consistent with, the transport system or public land reservation.</li> <li>To ensure the efficient and safe use of transport infrastructure and land comprising the transport system.</li> </ul>	Pursuant to the transport zone a planning permit is required for use and buildings and works associated with a Transport Zone. However, some cabling and changes to access points are proposed as part of the application.

#### **Overlays** Heritage Overlay To implement the Municipal Planning A planning permit is required to Strategy and the Planning Policy construct a building or to carry out works in a Heritage overlay. Framework. Consideration will be given to To conserve and enhance heritage natural cultural the significance of the heritage places of or significance. and whether To conserve and enhance those proposal will adversely affect elements which contribute to the natural or cultural significance of heritage places. significance of the place. To ensure that development does not Whether the location, bulk, form adversely affect the significance of or appearance of the proposed heritage places. building will adversely affect the To conserve specifically identified significance of the heritage heritage places by allowing a use that place. Whether the proposed works will would otherwise be prohibited if this will demonstrably adversely assist with the affect the conservation of the significance of the significance, character or heritage place. appearance of the heritage place **State Resource** To implement the Municipal Planning A permit is required for specific Strategy and the Planning Policy development and works under Overlay Framework. considerations overlay To protect areas of mineral, stone and include. other resources, which have been The need to ensure identified as being of State development of the land significance, from development that does not inhibit the would prejudice the current or future eventual development or productive use of the resource. use of the coal resource. The need to exclude urban development, including low density residential development and rural living development, from the area to which this schedule applies. o The impact of the building or works on nearby existing or proposed brown coal mining electricity or generation and on any nearby agricultural uses. LSIO - Land Consideration of application includes the susceptibility of the Subject to To implement the Municipal Planning development to flooding and **Inundation** Strategy and the Planning Policy flood damage. Framework. Overlay The effect of the development To identify flood prone land in a riverine on redirecting or obstructing or coastal area affected by the 1 in 100 stormwater floodwater, (1 per cent Annual Exceedance drainage water and the effect Probability) year flood or any other the development on area determined by the floodplain reducing flood storage and management authority. increasing flood levels and flow To ensure that development maintains velocities. the free passage and temporary storage of floodwaters, minimise flood damage, responds to the flood hazard and local drainage conditions and will not cause any significant rise in flood level or flow velocity. To minimise the potential flood risk to life, health and safety associated with

development.

	<ul> <li>To reflect a declaration under Division 4 of Part 10 of the Water Act, 1989.</li> <li>To protect water quality and waterways as natural resources by managing urban stormwater, protecting water supply catchment areas, and managing saline discharges to minimise the risks to the environmental quality of water and groundwater.</li> <li>To ensure that development maintains or improves river, marine, coastal and wetland health, waterway protection and floodplain health.</li> </ul>	
Design And Development Overlay	<ul> <li>To provide well planned industrial estates which are suitable for a wide range of industry users.</li> <li>To encourage quality development within the industrial zones which results in a neat appearance whilst also providing for the practical and efficient use of the land and is compatible with its surrounds.</li> </ul>	<ul> <li>While the site is in an industrial zone and has a DDO1 overlay, the site itself is used for rural purposes.</li> <li>The overlay has a number of performance criteria which are either not relevant to this application or can easily be met.</li> </ul>

Particular Provision	s:	
Clause 52.17 Native Vegetation	<ul> <li>To ensure that there is no net loss to biodiversity as a result of the removal, destruction or lopping of native vegetation. This is achieved by applying the following three step approach in accordance with the Guidelines for the removal, destruction or lopping of native vegetation (Department of Environment, Land, Water and Planning, 2017) (the Guidelines):         <ol> <li>Avoid the removal, destruction or lopping of native vegetation.</li> </ol> </li> <li>Minimise impacts from the removal, destruction or lopping of native vegetation that cannot be avoided.</li> <li>Provide an offset to compensate for the biodiversity impact if a permit is granted to remove, destroy or lop native vegetation.</li> <li>To manage the removal, destruction or lopping of native vegetation to minimise land and water degradation.</li> </ul>	A permit is required to remove destroy or lop native vegetation, including dead native vegetation where the land area is greater than 0. hectare.      See attached reports from Nature Advisory which assess the extent of the native vegetation to be removed and the further discussion in Section 4.4.
Clause 52.29 Applies to land adjacent to a	To ensure appropriate access to the Principal Road Network or land planned to form part of the Principal Road Network.	Planning permit required to create access to a Road in a Transport Zone 2.

Road in a Transport Zone 2.	<ul> <li>To ensure appropriate subdivision of land adjacent to Principal Road Network or land planned to form part of the Principal Road Network.</li> </ul>	A planning permit is required for the subdivision of land adjacent to a Road in a TZ2

## 4. CLAUSE 52.32-4 APPLICATION REQUIREMENTS

## **Site Context and Analysis**

The project area is mainly cleared agricultural land with dispersed patches of remnant vegetation. A number of farm dwellings are scattered through the area. These uses would be able to continue during the construction and operation phases of the proposed Gelliondale Wind Farm (GWF) Project.

The proposed GWF Project will be located across private properties, The overall area enclosed by the Site Boundary is around 1,620 hectares (herein also referred to as the 'Application Area' or 'Project Area'), however the proposed development footprint, including assessment areas either side of linear infrastructure (tracks and cable alignments) and assessment buffers around wind turbine positions and substation/BESS, construction and O&M compounds, located within the Application Area comprises approximately 146.3 hectares, being approximately 9% of the Application Area. The constructed wind farm, including access tracks and all substation and compound areas, will occupy less than 4.5% of the Application Area land surface, while the wind turbines themselves account for less than 0.1% of the Application Area.

A summary overview of the Application Area and Study Area is provided below. Figure 3 to Figure 11 inclusive illustrate the wider Study Area. The Study Area is defined as the Application Area and the surrounding land areas and features, as variously assessed and described in Flora & Fauna, Landscape & Visual Impact, Cultural Heritage, and other reports.

The Application Area primarily comprises land within private property, with the proposed works being located within cleared paddocks used for grazing stock. The land is generally flat. These areas are dominated by introduced pasture grasses.



Figure 5 - Typical example of farmland within the Study Area;



Figure 6 - Typical lower order road located between farms within the Study Area



Figure 7 - Rail trail (currently undergoing upgrades/completion)



Figure 8 - Existing 66kV power line (right)



Figure 9 - Looking south towards locations of GWT02 and



Figure 10 - Looking south towards locations of GWT05 and GWT06 from South Gippsland Highway and Coal Mine Road intersection



Figure 11 - Looking north-west towards location of GWT09 from northern boundary of Gelliondale State Forest and Ti Tree Road



Figure 12 - Looking northeast towards location of GWT11 from farm gate on Old Alberton West Road

There are no major watercourses within the Application Area, though it is noted that both Albert River and Jack River traverse the wider Study Area, and along the northern boundary of the Application Area. The existing overhead 66kV powerline, to which the Project will electrically connect, crosses both the Albert and Jack Rivers less than 1km north of the northernmost part of the Application Area.

The Application Area would not impact on any built structures, other than two existing dwellings (H08 and H09) on land owned by entities affiliated with the proponent (which will be unoccupied and possibly re-purposed upon commencement of construction), and in some locations where agricultural boundary fencing may be impacted, and would be replaced with gates/grids at access points and/or otherwise repaired.

There were no known historical or Aboriginal cultural heritage sites located within the Proposed GWF Project Area prior to the inception of the project and the investigations undertaken to inform and support the Cultural Heritage Management Plan (CHMP). Two new sites were discovered during the complex assessment for the CHMP, as well as one sensitive landform identified for avoidance. The Proposed GWF Project is designed to avoid all identified sensitive landforms and site areas, with appropriate protection measures employed during construction and operation in accordance with the approved CHMP.

# **Landform and Soils**

The Study Area is generally flat coastal plains, with dispersed creek margins, gentle slopes, isolated hills and swamps. The minimum altitude is 3 metres above sea level (ASL) and the maximum is 25 metres (ASL).

The soil type in the Study Area is primarily sandy soils. Different soil types that are indicated in the Study Area include yellow duplex soils, duplex soils, pale sands and sands. The central north-western part of the Study Area comprises lower slopes of the foothills of the Strzelecki Ranges. The southern part of the broader study area supported a gently undulating coast barrier dune complex with light-loamy to sandy soils. Land between the coastal dune complex and higher, hilly country further inland comprises relatively flat swampy ground with loamy to clay soils.

### **Land Use and Built Form**

The majority of the Study Area and its surrounds has been cleared of native vegetation and is currently being used for grazing stock, primarily dairy farms. Wide scale deforestation has occurred to allow for pastoral activities. These paddocks are dominated by introduced pasture grasses.

Built form across the Study Area is minimal, and limited to intermittent homesteads, some small groupings of houses, farm infrastructure and roads. There are 9 dwellings located within 1 kilometre of turbines, noting that all of these landowners have signed a consent agreement for the Proposed GWF Project and are participants in the project, and that two (2) of these dwellings (H08 and H09), owned by Synergy affiliated companies, will be unoccupied following the commencement of construction of the Project (these buildings will either be re-purposed, removed/relocated or demolished). Roads are a mixture of sealed and unsealed local roads. The South Gippsland Highway bisects the study area.

A former rail reserve which also bisects the study area now forms part of the South Gippsland Rail Trail, a 74km gravel cycle track which extends from Leongatha to Port Welshpool. The section which extends through the Study Area is currently (July 2023) being developed and is not yet accessible to the public.

### Flora and Fauna and Native Vegetation

The majority of the environment in the surrounding region is agricultural and bush blocks. Most of that land is dominated by introduced flora species. There are two water courses running though the Study Area. Although 267 plant species were recorded during the Flora and Fauna Assessments, of these 178 (67%) were indigenous and 89 (33%) were introduced or non-indigenous native in origin. A total of 120 fauna species were recorded. This included 101 bird (10 introduced), 10 mammal (5 introduced), six reptile, three frog and an array of invertebrate species (BL&A 2016).

The Project Area comprised three distinct vegetation characteristics. The central north-western part comprised lower slopes of the foothills of the Strzelecki Ranges. Much of this land had been cleared. However, some notable blocks of remnant Yellow Stringybark forest had been retained within areas abutting the more extensive forests of the Strzelecki Ranges.

The southern part of the Project Area supported a gently undulating coast barrier dune complex with light-loamy to sandy soils. This area would have once supported a complex of heathy vegetation types with Sedgy Wetland and Swamp Scrub in larger wet depressions and along drainage lines. Almost all this area (except for mainly roadside

vegetation and scattered paddock trees) has been cleared of native vegetation and is being used for stock grazing. Adjacent state forests (to the south) supported extensive expanses of Heathy Woodland, Swamp Scrub, Sedge Swamp and Damp Heathland.

Land between the coastal dune complex and higher, hilly country further inland comprised relatively flat swampy ground with loamy to clayey soils. This land would have once supported Swamp Scrub and grassland vegetation but has been extensively cleared, drained and converted to intensively managed dairy farms. Groundwater had also been significantly drained due to past practices. The existing extant of the woody vegetation in this area comprises planted shelterbelts of non-indigenous trees.

Careful siting of the Project has enabled clearing of native vegetation to be largely avoided. Up to 1.252 hectares of remnant patch native vegetation including two (2) large trees would be removed as a result of the Proposed GWF Project – 0.64 hectares of that total removal area, including the two large trees within a patch, are located at road intersections outside the project area on the transport route for wind farm components. Native vegetation removal is generally limited to small sections along roadsides, where access tracks are required to connect to local roads, in some sections where underground cables are proposed to cross or be within road reserves or crossing beneath the Rail Trail, or at turning points along the component transport route from Port Anthony (to accommodate over-dimensional vehicle and blade overhang). Underground infrastructure will generally run across open farmland, avoiding areas of ecological sensitivity to connect to the Substation facility, and directional drilling techniques at critical points of interface (e.g., beneath roads and other linear assets) can be employed to further reduce the impact on remnant native vegetation. The large trees to be removed comprise two (2) Manna Gums (Eucalyptus viminalis).

Following planning approval, micro-siting (within 100 metres) during the detailed design stage provides flexibility to adjust the location of infrastructure to further minimise any potential impacts.

Offsets required to compensate for the proposed removal of native vegetation have been determined and will be secured prior to the removal of native vegetation. The offset target for the current proposal is achievable via the purchase of available native vegetation credits on the Native Vegetation Credit Register, as evidenced in repeated searches commensurate with revisions of the Flora & Fauna Assessment.

The Project will not result in the potential for long term loss of a significant proportion of known remaining habitat or population of a threatened fauna species within Victoria.

Nature Advisory determined that the Project will not result in significant effects to flora and fauna, for the following reasons:

- The existing landscape of the Project is highly fragmented due to the long history of dryland agriculture and broad scale clearing activities that have taken place. In addition, only a small amount of native vegetation is to be removed for the Proposed GWF Project. For these reasons, it is considered that the Proposed GWF Project is not likely to significantly increase the level of fragmentation, or impact upon fauna movements.
- Appropriate avoidance and mitigation measures will be included within the respective Environmental Management Plans / Construction Environmental Management Plans to ensure that no threatening processes are made worse by the Project, and implemented via Planning Permit conditions.
- The BL&A and Nature Advisory analysis of susceptibility of EPBC Act listed migratory fauna species to impacts identified that the Fork-tailed Swift and the White-throated Needletail could be impacted by the Proposed GWF Project the Study Area, as they fly at Rotor Swept Area (RSA) height and are likely to forage over the Study Area. However, the number of individuals that may be affected by the Proposed GWF Project in a year is much less than an ecologically significant proportion of the population, and it is very unlikely that the Proposed GWF Project will lead to an unacceptable risk to the population. For this reason, it is considered that the Gelliondale Wind Farm will not lead to an unacceptable risk to this species' population that would be of conservation concern. Targeted surveys have been performed to assess White-throated Needletail utilisation of the Project area and informed the Flora and Fauna Assessment conclusion that, while occasional impacts may occur, the Project constitutes a low impact to the species. The Assessment also provides recommendations to enact additional avoidance and mitigation measures for this species.

- Whilst White-bellied Sea-Eagle (FFG Act: Listed) are vulnerable to collision with operating turbines, no evidence was found for nesting near proposed turbine locations during site studies, however the species may occasionally fly across the site given its proximity to coastal habitats. This could put individuals at risk of occasionally colliding with operating wind turbines. The frequency of such collisions is likely to be very low so population consequences are not considered significant. It will be important to monitor for the presence of this species as part of any impact monitoring and mitigation plan and have a plan involving investigation and a targeted mitigation response should repeated collision be detected.
- The Powerful Owl generally confines itself to forested habitats, none of which will have turbines built in them and dispersal of juvenile owls after breeding is finished would be a rare event, most likely confined to the areas where treed habitats are closest. Where this occurs, either side of the South Gippsland Highway, no turbines are proposed to be constructed. The likelihood of an ongoing impact to this species is therefore very low.
- The Swift Parrot could occur occasionally during dispersive movements, particularly when in transit between large, forested areas. However the Project lies in an area where there are few Swift Parrot records and where regular migration is not likely to occur. The population of Swift Parrot likely to use the study area is very small. Targeted surveys have been performed to assess Swift Parrot utilisation of the Project area and informed the Flora and Fauna Assessment conclusion that, given the distribution, abundance and habitat preference of the Swift Parrot, and taking into consideration the lack of preferred mainland foraging tree species on and around the Project Area, no significant impacts on the Swift Parrot population are expected from the Project.
- Southern Brown Bandicoot, Long-nosed Potoroo, Swamp Antechinus and White-footed Dunnart prefer habitat with dense vegetation cover. These habitats provide a high level of constraint, and where possible, removal of vegetation in these areas will be avoided, no significant impacts are anticipated from the Project.
- No listed frog species have the potential to occur on the Proposed GWF Project Area. The Proponent commits to a suitable buffer of at least 50 metres from waterways and wetland habitat impacts on frog habitat are not expected.
- There have been no records of the Growling Grass Frog in the region since 1995 and it is likely that the species is extinct in this region. The species will therefore not be adversely affected by the Proposed GWF Project.
- The Proposed GWF Project Area is located sufficient distance from the Albert River, significant tributaries and wet habitats in the Study Area to avoid impacts on flows or water quality in the Albert River to ensure that there are no impacts on Australian Grayling and Dwarf Galaxias, burrowing crayfish. The Proposed GWF Project will include a buffer of at least 50 metres from any watercourse.
- No impacts are expected to Ecological Communities from the Proposed GWF Project.
- Implementation of a Bat and Avifauna Management Plan for the Proposed GWF Project will ensure that procedures and strategies exist to respond to any unanticipated impacts on the White-bellied Sea-eagle and the Powerful Owl.

### Hydrology

There are two water courses running though the Study Area – the Albert River and the Jack River.

The Albert River is the largest watercourse crossing the Study Area, and constitutes most of the northern site boundary of the Application Area. Its reaches in the northern sections meander through the landscape and hold shallow to moderately deep, flowing fresh water. Although the river banks and channel are vegetated (with a mixture of indigenous reeds, rushes, herbs, climbers, trees and shrubs as well as introduced vegetation), surrounding land is mostly cleared dairy farms. Closer to the mouth of the river, water becomes brackish, shallower and slower-flowing. These areas, including a number of tributaries (possibly spring-fed) support mostly degraded brackish wetland vegetation (e.g., Sea Rush and Australian Salt-grass). These areas are being used to graze dairy cattle. The tidal reaches of the river are wider and are lined with Mangrove Shrubland, with Saltmarsh and associated vegetation types further from the river.

The Jack River is a permanent waterway that crosses the north-eastern part of the Study Area. This river runs almost parallel to the Albert River, within a kilometre or so to the north of the latter, and joins with the Albert River at a number of locations. A number of wet and dry ox-bows occur between and along the two rivers.

Nature Advisory determined that although there are farm dams and small watercourses located in the Study Area, it was determined that these do not contain suitable habitat for the Growling Grass Frog and given that the species had not been detected in the Application Area and immediate surrounds previously, no further surveys were therefore deemed necessary.

Aquatic habitats scattered across the Study Area consist of the Albert River and its tributaries, drainage lines, ephemeral wetlands and farm dams. The majority of farm dams are accessible to stock and support little or no vegetation. Ephemeral drainage lines are common throughout the Study Area as a method of draining water from low-lying agricultural land. Where more permanent water-bodies are allowed to flow naturally and excluded from grazing pressure, low and high marshes occurred, particularly in the north-east of the Study Area in association with the Albert River.

The coastal wetlands and shallow marine waters of the Corner Inlet and Nooramunga area, north and east of Wilson's Promontory are nominated under the Convention on Wetlands (the 'Ramsar' Convention) as a wetland of international importance. These wetlands are located to the south of the Application Area, generally around 3.5km from the Study Area. The closest proposed wind turbine (GWT13) is located in the east of the Proposed GWF Project Area just over 1,900 metres from the Ramsar site boundary.

There are no impacts anticipated to Jack River or Albert River as the Proposed GWF Project Area has been designed to avoid these areas. The Proposed GWF Project would not generate significant run off or affect streamflows. The footprint of the Application Area represents a very small proportion of the catchments to these Rivers. Additionally, the distance of the proposed activity to these rivers over grassed or cropped land is sufficient to remove any sediment mobilised from the works area during a rainfall event. Environmentally sensitive construction measures will be employed including sediment and erosion controls to ensure that the Project does not discharge wastewater and runoff to water environments, and specified within the CEMP to be implemented via Planning Permit conditions. A detailed drainage management plan will also be implemented prior to construction as a requirement of Planning Permit conditions, to prevent any localised drainage issues.

None of the project area lies within the Ramsar site boundary and none of the wetland will be directly destroyed or modified by the Proposed GWF Project. It is not anticipated that there will be any impacts to aquatic, estuarine or marine ecosystems due to the distance separating the Proposed GWF Project from the upper shores of these wetland areas.

The Proposed GWF Project is sufficiently distant from the Ramsar site, of low enough intensity and will be executed in an environmentally sensitive manner, ensuring that there will be no significant impacts on the Corner Inlet Ramsar site. The distance to the edge of the wetland from the construction site is such that any runoff from the construction site will dissipate within the grassed and cropped land before it reaches an open waterway. Land within this area is currently ploughed and cropped regularly. This is ample distance for any entrained sediment and associated pollutants to settle before any runoff reaches an open waterway. Notwithstanding, sediment and erosion control measures will be in place to prevent runoff from entering sensitive environments, such as watercourses.

The implementation of best practice methods for weed and pest animal control, documented in a pest plant and animal management plan within the CEMP for the Proposed GWF Project will ensure that no invasive species harmful to the ecological character of the Ramsar site wetlands will be established there as a consequence of the Project. The CEMP would be implemented post approval and informed by Planning Permit conditions and relevant specialist advice.

In consultation between the Proponent and the West Gippsland Catchment Management Authority (WGCMA) in April 2023, the mapped and known areas subject to inundation during 1-in-100-year events in the Application Area

were discussed insofar as they pertain to construction standards and avoidance or mitigation of any negative downstream impacts during inundation events. It was agreed that the wind turbines themselves are unlikely to have any impacts on groundwater or surface water flow, but rather the access track network which had the most potential to impact on surface flow, and that adequate measures should be incorporated into detailed design of the tracks and their drainage systems that would not lead to an increase of surface water movement onto neighbouring land. It is expected that WGCMA would take the opportunity to provide feedback or suggestions for conditions related to construction and environment management plan (CEMP).

Regional groundwater resources would not be affected due to the small turbine footprint and the ability to respond to any potential water issues during access track design and micro-siting of turbines under detailed design review. A sediment, erosion and water quality management plan would be prepared as part of a required CEMP, implemented by expected Planning Permit conditions.

# **Built Cultural Heritage**

The Gelliondale Briquette Plant is located on the corner of Coal Pit Road and the South Gippsland Highway, Gelliondale and is listed on the Victorian Heritage Register (H1058) and subject to a Heritage Overlay Schedule 81 (HO81) in the Wellington Scheme. The site's significance relates to the "technical accomplishment in the history of briquette production and of the construction and layout of a brown-coal mining operation", an old and rare example of a briquette plant, and its association with James T. Knox (1889-1967) a notable civil engineer, whose descendants continue to own the adjacent land, which is also proposed to host part of the wind farm.

The heritage site will not be directly impacted by the proposed activity.

A letter of advice from Biosis regarding the status of and interface with the historic heritage site of the Gelliondale Briquette Plant can be found in **Appendix R**.

### **Indigenous Cultural Heritage**

The geographic region is characterised by low lying coastal and alluvial plains with moderate to steep slopes and alluvial swamp fans. A number of waterways cross the region including Jack River, Albert River, Tarra River, Muddy Creek, Stoney Creek, Nine Mile Creek and their tributaries. The immediate surrounds of the Activity Area would have provided abundant opportunities for Aboriginal people to access food, water and other resources. Due primarily to the undeveloped nature of the region and expanse of agricultural and pastoral properties over the region, few archaeological assessments have been undertaken for planning and development processes requiring management of identified Aboriginal cultural materials. Most of the recorded Aboriginal places within the geographic region are artefact distributions (Artefact Scatters) and isolated artefacts. A variety of other place types present in the region demonstrates the habitation by Aboriginal people over inland and coastal settings, with shell middens, earth features, scarred trees and burials (Aboriginal Ancestral Remains) also present.

A total of 54 previously recorded Aboriginal places are present within the wider geographic region. Whilst no archaeological surveys had previously been completed in the Study Area, and no previously recorded sites were located in the Study Area, it exhibits a number of sensitive landforms that are likely to contain Aboriginal cultural heritage. During the surveys undertaken by Biosis for the Alberton Wind Farm Voluntary CHMP, two new Aboriginal artefact places were identified as well as three additional landforms of sensitivity for undetected cultural heritage. The Proposed GWF Project will avoid each of these Aboriginal places and sensitive landforms.

Two landforms of greater sensitivity were identified during the Standard Assessment ground survey: sandy rises and alluvial terraces. Sandy rises, which have developed bordering dunes associated with some of the former wetland

basins (probably incorporating extensive older barrier dune material), were noted in two areas to the south of the South Gippsland Highway. A distribution of 39 surface artefacts was recorded.

A total of five locations were selected for Complex Assessment testing, each of which lies in the vicinity of sensitive landforms identified during the Standard Assessment. No Aboriginal cultural heritage was recorded in the subsurface testing.

**VAHR 8220-0171(Hedley AS 1)** is located upon a crescent-shaped shallow dune formation (lunette) lying between the proposed locations of turbines GWT01 and GWT02. 39 surface artefacts were recorded on the lunette in pockets of disturbance and the lunette was registered by the original CHMP as a unique Aboriginal place, Hedley AS 1 (VAHR 8220-0171). The place is located in the south-west of the amended Activity Area. The place will be avoided.

**VAHR 8220-0170 (Hedley LDAD 1):** This place comprises two surface artefacts recorded adjacent to a farm access track west of Turbine T12 from the original CHMP (north-west of wind turbine GWT07 in the Proposed GWF Project, and outside the assessed impact area). The locations of these components were previously excluded from the former CHMP Activity Area and are now located in the central parts of the Activity Area.

A Notice of Intent to Amend an approved Cultural Heritage Management Plan was lodged with Victorian Aboriginal Heritage Register (CHMP 15167). The Amendment was approved by the Gunaikurnai Land and Waters Aboriginal Corporation (as Registered Aboriginal Party (RAP)) on 27 October 2022.

Any further works on the site will be required to operate under the nominated Cultural Heritage management conditions contained in Part 2 of the amended CHMP (see **Appendix H**).

# Site and Context analysis - The Surrounding Area

The Proposed GWF Project is located on coastal plain cleared farmland between areas of State Forest which extend to the north and south of the South Gippsland Highway in the Wellington Shire. The nearest major service centre is Yarram, about 7 kilometres north-east of the Project Area, with the township of Alberton situated 3 kilometres east of the project. The small settlement of Hedley lies at the western end of the Project Area, and the town of Welshpool is located a further 8 kilometres to the west. The farmland supports a range of agricultural activities, including dairy production, grazing, and cropping.

An existing 66kV transmission line runs through the Study Area at various points and bisects the Application Area in the west where the Project will electrically connect to the main power grid at the proposed new substation. This powerline is located within an existing electricity easement 14.4m wide.

The Proposed GWF Project infrastructure is designed to account for existing easements for utilities, which includes electricity distribution, water, and communications, to minimise any impacts on existing services. Any impacts through design and/or construction will be avoided or mitigated.

There are no current Native Title applications or determinations which affect the Study Area. This reflects the freehold status of the Study Area (i.e., farmland under previous exclusive possession). Much of the public land which lies to the south is covered by a completed Native Title determination, including the Gelliondale State Forest and the adjacent waterbodies. This was granted in 2010 and is held by the Gunaikurnai Land and Waters Aboriginal Corporation.

Alberton West State Forest: This area comprised an extensive forest remnant on the foothills of the Strzelecki Ranges, immediately north-west and contiguous with remnant forest blocks in the central north-western part of the broader study area.

Strzelecki Ranges: The main expanse of remaining remnant native forest covering the Strzelecki Ranges occurred less than 10 kilometres to the north-west. This habitat was somewhat linked to the broader study area via a patchwork of cleared farmland and small to large patches of remnant native forest.

Gelliondale State Forest: This area supported extensive heathy woodlands and other near-coastal vegetation types. It extended southwards from the southern edge of the broader study area.

Nooramunga Marine and Coastal Parks (Ramsar listed Important Wetland): This area supported extensive coastal banksia woodlands, saltmarshes and other coastal vegetation types, as well as areas of intertidal sand and mud flats and shallow marine waters. It extended southwards from the southern edge of the Gelliondale State Forest to Corner Inlet. Nooramunga Marine and Coastal Park generally occurs approximately 3.5 kilometres south of the broader study area, with the closest proposed wind turbine (GWT13) being 1,900 metres distant from the Ramsar site boundary.

Corner Inlet (Ramsar listed Important Wetland): This area extended westward from the southern end of Nooramunga Marine and Coastal Park. Corner Inlet lies approximately 7 kilometres southwest of the broader study area.

Wilsons Promontory National Park: This area extended southward from Corner Inlet, approximately 15 kilometres south-west of the Study Area.

# **Design Response**

# **Plans**

Detailed plans of the proposed development can be found in **Appendix M**. These plans also show the concept of the layout for proposed underground electrical reticulation to connect generation to substation infrastructure, and indicative details of the electricity utility works associated with the proposed Substation and Battery Energy Storage System (BESS).



Project Layout - Wind Farm Plan (Aerial View 2) | May 2023

Map scale: 1:30,000 (@A3) | Coordinate system: GDA94 MGA Zone 55 | Base map: G

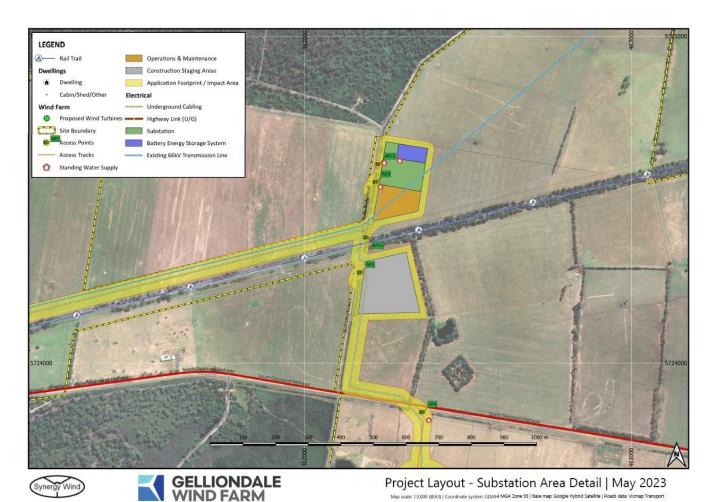
Figure 13 - Project Layout Plan (1:30,000 scale - Whole Application Area)

No new overhead powerlines are proposed for the Gelliondale Wind Farm Project. Power generated by the wind turbines will be transmitted to the proposed Substation via underground cabling. The cable network connects the turbines and crosses within and beneath road and rail reserves where necessary. Details of the land tenure at crossing points are contained in Table 2 of Appendix A. Consultation with relevant land managers (private lessees, Department of Transport & Planning) was initiated early in the design process to ensure feasibility of public land crossings and to determine proper process for acquiring relevant licences or leases. All licence processes are planned to be initiated post approval and further consultation with land managers and land users will commence in response to permit conditions and proper process.

Construction methods for underground cabling will be open trenching in most instances on private farmland, and directional drilling where required or advised, as determined during detailed design and to minimise impact on surface assets and trafficability of the public road network. For example, when crossing beneath any open road or the rail reserve, directional drilling techniques would be employed where possible to avoid direct impact on surface treatments and neighbouring areas of native vegetation.

Details of the internal reticulation underground cabling and the route to the proposed Substation are shown on layout plans in **Appendix M**.

Indicative diagrams of the infrastructure and layout of items at the proposed Substation and battery energy storage system (BESS) locations are provided in **Appendix P** and also appear on select plans in **Appendix M**.







GELLIONDALE Substation Area - Indicative Arrangement | May 2023 WIND FARM

May scale 11.000 (SMA) | Coordinate Systems CDAM MGA Zone 55 | Base nap; Google Hybrid Statistic | Roads data: Vacroup Transport

Figure 15 - Project Layout Plan (1:1,000 scale - Substation Area Indicative Arrangement Plan)

# **Distances to non-involved Neighbour Dwellings**

To confirm compliance of proposed wind turbine locations with setback distances set down in the *Policy and Planning Guidelines for the Development of Wind Energy Facilities in Victoria (November 2021) (the Guidelines)*, precision distance surveys were undertaken by a licensed surveyor to record the exact distance between turbine positions as indicatively proposed at the time and the seven closest neighbour dwellings.

An application for a wind energy facility is prohibited by the planning scheme where evidence of written consent is not provided where an existing dwelling is located within one kilometre of any turbine (measured from the centre of the tower at ground level) that forms part of a Proposed GWF Project.

The Proposed GWF Project is designed to observe the distance limitation with respect to non-involved neighbour dwellings, and the proposed wind turbines have been positioned beyond one kilometre away from the nearest wall or corner of neighbour dwellings.

Setback distances to the nearest neighbour dwellings, as surveyed in June 2022, are as follows:

- **N046** 1,115.9 metres to GWT02; 1,239.4 metres to GWT03
- N048 1.133.5 metres to GWT03
- N068 1,057.8 metres to GWT05; 1,053.1 metres to GWT06 (see note)
- **N121** 1,120.0 metres to GWT09
- **N135** 1,106.4 metres to GWT10; 1,134.1 metres to GWT11
- **N146** 1,221.3 metres to GWT13
- N147 1,177.9 metres to GWT13

**Note**: GWT05 & GWT06 were re-positioned in a layout revision in late June 2022, moving them further away from N068 by 34.6 metres and 18.8 metres, respectively, as they appear in this application. This results in **adjusted distances for N068** of **1,092.4 metres** to **GWT05**; **1,071.9 metres** to **GWT06**.

The licensed surveyor Distance Survey Reports can be found at **Appendix S**.

# Flora & Fauna

Nature Advisory Pty Ltd has undertaken flora and fauna assessments, bird utilisation surveys (BUS) and bat surveys over the Project area between 2014 and 2016 - undertaken for Alberton Wind Farm, based on a now superseded layout - to provide baseline data on the pre-construction utilisation of the wind farm site by birds and bats as a basis for the development of any mitigation measures that may be necessary. As the Alberton Wind Farm (the Former Project) study area incorporated the current Gelliondale Wind Farm layout, the results of these surveys are considered relevant and sufficient to address potential impacts of the Gelliondale Wind Farm.

#### Vegetation

Detailed native vegetation assessments have been carried out for the Former Project in March 2015 and September 2016, and for the Gelliondale Wind Farm study area assessments were conducted in September 2021 and March 2023.

Land in the study area would have once supported a complex of heathy vegetation types with Sedgy Wetland and Swamp Scrub in larger wet depressions and along drainage lines. Almost all of this area and surrounding land had been cleared of native vegetation and was being used for stock grazing. Ground water had also been significantly drained. Other land uses within the study area include a rail reserve and several road reserves, as well as Alberton West State Forest to the north Gelliondale State Forest to the south.

Vegetation in the study area consisted of Swamp Scrub and Heathland remnant vegetation on roadsides, windbreaks, and in the rail trail corridor, and ephemeral wetland vegetation in grazing paddocks and drainage lines. Roadside vegetation was mostly dominated by Swamp Paperbark thickets with some emergent Swamp Gums and mixed native and non-native understorey of grasses and herbs. The rail trail roadside vegetation comprised larger trees, mostly Swamp Gums, with a remnant understorey of Swamp Paperbark and native grasses. Grazing paddocks held wetland vegetation in low laying areas, dominated by native grasses such as Spike Sedge, Rushes, Common Reed, Cumbungi, and some aquatic herbs such as Pondweed.

Roadside vegetation at intersections potentially impacted by component transport Barry Beach (Port Anthony) had more variation in composition, with native vegetation near Barry Beach consisting of Heathy Woodland and Swamp Scrub while roadside vegetation near Agnes consisted of Lowland Forest and woodland associated with the nearby Lamont Creek.

The following DEECA BioSites occurred within the broader study area:

- Albert River (Site No. 1903) national significance;
- Gelliondale Railway (Site No. 1955) regional significance; and
- Hedley (Site No. 1914) regional significance.

The rail trail reserve which crosses the broader study area provided the only narrow, densely vegetated east to west wildlife corridor through the otherwise cleared landscape.

Key habitat areas listed below occurred within the region:

• Alberton West State Forest - This area comprised an extensive forest remnant on the foothills of the Strzelecki Ranges, immediately north-west and contiguous with remnant forest blocks in the central north-western part of the broader study area.

- **Strzelecki Ranges** The main expanse of remaining remnant native forest covering the Strzelecki Ranges occurred less than 10 kilometres to the north-west. This habitat was somewhat linked to the broader study area via a patchwork of cleared farmland and small to large patches of remnant native forest.
- **Gelliondale State Forest** This area supported extensive heathy woodlands and other near-coastal vegetation types. It extended southwards from the southern edge of the broader study area.
- Nooramunga Marine and Coastal Parks This area supported extensive coastal banksia woodlands, saltmarshes and other coastal vegetation types, as well as areas of intertidal sand and mud flats and shallow marine waters. It extended southwards from the southern edge of the Gelliondale State Forest, to Corner Inlet. Nooramunga Marine Coastal Park occurs approximately 3.5 kilometres south of the broader study area.
- Corner Inlet (Ramsar and listed Important Wetland) This area extended westward from the southern end of Nooramunga Marine Coastal Park. Corner Inlet lies approximately seven kilometres southwest of the broader study area.
- Wilsons Promontory National Park This area extended southward from Corner Inlet, approximately 15 kilometres south-west of the study area.

The study area lies within the Gippsland Plain bioregion and falls within the West Gippsland catchment.

In accordance with the Guidelines, all applications to remove native vegetation must provide an avoid and minimise statement that describes any efforts undertaken to avoid the removal of, and minimise the impacts to biodiversity and other values of native vegetation, and how these efforts were focused on areas of native vegetation with the highest value.

The proponent committed early in the process to reduce the removal of native vegetation to a minimum based on the results of Nature Advisory's field surveys and subsequent advice. Efforts to avoid and minimise impacts to native vegetation in the current application are presented as follows:

- The number of turbines has been reduced to 13 from the initial 34 turbine layout of the Former Project.
- A proposed turbine between the large forest blocks has been removed.
- The distance between proposed turbines and forest edges has been increased for most turbines, unless other restrictions were in place (distance to dwellings).
- Where feasible, proposed access tracks follow existing cleared farm tracks.
- The vast majority of the remaining development footprint has been sited within cleared agricultural land.
- The transmission line route has been removed for this proposal (all electrical infrastructure is proposed to be placed underground), avoiding remnant native vegetation and scattered trees within and south of the rail reserve corridor reserve.
- An access track was moved out of Birds Road (a narrow road lined on either side with diverse sedgy, shrubby and grassy vegetation as well as overhanging trees) and into the cleared private land to the east.
- Works compounds and electrical substations have been sited within cleared farm paddocks.
- Access point 1 and associated track were moved west, avoiding impacts on Gelliondale State Forest.

All of the above changes resulted in considerable reductions in overall proposed native vegetation removal.

The proponent has indicated that, where feasible, further micro siting of infrastructure will occur during the construction stage, to further reduce impacts to native vegetation. The impacts presented in this report therefore present a conservative account of proposed impacts.

Offsets required to compensate for the proposed removal of native vegetation from the study area are as follows:

- 0.501 general habitat units and must include the following offset attribute requirements: **Minimum strategic biodiversity value (SBV) of 0.324.**
- Occur within the West Gippsland CMA boundary or the Wellington or South Gippsland Shire Council
  areas.
- Include the protection of at least two large trees.

Under the Guidelines all offsets must be secured prior to the removal of native vegetation.

The offset target for the current proposal will be achieved via a third-party offset. An online search of the Native Vegetation Credit Register (NVCR) has shown that the required offset is currently available for purchase from a native vegetation credit owner (DEECA 2023).

#### **Avifauna**

During the bilateral assessment process of the Former Project, targeted surveys were requested by DEECA for two species of concern, Swift Parrot and White-throated Needletail.

The Swift Parrot targeted survey was conducted in eucalypt remnants within the wind farm footprint. Several sites in larger blocks in surrounding State Forests were also included in the sample, since these areas were likely to provide feeding habitat for the species.

Four surveys were undertaken, these included:

First survey: 1/04/2020

• Second survey: 12/04/2021

Third survey: 24/05/2021

• Fourth survey: 22/06/2021

All surveys were undertaken in autumn when the parrots were flying from Tasmania towards their wintering ground in mainland Australia.

No Swift Parrot was recorded at or near the wind farm site during the four targeted surveys described above. Flowering was reasonable at the sampling sites and have attracted many nectar eating lorikeets and honeyeaters, but not the targeted species.

The Swift Parrot is listed as *Critically Endangered* under both of the EPBC and FFG Acts. Since the species was not recorded in or close to the wind farm site, no referral was warranted for this species under both of the above two acts for the initial project. The Swift Parrot was not confirmed as occurring within the Gelliondale Wind Farm study area during the targeted surveys conducted in April 2020, and April, May and June 2021. Owing to the lack of high-quality or extensive habitat that would support these species on the wind farm, Swift Parrot regular movements across the wind farm site is not anticipated. Instead, it may be expected that the occasional individuals of Swift Parrots may visit the wind farm temporarily when food resources may attract them into the site. The Gelliondale WF has a low number of turbines, no significant impact on the overall population of this species is expected.

This White-throated Needletail (WTNT) is widespread in eastern and south-eastern Australia and large numbers usually appear in Victoria and south-east NSW in December and later peak in Tasmania during February to March. This

subspecies is a trans-equatorial migrant that breeds in the Northern Hemisphere summer and migrates south for the Southern Hemisphere summer. They arrive in Australia in about October each year and leave somewhere between May and August.

White-throated Needletail numbers in Victoria have declined by 49 percent between 1979–1981 and 1998–2000. Numbers of needletails seen per day in eastern Australia more than halved between 1951-60 and 1991-20.

The species is almost exclusively aerial in Australia, flying at heights of less than one metre up to more than 1000 metres above the ground, moving around in flocks and occurs over most habitat types and is recorded most often above wooded areas, including open forest and rainforest, and may also fly below the canopy between trees or in clearings. When flying above farmland, it is more often recorded above partly cleared pasture, plantations or remnant vegetation at the edge of paddocks.

The White-throated Needletail feeds on flying insects, such as termites, ants, beetles and flies. They catch the insects in flight in their wide gaping beaks. Birds usually feed in rising thermal currents associated with storm fronts and bushfires and they are commonly seen moving with wind fronts.

In Australia there are records of collision with wind turbines, powerlines, and windows, but the impacts to the long-term population survival require further investigation. Organochlorine pesticides are another possible cause of decline of White-throated Needletails, either through a decrease in the abundance of invertebrates or from secondary poisoning. The loss of roosting sites in Australia may also be a cause of decline. Loss of forest and woodland habitats may have also resulted in the reduction of invertebrate prey. The largest single threat to White-throated Needletail appears to be the accelerated destruction of the Siberian forests, where a large proportion of the Australian population of Needletails needs old trees with hollows in which to breed.

Three surveys were undertaken during the period when the WTNT were in Australia. At each survey, the number of WTNT observed flying over the survey point was counted four times, at different times of the day (early morning, midmorning, early afternoon, late afternoon). The timing of the three surveys and number of observation points were as follows:

- 7–11 December 2020: Six points were surveyed over four days (total of 24 replicates), with a period of one hour at each survey point (total of 24 hours of survey efforts)
- 22–26 March 2021: 10 points were surveyed over four days (total of 40 replicates), with a period of 30 minutes at each survey point (Total of 20 hours of survey effort)
- 25–29 April 2021: 10 points were surveyed over four days (total of 40 replicates), with a period of 30 minutes at each survey point (Total of 20 hours of survey effort)

The increase in number of survey points, and reduction in observation time was believed to increase the likelihood of observation of WTNTs if present in the area. If a flock was observed, it would be monitored for the whole duration of the observation.

The points selected for the counting of the WTNT were located within the wind farm site, scattered along public roads and reserves throughout the study area, provided they offered good visual coverage.

During the 2020/2021 targeted survey, several WTNT were recorded flying over the wind farm site. None were seen during the December 2020 targeted survey. A lack of observations of the species during this period suggests that the species had still not arrived in the area in large numbers.

During the February 2021 targeted survey, a cumulative total of 469 WTNT were recorded flying over the wind farm site, however double counts were likely as flocks were seen over five days and actual numbers would range from 160-250 individuals. WTNT were recorded on four out of five days of surveys.

During March 2021, a cumulative total of 41 WTNT were recorded on two out of the four days of the survey. The records were of small flocks ranging in size from 1 to 18 birds recorded at three different observation points.

WTNT mortality from collision with wind turbines within Australia is known to occur. The number of WTNT flying within the proposed windfarm footprint was considered overall low to moderate, but occasionally high and restricted to the forested sections and paddocks in between, however these numbers may only prevail over up to four months per year, namely December-April. Occasional impacts may occur in days of peak occurrence in the study area, given the presence of proposed turbines close to areas where flocks were seen flying at Rotor Swept Height. Continuous collisions over time may have a low impact to the species.

Avoidance and mitigation measures may include but not be limited to:

- Further surveys to ascertain peak activity weather and time patterns;
- Targeted turbine curtailment during predicted peak occurrence times (month, time of the day, prevailing winds, storm fronts); and
- Mortality monitoring and impact triggers.

The analysis of susceptibility of listed fauna species presented in Section 5.6.3 of the Flora and Fauna Assessment identified a number of nationally (EPBC Act) and state (FFG Act) threatened species, are susceptible to impacts from wind farm development in the study area. Of these species, the following were considered more likely to be impacted, as they have the potential to occur, been recorded within the wind farm, or fly at RSA height:

- Swift Parrot
- White-throated Needletail
- Gang-gang Cockatoo
- Powerful Owl
- White-bellied Sea-Eagle

Targeted surveys of the first EPBC two species have been carried out; the details of the survey and possible impacts on these two species are discussed in detail in Section 6. No significant impacts to the Swift Parrot or White-throated Needletail populations are expected from the proposed revised wind farm layout.

The Gang-gang Cockatoo is a strict woodland species and would only occasionally venture outside the woodland and is not expected to be significantly impacted.

Targeted surveys for Powerful Owl in areas of forest may well confirm their presence (already confirmed for the Alberton West state forest) but would not change conclusions in relation to the likelihood of impact, as discussed earlier in this report. The owl generally confines itself to forested habitats, none of which will have turbines built in them and dispersal of juvenile owls after breeding is finished would be a rare event most likely confined to the areas where treed habitats are closest. Where this occurs, either side of the South Gippsland Highway, no turbines are proposed to be constructed. The likelihood of an ongoing impact on this species is therefore considered to be low.

The White-bellied Sea-Eagle is not likely to be impacted by the operation of a wind farm; the species mostly found along the coast and may on occasions venture inland passing over the wind farm site.

The Gelliondale Wind Farm Project has been designed to avoid impacts on native vegetation and wildlife at every stage and will not have a significant impact on any habitat for any rare or threatened flora species as determined in the Flora and Fauna Assessment. A Bat and Avifauna Management (BAM) Plan is expected in permit conditions and would provide procedures and strategies to respond to any impacts on any threatened species. The Assessment provides recommendations for best practice development and construction to minimise impacts on flora and fauna.

The full *Flora and Fauna Assessment* and bird utilisation survey and targeted flora survey information is contained in **Appendix D**.

# **Landscape Assessment**

A Landscape & Visual Impact Assessment (LVIA), undertaken by Hansen Partnership Pty Ltd (Hansen), identifies in its report the visual impacts that may occur in response to the proposed wind turbines of the Gelliondale Wind Farm and assesses this impact on the basis of well-established international principles of visual impact assessment. The Landscape & Visual Impact Assessment can be found at **Appendix E**.

The LVIA considered legislation, policy and standards relevant to the assessment and includes a review of relevant Commonwealth (Environment Protection and Biodiversity Conservation 1999 Act (EPBC)), State (Marine and Coastal Act 2018, Planning and Environment Act 1987), and local schemes, provisions, and overlays. It also considers the Coastal Spaces Initiative, statutory heritage controls for 10 heritage places listed on the Victorian Heritage Register in the region surrounding the Proposed GWF Project, and provides a comprehensive baseline assessment of key landscape features within the defined viewshed of the Proposal.

The landscape assessment first established a study area and identified and described a series of landscape character areas, and the value or significance of each of these was assessed and described. This provided the basis for the subsequent landscape and visual impact assessment.

The LVIA identified the following landscape character areas in the study area:

- 1. Coastal Islands, which has been assessed as a 'High' landscape value.
- 2. South Gippsland Coastal Plains, which has been assessed as a 'Low' landscape value.
- 3. Settlements, which has been assessed as a 'Low' landscape value.
- 4. Timber Plantation Forest, which has been assessed as a 'Low' landscape value.
- 5. Strzelecki Range and Foothills, which has been assessed as a 'Moderate' landscape value.
- 6. Forest Foothills, which has been assessed as a 'Low' landscape value.
- 7. Wilsons Promontory Granite Coast, which has been assessed as a 'High' landscape value.

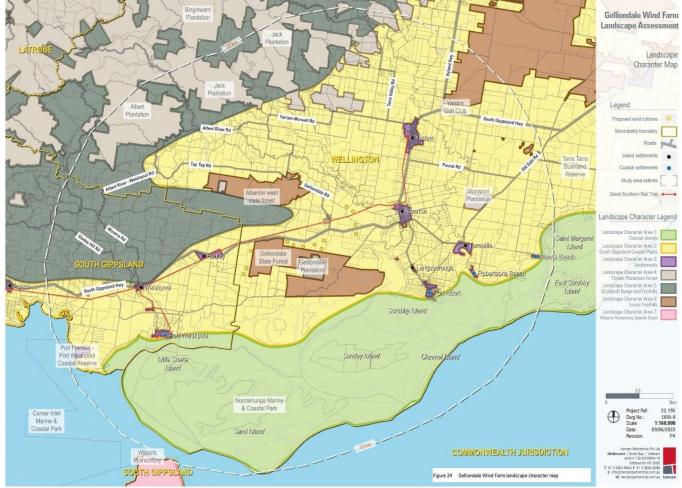


Figure 16 - Landscape Character Map from the LVIA report (see Appendix E)

A set of ten (10) photomontage products, consisting of an existing view (no wind farm infrastructure), a wireframe view (wind turbines superimposed onto the existing view image as a high-contrast outline, and fully visible in front of intervening objects, terrain or vegetation), and a photomontage view (photo-realistic models of wind turbines as they would appear in the landscape after construction of the project – these models are edited to remove parts of wind turbines which would not be visible from each viewpoint due to obstruction from intervening objects, terrain or vegetation) are included in the LVIA. The photomontages are created utilising a 3D model of a wind turbine of the same parameters as applied for in this application. For the LVIA, the Vestas V162-6.x was chosen as the candidate model for this impact assessment.

The viewpoints chosen are all in publicly accessible locations at a range of distances and viewing angles to the wind turbines. The rationale for viewpoint selection is based on the visual sensitivity map in the areas of moderate and high visual sensitivity (see *Landscape Visual Sensitivity Map* in the LVIA at **Appendix E**). The view locations were selected within a 3km radius of the Project area and the townships of Welshpool, Port Welshpool, Hedley, Alberton, Yarram and Port Albert.

The impact assessment as determined on the basis of impacts assessed at each representative viewpoint is arrived at on the basis of 3 variables:

- 1. Landscape visual sensitivity (determined on the basis of the identified landscape value and its degree of visual exposure to proposed project infrastructure);
- 2. Magnitude of visibility of the proposed infrastructure (as depicted within the photomontage views from representative view locations), and
- 3. The nature, number and frequency of visual receptors.

The Hansen LVIA details the following impact assessment findings at each of the photomontage viewpoint locations:

#### **Moderate Impact** at the following viewpoints:

- View location 02: located at Marginal Wharf, Port Welshpool, which is within the 'Settlement' landscape character area.
- View location 03: at James Road, Hedley, which is within the 'Coastal Islands' landscape character area.
- View location 04: located at Port Albert, which is within the 'Coastal Islands' landscape character area.
- View location 05: located at South Gippsland Highway, Hedley, which is within the 'Settlement' landscape character area.
- View location 06: located at South Gippsland Highway, Gelliondale, which is within the 'South Gippsland Coastal Plains' landscape character area.
- View location 08: located at South Gippsland Highway, Alberton, which is within the 'Settlement' landscape character area.
- View location 09: located at South Gippsland Highway, Alberton, which is within the 'South Gippsland Coastal Plains' landscape character area.
- View location 10: located at Hedley, which is within the 'Settlement' landscape character area.

#### **Low Impact** at the following viewpoint:

View location 07: located at Yarram Memorial Park, which is within the 'Settlement' landscape character area.

# Nil Impact at the following viewpoint:

View location 01 is located at South Gippsland Highway, Welshpool., which is within the 'Settlement' landscape character area.

Gelliondale Wind Farm\_LA

View Location 05 - Existing view

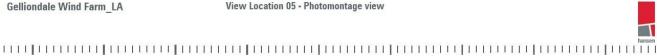




Figure 62 View location 05: Existing



Figure 17 - Existing View to the east along the South Gippsland Highway





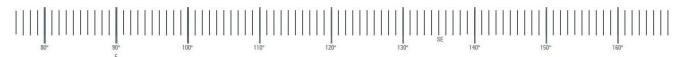


Figure 18 - Photomontage View to the east along the South Gippsland Highway

Gelliondale Wind Farm\_LA

View Location 08 - Existing view





Figure 75 View location 08: Existing view



Figure 19 - Existing View to the south-west along the South Gippsland Highway





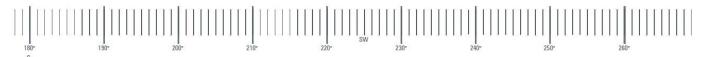


Figure 20 - Photomontage View to the south-west along the South Gippsland Highway

The Landscape & Visual Impact Assessment can be found at **Appendix E**.

In summary, none of the viewpoints were assessed as having a "very high" nor "high" visual impact, with the majority of viewpoints having a moderate impact on the landscape. The level of visual impact is therefore considered to be acceptable in this presented circumstance for the Project.

#### **Noise**

An Environmental Noise Assessment has been undertaken by Marshall Day Acoustics for the Project and includes an assessment of the proposed wind farm by comparing conservatively predicted noise levels for a candidate model of wind turbine (the GE Cypress 6.0-164) against the noise limits of NZS6808:2010. A total of two hundred and twentyseven (227) residential properties have been included in the assessment, including twelve (12) involved receiver dwellings. Compliance with NZS 6808:2010 noise limits is achieved at all wind speeds at all properties (except H09, owned by a Synergy affiliate entity, which is slated to be unoccupied from commencement of construction) identified in the vicinity of the proposed Gelliondale Wind Farm Project for the candidate wind turbine model.

The Assessment was undertaken, noting relevant guidance and methodologies from the following Victorian legislation and guidelines:

- **Environment Protection Act 2017**
- **Environment Reference Standard**
- **Environment Protection Regulations 2021**
- Victorian Department of Environment, Land, Water and Planning publication Development of Wind Energy Facilities in Victoria – Policy and Planning Guidelines dated November 2021
- New Zealand Standard 6808:2010 Acoustics Wind farm noise
- EPA Publication 1826.4 Noise limit and assessment protocol for the control of noise from commercial, industrial and trade premises and entertainment venues dated May 2021.

Section 5 of the Victorian Wind Energy Guidelines outlines the key criteria for evaluating the planning merits of a wind energy facility. The following guidance is provided for the assessment of noise levels from proposed new wind farm developments:

A wind energy facility must comply with the noise limits in the New Zealand Standard NZS 6808:2010 Acoustics – Wind Farm Noise (the Standard). [...]

The Standard specifies a general 40 decibel limit (40 dB LA90(10min)) for wind energy facility sound levels outdoors at noise sensitive locations, or that the sound level should not exceed the background sound level by more than five decibels (referred to as 'background sound level +5 dB'), whichever is the greater. [...]

Noise sensitive locations are defined in the Standard as, "The location of a noise sensitive activity, associated with a habitable space or education space in a building not on a wind farm site", and include:

- any part of land zoned predominantly for residential use
- residential land uses included in the accommodation group at clause 73.03, Land use terms of the VPP and all planning schemes
- education and child care uses included in the child care centre group and education centre group at clause 73.03 of the of the VPP and all planning schemes. [...]

A 45-decibel limit is recommended for stakeholder dwellings. A stakeholder dwelling is a dwelling located on the same land as the wind energy facility, or one that has an agreement with the wind energy facility to exceed the noise limit.

Based on the legislation and guidelines, assessing the operational noise levels of the project involves:

- assessing background noise levels at noise sensitive locations around the wind farm;
- assessing the land zoning of the project site and surrounding areas;
- establishing suitable noise limits accounting for background noise levels and land zoning;
- predicting the level of noise expected to occur as a result of the proposed wind turbines and related infrastructure;
- assessing whether the development can achieve the requirements of Victorian policy and guidelines by comparing the predicted noise levels to the noise limits; and
- recommending reasonably practicable measures to minimise the risk of harm from as a result of noise from the related infrastructure.

The noise modelling results presented in the Assessment demonstrate that predicted noise levels are between 35 and 40 dB LA90 for ten (10) non-involved receivers. In accordance with NZS 6808, background noise monitoring is therefore required to be undertaken at selected receivers.

Background noise monitoring was carried out at five (5) receivers from 14 July to 2 September 2022. It is noted that consent to undertake background noise monitoring was not granted at all preferred receivers. Noise monitoring was therefore limited to the locations where access was available for the deployment of unattended noise monitoring equipment. Prior to construction of the wind farm, background noise monitoring may be undertaken at additional receivers, should consent be provided.

Details of the assessed candidate wind turbine are provided in Table 8 of the Assessment, reproduced below:

Item	Detail
Make	General Electric (GE)
Model	Cypress 6.0-164
Rotor diameter	164 m
Hub height	128 m
Blade serrations	Yes
Rated power	6.0 MW
Cut-in wind speed (hub height)	3 m/s
Rated power wind speed (hub height)	12 m/s
Cut-out wind speed (hub height)	25 m/s

The overall A-weighted sound power levels (including the +1.0 dB addition) as a function of hub height wind speed are presented in Table 9 with the octave band values presented in Table 10 (both tables from the Assessment reproduced below). These represent the total noise emissions of the wind turbine for each sound mode, including the secondary contribution of ancillary plant associated with each wind turbine (e.g., cooling fans).

	Hub he	Hub height wind speed, m/s								
	4	5	6	7	8	9	10	11	≥12	
Lwa	94.8	96.7	100.2	103.5	105.7	107.7	108.0	108.0	108.0	
	Octave band centre frequency, Hz									
	31.5	63	125	250	500	1000	2000	4000	8000	Total
Lwa	79.8	89.1	94.6	99.1	101.7	103.3	101.1	93.6	77.8	108.0

Predicted noise levels have been calculated for each receiver, and the following is concluded:

- Compliance with the applicable base noise limit of 40 dB LA90 by at least 1.8 dB at all non-involved receivers
- Compliance with the applicable base noise limit of 45 dB LA90 by at least 0.8 dB at all involved receivers.

The Environmental Noise Assessment report also considers noise from related infrastructure, such as the transformer at the proposed Substation and the battery energy storage system (BESS).

The BESS is proposed to have a capacity of 40 MW. Equipment details proposed for the BESS are not known at this stage however total equipment noise levels from other similar projects indicate sound power levels of 85-90 dB LWA for each 1 MW container unit5.

The transformers and any associated cooling equipment would be the main sources of noise located within the terminal station.

At this stage in the project, specific details of the transformer make and model are yet to be determined. However, to provide a basis for assessing the proposed substation, Synergy advised that the terminal station is proposed to comprise a single transformer rated at 95 MVA. In lieu of measured sound power level data for a specific transformer selection, reference has been made to Australian Standard AS 60076-10:2009 Power transformers – Part 10: Determination of sound levels (AS 60076-10:2009) which provides a method for estimating transformer sound power levels.

The predicted effective noise levels at the nearest dwelling to the related infrastructure are below the day, evening and night recommended levels for the site.

The Assessment recommends noise management measures, wherein it is stated that the operator of the wind farm:

- Must ensure that wind turbine noise complies with NZS 6808; and
- Must implement all applicable actions under Division 5.3 of the EP Regulations to manage and review wind turbine noise from the facility, including:
  - o preparation of a noise management plan;
  - o conducting noise compliance testing when the wind farm begins operating;
  - o preparing annual compliance statements; and
  - o conducting verification wind turbine noise monitoring every 5 years.

In addition to the above, the following noise management measures should be implemented as part of the subsequent stages of development:

- The transformer equipment should be specified and selected to achieve noise emissions not exceeding the empirical values specified in AS 60076-10
- A detailed noise assessment should be prepared by a qualified acoustic consultant, prior to construction, addressing:
  - o the final wind turbine selection and layout
  - o the final location and equipment selection for the BESS and transformer station
  - o compliance with the applicable noise limits at surrounding receivers
  - o recommendation of reasonably practicable noise mitigation measures to minimise the risk of harm from noise associated with the BESS and transformer station, as required under the EP Act.
- Development of reasonably practicable construction noise mitigation and management measures to be documented in a construction environmental management plan, prior to construction.

Construction noise from the project would be temporary in nature and would therefore not affect the long-term ambient noise environment of nearby identified natural areas. Noise associated with construction works, would be managed in accordance with a CEMP to be implemented via Planning Permit conditions.

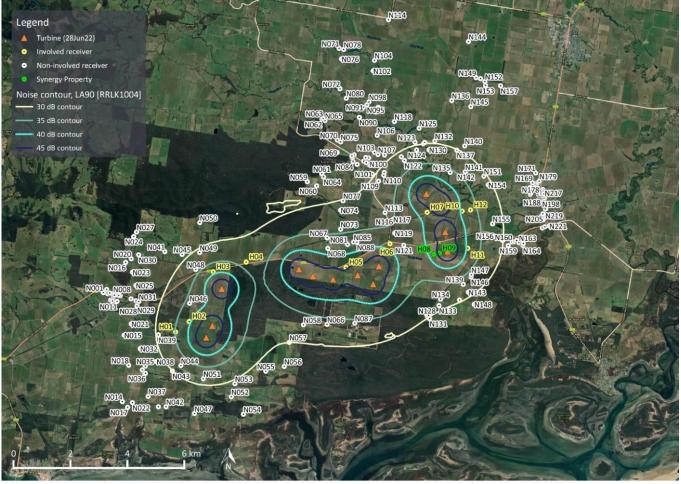


Figure 21 - Highest Predicted Noise Level Contour Map (based on the GE Cypress 6.0-164 model wind turbine)

The full Environmental Noise Assessment report can be found in Appendix J.

# Noise Assessment Verification Report

The Policy and Planning Guidelines for the Development of Wind Energy Facilities in Victoria (November 2021) highlight the requirement under Clause 52.32-4 for an "environmental auditor appointed under Part 8.3 of the Environment Protection Act 2017 to prepare a report that verifies if the acoustic assessment undertaken for the purpose of the pre-construction (predictive) noise assessment report has been conducted in accordance with the Standard".

In accordance with the above Synergy Wind engaged Arup Australia Pty Ltd to undertake a review of the Marshall Day Noise assessment and prepare a verification report. The Verification of Gelliondale Wind Farm Environmental (Predictive) Noise Assessment report concludes that the Marshall Day assessment was conducted in accordance with NZS 6808:2010.

The full verification report can be found in **Appendix O**.

# **Shadow Flicker and Blade Glint**

A Shadow Flicker and Blade Glint Assessment has been undertaken by DNV for the Proposed GWF Project (see **Appendix K**). The GE Cypress 6.x-164 was chosen as the candidate model for this impact Shadow Flicker and Blade Glint Assessment.

Shadow flicker involves the modulation of light levels resulting from the periodic passage of a rotating wind turbine blade between the sun and an observer. The duration of shadow flicker experienced at a specific location can be determined using a purely geometric analysis which takes into account the relative position of the sun throughout the year, the wind turbines at the site (modelled as a static sphere that is always oriented toward the receiver), local topography and the location of the viewer – the results of this analysis are 'Theoretical' (overestimation) annual maximum values of exposure hours. The Shadow Flicker and Blade Glint Assessment has also sought to quantify the likely reduction in shadow flicker duration due to turbine orientation (modelled as a disk) and cloud cover or other atmospheric phenomenon (fog, mist, etc.) – this analysis provides "Predicted actual' annual exposure hours at the various receptor locations.

The Proposed GWF Project has been designed to comply with the limits set down in the Guidelines (see below) without need for assessment of local screening or individual situations that would further mitigate or reduce the amount of shadow flicker experienced at a receptor location.

Ninety-eight (98) dwellings (out of the 565 dwellings mapped out to 5km from proposed wind turbines) were considered as having the potential to experience shadow flicker in the assessment. The 98 dwellings assessed include thirteen host (participating land-owner) dwellings and 85 neighbour dwellings.

The Policy and Planning Guidelines for the Development of Wind Energy Facilities in Victoria (November 2021) (the Guidelines) recommend a shadow flicker limit of 30 hours per year in the area immediately surrounding a dwelling. In addition, the EPHC Draft National Wind Farm Development Guidelines recommend a limit on the theoretical shadow flicker duration of 30 hours per year, and a limit on the actual shadow flicker duration of 10 hours per year.

The Shadow Flicker and Blade Glint Assessment concluded that a total of 22 dwellings are predicted to experience some shadow flicker above a moderate level of intensity, of which 9 are host dwellings and 13 are neighbour dwellings.

Of the 13 neighbour dwellings predicted to experience some shadow flicker above a moderate level of intensity, none are predicted to experience theoretical shadow flicker durations above the recommended limit of 30 hours per year within 50m of the dwelling.

Theoretical and predicted actual annual shadow flicker duration (maximum within 50m) at neighbour dwellings are provided as follows:

- N039 Theoretical = 8.1 hours per year; Predicted Actual = 2.0 hours per year
- N046 Theoretical = 23.5 hours per year; Predicted Actual = 5.1 hours per year
- N110 Theoretical = 23.9 hours per year; Predicted Actual = 5.6 hours per year
- N111 Theoretical = 17.0 hours per year; Predicted Actual = 4.1 hours per year
- N113 Theoretical = 13.1 hours per year; Predicted Actual = 2.8 hours per year
- N115 Theoretical = 24.6 hours per year; Predicted Actual = 5.0 hours per year

- N116 Theoretical = 15.2 hours per year; Predicted Actual = 2.9 hours per year
- N117 Theoretical = 26.8 hours per year; Predicted Actual = 5.6 hours per year
- N121 Theoretical = 22.8 hours per year; Predicted Actual = 5.6 hours per year
- N141 Theoretical = 9.9 hours per year; Predicted Actual = 2.3 hours per year
- N142 Theoretical = 14.5 hours per year; Predicted Actual = 3.7 hours per year
- N147 Theoretical = 5.1 hours per year; Predicted Actual = 0.4 hours per year
- N155 Theoretical = 9.1 hours per year; Predicted Actual = 2.5 hours per year

Blade glint is not expected to become problematic, as modern wind turbines are generally finished with low reflectivity surfaces, and this finish can be made a condition of any permit issued.

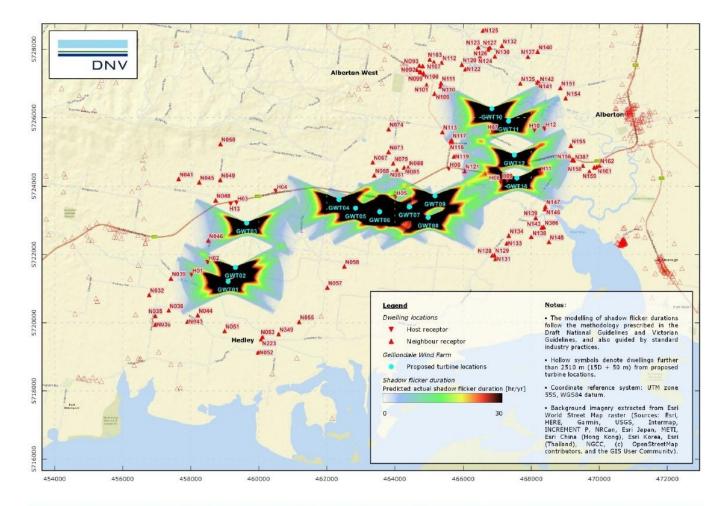


Figure 6 Predicted actual annual shadow flicker duration map

Figure 22 - Predicted actual annual shadow flicker duration

# <u>Cultural Heritage</u>

#### **Aboriginal Heritage**

Biosis undertook a Cultural Heritage Assessment (15 September 2017, initially for Alberton Wind Farm) and was engaged to apply for an amendment to the approved Cultural Heritage Management Plan (CHMP for the Proposed GWF Project, which itself was approved on 27 October 2022 (see **Appendix H**).

An initial assessment, based on detailed background research and a targeted field inspection, was undertaken by Biosis Pty Ltd on behalf of Synergy Wind Pty Ltd in 2015, during the earlier design stages for the Alberton Wind Farm project.

During the surveys undertaken for the Alberton Wind Farm Voluntary CHMP in 2016, two new Aboriginal artefact places were identified as well as three additional landforms of sensitivity for undetected cultural heritage. The Proposed GWF Project will avoid each of these Aboriginal places and sensitive landforms.

Two landforms of greater sensitivity were identified during the Standard Assessment ground survey: sandy rises and alluvial terraces. Sandy rises, which have developed bordering dunes associated with some of the former wetland basins (probably incorporating extensive older barrier dune material), were noted in two areas to the south of the South Gippsland Highway. A distribution of 39 surface artefacts was recorded.

A total of five locations were selected for Complex Assessment testing, each of which lies in the vicinity of sensitive landforms identified during the Standard Assessment. No Aboriginal cultural heritage was recorded in the subsurface testing.

A sandy rise located between proposed wind turbines (GWT08 and GWT09) will be avoided by advised re-routing of the initially planned access track between those wind turbines, which now accesses GWT08 via GWT07.

**VAHR 8220-0171 (Hedley AS 1)** is located upon a crescent-shaped shallow dune formation (lunette) lying between the proposed locations of turbines GWT01 and GWT02. 39 surface artefacts were recorded on the lunette in pockets of disturbance and the lunette was registered by the original CHMP as a unique Aboriginal place, Hedley AS 1 (VAHR 8220-0171). The place is located in the south-west of the amended Activity Area. The place will be avoided.

**VAHR 8220-0170 (Hedley LDAD 1)**: This place comprises two surface artefacts recorded adjacent to a farm access track north-west of wind turbine GWT07 in the Proposed GWF Project, and outside the assessed impact area. The place will be avoided.

The Proposed GWF Project has been designed to avoid impacts to Aboriginal cultural heritage, whereby the Proposed GWF Project Area, including the proposed locations of the turbines and associated infrastructure, do not lie within areas of designated cultural heritage sensitivity.

Specific cultural heritage management requirements are outlined in detail in the approved amended CHMP, and include conditions which are compliance requirements as of the approval date of the CHMP and its amendment. These conditions include:

- Avoidance of harm at sites Hedley AS 1 and Hedley LDAD 1 these places must be avoided during
  construction and operation of the Proposed GWF Project, and the place location must be included on all
  activity construction plans
- Cross-cultural heritage induction training session must be conducted with all site workers and contractors
  prior to the commencement of the activity, undertaken by a representative of the Registered Aboriginal
  Party



- A hard copy of the approved CHMP (as emended) must be kept within the activity area for the duration of the activity
- Avoidance of any impact on the sensitive area (sandy rise) between proposed wind turbines GWT08 and GWT09 – this area has been avoided by re-routing the access track that leads to GWT08 (now approaches from GWT07 location); and the area is to be marked as an area to be excluded from disturbance on activity construction plans (marked as a 'No-Go Zone')

Contingencies are required as part of the CHMP under clause 13(1) Schedule 2 of the Aboriginal Heritage Regulations 2018, and contingency plans are included in the CHMP addressing the general requirement for compliance with the CHMP, as well as matters including dispute resolution, compliance review, remedying of any non-compliance, approval requirements for any future changes to the proposed activity, and response to any discovery of Aboriginal cultural heritage during the activity.

### Gelliondale Briquette Plant

The recorded area of this historical site, which is recorded on the Heritage Register (H1058) and the Heritage Inventory (H8220-0008) lies about 110 metres to the west of the proposed location for wind turbine GWT04. The site is also listed in the Wellington Planning Scheme as being within the Heritage Overlay (H081). The proposed turbine, crane pad and associated infrastructure will not impact on the historical site.

The site is significant because of its demonstration of technical accomplishment and a rare surviving example of a briquette plant. It also represents early private enterprise into a brown coal mining enterprise. The site currently consists of a dam, mullock heap, trolley line, boiler mountings, coal bunker and various other associated infrastructure.

The site's original owner, James T. Knox, is also recognised as an important figure in Victorian heritage known for the promotion of concrete use within the Australian construction industry (VHD 1994).

It is noted that the VHR statement of significance does not highlight this site to be of significance for any visual, architectural or landscape related values. Whilst the views/landscape around the site will certainly change with a new wind turbine located within its vicinity, this would not affect the reasons for which it is significant and therefore would not affect the significance of the site.

Under the plans for the Project the heritage site will not be directly impacted by the proposed activity. No movement of material or components is proposed to take place within the historical site or the Heritage Overlay area.

A letter of advice from Biosis regarding the status of and interface with the historic heritage site of the Gelliondale Briquette Plant can be found in **Appendix R**.

# **Aircraft Safety**

Chiron Aviation Consultants state in their Aviation Impact Assessment of 22 May 2023 that the Proposed GWF Project is not a hazard to aircraft safety.

The Aviation Impact Assessment concludes that:

- the GWF is a low risk to aviation safety and is therefore not a hazard to aircraft safety
- The GWF does not require aviation obstacle lighting
- The GWF will not impact on:
  - o The Obstacle Limitation Surface (OLS) of any certified aerodromes
  - The Lowest Safe Altitudes (LSALT) for air routes in the vicinity
  - The Procedures for Air Navigation Services Aircraft Operations (PANS-OPS) protected airspace associated with the Instrument Approach Procedures at Yarram and LaTrobe Valley certified aerodromes
  - The performance of civil Air Traffic Control (ATC) Communications, Navigation Aids and Surveillance (CNS) facilities
  - O The performance of Military Air Traffic Control (ATC) Communications, Navigation Aids and Surveillance (CNS) facilities at RAAF East Sale

Consultation with both Airservices Australia and the Department of Defence confirms that the GWF will not have an impact on designed instrument approach procedures, CNS facilities, ATC operations or military facilities.

The Proposed GWF Project does not require obstacle lighting as the risk to aviation is LOW and no additional mitigating strategies are required.

A discussion on impacts of the Proposed GWF Project on aerial fire-fighting is also contained in the AlA. Here it is noted, from a South Australian Country Fire Service fact sheet entitled Aerial Firefighting, that "although aircraft are often the most visible part of the response to fire, and therefore believed to be the most important, almost all fires are still extinguished by ground crews".

The Proposed GWF Project also complies with Victorian Country Fire Authority (CFA) recommendations regarding a minimum distance between turbines of 300 metres, providing "adequate distance for aircraft to operate around a wind energy facility given the appropriate weather and terrain conditions", as well as addressing ground-based fire-fighting requirements by provision of standing water supply and ingress/egress points requested by CFA.

The full Aviation Impact Assessment report can be found in **Appendix F**.

Airservices Australia, the Department of Defence, and other local operators would be informed of the construction layout in the lead-up to construction, and any other tall structures (meteorological monitoring masts) would be reported for inclusion on aeronautical charts.

# **Electro-magnetic Interference**

Potential electro-magnetic impact from the Proposed GWF Project has been addressed in the *EMI Assessment* (DNV 2 June 2023) (**Appendix G**). The GE Cypress 6.x-164 was chosen as the candidate model for this *EMI Assessment*.

The assessment found that turbines at the project may interfere with point-to-area services such as mobile phone signals, radio broadcasting and terrestrial television broadcasting, particularly in areas already experiencing poor or marginal signal coverage (areas immediately west of the project site are identified in the assessment). A range of potential mitigation options are available to rectify any difficulties, should interference to these services be experienced as a result of the operation of the wind farm – these options are detailed further in the Assessment.

The Assessment found there are no proposed wind turbines located within the diffraction exclusion zones for any point-to-point links passing over the project site. It also found that the project is unlikely to cause interference to any mobile radio or paging systems operated by emergency services.

DNV consulted with over 20 organisations operating services that may be impacted by the Proposed GWF Project (including point-to-multipoint links, emergency services, meteorological radar, and wireless internet) and all responses indicated that the wind farm is unlikely to have any material impact on their services.

A key recommendation from the Assessment is to engage with various operators in the lead-up to and during construction and early operation of the Proposed GWF Project to address any issues that may arise impacting on radio frequency services as the development progresses.

A pre-construction reception/signal assessment program (covering TV, mobile phone, fixed wireless broadband internet, and CB radio) is planned by the Proponent to gather feedback from owners of dwellings in the project vicinity (focussed primarily on areas identified in the *EMI* Assessment as having poor or marginal signal coverage, and the specific dwellings identified in Table 16 of the Assessment) which will constitute baseline signal quality data.

### **Transport**

The potential impact on traffic as a result of the Proposed GWF Project has been considered by Stantec Australia Pty Ltd (formerly Cardno) in a *Traffic Impact Assessment (TIA)*. In assessing the traffic impacts and associated mitigation measures, consideration has been given to suitability of roads within the Wind Farm area to accommodate traffic generated by the Gelliondale Wind Farm project and over dimensional (OD) and over-size, over-mass (OSOM) haulage route options between Port Anthony and the Wind Farm site for WTG components and other major imported componentry.

Traffic generation scenarios including external traffic associated with materials haulage (bulk construction materials and WTG/major components) and staff vehicles during the wind farm construction, operational traffic generated across the life of the Wind Farm, and Post operation traffic generated during the Wind Farm decommissioning phase.

Stantec found that, having consideration for the base traffic levels and the anticipated traffic generated by the Wind Farm during the construction and operation of the Wind Farm, it is expected that the Wind Farm traffic will be reasonably accommodated by the public roads with negligible impact.

The Traffic Impact Assessment includes an over-size, over-mass (OSOM) route assessment of the planned component delivery route from Port Anthony (Barry Beach) to the project site, and provides large-scale plans of turning circles at key intersections from Port Anthony to project site access points.

#### The TIA concludes that:

- As proposed, the Wind Farm project and proposed access road network will limit external traffic generated during construction to staff vehicles, HV traffic associated with external bulk materials haulage and OSOM vehicles associated with WTG and other major component delivery. Internal construction traffic will be limited to new internal access tracks to be constructed as part of the Wind Farm;
- At the time of peak construction activity (expected to be an about 2 to 3 month period commencing about 10 months into the construction phase), the indicative external traffic generated by the Wind Farm will add approximately 400 vehicles per day on the surrounding road network including 300 HV and OSOM vehicles and 100 light vehicles. This will be in addition to the existing traffic on all external roads;
- Based on the existing capacity of the surrounding road network, the traffic generated by the Wind Farm during the construction and operation periods will be accommodated with minimal impact;
- Subject to the resolution of specific traffic management requirements and procedures, the identified primary OSOM vehicle route option from Port Anthony to the Wind Farm site for the transport for WTG and other imported major components has been assessed and is suitable for OSOM transport vehicles;
- Native vegetation removal at the project site amounts to only 0.61Ha, while the transport route (blade turning circles) external to the site will result in the removal of an additional 0.65Ha of native vegetation, including two (2) large trees (as a result of minor infill of material required to support truck movement and turbine blade overhang necessitating clearance); and
- It is anticipated that the preparation of relevant transport management plans will be completed as required for specific deliveries throughout construction.

### The full TIA report can be found in **Appendix L**.

In consultation between the proponent and the facility owners at Port Anthony it has been confirmed that wind farm component delivery from foreign or other Australian ports to Port Anthony can take place directly. Due to the project consisting of only 13 wind turbines, the scheduled component delivery loads are expected to be accommodated on vessels capable of safely navigating the channel depths at Port Anthony. Components brought to Australia on larger vessels that may exceed the navigable depth there can be transferred onto smaller vessels at ports elsewhere (e.g., Hastings, Melbourne, Geelong, Portland, or even Newcastle) before being transferred again to road transport at Port Anthony.

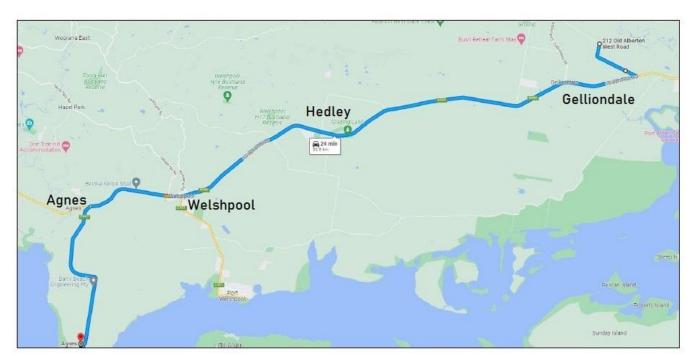


Figure 23 - Road Transport Route – Port Anthony to Gelliondale Wind Farm

The short distance between Port Anthony and the Gelliondale Wind Farm site (just over 30 kilometres by road from the port to the eastern-most access point) offers a short, direct route for component delivery with impacts limited to minor levels of native vegetation removal, a small amount of intersection upgrade work required (infill of verges at 7 of the 10 intersections assessed, 3 x culvert upgrades), and a low level of traffic flow disturbance which would be controlled according to construction protocols under a Traffic Management Plan.

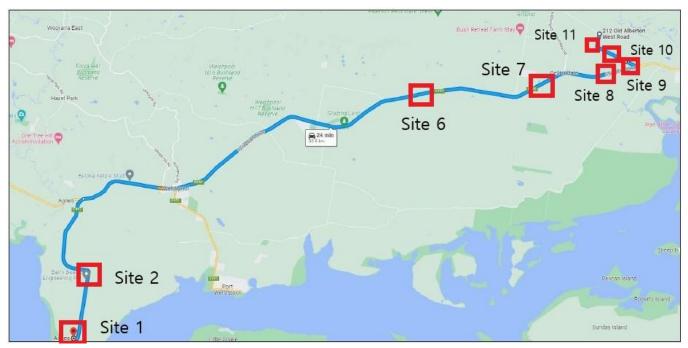


Figure 24 - Road Transport Route - Intersections with vegetation or minor works impact; see TIA Site Plans (Appendix L)

### **Risk Management and Fire Safety**

CFA was consulted regarding the Project and the proponent took advice in the form of static water supply requirements, firebreaks, infrastructure setback and increasing the number of access points into and out of the proposed substation and BESS area. The risk of fire in relation to development of the Proposed GWF Project has been also been assessed in a fire safety study as part of a risk management plan, investigated and compiled by Fire Risk Consultants Pty Ltd in order to address bushfire risk according to the Victoria Planning Provisions, Clause 13.02-1S (Bushfire Planning), through bushfire hazard identification and assessment as recommended as recommended in the CFA document, Design Guidelines and Model Requirements Renewable Energy Facilities.

The Gelliondale Wind Farm and Battery Energy Storage System (BESS) – Risk Management Plan (Including Fire Safety Study) found that the entire development can occur safely if the requirements set out in the risk assessment are implemented and development of Fire Management and Emergency Management Plans in consultation with the CFA.

Further, the study concludes that, while there is no doubt that a wind turbine can present fire risks if not designed, constructed, commissioned and operated effectively, the design of the Proposed GWF Project will contribute to a reduction in the potential for bushfire to enter or leave the Project Area.

Specific measures (such as fire-breaks, setbacks and separation distances, as well as fire-fighting equipment requirements) are detailed in the study to aid in the design of critical project components that will prevent and mitigate risk. The study recommends continued observance of CFA guidelines on renewable energy facility

development, and provides the basis for development of Fire Management and Emergency Management Plans as part of the overall construction and operational Plans.

During detailed design and pre-construction phases recommendations on fire prevention, mitigation, and suppression will be applied in accordance with all relevant standards and permit conditions, including a full suite of management plans which it is expected will contain conditions informed by the recommendations of the FRC Risk Management Plan and Fire Safety Study.

The full Gelliondale Wind Farm and Battery Energy Storage System (BESS) – Risk Management Plan (Including Fire Safety Study) can be found in **Appendix Q**.

# **Decommissioning & Rehabilitation Plan**

The operational life of the Proposed GWF Project is expected to be around 35 years after which time the facility may be decommissioned and removed, or repowered with new turbines (subject to a further planning application if required, and also subject to technological advancements in wind and other renewable generation sources). Decommissioning is essentially carried out in reverse order to the construction phase – wind turbines are dismantled and removed, and the site rehabilitated to a state similar to the existing conditions in the project area. Underground infrastructure will be removed or left in situ (only below 500mm depth), including the wind turbine foundations which would be ground back to below ground level and backfilled before returning to pasture or cropping use. Key decommissioning activities would be carried out in consultation with the land-owners to ensure that the land can be returned to agricultural use (i.e., some access tracks and gates may be retained at the request of the land-owner) and in accordance with the Planning Permit conditions. It is expected that Planning Permit conditions will specify a requirement for a decommissioning plan as well as a traffic management plan for decommissioning, which will set out all relevant details for decommissioning and rehabilitation.

### **Community**

The Gelliondale Wind Farm is proposed to exist in a rural community. The project has involved (participating) landowners, and it has immediate and near neighbours. Since inception, Gelliondale Wind Farm has sought to communicate effectively with these neighbours and the broader community. Starting in August 2021, courtesy notification was sent to Councillors of the Coastal Ward of the Wellington Shire Council, and State and Federal elected representatives, informing them of the new project and the simultaneous commencement of engagement with near neighbours, community members and other stakeholders. Phone calls to near neighbours were made, and in accordance with a Community Engagement Strategy commissioned from Clifton Stakeholder Services of Melbourne, information material was produced and delivered to as many recipients as could be found within about 3km of the project site.

The draft Gelliondale Wind Farm Community Engagement Strategy has been revised and updated several times during the development of the project to this point. This Strategy outlines the approach, methods and tools for effective engagement and communication with the community and other stakeholders throughout the life of the project. It is anticipated that the Strategy will continue to evolve and adapt to community expectations and project realities as development continues and other phases of the project (e.g., construction, operation) commence and progress.

The Strategy includes tools for documenting what has occurred during the development phase and plans for further engagement during development, pre-construction, construction, operation and decommissioning of the proposed Gelliondale Wind Farm, including a complaints handling process.

The Strategy has been developed in line with the guiding principles of the International Association for Public Participation (IAP2) — an international standard in community engagement practice.

The objectives of this Strategy are to:

- provide a framework for honest, innovative, flexible and transparent community engagement
- keep local residents and all stakeholders informed about project activities and any potential impacts by providing timely information
- provide an avenue for local residents and the broader community to provide input into how potential impacts could be managed to reduce or mitigate those impacts
- provide an avenue for the community to communicate with project personnel
- provide a protocol to record and respond to community queries and complaints
- inform the community and stakeholders about the benefits of the project, involve them in how those benefits are shared and inform them of progress in meeting performance targets in relation to those benefits
- ensure the commitments made to the community are monitored, evaluated and reported on.

The Strategy objectives inform and outline a series of objectives of the engagement itself. Gelliondale Wind Farm's engagement objectives are derived from the IAP2 Core Values and have been tailored to the specific needs of the local community:

- We will engage respectfully with the local community, including Traditional Owners of the land, throughout the life of the project.
- We will provide timely information and be accessible and responsive in addressing community feedback and concerns throughout the life of the project.
- We will be sensitive to areas of high biodiversity, cultural and landscape value in the design and operation of the project.
- We will minimise the impacts on highly productive agricultural land and explore opportunities to integrate agricultural production.
- We will consult with the community on the potential visual, noise, traffic and other impacts of the project, and on mitigation options.
- We will support the local economy by providing local training, employment and procurement opportunities.
- We will offer communities the opportunity to share in the benefits of the project.
- We will commit to supporting and creating opportunities for specified target groups and local initiatives to build social and industry capability.

Community and other stakeholders have been offered regular opportunities to engage directly with the project team — either face-to-face, over the phone or via correspondence.

These opportunities have been facilitated through direct phone contact, door knocks, correspondence, project advertisements, surveys and via the project information centre and website. This community and stakeholder engagement activity is ongoing.

The Proposed GWF Project includes a planned commitment (should the project be permitted to proceed) to providing ongoing, meaningful support to the host community during the life of the project, through a Community Benefit Program.

A draft Gelliondale Wind Farm Community Benefit Program has been developed for consultation with the community and other stakeholders. Community members are welcome to provide ideas, feedback and comments on the proposed structure and funding intentions of the Community Benefit Program.

As part of its commitment, Gelliondale Wind Farm will establish a grants program initially conceived to support local landholders neighbouring the site as well as local community projects.

The fund will distribute between \$160,000 and \$240,000 a year among neighbours and community organisations. The Community Benefit Program grants distribution will (subject to further feedback and the structure of the finalised program) include:

- Near Neighbours Grant (Band 1) through which landholders with their main residence within 1 to 1.2 kilometres of a turbine will be eligible for a grant of \$2000 per annum.
- Neighbours Grant (Band 2) through which landholders with their main residence between 1.2 and 1.5 kilometres of a turbine will be eligible for a grant of \$1000 per annum.
- Community Benefit Grant through which grants will support outstanding local community activities and programs. An annual amount of \$24,000 will be set aside to support community activities such as initiatives by sporting clubs, art and music programs, tourism promotions, senior and youth programs and agricultural events. Another \$24,000 will be distributed to local Indigenous, environmental and land management projects including wildlife recovery and habitat restoration as well as housing, health and youth safety initiatives.

It is proposed that applications for grants will be reviewed and funds distributed annually by a committee that will include representatives (or their delegates) from Wellington Shire; the Environment Protection Authority Victoria; the Department of Energy, Environment and Climate Action; and a representative of Gelliondale Wind Farm.

In addition to the Community Benefit Program, the project benefits include:

- the creation of sustainable local employment during construction and operation
- a commitment to engaging local and regional Victorian suppliers and manufacturers wherever possible
- a commitment to develop local initiatives that provide social benefit

a commitment to optimise environmental, cultural and sustainability outcomes. As mentioned above, engagement with the local community and provision of information, as well as other stakeholder consultation, is ongoing, with the Information Centre at 310 Commercial Road, Yarram, continuing to operate as the development is preparing its application material for the planning permit assessment. Draft versions of the supporting studies for this permit application have been made available, and updated from time to time, for viewing by interested community members at the Information Centre, and the versions accompanying the December 2022 EES referral submission are published in full on the project website.

### The Community and the Gelliondale Wind Farm during planning assessment

Upon submission of the planning permit application the community will continue to have access to the project Information Centre in Yarram and the project website (<u>gelliondalewind.com</u>). The website will be updated with all the final versions of the supporting studies accompanying the application.

The Proponent will proceed with consultation and engagement activities, providing updates on the planning assessment and EPBC processes as they become known, seek further input on the draft Community Benefit Program and seek feedback from the community on a possible wind farm viewing area, which has been raised in consultation with Regional Roads Victoria.

Individuals making submissions to the planning process will be welcome to request information or ask any questions about the project, and Gelliondale Wind Farm will also offer further community information sessions on matters of

concern or interest at the Information Centre in Yarram, if requested during the planning application exhibition period.

#### The Community and the Gelliondale Wind Farm under construction

Planning and associated approvals are expected to take approximately 6-9 months. During this time, detailed design and various pre-construction activities will take place. The timing of construction would commence between 8-12 months post development approval, depending upon the season (civil works are not likely to be undertaken during winter) and the lead time for turbine delivery. A construction period of 12-18 months is expected.

Employment in the region during construction phase is anticipated to be around 50 construction workers plus additional employment generated by procuring local services. Indirect employment during the construction process is expected to contribute to jobs generated locally, elsewhere in the state, and nationwide.

The comprehensive Construction Environmental Management Plan (CEMP), to be implemented via Planning Permit conditions, will guide and inform all activities during the construction phase, and will address issues such as:

- sediment, erosion, and water quality
- drainage management
- pest plants and animals
- emissions, dust, odours
- traffic management
- excavated material management
- general construction works area management

The draft Gelliondale Wind Farm Community Engagement Strategy already addresses engagement issues foreseen during the pre-construction/detailed design, construction and operational phases of the project, and suggests systems and processes to appropriately manage contacts, correspondence, complaints and enquiries.

During construction, Gelliondale Wind Farm will use communication/consultation management software operated by dedicated staff to record details of all contact and correspondence with stakeholders and the community. This program will be regularly updated and will be used to:

- record all contact with stakeholders and the community and the actions resulting from those contacts
- track the progress and closeout of enquiries and complaints
- identify trending issues and opportunities
- enable the implementation of mitigation strategies
- maintain accurate contact details of stakeholders
- prepare regular reports on communication and engagement activities.

#### <u>Signage</u>

Informational and directional signs will be installed at entry points to the wind farm site prior to the start of construction and during operations at relevant and appropriate locations. The signs will include a brief overview of the project, the contact phone number and email for the project and an after-hours number, if applicable, for any urgent complaints.

#### **Enquiry management process**

During construction, Gelliondale Wind Farm will:

- manage and respond to all enquiries regarding the project
- provide a response in accordance with established timeframes

- refer enquiries not associated with our activities to the relevant authority, if known
- record all interactions with the enquirer
- provide an overview of enquiries, including status, in line with regular project team reporting.

#### **Complaint management process**

During construction, Gelliondale Wind Farm will:

- respond to all complaints regarding the project
- investigate and determine the source of a complaint immediately, including an initial call to the complainant (where a telephone number is available)
- provide a response in accordance with established timeframes
- keep the complainant informed of the process until the complaint is resolved
- take action and implement measures to prevent the reoccurrence of the complaint where possible
- record details of the complaint in a Complaints Register
- refer complaints not associated with our activities or the project to the relevant authority, if known
- provide an overview of complaints, including status, in line with regular project team reporting.

Complaints received by a contractor or subcontractor will also be included on the Complaints Register and will include:

- date of complaint
- complainant details
- issue raised
- response time
- whether required response times were met
- status outstanding, in progress or closed.

#### The Community and an Operating Gelliondale Wind Farm

The anticipated implementation of the Proposed GWF Project has an overall expected timeframe of 26-39 months as outlined above.

As the construction phase draws to a close, commissioning of the wind turbines and testing programs at the Substation/BESS facility will take place, in line with general site rehabilitation as part of the CEMP, implemented via Planning Permit conditions.

It is anticipated that the same systems for enquiry management and complaint handling, as evolved and updated from development and construction phases, would continue to be employed during the operational and decommissioning phases of the project life. This is essential as a means of addressing any concerns around compliance with operating conditions, such as noise emission enquiries or complaints.

In Summary, the application requirements as specified in clause 52.32-4 are met as demonstrated above.

## 5. OTHER LEGISLATION

#### 5.1 Environmental Effects Act

The Gelliondale Wind Farm Project was referred to the Minister for Planning on 19 December 2022 for a decision as to whether an environmental effects statement (EES) should be prepared. It was determined by the Department that given the earlier larger Alberton Wind Farm proposal over the same but larger study area had already been assessed by the Department, as not warranting an EES to be prepared, the Gelliondale Wind Farm proposal did not warrant a detailed assessment by the Department as to whether an EES was required. The Department was comfortable relying on its previous assessment that no EES was required for the new Gelliondale project layout.

# 5.2 Environment Protection and Biodiversity Conservation Act (EPBC Act) – Bilateral Agreement

A referral of the Gelliondale Wind Farm Project under the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) has been made to the federal Minister for the Environment and Water on 12 June 2023.

The EPBC Referral Decision 'Controlled Action' and assessment approach 'assessment by public environment report' was received on 17 October 2023.

Guidelines from DCCEEW for Public Environment Report were due for completion on the 17 November 2023.

# 6. PLANNING ASSESSMENT - STRATEGIC PLANNING JUSTIFICATION - STATE AND REGIONAL SIGNIFICANCE

#### 6.1 Municipal Planning Strategy (MPS)

Clause 02 of the Wellington Scheme 'Municipal Planning Strategy (MPS)' outlines the strategic objectives for the Shire of Wellington and local implementation of State planning objectives.

The Wellington Vision is outlined in clause 02.02. It outlines that the 2021-2025 Council Plan sets the strategic actions, priorities, and key projects that seek to facilitate this vision. The plan is centred on five key priority areas which includes noting that:

- Climate change is the biggest challenge and priority facing the Shire. At the current emission levels, future impacts on our people will be significant. Wellington seeks to be a climate resilient community with sustainable practices and places.
- There is great opportunity to diversify and transition our economy to encourage job growth and take
  advantage of several exciting sunrise (growth) industries, the best prospect being the renewable energy
  industry.

Clause 02.03-6 lists environmentally sustainable green energy as an important industry for Gippsland.

The Study Area is located within Planning Unit 5 – Strzelecki (north of South Gippsland Hwy) and Unit 8 Coastal (south of South Gippsland Hwy).

The Scheme notes the strategic contribution of farming to the Shire's agricultural economy from these areas. The development of a wind farm will not conflict with farming activities, and a significant amount of work has been done with participating landowners, to ensure that the proposed layout does not hinder farming activities. In addition, the proposed GWF Project will provide valuable additional, regular and guaranteed farm income that will assist to maintain the viability of farming in the area.

The proposed GWF Project will contribute to strengthening and diversifying a new sustainable economic base for the Shire of Wellington and contribute to the new green energy image being sought for the wider Latrobe area. In addition, the proposal does not hinder potential future exploitation of the brown coal resources recognised in the Wellington Scheme Significant Resource Overlay, should extract become viable in the future, within Australian commitments to reduce production of greenhouse gases.

The Proposed GWF Project makes a valuable contribution to the Victorian Government objective to reduce emissions from electricity generation by 45 – 50% below 2005 levels by 2035, supporting the reliability of Victoria's electricity supply, putting downward pressure on electricity prices and creating investment in a new renewable energy project in the State.

# 6.2 State Planning Policy Framework

The State Planning Policy Framework (Clauses 11 to 19 of the Shire of Wellington Planning Scheme) provide the strategic justification for the proposed GWF Project.

Provision of Renewable Energy for Victoria

Clause 19.01-2S 'Renewable Energy', has the objective to:

To support the provision and use of renewable energy in a manner that ensures appropriate siting and design considerations are met.

This will be achieved by (Strategies):

- Facilitate renewable energy development in appropriate locations.
- Protect energy infrastructure against competing and incompatible uses.
- Set aside suitable land for future energy infrastructure.
- Consider the economic and environmental benefits to the broader community of renewable energy
  generation while also considering the need to minimise the effects of a proposal on the local community and
  environment.
- Support wind energy facilities in locations with consistently strong winds over the year.

In achieving the Renewable Energy Objective, planning proposals must consider the "Policy and Planning Guidelines for Development of Wind Energy Facilities in Victoria" (Guidelines) 2021 (refer to assessment in following Chapters).

# Victorian Government – Renewable Energy Target

In 2017, the State Government announced the Victorian Renewable Energy Target for generation of 25 per cent renewable energy generation by 2020, 40 per cent by 2025, and 50% by 2030.

In October 2022, an intention to legislate updated targets was announced. This would include an updated 65% renewable energy generation target for 2030, and add a 95% target by 2035.

Energy storage targets of at least 2.6GW of storage capacity by 2030 and at least 6.3GW by 2035 are also intended to be legislated.

By generating enough clean energy from renewable sources to power about 37,000 homes, and providing an anticipated 40MW of battery storage capacity, the Proposed GWF Project makes a valuable contribution towards these targets.

#### Supporting Gippsland Regional Growth

In considering the policy objectives and strategies for the Gippsland region, planning must consider as relevant, the Gippsland Regional Growth Plan (Victorian Government, 2014) which includes the following Objectives:

A Diversified Economy (Clause 17.01-18) – To strengthen and diversify the economy.

**Innovation and research-(17.01-2S)** – To create opportunities for innovation and the knowledge economy within existing and emerging industries, research and education.

Clause 11.01-15 'Settlement' refers to the Gippsland Regional Growth Plan (Victorian Government, 2014) which highlights the strategic importance of wind energy facilities to the future prosperity of the Gippsland Region:

"the Gippsland region's economy is predominantly driven by its abundant natural resources such as productive agricultural land and earth resources" (p19).

"Energy, gas, water, mining, construction and defence are other key sectors that drive the Gippsland economy and create significant benefits for employment, exports and wealth creation" (p19).

"Gippsland will need to move to a low-carbon economy and diversify its economic activities. The region is in a position to take advantage of its existing assets and resources in energy" (p19).

The Gippsland Regional Growth Plan (State of Victoria, 2014) aims to achieve these goals by (Strategies):

- Facilitate and manage access to earth resources where appropriate, including sand and stone, minerals and renewable energy potential.
- Support transition to a low-carbon economy with renewable energy and greenhouse emission reductions including geothermal, clean coal processing, and carbon capture and storage.

Section 1.7 of the Gippsland Regional Plan 2020-2025 (State of Victoria, Committee for Gippsland) considers wind farms as part of Gippsland advantage, stating that Gippsland is:

A leading traditional energy producer using coal, gas and oil reserves, Gippsland also has promising offshore carbon capture storage sites, high quality on and off-shore wind conditions and good solar conditions, which provide exciting opportunities for ongoing sustainable renewable and clean energy production.

We (Gippsland) also have an efficient high capacity high voltage transmission and switch yard network that transmits energy to Melbourne, the national electricity grid, and Tasmania. This capacity is a key energy advantage for Gippsland, enabling carriage of significant volumes from new energy sources to key markets. (Page 9)

In discussing the future of energy, the report notes that:

Gippsland is emerging as an exciting renewable and clean electricity region. With three onshore windfarms in our south, Gippsland has prime locations and conditions for further onshore and offshore wind generation, as well as solar farms, battery storage and biomass facilities.

Our renewable and clean energy opportunities are amplified by Gippsland's significant advantages of legacy high-capacity electricity transmission network, support businesses and power industry trained workforce, that also support the declaration of Gippsland as one of Australia's Renewable Energy Zones.

The Regional Plan identifies new energy as a priority and seeks to encouraging innovation and investment to sustainably grow new energy of as one of the 5 key industries in Gippsland.

Clause 13.02-1S has also been considered in the report by Fire Risk Consultants as discussed in the previous section titled Risk Management and Fire Safety.

This section provides an assessment of the Proposed GWF Project against the applicable Wellington Scheme planning controls and policy provisions including the Policy and Planning Guidelines for Development of Wind Energy Facilities in Victoria (Victorian Government, 2021).

#### 6.3 Planning Zones

The project site is generally all contained within the Farming Zone, apart from one lot which is in the Industrial Zone One, however this industrial zoning somewhat of an anomaly in the area (covering a small area) and is due to the presence of the former briquette operations. A wind energy facility is an appropriate use in the industrial zone, especially in the context of this site in its rural setting. The land around the briquette operations site is used for agricultural purposes identical to that on adjacent lots of the same property.

The proposal will not have a significant impact on the use of the land for agriculture. Agricultural activities in the area are generally low intensity agricultural uses and the location of the wind energy facility over the land will not have a significant impact on agricultural production. The proposal will not adversity affect the use of the land for agricultural purposes as the majority of the land will continue to be able to be used for agricultural purposes after the wind energy facility is constructed and operational.

In line with the purpose of the zone the wind farm will encourage the retention of employment and population to support rural communities.

Most constructed wind farms in Victoria are located in the Farming Zone, and the Farming Zone has been found to be a suitable zone for wind energy facilities.

In Summary:

The proposal does not present a land use conflict for the ongoing use of the subject land or surrounds from the primary purposes of agriculture.

#### 6.4 Planning Overlays

Appendix C of this report shows the proposal in relation to planning scheme overlay over and near the application area.

#### State Resource Overlay (SRO)

The majority of the site is subject to the State Resource Overlay. The schedule to the overlay lists the relevant resource as Gippsland Brown Coalfields. The Statement notes that:

The Gippsland Coalfields provide a secure long term energy source for base load power generation in Victoria, as well as providing a unique opportunity for other related significant developments.

A wind energy facility is not noted as a development or use requiring a planning permit under this overlay.

The management objectives of the land note that the land use over the resource should be of a type that will not inhibit, by way of community significance or cost of removal, the eventual productive use of that resource. The relatively small footprint of the wind energy facility and the requirement for decommissioning will ensure that eventual productive use of the coal resource is not inhibited.

#### In Summary:

- The proposed wind farm facility can co-exist with the coal resource.
- The proposed Wind Energy Facility and Utility installation is not subject to specific approval under the SRO.
- The proposal will not significantly inhibit the eventual development or use of the coal resource.
- The subject proposal is appropriate in this overlay and its approval would not prejudice the future productive
  use of the resource, if State government policy were to change to support the development of coal
  resource.

#### Heritage overlay (HO) and Design and Development Overlay (DDO1)

One turbine (GWT04) is located in proximity to Heritage Overlay HO81 (Gelliondale Briquette Plant). The recorded area of the historical site, which is recorded on the Heritage Register (H1058) and the Heritage Inventory (H8220-0008) lies 40 metres to the north and approximately 100m west of the proposed location for Turbine GWT04. Part of the project area is also subject to the Design and Development Overlay (DDO1), however this relates to industrial development, hence is it not particularly relevant to this submission, and its guidelines can easily be met.

The proposed turbine, crane pad and associated infrastructure will not impact on the industrial historical site and no works are proposed within HO81. As noted, the proposal has been assessed by Biosis and the project has been found to not give rise to any impacts from a historic heritage perspective. See appendix M for the assessment by Biosis.

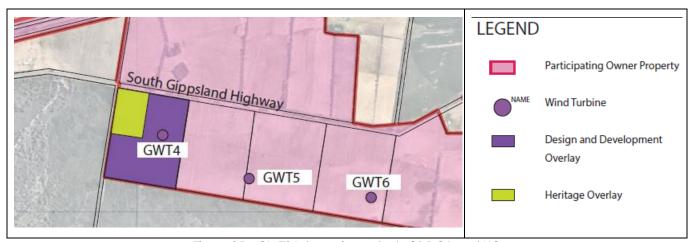


Figure 25 – GWT04 shown in context of DDO1 and HO

#### In Summary

• There is low potential for the proposed turbine (GWT04) and crane pad to impact the Gelliondale Briquette Plant, the proposed development does not adversely affect the significance of heritage place.

#### **Bushfire Management Overlay (BMO)**

Turbines GWT05 & 06 are located within the BMO and 3 other turbines are located close to the BMO boundary. The whole of the site area is also located within a designated Bushfire Prone Area. Assessment of fire risk has been undertaken by Fire Risk Consultants and their report can be found in Appendix M. The report found that the proposal is acceptable in the context of the site, and that provided due process is followed and managed that the proposal is acceptable in the context of this location.

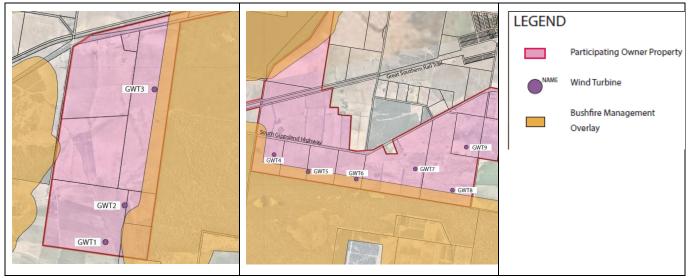


Figure 26 – Turbines shown in context of BMO

#### In Summary

• The proposal and management controls as proposed successfully address the risk to life and property from bushfire such that any risk can be reduced to an acceptable level.

#### Land Subject to Inundation Overlay (LSIO)

The eastern edge of the application area is also subject to a Land Subject to Inundation Overlay, however no infrastructure is proposed to be developed within the LSIO area. The nature of the proposed development is that it can successfully be built in flood prone areas. The nature of the development means that the free passage and temporary storage of floodwaters is maintained, the proposal will not be at risk from flood damage, is compatible with the flood hazard and local drainage conditions. The proposal will also not cause any significant rise in flood level or flow velocity as no structures are proposed to be located within area specifically located within the LSIO area.

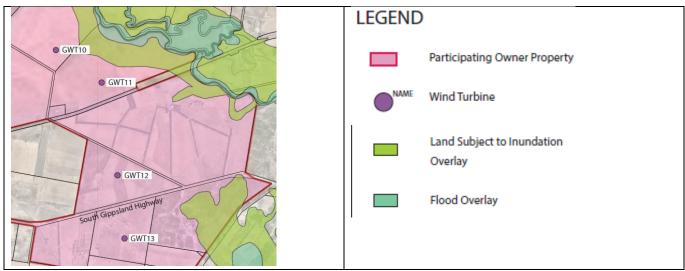


Figure 27 – Turbines shown in context of LSIO

#### In Summary

• The Project infrastructure is located well outside of the LSIO area and therefore is not subject to the requirements of the LSIO.

#### 6.5 Municipal Planning Strategy (MPS)

Clause 02 of the Wellington Scheme 'Municipal Planning Strategy' (MPS) outlines the strategic objectives for the Shire of Wellington and local implementation of State planning objectives.

The Study Area is located within Planning Unit 5 – Strzelecki (north of South Gippsland Hwy) and Unit 8 Coastal (south of South Gippsland Hwy). The Scheme notes the strategic contribution of farming to the Shire's agricultural economy from these areas and that conflicts have risen over years between "lifestyle living" and forestry activities. The proposed GWF Project is located over farmland that is very productive given the rainfall off the Strzelecki Ranges.

The development of a wind farm will not conflict with farming activities, and a significant amount of work has been done with participating landowners over the last three years, to ensure that the proposed layout does not hinder farming activities. In addition, the Proposed GWF Project will provide valuable additional, regular and guaranteed farm income that will assist to maintain the viability of farming in the area.

The Proposed GWF Project will contribute to strengthening and diversifying a new sustainable economic base for the Shire of Wellington and contribute to the new green energy focus being sought for the wider Latrobe area. In addition, the proposal does not hinder potential future exploitation of the brown coal resources recognised in the Wellington Scheme Overlay, should extraction become viable in the future, within Australian commitments to reduce production of greenhouse gases.

The Proposed GWF Project makes a valuable contribution to the Victorian Government's Renewable Energy Target for generation of 40 per cent by 2025 and 50% by 2030.

## In Summary:

The proposal accords with the Municipal Planning Strategy by responding to the Wellington Vision at Clause 02.02 in that the proposal:

- Addresses climate change, and will provide a sustainable renewable energy facility within the shire.
- Is a great opportunity to diversify and transition the local economy to encourage job growth and take advantage of renewable energy industry proposals.

# 6.6 Local Planning Policies

There are no specific relevant Local Planning Policies which are relevant to this proposal.

#### 6.7 Particular Provisions

#### Clause 52.32-1 to 4 – Use and Development, and Application Requirements

Clause 52.32-2 specifies that A permit is required to use and develop land for a wind energy facility. The table to clause 52.32-2 nominates locational criteria and condition requirements. The proposed GWF Project meets all locational criteria and conditions and the application requirements as specified in clause 52.32-4.

Location	Conditions	Compliance with Condition
On land where any turbine that	Must meet the requirements of	Meets the requirements of
forms part of the facility is	clause 52.32-3.	Clause 52.32-3 as
located within one kilometre of		demonstrated in section 4 of
an existing dwelling. This does		this report and also as
not apply to a Wind energy		demonstrate by the owner
facility that is located on land in		consents in Appendix B of this
a residential zone, an industrial		report
zone, a commercial zone or a		
special purpose zone.		
Land described in a schedule	Must be principally used to	The project is not proposed on
to the National Parks Act 1975	supply electricity to a facility	any land listed in a schedule to
	used in conjunction with	the National Parks Act 1975
	conservation, recreation,	
	administration or	
	accommodation use of the	
	land.	
Land declared a Ramsar		The project is not proposed on
wetland as defined under		land declared a Ramsar
section 17 of the Environment		wetland as defined under
Protection and Biodiversity		section 17 of the Environment
Conservation Act 1999 (Cwth)		Protection and Biodiversity
		Conservation Act 1999 (Cwth)
Land listed in a schedule to	Must be on land in a residential	The project is not within five
clause 52.32-2	zone, industrial zone,	kilometres of a residential zone,
	commercial zone or special	an industrial zone, a business
	purpose zone and must be	zone or a special purpose zone
	integrated as part of the	in the urban area of Sale.
	development of the land.	

## Turbines within one kilometre of a dwelling

Clause 52.32-3 requires applications with wind turbines proposed to be located within one kilometre of existing dwellings to provide evidence of consent by residents including a signed consent form and map. Copies of the relevant consents are contained in **Appendix B**. Distance Survey Reports have been completed which also demonstrate that no 3<sup>rd</sup> party dwellings are within 1km of any proposed turbines as defined in the scheme (refer to **Appendix S**).

#### Clause 52.17 Native Vegetation

While the proposal has been carefully designed to minimise the need for removal of native vegetation in accordance with Clause 52.17, removal of a limited amount of native vegetation will be required for the project as outlined in the flora and fauna report by Natural Advisory, see appendix D.

The proponent committed early in the process to reduce the removal of native vegetation to a minimum based on the results of Nature Advisory's field surveys and subsequent advice. Efforts to avoid and minimise impacts to native vegetation in the current application have been made in accordance with the guidelines. Full details of the matters taken into consideration to avoid and minimise the removal of Native Vegetation are included intended in the report by Nature Advisory.

#### Clause 52.29 – Land Adjacent to a road in a Transport Zone 2

For this proposal, the provisions of Clause 52.29 – Land adjacent to the Principal Road Network only apply to the South Gippsland Highway, which are zoned TRZ2 and therefore identified as 'principal road network'.

Pursuant to Clause 52.29-2, a permit is required to:

- create or alter access to a road in a TRZ2
- subdivide land adjacent to a road in a TRZ2.

As such, a permit is required for altering the intensity of use and the physical extent and layout of proposed site access points. A Traffic Impact Assessment has been undertaken by Stantec.

The proposal will not affect the operation of the roads, or have any impacts on public safety, pursuant to Clause 52.29. Limited additional road pavement is likely to be required at the site access points along the Highway, within the existing road reserve. Full details of the assessment of traffic and access as can be found in appendix L.

#### 7. CONCLUSION

The Project positively responds to the requirements of the Wellington Planning Scheme and the Policy and Planning Guidelines for Development of Wind Energy Facilities in Victoria Nov 2021.

The proposal will contribute to the achievement of renewable energy targets at both the State and Federal Government Level.

The Project will generate approximately 300 GWh of electricity per year, which will power approximately 37,000 average Victorian households and will contribute to approximately 320,000 tonnes of CO2 abatement per year.

The specialist reports concluded that the Project does not result in any significant impacts in respect of:

- Cultural Heritage;
- Bushfire Risk
- Traffic and Access
- Flora and Fauna; and
- Local amenity considerations such as Noise, Shadow Flicker and Visual Amenity.

The subject application will:

- give effect to the objectives of planning in Victoria and the State Planning Policy.
- respond to the Wellington Vision as outlined in the Municipal Planning Strategy.
- comply with the standards contained in the Policy and planning guidelines for development of wind energy facilities in Victoria 2021.
- meet Victorian government commitments regarding wind and renewable energy; and
- not result in any significant effects on the environment and will not create any significant social impact.
- Furthermore, the proposal will bring immediate and long-term economic and other benefits to the local community.

#### The proposal:

- Does not present a land use conflict for the ongoing use of the subject land or surrounds from the primary purposes of agriculture, nor any significant ongoing conflict in relation to the mapped Brown Coal resource.
- Has been verified by an environmental auditor who has approved of the reports prepared by Marshall Day for noise assessment.

Having regard to all of the above, to the detail provided in this application and to the various expert reports provided, the proposed development of the Project satisfies the requirements of the Wellington Planning Scheme and associated incorporated documents. It also supports both the State and Federal Governments Renewable Energy Targets, while adding investment into Wellington Shire producing local jobs and helping to diversify the economy.

On the balance considering all planning requirements and policy the proposed development of the Wind Energy Facility and associated use and development is an appropriate land use and development outcome.

#### **BEVERIDGE WILLIAMS**

APPENDIX A:

**CERTIFICATES OF TITLE** 

APPENDIX B: OWNERS WRITTEN CONSENT

APPENDIX C: PLANNING CONTEXT PLANS

APPENDIX D: GELLIONDALE WIND FARM, FLORA AND FAUNA ASSESSMENT (NATURE ADVISORY, JULY 2023) & BACKGROUND REPORTS

APPENDIX E: LANDSCAPE AND VISUAL IMPACT ASSESSMENT (HANSEN PARTNERSHIP PTY LTD, JUNE 2023)

APPENDIX F: AVIATION IMPACT ASSESSMENT, GELLIONDALE WIND FARM (CHIRON AVIATION CONSULTANTS, 22 MAY 2023)

APPENDIX G: (DNV, 02 JUNE 2023)

**GELLIONDALE WIND FARM – EMI ASSESSMENT** 

APPENDIX H:
AMENDED CHMP

CULTURAL HERITAGE ASSESSMENT

Note: Erratum

"The final approved CHMP document states throughout that 'the Activity Area measures approximately 14,668 hectares'. This is an error of thousands separation and should state that the Activity Area measures approximately 1,467 hectares."

# APPENDIX I: PRELIMINARY GEOTECHNICAL INVESTIGATION (GOLDER ASSOCIATES, 17 JANUARY 2017) – GENERAL BACKGROUND

APPENDIX J: GELLIONDALE WIND FARM, NOISE ASSESSMENT (MARSHALL DAY ACOUSTICS, ENVIRONMENTAL NOISE ASSESSMENT, 14 JULY 2023, AND BACKGROUND NOISE MONITORING, 9 JUNE 2023)

APPENDIX K: GELLIONDALE WIND FARM, SHADOW FLICKER AND BLADE GLINT ASSESSMENT (DNV, 23 MAY 2023)

APPENDIX L: JUNE 2023)

TRAFFIC IMPACT ASSESSMENT (STANTEC, 1

**APPENDIX M:** 

**PROJECT CONTEXT & LAYOUT PLANS** 

**APPENDIX N:** 

**PROJECT LAYOUT CO-ORDINATES** 

APPENDIX O: VERIFICATION REPORT BY ENVIRONMENTAL AUDITOR - NOISE (ARUP, 18 JULY 2023)

APPENDIX P: SYSTEM DETAILS

# SUBSTATION & BATTERY ENERGY STORAGE

APPENDIX Q: GELLIONDALE WIND FARM AND BATTERY ENERGY STORAGE SYSTEM (BESS) – RISK MANAGEMENT PLAN (INCLUDING FIRE SAFETY STUDY) (FIRE RISK CONSULTANTS, JUNE 2023)

APPENDIX R: GELLIONDALE WIND FARM - HISTORICAL HERITAGE LETTER OF ADVICE (BIOSIS, 31 MAY 2023)

APPENDIX S: REPORTS

LICENSED SURVEYOR DISTANCE SURVEY