

5. Planning Policy

This chapter will review the relevant sections of the Planning Policy Framework, Planning and Policy Guidelines for Development of Wind Energy Facilities in Victoria (January 2016) and identify the local planning schemes and provisions relevant to this assessment.

This is not intended to be a thorough review of the planning scheme, mechanisms and triggers as this is best undertaken by others. Rather this review seeks to identify areas or locations that may be of a particular landscape or visual significance when compared to other landscapes in the region and recognised or protected accordingly.

5.1 Planning Policy Framework (PPF)

The PPF sets out broad policy objectives to ensure uniform and consistent application of the planning scheme. The following Clauses are of relevance to an LVIA of the Project.

5.1.1 Clause 12.05-2S Landscapes

The objective of this provision is to protect and enhance significant landscapes and open spaces that contribute to the character, identity and sustainable environments. Key strategies include:

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

Local content to this clause is provided at Clause:

- *21.06 (Natural Environment) of the Baw Baw Planning Scheme;*
- *21.06 (Environmental and Landscape Values) of the South Gippsland Planning Scheme;*
- *21.03 (Environmental and Landscape Values) of the Latrobe Planning Scheme; and*
- *21.13 (Environment and Landscape Values) of the Wellington Planning Scheme.*

5.1.2 Clause 19.01-2S Renewable energy

Clause 19.01-2s seeks to promote the provision of renewable energy in a manner that ensures appropriate siting and design considerations are met. Key and relevant strategies include:

- *Facilitate renewable energy development in appropriate locations;*
- *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; and*
- *Recognise that economically viable wind energy facilities are dependent on locations with consistently strong winds over the year.*

5.2 Local Planning Policy Framework

The Project site is located within areas covered by the Baw Baw, La Trobe and South Gippsland Planning Schemes. While the Project viewshed also covers land located within the Wellington Planning Scheme. The majority of the Project boundary and viewshed is located within the Latrobe Shire.

Figure 5-1 shows the Project boundary and the 28.6 km viewshed in proximity to shire boundaries.

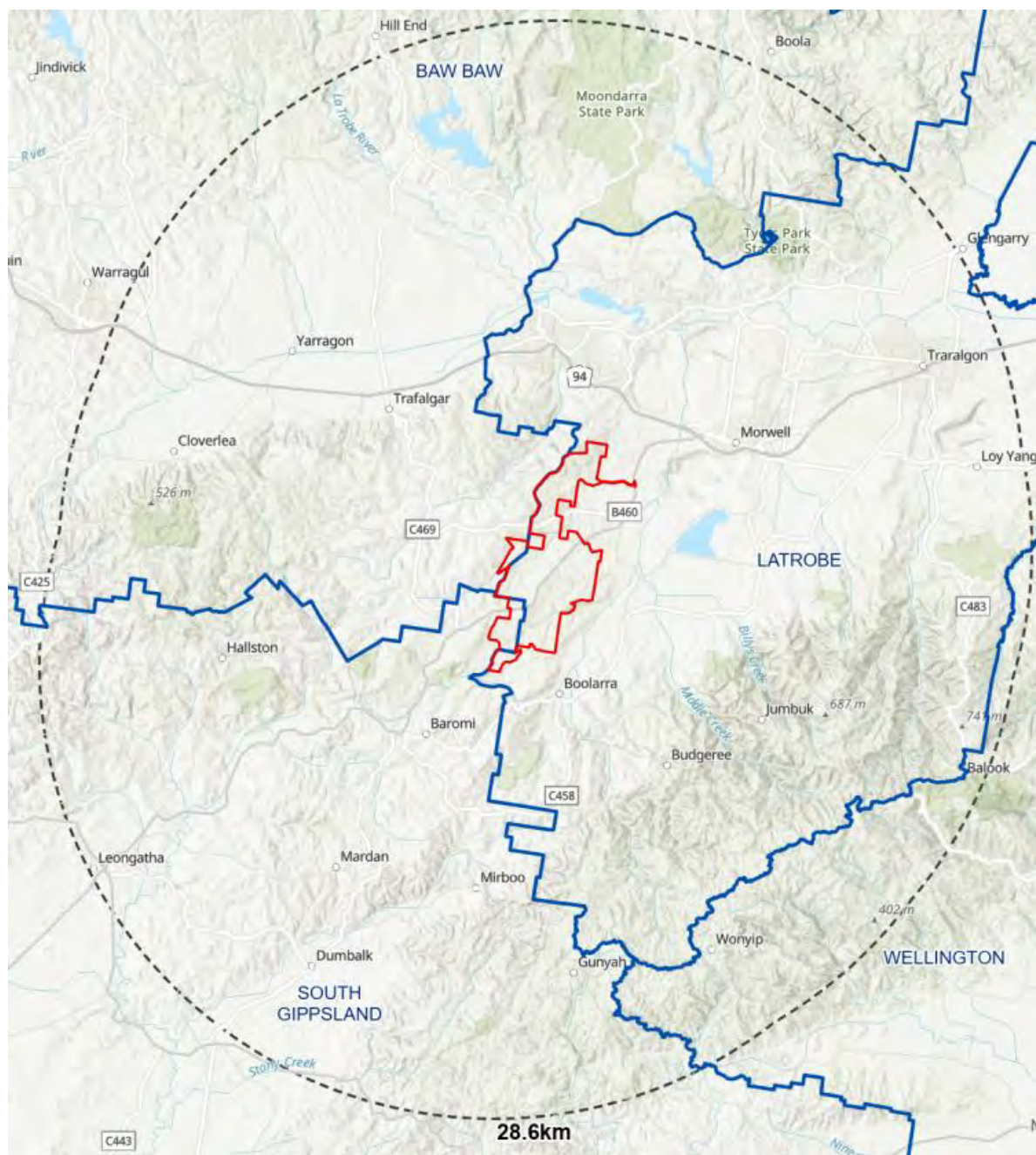


Figure 5-1: Project Boundary and viewshed relative to LGAs

The following clauses of the LPPF's described within the Baw Baw, South Gippsland, Latrobe and Wellington Planning Schemes are of relevance to this LVIA of the Project.

5.2.1 Baw Baw Planning Scheme – Clause 21.06 Natural Environment and Resource Management

Clause 21.06 describes the role that rural areas and significant water catchments play in the provision of the State's water and natural resources and the value placed on the pastoral, rural and bushland landscapes by residents and visitors. Key objectives of this clause relate primarily to the protection of:

- *Clause 21.06-3 Biodiversity*
- *Clause 21.06-4 Natural Resource Base*
- *Clause 21.06-5 Water Catchments*

- *Clause 21.06-6 Farmland and Soil Quality*
- *Clause 21.06-7 Forestry Operations*
- *Clause 21.06-8 Coal Resources*
- *Clause 21.06-9 Stone Resources*

5.2.2 South Gippsland Planning Scheme - Clause 21.06 Environmental and landscape values

Clause 21.06 describes specific coastal landscapes within the Shire that are of State or regional significance which include Venus Bay Peninsula and Anderson Inlet, Cape Liptrap and Waratah Bay, and Corner Inlet Amphitheatre. These areas are included within a Significant Landscape Overlay which seeks to protect landscape values specific to these areas. These features are over 30 km from the project and outside the viewshed.

5.2.3 South Gippsland Planning Scheme - Clause 21.13 Infrastructure

Clause 21.13 Infrastructure recognises that *'the use of alternative, renewable energy sources such as solar and wind power is a small, yet significant, method by which the community can address the global issue of climate change through local actions. However, there needs to be a balance between the potential benefits and negative impacts of using alternative energy technologies.'*

Relevant objectives and strategies include:

- *Objective 1 – To encourage the use of alternative energy sources in the provision of electricity.*
- *Strategy 1.1 – Promote the use of alternative energy sources, such as wind, tidal and solar power.*
- *Objective 2 – To ensure that the use of alternative energy technology does not detrimentally affect the surrounding environment. Specifically, strategy 2.2 discourages tall structures on ridgelines or in view corridors.*
- *Strategy 2.1 – Ensure the design and siting of structures associated with alternative energy production does not detrimentally affect the character of the area.*
- *Strategy 2.2 – Discourage tall structures on ridgelines or in view corridors*
- *Strategy 2.3 – Minimise the potential impact of alternative energy sources on the existing physical and ecological relationships of flora and fauna, and identify appropriate mitigation techniques where required*
- *Strategy 2.4 – Minimise the potential impact of alternative energy sources on public health and safety, including fire hazard*

When deciding on an application for alternative energy sources the following matters will be considered as appropriate:

- *The design and siting of any structure associated with the energy installation; and*
- *The visual impact on the landscape, including visual corridors and sight lines.*

5.2.4 Latrobe Planning Scheme - Clause 21.03 Environmental and Landscape Values

This provision provides local content to support Clause 12 (Environmental and Landscape values) of the State Planning Policy Framework. A relevant objective is:

- *Objective 3 – To protect and enhance the visual, natural and cultural heritage values of rural landscapes.*

5.2.5 Wellington Planning Scheme – Clause 21.13 Environment and Landscape Values

The overview of the Wellington Environment and Landscape Values states that *"The Shire's rural areas contain some of the most ecologically important and diverse areas in the State. These have high intrinsic natural values and are a significant factor in attracting people to reside and visit the Shire. There are significant environmental landscape issues facing the Shire's rural areas, including inappropriate residential development and the*

protection of vegetation habitat. Infrastructure development can have significant detrimental effects on the landscape. The rural amenity of the Shire is an asset which warrants protection. Residents and tourists derive pleasure from the scenic values of the rural landscapes. Even the highly modified areas of the Shire possess high landscape values. The Macalister Irrigation District, with its picturesque, green irrigated dairy country set against the foothills of the Great Dividing Range is an excellent example of the region's aesthetic assets."

- *Objective 1 - To protect, improve and sustainably manage the Shire's natural environment and diverse landscapes.*
- *Objective 2 - To recognise the visual, landscape and recreational importance of the Gippsland Lakes and coastal environment to the region.*

5.3 Zones and Overlays

Planning zones describe permissible uses, identify areas of sensitivity and protection of features that are special or unique to an area. Zones and overlays also protect the continued use of areas and businesses against adverse amenity claims such as dust, noise, odour or views.

Uses such as coal mines and reserves, power stations, plantations or farming areas have the potential for offsite amenity impacts such as odour, noise, dust or visual. Planning provisions for these areas put in place protections to enable the continued use of those areas and protect them from encroachment and incompatible uses.

Similarly, landscapes that exhibit special or unique features are typically found within Significant Landscape Overlays (SLOs) or Environmental Significance Overlays (ESO). These overlays include guidance on how these areas might be protected. Sensitive uses, such as residential areas or National Parks are often protected against adverse impacts that may be detrimental to the use and enjoyment of these areas from incompatible uses.

5.3.1 Zones within the viewshed

The majority of the land within the viewshed of the Delburn Wind Farm is Farming Zone (FZ) and Special Use Zone 1 – Brown Coal Reserves (SUZ1). The Public Use Zone 1 (PUZ1) covers services and utilities in the Shire of Baw Baw, north of the Project site. Figure 5-2 shows the land-use zones within the viewshed of the Delburn Wind Farm.

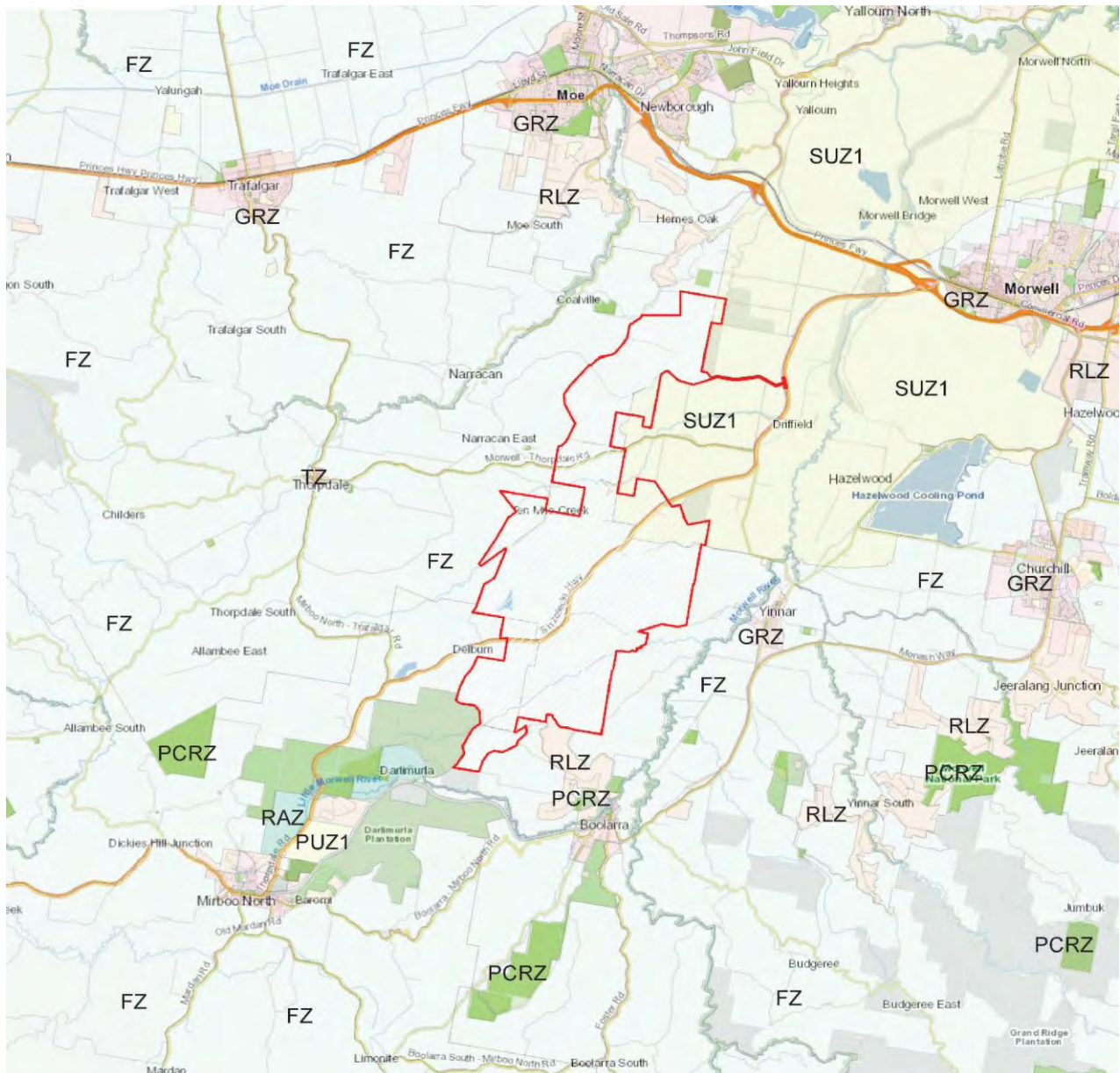


Figure 5-2: Zones within and surrounding the site. (Source: <https://mapshare.vic.gov.au/vicplan/>)

Sensitive uses include the areas within land zoned Public Conservation and Resource Zone (PCRZ), General Residential Zone (GRZ), areas within the Rural Living Zone (RLZ) and open space areas located within the Public Park and Recreation Zone (PPRZ).

Places of interest and sensitive uses within these zones include the Bull Beef Creek Nature Conservation Reserve, Moondarra State Park and Tyers Park and residential clusters within townships and rural living.

With the exception of the Rural Living Zones near Boolarra and Moe, the majority of the areas zoned for residential purposes are setback from the site's immediate boundaries.

Further, the rural living zones to the northeast of the site near Morwell as well as those near Churchill, Jerralang Junction and Yinnar South are at distances greater than 6kms. Beyond 6kms the turbines have the potential to be a noticeable element where they are clear views.

5.3.2 Zone and overlays affecting the site

The majority of the Project is within land designated Farming Zone (FZ). A small portion of the northern part of the site is within land zoned Special Use Zone – Brown Coal (SUZ1). The portion of the site within the Baw Baw Planning Scheme is included within a broader Erosion Management Overlay (EMO). An Environmental Significance Overlay – Schedule 5 (ESO) within the South Gippsland Shire Planning Scheme also covers part of the site's southern boundary. This ESO relates to the management of erosion and water quality.

Farming Zone (FZ)

The purpose of the Farming Zone is:

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

The Farming Zone contemplates that uses within these areas have the potential to impact on the amenity of sensitive uses such as residential dwellings. Areas within Farming Zones are not sensitive from a landscape and visual perspective.

Special Use Zone (SUZ1)

The purpose of the Special Use Zone is *to recognise or provide for the use and development of land for specific purposes as identified in the schedule to this zone.*

The purpose of SUZ1 – Brown Coal is:

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

Areas within the Special Use Zone contemplate or have approved uses that are intensive and not sensitive to visual change. Further, many of these areas have either current coal mining leases or exploratory licenses in place.

Figure 5-3 shows the proximity of mining and exploratory leases within land zoned SUZ in proximity to the project. Current mineral exploratory licenses area shown with an EL prefix. Current or approved mining licenses are shown with an MIN prefix. The approximate project boundary has been included on the image below.

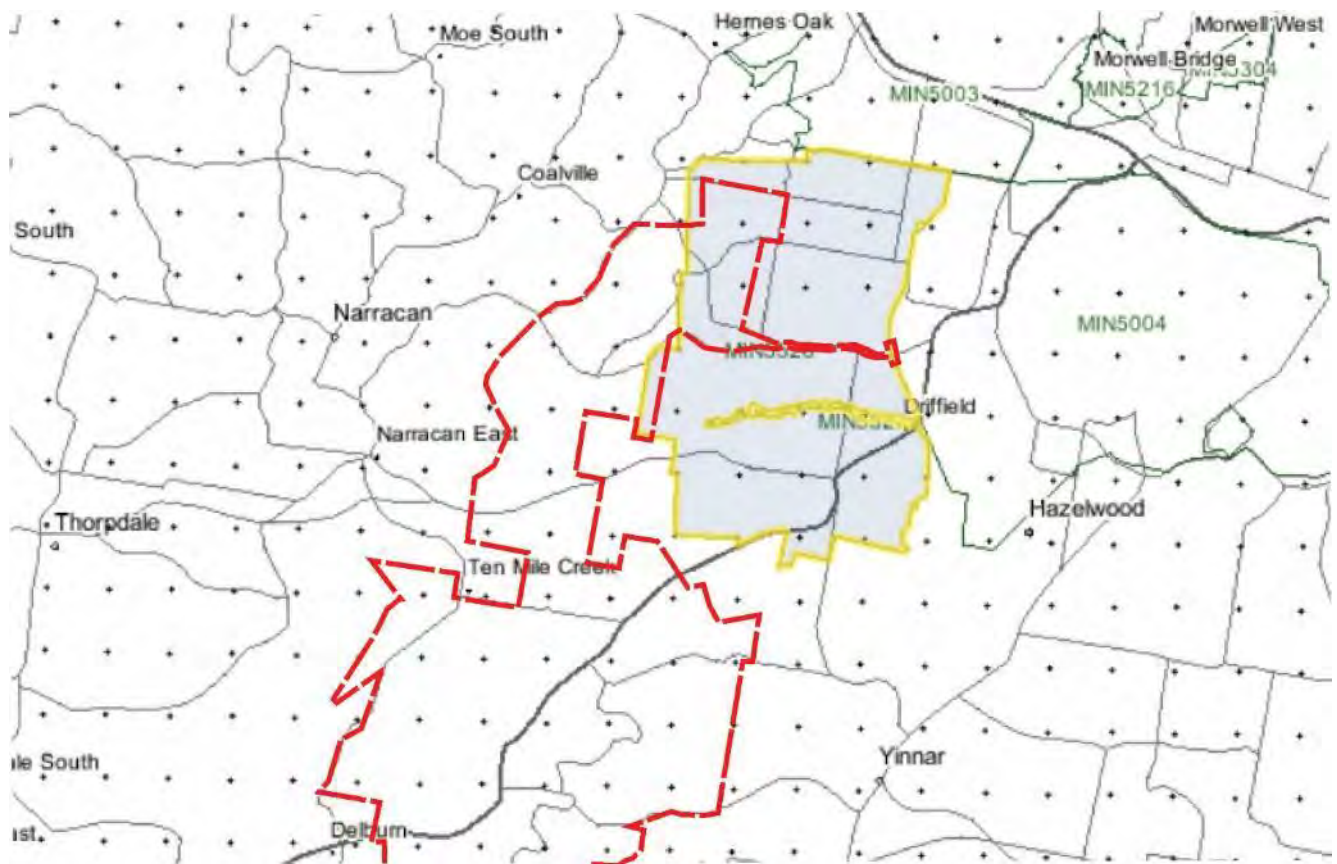


Figure 5-3 Current Coal Mining Licence (MIN5526)

Mining licence MIN5526 is located to the west of the Strzelecki Highway and the locality of Driffield and to the east of the Project.

It is recognised that such licenses do not grant permission to construct or operate a coal mine in the affected areas, however, they do allow for further studies and potential approvals of such activities.

5.3.3 Overlays within the viewshed

Overlays recognise landscape features that are special or unique, that are distinct to the areas that surround them. Significant Landscape Overlays (SLO) are implemented to identify, conserve and enhance the character of significant landscapes. There are two such overlays within the Project viewshed. Figure 5-4 shows the SLOs in proximity to the Project site.

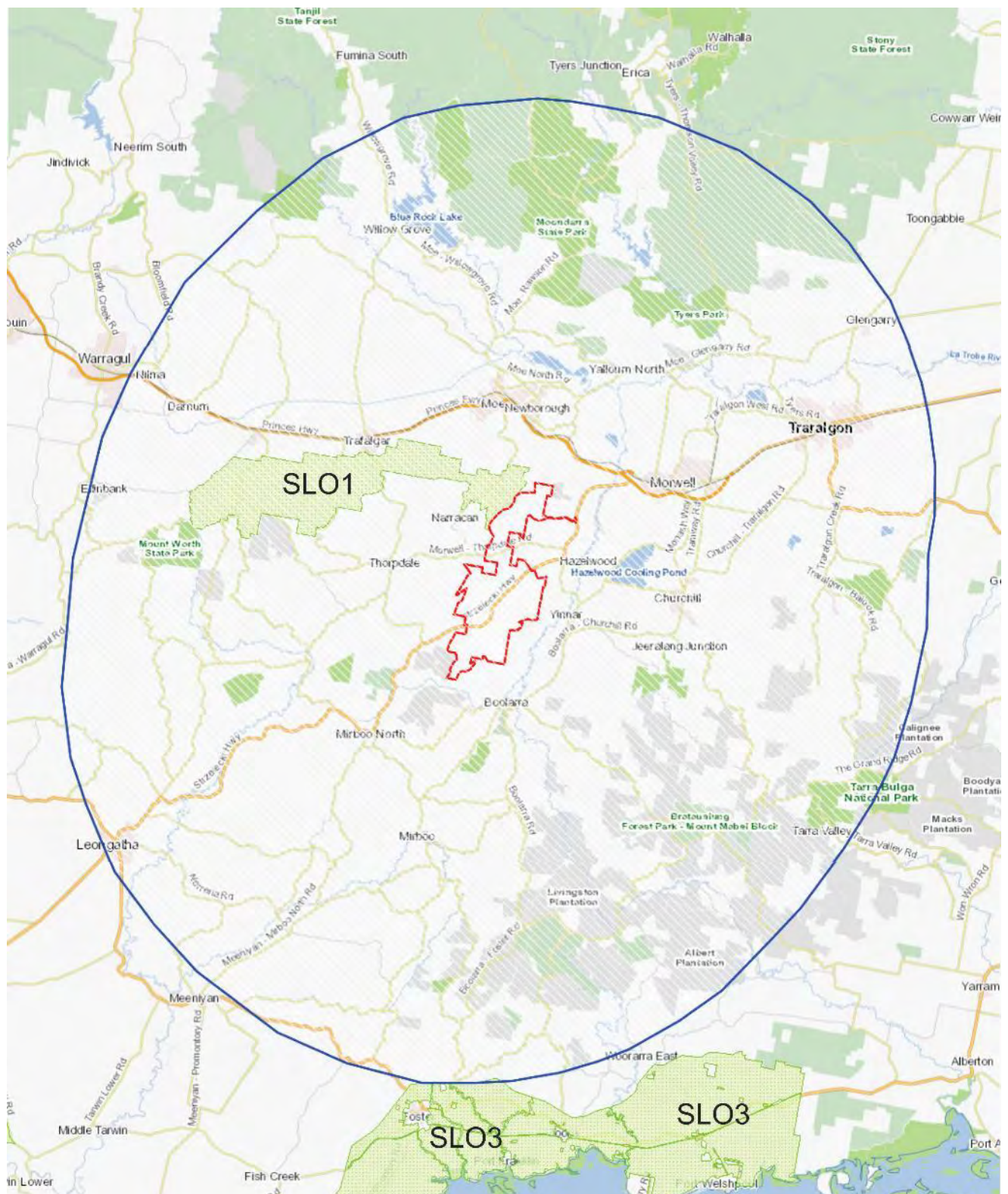


Figure 5-4: SLOs within the viewshed. (Source: <https://mapshare.vic.gov.au/vicplan/>)

Schedule 3 to the SLO of the South Gippsland Planning Scheme sits just inside the 28.6km viewshed. SLO3 relates specifically to a landform known as the Corner Inlet Amphitheatre. The Project will not be discernible, or visible from locations which will affect the interpretation of SLO3.

Schedule 1 to the SLO of the Baw Baw Planning Scheme applies to the northern foothills of the Strzelecki Ranges. The Statement of significance states that:

The north face of the Strzelecki Ranges presents a landscape of diversity where cleared land, remnant vegetation and timber plantations co-exist. No dominant built development exists and yet houses, and narrow roads climb from the valley floor and foothills adjoining the Princes Highway between Yarragon and Trafalgar.

The Landscape Character objective to be achieved within SLO1 is:

- *To protect the natural beauty and landscape form of the Strzelecki Range.*
- *To protect the rural landscape from insensitively designed development.*
- *To maintain and protect the diversity of landscapes, native fauna, remnant vegetation and sites of historical, botanical and zoological significance.*
- *To provide for the development of tourism-oriented activities which complement the landscape of the Strzelecki Ranges.*
- *To recognise and protect the landscape and conservation features of the Strzelecki Ranges.*
- *To protect the Ranges and the surrounding landscapes from visual intrusion and inappropriate development.*

SLO1 is located to the south of the Princes Highway between the shire boundary near the Project site to Hazeldean Road to the west and applies to a broad area approximately 15 km in length and up to 4 km deep behind Yarragon South. Figure 5-5 shows part of the landscape within SLO which is located in the area behind the township of Trafalgar to the west of the site.

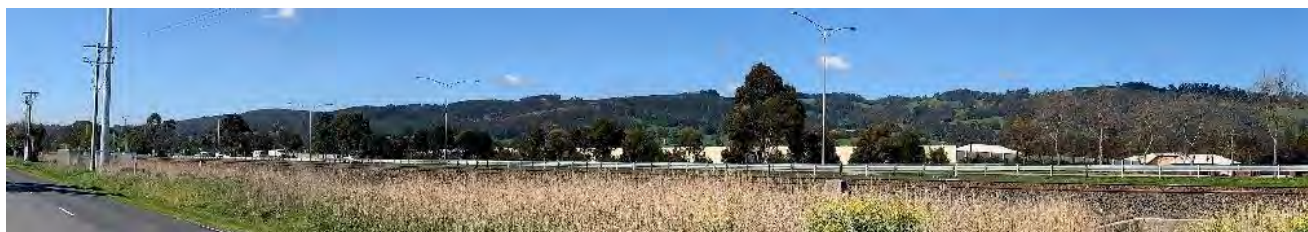


Figure 5-5: View of SLO1 from the edge of Trafalgar

SLO 1 seeks to, amongst other things protect the landscape form of the Strzelecki Range and the rural landscape from insensitively designed development and to protect them and the surrounding landscapes from visual intrusion and inappropriate development.

The proposed wind farm will not alter the landform of the Strzelecki Range. This assessment will consider views from publicly assessable locations that may include the area within the SLO.

The change in views and the interpretation of the SLO will be considered as part of this Landscape and Visual Impact Assessment.

Environmental Significant Overlay (ESO)

There are several ESOs within the viewshed, however there were no particular landscape-visual values or objectives identified in a high-level review of the purpose and objectives of each schedule.

ESO1 (Areas of Natural Significance) of the South Gippsland Planning Scheme, although outside the project viewshed identifies areas of natural and landscape significance as follows:

- *To conserve areas of high environmental and landscape quality, ensuring development minimises adverse environmental impact; and*
- *To protect the views of identified significant vistas*

There are several policies and strategies within the Latrobe Planning Scheme that seek to protect and preserve large areas for future exploitation of the vast brown coal resources. There are no overlays in these areas that seek to protect these areas for their scenic qualities and amenity to the broader region.

5.4 Particular Provisions – Clause 52.32 (Wind Energy Facility)

Clause 52.32 (Wind Energy Facility) applies to land used and developed or proposed to be used and developed for a Wind energy facility to establish and expand wind energy facilities, in locations that are appropriate or that will have minimal impact on the amenity of the area.

Section 4 requires an application to provide a site and context analysis including specific information relevant to landscape and visual impact.

- *Direction and distances to nearby dwellings, townships, urban areas, significant conservation and recreation areas, water features, tourist routes and walking tracks, major roads, airports, aerodromes and existing and proposed wind energy facilities*
- *Views to and from the site, including views from existing dwellings and key vantage points including major roads, walking tracks tourist routes and regional population growth corridors;*
- *National Parks, State Parks, Coastal Reserves and other land subject to the National Parks Act 1975;*

The application should include an assessment of:

- *The visual impact of the proposal on the surrounding landscape;*
- *The visual impact on abutting land that is described in a schedule to the National Parks Act 1975 and Ramsar wetlands and coastal areas.*

Decision Guidelines

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

- *The Municipal Planning Strategy and the Planning Policy Framework;*
- *The effect of the proposal on the surrounding area in terms of noise, blade glint, shadow flicker and electromagnetic interference;*
- *The impact of the development on significant views, including visual corridors and sightlines;*
- *Policy and Planning Guidelines for Development of Wind Energy Facilities in Victoria (Department of Environment, Land, Water and Planning, March 2019).*

5.4.1 Policy and Planning Guidelines for Development of Wind Energy Facilities in Victoria (March 2019)

Policy and Planning Guidelines for Development of Wind Energy Facilities in Victoria (March 2019) (the Guidelines) is a reference document listed at Clause 52.32-6 - Decision guidelines. The guidelines provide operational performance standards to inform the assessment and operation of a wind energy facility.

The features of the landscape include:

- *the topography of the land*
- *the amount and type of vegetation*
- *natural features such as waterways, cliffs, escarpments, hills, gullies and valleys*
- *visual boundaries between major landscape types*
- *the type, pattern, built form, scale and character of development, including roads and walking tracks*
- *flora and fauna habitat*

- *cultural heritage sites*
- *the skyline.*

The degree of visual impact of a wind energy facility depends on the extent of the change to the landscape caused by the development, taking into account:

- *the visibility of the development*
- *the locations and distances from which the development can be viewed*
- *the significance of the landscape as described in the planning scheme (including in an overlay, a relevant strategic study or landscape features referenced in the planning scheme)*
- *landscape values associated with nearby parks described in a schedule to the National Parks Act 1975 or Ramsar wetlands*
- *landscape values associated with nearby land included in the schedule to Clause 52.32-2 of the planning scheme, such as specified areas of landscape and environmental significance, specified coastal locations and areas identified to accommodate future population growth of regional cities and centres*
- *the sensitivity of the landscape features to change.*

The visual impact of the development relates to:

- *the number, height, scale, spacing, colour and surface reflectivity of the wind turbines*
- *the quantity and characteristics of lighting, including aviation obstacle lighting (subject to CASA requirements and advice)*
- *avoidance of visual clutter caused by turbine layout and ability to view through a cluster or array (visually well-ordered series) of turbines in an orderly manner*
- *the removal or planting of vegetation*
- *the location and scale of other buildings and works including transmission lines and associated access roads*
- *proximity to sensitive areas*
- *proximity to an existing or proposed wind energy facility, having regard to cumulative visual effects.*

Suggested impact reduction measures

- *siting and design to minimise impacts on views from areas used for recreation and from dwellings*
- *locating arrays of turbines to reflect dominant topographical and/or cultural features, such as ridgelines, the coastline, watercourses, windbreaks or transmission lines • using turbine colour to reduce visual impacts from key public viewpoints*
- *limiting night lighting to that required for safe operation of a wind energy facility and for aviation safety*
- *reducing the number of wind turbines with obstacle lights while not compromising aviation safety*
- *mitigating light glare from obstacle lighting through measures such as baffling*
- *selecting turbines that are consistent in height, appearance and rotate the same way*
- *spacing turbines to respond to landscape characteristics*
- *undergrounding electricity lines wherever practicable*
- *minimising earthworks and providing measures to protect drainage lines and waterways*
- *minimising removal of vegetation*
- *avoiding additional clutter on turbines, such as unrelated advertising and telecommunications apparatus.*

A key requirement of the guidelines is the consideration of the provisions within the local Planning Schemes and especially any provisions that relate to landscape significance or community values that apply to areas within the viewshed. These include views and visual impact from nearby dwellings, townships and urban areas, conservation and recreation areas, water features, tourist routes and walking tracks, major roads. Views from publicly accessible locations are assessed in Section 8 of this report. The consideration of views and impacts from nearby dwellings are set out in section 9.

5.5 Planning Implications

The PPF puts in place measures to protect natural features, scenic qualities and prominent views and vistas across the project viewshed. These desires are also echoed by Clause 52.32 which seeks to balance the recognition that wind turbines are large structures and to ensure that they are sited correctly paying particular attention to overlays including ESOs, and SLOs, all of which identify and protect particular environmental or qualitative features.

The majority of the project viewshed is occupied by areas within the Farming Zone (FZ) or Special Use Zone (SUZ) which is set aside specifically for the extraction of coal and energy production. The more sensitive uses in proximity to the project are the residential clusters to the west, south and south-east of the project.

South Gippsland Planning Scheme Clause 21.13 Infrastructure *Objective 2 seeks to ensure that the use of alternative energy technology does not detrimentally affect the surrounding environment. Specifically, strategy 2.2 discourages tall structures on ridgelines or in view corridors.*

There were originally 5 turbines located within this area in the Concept layout. 2 turbines have been removed in this area within the current layout (Version 3.5).

This clause is unique to the South Gippsland Planning Scheme and does not reside in any of the other planning schemes. Several viewpoints will be selected from where this clause applies and be assessed in Section 8.

The following section (Section 6) will determine the landscape character types and their sensitivity to change. Section 7 will then explore the visibility of the turbines from these areas within the viewshed to assist with selecting views from each of the identified character areas to develop an understanding of the project in key and sensitive views which are discussed in Section 8.

6. Landscape Character

Landscape Units are based on areas with similar visual characteristics in terms of topography and features, such as creeks and drainage lines, soil, vegetation and land use. The following sections describe the underlying patterns of these elements to derive the landscape units within the viewshed.

The Delburn Wind Farm is set within an area of vegetated hills (plantations).

Existing infrastructure includes roads, telecommunication towers, transmission lines, power lines as well as existing power infrastructure in the north-eastern areas.

6.1 Topography

The Project and the study area are located within the Latrobe Valley and part of the Strzelecki Ranges.

The topography within the study area is predominantly hilly and ranges in elevation from 25 m on the outskirts of Traralgon to 740 m at Mt Tassie on the outskirts of the viewshed.

6.2 Vegetation

Vegetation within the viewshed is varied. It includes plantation vegetation, natural forested areas, roadside vegetation, windbreak/buffer planting within farm areas and garden planting around residences. Figure 6-1 shows an example of both native hardwood and exotic pine plantations from within the project viewshed.



Figure 6-1: Vegetation example – Plantation

Figure 6-2 shows an example of vegetation located in farming areas within the project viewshed.

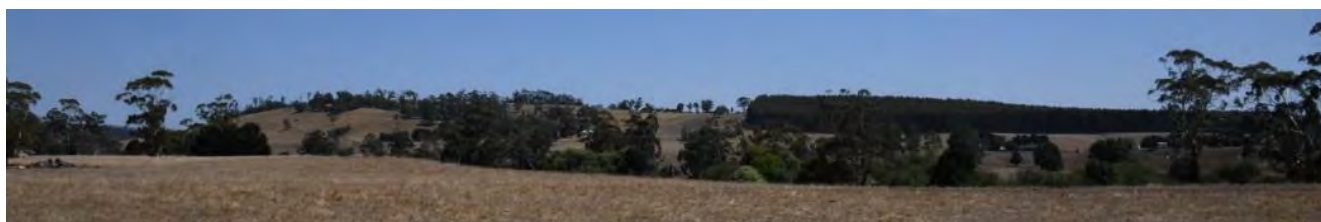


Figure 6-2: Vegetation example – Farming areas

Vegetation includes areas of remnant and revegetation along creek lines, valleys and gullies as well as fence lines, hilltops and ridges. There are also many large areas of native forest, national and state parks and timber plantations.

Figure 6-3 shows road-side vegetation that is found within the verges along the majority of major roads including the Strzelecki Highway and other local and minor roads.



Figure 6-3: Roadside vegetation within the viewshed

The vegetation confines and filters views across much of the landscape.

6.3 Land Use

Land use and status within the relevant planning schemes assist to understand the significance of an area as identified within the relevant planning schemes and therefore its sensitivity to visual change. This is due in part to the permissible use and prevalence of that use within an area and the level of protection afforded to that area under the provision of the planning schemes.

The dominant land uses within the viewshed of the Project include:

- Managed timber plantation and forestry;
- Farming and agriculture;
- Open-cut coal mines;
- Power stations.
- State and National parks
- Townships; and
- Water storage, cooling ponds and waterways.

These land-uses are broadly defined by land-use zones within the relevant planning schemes. Areas and uses that are potentially sensitive to the development of a wind farm from a landscape and visual perspective include townships, areas of rural residential development and areas such as state and national parks. The consideration of dwellings in farming zones is typically confined to locations in proximity to the dwelling, rather than the whole of the landholdings. The objective of the farming zone seeks to protect the land for agricultural and farming uses which are recognised as having potential offsite impacts to amenity including noise, odour, dust and in some instances, visual impacts through buildings structures and seasonal changes. These areas are different from land zoned Rural Residential where such areas are established and recognises as lifestyle properties in rural areas.

The Latrobe Valley brown coal electricity generators supply around 90% of Victoria's electricity. The region is recognised as the powerhouse of Victoria through its open-cut coal mines and power stations. The brown coal resources prevalent throughout the areas comprise some of the largest in the world. These areas are recognised by the application of Special Use Zones which, subject to further studies and approvals, preserve and contemplate change of the landscape. There are also many exploratory or active mining leases across these areas.

Figure 6-4 shows the core power stations, associated open-cut coal mines, substation locations and the high-voltage power line network.

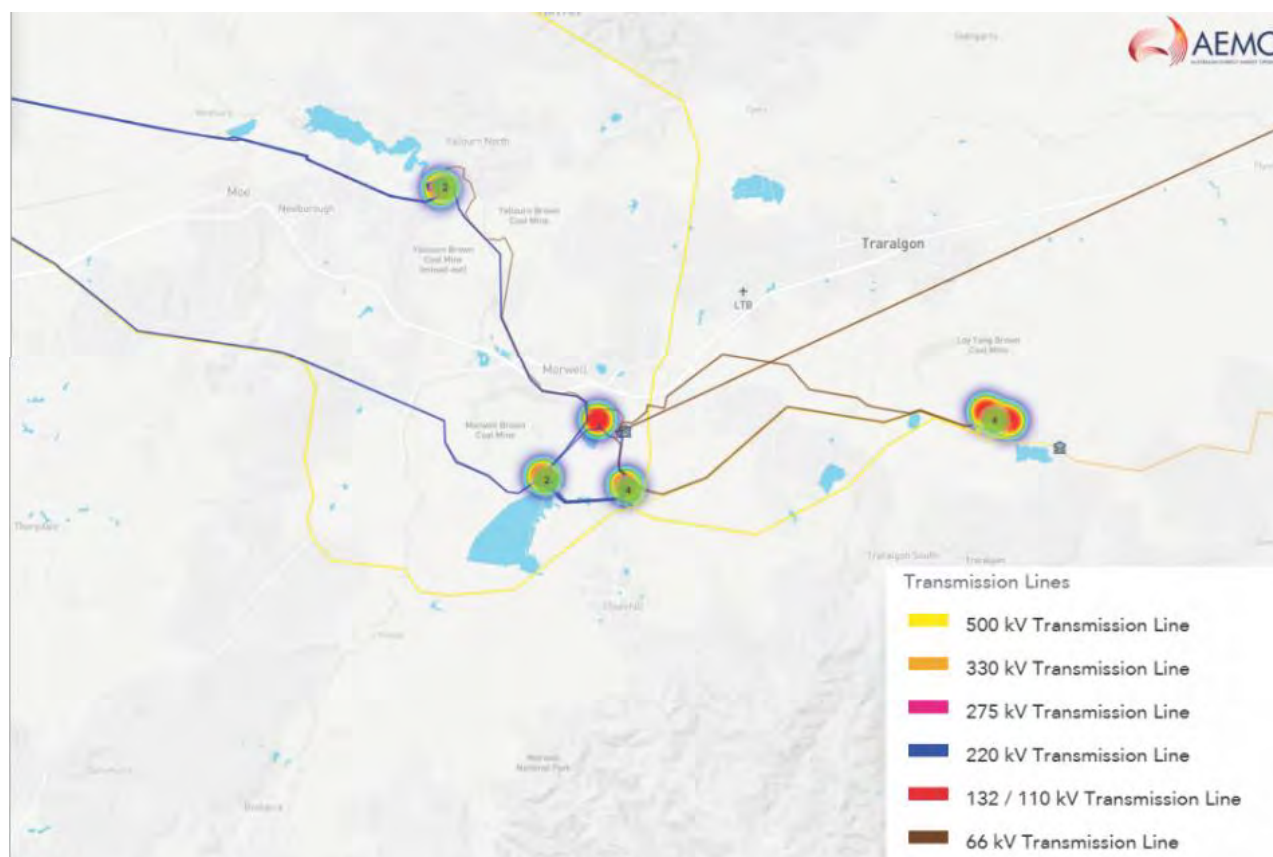


Figure 6-4: Energy Infrastructure (Source: <https://www.aemo.com.au/aemo/apps/visualisations/map.html>)

The majority of the infrastructure is located in the area to the north and east of the Project, with existing 500 kV (shown in yellow) and 220kV (shown in blue) transmission lines that run through the northern section of the Project.

The presence of open-cut coal mines and power stations, supported by high-voltage and domestic scale power lines, in combination with the protection of these areas within the PPF provides a visual reminder and connection to the important role the Latrobe Valley region plays to the state's electricity security.

This is further supported by the various instruments within the local and state planning schemes, such as the State Resource Overlay (SRO) discussed in Section 5 of this report. The implications of such strategies will be explored with regards to landscape sensitivity and land use in this assessment.

6.4 Landscape Units

There are six distinct landscape character types in the area surrounding the proposed Delburn Wind Farm. These have been assessed based on land use, topography and vegetation. These landscape character types can be defined as the following:

6.4.1 Landscape Unit 1a – Townships

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

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



Figure 6-5: Landscape Unit 1a – Township examples



Figure 6-6: Landscape Unit 1a – Township example

6.4.2 Landscape Unit 1b – Rural Residential

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

This landscape type is valued for its natural-appearing or 'rural' amenity but does generally include a number of built features, including neighbouring agricultural or horticultural infrastructure and machinery, tourism-related land uses and the road network.



Figure 6-7: Landscape Unit 1b – Rural Residential example



Figure 6-8: Landscape Unit 1b – Rural Residential example

6.4.3 Landscape Unit 2a – Cleared Flat Farmland

Landscape Unit 2a – Cleared Flat Farmland are areas used primarily for agricultural purposes. There are many instances of constructed elements within this landscape type, including the road network, transmission lines, farm buildings and fences.



Figure 6-9: Landscape Unit 2a – Cleared Flat Farmland example

6.4.4 Landscape Unit 2b – Cleared Hilly Farmland

Landscape Unit 2b – Cleared Hilly Farmland is highly modified, given the historic clearance of native vegetation. The intersection of rolling hills and deeply incised valleys provides for a diversity of framing of views that are either closed and confined or reveal longer views across the valley floor and to the elevated hills in the distance.



Figure 6-10: Landscape Unit 2b – Cleared Hilly Farmland example



Figure 6-11: Landscape Unit 2b – Cleared Hilly Farmland example

6.4.5 Landscape Unit 3 – Industrial / Mining

A large part of the area to the east and northeast of the Project is within the area of land in the SUZ1 and includes many operating coal mines and power stations as well as the recently closed Hazelwood Power Station. Within these areas are the extraction pits, which are open, partially rehabilitated or fully rehabilitated, operating and transitioning power stations and the many overhead high voltage powerlines. The images below show the character of the area within the land in the SUZ1.

Figure 6-12 shows Hazelwood Power Station, Figure 6-13 shows Yallourn Power Station from the off ramp of the Princes Freeway with the water treatment ponds south west of Morwell and Figure 6-14 shows an example of overhead powerlines within the area. These images were taken before the removal of the stacks on May 25, 2020.



Figure 6-12: Landscape Unit 3 – Industrial/Mining example (Hazelwood Power Station)



Figure 6-13: Landscape Unit 3 – Industrial/Mining example (Yallourn Power Station)



Figure 6-14: Landscape Unit 3 – Industrial/Mining example (Transmission Line)

6.4.6 Landscape Unit 4a – Forested hills (Natural)

Landscape Unit 4a – Forested Hills generally consists of rolling or dramatic hills with large sections of natural vegetation. This landscape is attractive as it contains areas that appear pristine or natural.



Figure 6-15: Landscape Unit 4a – Forested Hills (Natural) example

6.4.7 Landscape Unit 4b – Forested Hills (Plantation)

Landscape Unit 4b consists of rolling hills that are vegetated with ordered plantation vegetation. This landscape is attractive when vegetated.



Figure 6-16: Landscape Unit 4a – Forested Hills (Plantation) example



Figure 6-17: Landscape Unit 4a – Forested Hills (Plantation) example

The colours and tones of these areas under pine plantation contrast to areas of native forest or timber plantations. These areas are regularly modified through timber harvesting.

6.4.8 Landscape Unit 5 – Lakes and Waterways

There are a number of waterways, catchments, streams and lakes within the viewshed of the Delburn Wind Farm. These include the larger rivers of Morwell and Latrobe Rivers and the more local catchments of Little Morwell River and Middle Creek. There are also several constructed lakes such as the Hazelwood Pondage, which were constructed for the functional purpose of cooling the Hazelwood Power Station, which have now been adopted as community assets.

Over time the Morwell River has been impacted by the various mining and extractive activities across its natural alignment, which has resulted in it being diverted from its natural alignment on a number of occasions. The resulting profile and alignment of the streambed can be observed along the river's lower reaches within the viewshed particularly where the Strzelecki Highway crosses the river. Nonetheless, Lakes and waterways usually have a high sensitivity to visual change due to their scenic qualities, passive or recreational uses and intrinsic value.

It must also be contemplated that as existing coal mines seek to close and transition to care and maintenance there may be several additional mining pits that transition to a pit lake and recreational asset to the community.



Figure 6-18: Landscape Unit 5 – Morwell River Diversion

Figure 6-19 shows the Narracan Falls and reserve to the northwest of the Project.



Figure 6-19: Landscape Unit 5 – Narracan Falls

Other lakes and waterways within the viewshed include Narracan Falls and Lake Narracan.

6.4.9 Landscape Unit 6 – National and State Parks

National or State Parks/Reserves are areas of dramatic topographical features, often heavily vegetated with native vegetation. These areas appear pristine and may serve as landmarks or vantage points. These areas may contain minor development, such as unpaved/low-traffic roads, walking or cycling trails.



Figure 6-20: Landscape Unit 6 – National and State Parks

6.5 Landscape Sensitivity

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

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

The landscape within the viewshed includes many constructed elements including new dwellings, structures and sheds, high voltage transmission line towers, mining activities, power infrastructure and other interventions.

The landscape sensitivity of the Cleared Farmland Landscape Unit is considered low. It is not a rare or threatened land-use or character and is common across a large area of Victoria. This landscape undergoes visually apparent change both on a regular basis and progressively over time. Rural activities such as grazing, tractors, crop cycles and other farming changes associated with farming and agriculture are constant reminders of human influence on the landscape. However, it must be recognised that some people value the visual aspects of cleared farmland with minimal signs of mechanised construction such as houses, farm sheds and the like. The presence of wind turbines may be perceived as a high visual impact due to the presence of large-scale structures on a rural landscape to these viewers, notwithstanding that the landscape is already highly modified by human activity.

Lakes and waterways usually have a high sensitivity to visual change due to their scenic qualities, passive or recreational uses and intrinsic value. Due to the modified nature of the Morwell River, the sensitivity of the would be rated as Moderate. While other lakes and waterways within the viewshed such as Narracan Falls and Lake Narracan would have a high sensitivity to visual change due to their scenic qualities, passive or recreational uses and intrinsic value.

The landscape sensitivity of the Forested Hills (Natural) Landscape Unit is considered moderate to high, as although it too is relatively common, it appears more pristine or natural than the Forested Hills (Plantation) and Cleared Farmland landscape units.

The Townships Landscape Unit is considered to have a moderate sensitivity. This is based on a higher number of residents and the setting. The village settlement generally has limited views to the surrounding landscape which is screened by buildings and roadside vegetation.

Table 6-1 rates the sensitivity of the various landscape units within the viewshed of the Delburn Wind Farm.

Table 6-1: Landscape Unit Sensitivities

Landscape Unit	Sensitivity
Unit 1a – Townships	Moderate - Built form and other visual elements reduce the visual sensitivity of these areas. However, as these are urban areas with many houses, the landscape sensitivity is rated moderate.
Unit 1b – Rural Residential	Moderate-High - While these areas are valued for their 'natural-appearing' or rural landscape amenity, they have modified landscapes within zones that are set aside for rural related industries such as farming or extractive resources, and thus inherently contain land uses with potential off-site amenity impacts.
Unit 2a – Cleared Flat Farmland	Low – Highly modified, contains visible infrastructure, is not topographically dramatic and does not contain large bodies of water.
Unit 2b – Cleared Hilly Farmland	Low to Moderate – Highly modified, by way of clearing of native vegetation. The intersection of rolling hills deeply incised valleys provides for a diversity of framing of views that are either closed and confined or reveal longer views across the valley floor and to the elevated hills in the distance.
Unit 3 – Industrial / Mining	Low - Highly modified landscape.
Unit 4a – Forested Hills (Natural)	Moderate to High - This landscape is attractive as it contains areas that appear pristine.
Unit 4b – Forested Hills (Plantation)	Low to Moderate - This landscape is attractive when vegetated. This landscape is European in appearance and regularly modified through timber harvesting.
Unit 5 – Lakes and Waterways	Moderate to High - Lakes and waterways usually have a high sensitivity to visual change due to their scenic qualities, passive or recreational uses and intrinsic value. Due to the modified nature, the sensitivity of the Morwell River would be rated as Moderate
Unit 6 – National and State Parks	High - This landscape is attractive as it contains areas that are and appear pristine. Encroaching development into this landscape type has increased the rarity of this landscape.

The landscape units and sensitivity ratings will form the basis of the visual impact of views from publicly accessible locations.

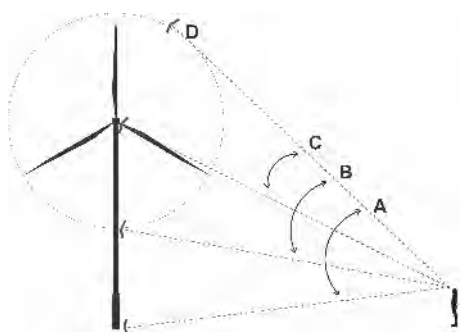
Landscape sensitivity from individual residential properties will always be assessed as "high" as for a resident, their home will always be a highly sensitive location and disturbances to a resident's views must always be considered to have the highest degree of sensitivity.

7. Seen Area Analysis

A Seen Area Analysis (SAA) identifies patterns of theoretical visibility and potential views towards the project. The SAA is a theoretical model that is based upon key Project infrastructure and the topography of the surrounding landscape. The SAA does not include features such as vegetation, buildings or structures that will assist to screen or filter views and is therefore conservative in its' assessment of visibility and views.

The patterns of theoretical visibility assist to determine locations where the Project is potentially the most visible and guides the selection of representative viewpoints to consider the views to the site and to the proposed location of wind turbines, key vantage points, major roads and tourist routes, and residential clusters sufficient to give a sense of the Project and its setting.

The Seen Area Analysis can map patterns of visibility for either the project as a whole or in key components. Sections that are relevant to views and visual impact are set out below.



- Zone A – Areas from which one or more Turbines are visible in their entirety;
- Zone B – Areas from which the entire swept path of one or more Turbines are visible;
- Zone C – Areas from which nacelle and above of one or more Turbines are visible; and
- Zone D - Areas from which tip of the blade of one or more Turbines are visible

Figure 7-1: Visibility parameters (not to scale)

Zone A includes locations that have the potential to view a wind turbine in its entirety. A viewer at this location will theoretically be able to see "any part of the wind turbine blades" which includes Zone B, C and D.

Figure 7-2 shows the GIS-based mapping of Zones A, B, C and D.

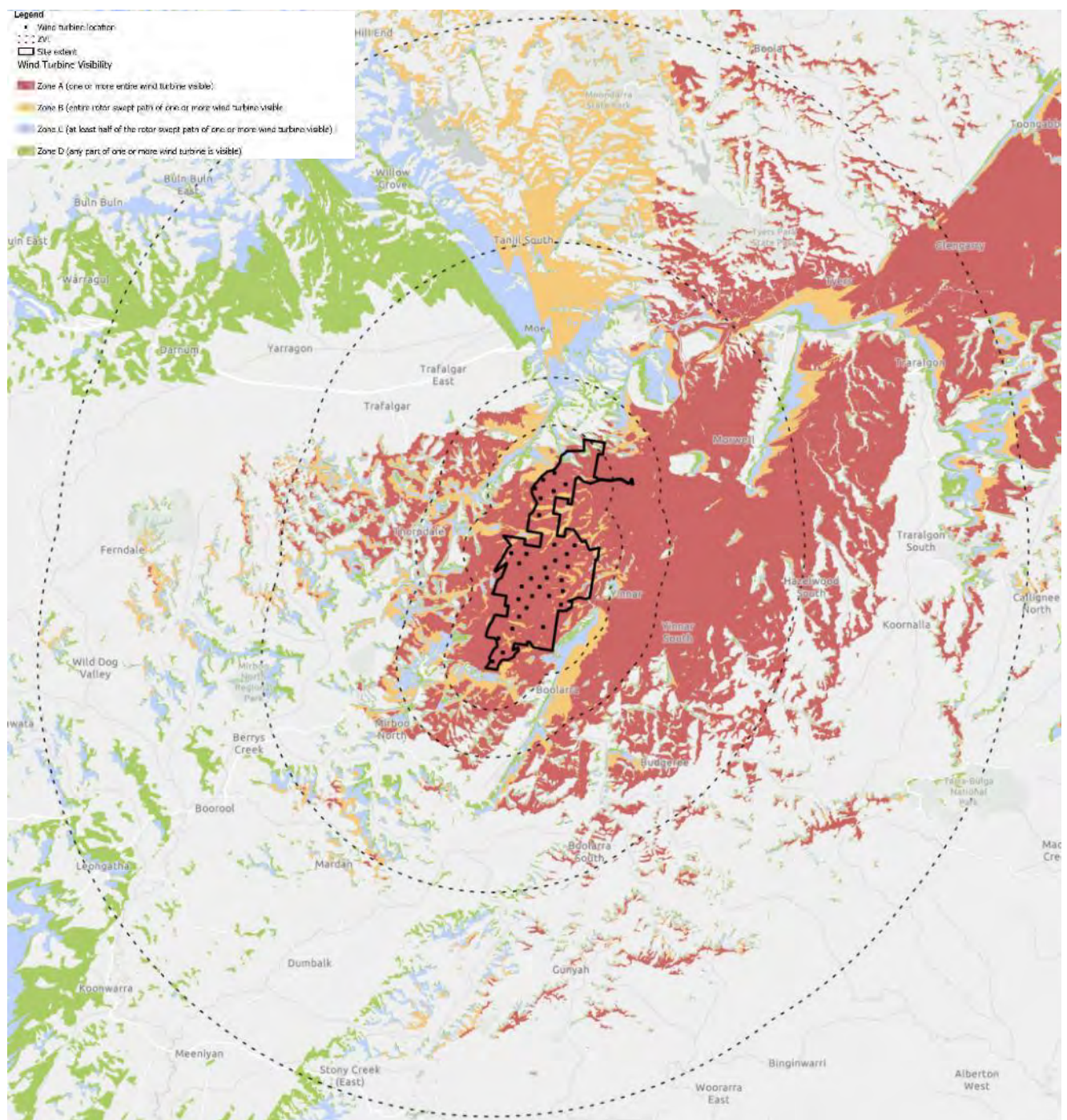


Figure 7-2: Areas of potential wind turbine visibility

The mapping of turbines in their entirety (Zone A) or the areas from which a blade tip is visible (Zone D) is too prescriptive and is not indicative of overall visibility of the Project. Mapping those areas where the swept path (Zone B) and the nacelle and above (Zone C) are more useful when selecting viewpoints in which to assess the likely visual impact of the Project.

Figure 7-3 shows the visibility patterns for Zone C (nacelle and upper portion of the swept path) within the Project viewshed. This is a conservative assessment in that the mapping for Zones A and B tend to show smaller areas of visibility. This is because the modelling will exclude areas that may not “see” part of these features and are therefore excluded from the results. The mapping for each of the zones is included in Appendix A.

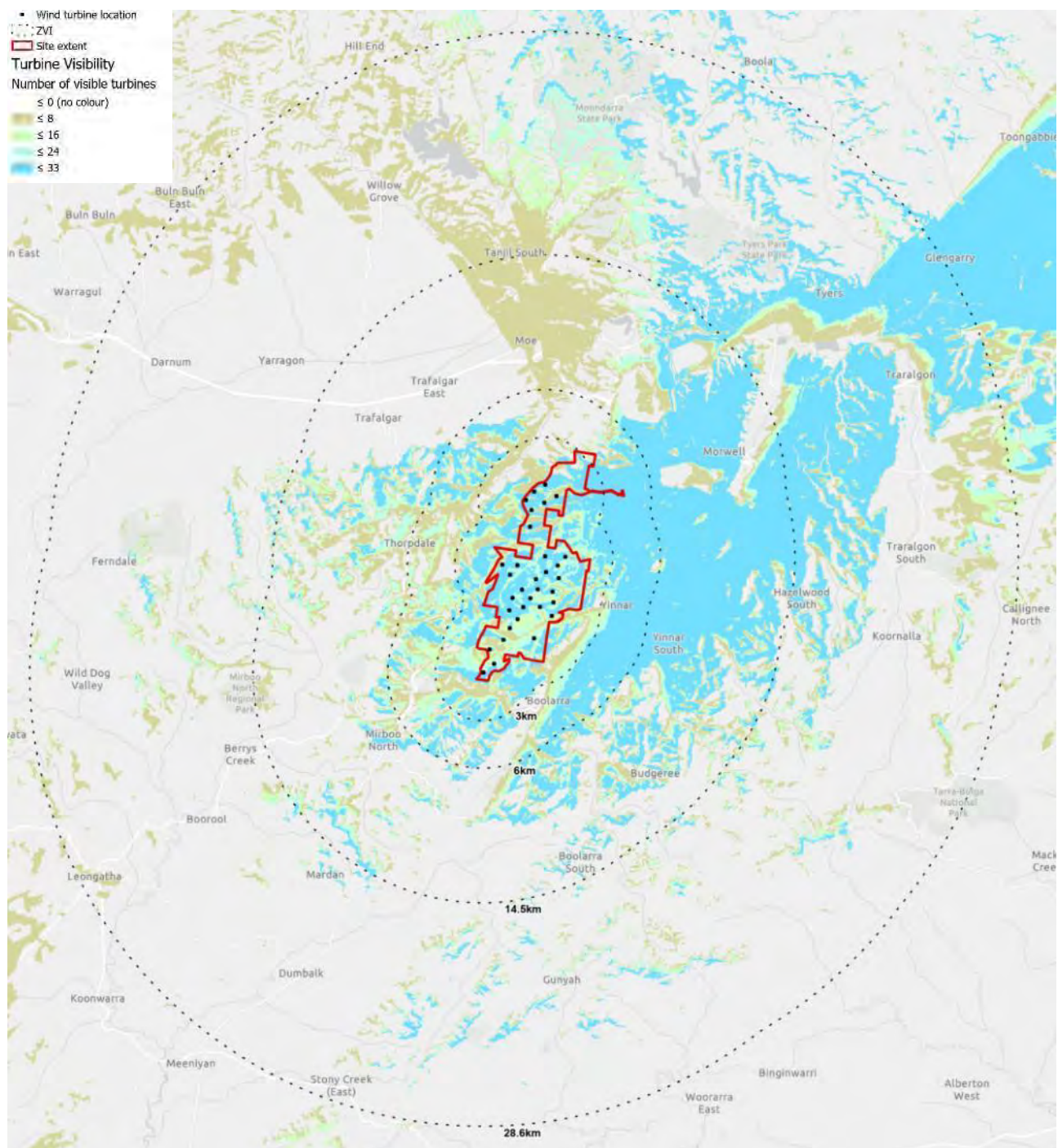


Figure 7-3: SAA – Zone C (Nacelle and above)

The areas with the greatest potential for visibility of the majority of the wind turbines are those areas to the east and northeast. These areas are predominantly within land zoned SUZ1 which include the many large areas of large open cut coal mines that are either operating or transitioning and power stations.

The SAA highlights the dynamic undulating nature of the topography to the west and south of the Project area which will limit views towards the turbines.

It is emphasised that this modelling is theoretical and does not consider vegetation seen in many areas across the project viewed.

This modelling assisted in the selection of publicly accessible viewpoints assessed in the following Section.