Planning Permit Application Report

Wombelano Wind Farm

Prepared by Wind Projects Australia and Energy Forms on behalf of Wind Projects Australia Pty Ltd and FERA Australia Pty Ltd

Document History

Version	Changes	Author	Reviewer	Date
0	NA	Jerome Rowcroft	Fi Cotter (Energy Forms)	6th March 2021
1	Applied changes in response to DELWP's RFI	Jerome Rowcroft	Fi Cotter (Energy Forms)	30th September 2021
2	Narrowed application for a reduced rotor diameter.	Jerome Rowcroft	Fi Cotter (Energy Forms)	2nd November 2021

EXECUTIVE SUMMARY

The Proponent, Wind Projects Australia Project 1 Pty Ltd, a joint venture between Wind Projects Australia Pty Ltd and Fera Australia Pty Ltd, is seeking planning approval to develop a Wind Energy Facility (WEF) in the West Wimmera Local Government Area (LGA) in Victoria, 20 km east of Edenhope and 65 km south-west of Horsham.

The project impacts the following land:

- Principal location: Crown Allotment 48A, Parish of Wombelano, Charam-Wombelano Road, Wombelano, 3409.
- Connection easement: Goroke-Harrow Road, immediately south of the intersection with Charam-Wombelano Road.
- Connection easement: Lot 2 PS532436, Charam-Wombelano Road, Wombelano, 3409.
- Connection easement: Charam Zone Substation, Lot 1 PS532436, Charam-Wombelano Road, Wombelano, 3409.
- Site entrance: Road Reserve on the western side of Goroke-Harrow Road, nominally 2 km south of the intersection with Charam-Wombelano Road.

Permission is sought to develop the WEF, which will include:

- Up to seven Wind Turbine Generators (WTGs);
- A battery storage facility;
- Underground powerlines from the site to Charam Zone Substation (CHM);
- Internal tracks and cabling;
- On-site substation;
- Lay-down and hard-stand areas;
- Concrete batching plant;
- Maintenance facilities; and
- A permanent meteorological mast and associated anemometry on the land.

The following planning triggers have been identified:

- VPP Clause 35.07-1 identifies that a permit is required for the construction of a WEF in a *Farm Zone.*
    - Must meet the requirements of VPP Clause 52.32.
- VPP Clause 35.07-1 identifies that a permit is required for the construction of a temporary concrete batch plant in a *Farm Zone*.
- A planning permit is triggered by the removal of native vegetation under LPP Clause 42.01, Schedule 2 to the Environmental Significance Overlay.
- A planning permit is triggered by the removal of native vegetation under LPP 52.17.

The requirements specified in these triggers are addressed in the body of this planning report, with further detailed assessment included in the appendices.

The 252 ha site is nominally flat land in the Farm Zone. The land is heavily modified farmland, currently used for cropping and sheep grazing. The development of the WEF will occupy nominally 2% of the land area. There are no dwellings within 1 km of any proposed WTG locations or their associated micro-siting regions.

The site takes advantage of the following characteristics:

- Strong, consistent wind resource;
- Close proximity to the grid – CHM is adjacent to the site;
- Good road access;
- Flat site, minimising civil works;
- Cleared site, with minimal native vegetation removal required and low environmental impact;
- Low population density – with no dwellings located within 1 km of WTGs.

According to Clause 35.07-1 of the Victorian Planning Provisions (VPPs), a planning permit is required for the following land use and associated buildings and works within the *Farming Zone*:

- Wind Energy Facility
    - Including a Battery Energy Storage System.
    - Must meet the requirements of Clause 52.32 of the VPP.

Furthermore, a planning permit is triggered by the removal of native vegetation under Local Planning Provision (LPP) Clause 42.01, Schedule 2 to the Environmental Significance Overlay.

The Responsible Authority for a permit under this legislation is the Planning Minister.

The following key impact assessments are summarised below:

- Noise
- Visual impacts (Blade glint, shadow flicker and significant landscapes)
- Hydrology and Water Quality
- Cultural Heritage – Aboriginal and European
- Electromagnetic Interference (EMI)
- Flora and Fauna
- Traffic
- Aviation and Aircraft Safety

NOISE

Resonate Consultants modelled L_{A90} noise levels around the site, that is, A-weighted noise level exceeded for 90% of the measurement time as required under NZS 6808:2010. Their modelling demonstrated compliance with the relevant standard: NZS6808:2010, with L_{A90} noise levels not exceeding 33 dBA at any dwellings.

As required under Clause 52.32 of the VPPs, a Victorian Environmental Protection Agency (EPA) Audit of the acoustic study was completed by John Cumming (EPA Audit 8006891), which found that the study conducted by Resonate Consultants complied with:

- NZS6808: 2010
- NIRV Guidelines
- VPP Guidelines for WEFs

EHP, in their biodiversity assessment, have demonstrated that the potential acoustic impact on wildlife within the adjacent Poynton State Forest is negligible.

VISUAL IMPACTS

A non-reflective finish on the WTGs will be used to ensure that there impacts associated with blade glint are acceptable.

With regards to shadow flicker, the Draft National Wind Farm Guidelines (DNWFG)[1] sets a threshold of impact of 265 times the maximum chord of the wind turbine blade. Beyond this distance, according to the Guidelines, the lighting differential is considered negligible, and thus, the impact is negligible. The Victorian Wind Farm Development Guidelines stipulate that there should be no more than 30 hours per year of shadow flicker.

The maximum chord for the proposed Vestas V162 WTG is 4.3 m, which is typical of utility-scale WTGs. The smallest distance between a proposed WTG and a dwelling is 1,227 m, which would require a maximum chord in excess of 4.63 m to generate noticeable shadow flicker at the nearest dwelling based on the DNWFG. Again, based on the DNWFG, for the V162 WTG, impacts might be expected up to 1,139.5 m from WTGs.

Large turbines, with rotor diameters' in excess of 150 m, and tip heights of up to 250 m will be visible from a significant distance. The landscape is generally flat. The wind farm will have a significant visual impact on its immediate surrounds. Vegetative screening to be offered to dwellings within 3 km. Beyond the immediate vicinity of the wind farm, because the WEF consists of only up to seven WTGs, the impact on an observer's field of view is minimal. While the visual impact is both significant and obvious, the existing landscape is itself heavily modified and able to absorb the impact of the WEF.

Photomontages of the WEF have been prepared based on a rotor diameter of 170 m and maximum tip height of 250 m. The slightly larger rotor that is modelled provides some level of conservatism – illustrating a "worst case" scenario.

HYDROLOGY AND WATER QUALITY

The proponent has engaged in early stage consultation with the Wimmera Catchment Management Authority. The Wimmera CMA highlighted that they would support West Wimmera Shire Council's assessment of the project, subject to the following conditions:

- Wastewater should not be discharged into wetlands and should be contained wholly within the development.
- The development and associated works should not degrade the ecological condition of the wetland.
- The development and runoff from additional hard surface areas should not result in an alteration to quality or quantity of surface water flows.
- The development should not result in a change to surface water drainage patterns, an increase in sediments entering the wetland or wastewater and pollutants entering the wetland.
- Soil erosion and resultant contamination of runoff from the allotment during construction must be minimised to ensure the quality of water entering nearby wetlands is maintained. The authority recommends that the guidelines documented in EPA Publication 275 – Construction Techniques for Sediment Pollution Control are followed.

[1] National Wind Farm Development Guidelines – Draft, Environment Protection and Heritage Council, Commonwealth of Australia, July 2010.

- Works construction must not lead to alterations in the hydrology from preconstruction conditions of natural wetlands that receive drainage from the allotment.

These requirements can be adhered to through standard engineering practices.

CULTURAL HERITAGE – ABORIGINAL AND EUROPEAN

There are no sensitive areas that overlap the activity area that trigger the need for a Cultural Heritage Management Plan. While no impact on Aboriginal Heritage is anticipated, the Proponent will develop an unanticipated finds protocol, which will form part of the project's Environmental Management Plan.

With regards to non-European heritage, the Victorian Heritage Register identifies that the nearest items to the project are the Pot Brook Charcoal Kilns, located on Cameron and Lampards Road, 4.2 km south-west of the WEF.

Because there are no items on the Victorian Heritage Register in the immediate proximity to the site, a material impact on non-Aboriginal heritage is unlikely.

ELECTROMAGNETIC INTERFERENCE (EMI)

There are no broadcast points, receivers, or point-to-point microwave links in the vicinity of the site that will be affected by the WEF.

FLORA AND FAUNA

The site of the WEF is intensively farmed agricultural land.

The Proponent has engaged appropriately qualified ecological consultants, Biosis and Ecology and Heritage Partners (EHP) to report on flora and fauna on and around the site, conducting both desktop and site surveys. EHP conducted a site survey in spring (4th – 5th October 2018) and winter (19th – 20th July 2021). Biosis conducted further surveys in August 2020.

Impacts on species listed under the Flora and Fauna Guarantee (FFG) Act (1988) (Victoria) and Environmental Protection and Biodiversity Conservation (EPBC) Act (1999) (Commonwealth) are assessed in reports by Biosis (South-Eastern Red-Tail Black Cockatoo study) and EHP (Biodiversity Assessment) as well as the EPBC referral document submitted to the Commonwealth Department of Agriculture, Water and Environment (DAWE). DAWE determined that the project is not a controlled action.

The following species have been identified:

FFG Act: Buloke *Allocasuarina luehmannii*

FFG Act: Brolga *Antigone rubicunda*

EPBC Act: SERTBC *Calyptorhynchus banksii graptogyne*

EPBC Act: White-throated Needletail *Hirundapus caudacutus*

EPBC Act: Fork-tailed Swift *Apus pacificus*

EHP's study assessed the site's biodiversity values and potential impacts of the WEF.

With respect to impact, the removal of Buloke saplings in the road reserve, for which an FFG permit will be required, has no realistic potential to significantly impact on either the Buloke species or the SERTBC.

With regards to the Brolga, DELWP[2] notes that "There is no evidence of Brolga collision mortalities from wind turbines". The emphasis of the draft standards is on avoidance of effects on breeding and flocking habitats for Brolgas by the appropriate siting of wind farms and on minimising disturbance of key habitats by the provision of buffers from specified wind energy infrastructure. Furthermore, the project will entail no potential loss of *critical habitat* for the Brolga. The project will place powerlines underground, avoiding any potential impact on Brolgas, notwithstanding that Brolga flocking or breeding sites are beyond 5 km from the project site.

The potential impact on the SERTBC is minimal, as there is negligible impact on nesting and feeding habitat, and collision risk is very unlikely as the flight height of the SERTBC is generally below the proposed rotor swept area envelope[3].

The layout of the WEF has been developed so as to minimise impacts on flora and fauna, resulting in only 0.127 ha of native vegetation requiring removal. The need to remove native vegetation triggers a permit requirement under Clause 52.17 of the Victorian Planning Provisions, as well as the need for vegetation offsets.

With the assistance of Biosis and Energy Forms, and with reference to the work of EHP, an Environmental Effects Statement (EES) Referral Self-Assessment in accordance with the Environmental Effects Act (1978) was completed to determine whether the project triggers any referral. This self-assessment determined that an EES Referral is not warranted for this project.

Furthermore, EHP, in their biodiversity assessment, have demonstrated that the potential acoustic impact on wildlife within the adjacent Poynton State Forest is negligible.

TRAFFIC

The assessment of the preferred Over-Dimension/Over-Size-Over-Mass vehicle route option from Port of Portland to the Wind Farm site for the transport for WTGs and other imported major components demonstrates, subject to some roadside works and the implementation of traffic management during haulage, that the proposed routes are suitable for the largest blades and haulage design vehicles.

The independent traffic assessment has been prepared on the basis of a slightly larger rotor than that proposed, which provides for some conservatism.

AVIATION AND AIRCRAFT SAFETY

The Aviation Impact Statement and Aviation Impact Report highlight that there are no Aircraft Landing Areas within 10 nm of the site, and no flight routes pass over the site. No Grid Lowest Safe Altitudes will need to be raised.

Airservices Australia has formed the view that the WEF will not impact on the safety, efficiency or regularity of existing, or future air transport operations into or out of any airport. Airservices

[2] Department of Environment, Land, Water and Planning (DELWP) 2020b. Brolga assessment and mitigation standards for wind energy facilities. Explanatory document.
[3] Biosis 2020. Summary of Red-tailed Black Cockatoo flight behaviour investigation for Wombelano Wind Farm. Report for Wind Projects Australia. Author: Smales, I. Biosis Pty Ltd, Melbourne.

Australia and Department of Defence will need to be notified of the new obstacles for inclusion in Pilot NOTAMs and maps.

The Proponent has consulted with landowners owning the land adjacent to the proposed development. No issues have been raised by those landowners with the Proponent with respect to their own Farm Aviation practices.

SUMMARY

The following planning triggers have been identified:

- VPP Clause 35.07-1 identifies that a permit is required for the construction of a WEF in a *Farm Zone.*
    - Must meet the requirements of VPP Clause 52.32.
- VPP Clause 35.07-1 identifies that a permit is required for the construction of a temporary concrete batch plant in a *Farm Zone*.
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The requirements specified in these triggers are addressed in the body of this planning report, with further detailed assessment included in the appendices.

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The Proponent will submit to the Responsible Authority the Development Plans and associated management plans that are consistent with the design envelope specified in this report for endorsement. Once endorsed, these Development Plans and management plans will form part of the Planning Permit.

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LIST OF ACRONYMS

Acronym/Abbreviation	Definition
The Act	Victorian Planning and Environment Act (1987)
ALA	Aircraft Landing Area
AREMI	Australian Renewable Energy Mapping Interface
CEMP	Construction Environmental Management Plan
CFA	Country Fire Authority
CHM	Charam Zone Substation
CHMP	Cultural Heritage Management Plan
CMA	Catchment Management Authority
DAWE	Department of Agriculture, Water and the Environment (Federal)
DELWP	Department of Environment Land Water and Planning (State)
EMI	Electromagnetic Interference
EMP	Environmental Management Plan
EPA	Environmental Protection Agency
EPBC	Environmental Protection and Biodiversity Conservation Act (1999) (Commonwealth)
Fera	Fera Australia Pty Ltd
FFG	Flora and Fauna Guarantee Act (1988)
ha	Hectare
GWh	Giga-Watt-hour
km	kilometre
kV	kilo-Volt
L_{A90}	A-weighted noise level exceeded for 90% of the measurement time as required under NZS 6808:2010.
LGA	Local Government Area
LGC	Large-scale Generation Certificate
LPP	Local Planning Provision
LSALT	Lowest Safe Altitude
m	Metre
m/s	Metres per second
MVA	Mega-Volt-Amp
MW	Mega-Watt
NEM	National Electricity Market
nm	Nautical Mile
NOTAM	Notice to Airmen
RA	Responsible Authority
RET	Renewable Energy Target
SDS	Safety Data Sheet
VPP	Victorian Planning Provisions
WEF	Wind Energy Facility
WPA	Wind Projects Australia Pty Ltd
WTG	Wind Turbine Generator

1. INTRODUCTION

The Proponent, Wind Projects Australia Project 1 Pty Ltd, wholly owned by Wind Projects Australia Pty Ltd (WPA) and Fera Australia Pty Ltd (Fera), are proposing a Wind Energy Facility (WEF) in the West Wimmera Local Government Area (LGA) in Victoria, 20 km east of Edenhope and 65 km south-west of Horsham. The proposed facility will consist of up to seven Wind Turbine Generators (WTGs), exporting renewable energy for sale into the National Electricity Market (NEM), connecting into the Charam Zone Substation (CHM) via either a 66 kV sub-transmission line or a 22 kV distribution line, placed underground. This Planning Permit Application is made under Clause 52.32 of the Victorian State Planning Provisions, where the Department of Land Water and Planning (DELWP) are the Determining Authority.

The project impacts the following land:

- Principal location: Crown Allotment 48A, Parish of Wombelano, Charam-Wombelano Road, Wombelano, 3409.
- Connection alignment: Road reserve on either side of Goroke-Harrow Road from the intersection with Charam-Wombelano Road and Goroke-Harrow Road to 150 m south of that intersection.
- Connection alignment: Under Goroke-Harrow Road between 100 m and 150 m south of the intersection Charam-Wombelano Road – Goroke-Harrow Road intersection.
- Connection alignment: Road reserve along south side of Charam-Wombelano Road and the northern boundary of Lot 2 PS532436 from the Charam-Wombelano Road – Goroke-Harrow Road intersection to the entrance to Charam Zone Substation, Lot 1 PS532436, Charam-Wombelano Road, Wombelano, 3409.
- Connection alignment: Entrance into Charam Zone Substation, Lot 1 PS532436, Charam-Wombelano Road, Wombelano, 3409.
- Site entrance: Road Reserve on the western side of Goroke-Harrow Road, nominally 2 km south of the intersection with Charam-Wombelano Road.

Planning approval is sought for up to 7 WTGs and associated infrastructure, which includes:

- A battery storage facility;
- Underground powerlines from the site to CHM;
- Internal tracks and cabling;
- On-site substation;
- Lay-down and hard-stand areas;
- Concrete batching plant;
- Maintenance facilities;
- A permanent meteorological mast and associated anemometry on the land; and
- Clearing of 0.127 ha of native vegetation under VPP Clause 52.17.

The site has been selected due to its close proximity to existing electricity infrastructure, the excellent wind resource, the minimal impact on native flora and fauna, the simplicity of the topography, resulting in a simpler build process, the excellent site access available, and the separation between the WTGs and neighbouring dwellings.

While the exact type and size of the WTGs are yet to be determined, the Proponent is seeking a Planning Permit allowing WTGs up to a tip height of 250 m above ground level to be constructed,

with a minimum lower tip height of 55 m. A rotor diameter of 162 m is proposed resulting in a maximum hub height of 169 m. The reasons for this are outlined below:

- The tip height limit based on avoiding impacting on grid Lowest Safe Altitudes (LSALTs) is over 300 m;
- Modelled wind data suggests that by increasing the hub height from 100 m to 150 m, the mean wind speed will increase from nominally 7.0 m/s to 7.9 m/s – resulting in nominally a 25% increase in yield; and
- The project is looking progressing rapidly to the construction stage, thus a 162 m rotor is proposed – corresponding to the commercially available Vestas V162 WTG.
- Fundamentally, the larger the rotor, the higher the yield, and the lower the levelised cost of energy.

While the size of the Wombelano Wind Farm is modest when compared to other wind farms in neighbouring shire councils, the amount of energy predicted to be generated by the wind farm is commensurate with the electricity demand in the region.

Furthermore, the Proponent is aware that:

- A new mineral sand processing facility is under consideration by Iluka in the region, potentially drawing 10 MW – 20 MW of baseload power;
- Riordan Grains have acquired a large grain storage facility in 2018 approximately 6 km from the WEF, and have upgraded it, resulting in greater energy consumption in the region, however, they have been relying on backup diesel generators to supply their load during harvest;
- Anecdotally, the electricity supply in the area is not strong, with many blackouts and a reliance on diesel backup generation; and
- Based on asset information data supplied by Powercor, the 66 kV sub-transmission line into CHM is sufficient for the supply of Edenhope and surrounds, but it precludes any new energy intensive development as line losses would become large and upgrades would be required.

In this context, the proposed WEF will result in:

1. Increasing electricity generation in the region.
2. Reduce power bills in the vicinity of Edenhope through a reduction in the Distribution Loss Factor (DLF).
3. Improved reliability of supply.
4. Improved opportunity for other energy-reliant industry in the region.
5. Significant economic development and training outcomes in the region.

These items not only result in direct investment in the region, but they also facilitate further growth in the region by removing the barrier to market entry of a weak power supply.

Because of the current uncertainty associated with some of these investments, a staged development may be most appropriate, with, for example, two turbines constructed as part of Stage 1, whilst the remainder of the turbines (up to seven) may be constructed when the external factors align. Because of the high hub heights of the proposed WTGs, concrete or hybrid concrete/steel towers may be beneficial.

2. SITE AND LOCALITY

2.1 LOCAL CONTEXT

2.1.1 Site Location and Specifications

The proposed Wombelano Wind Farm is located on Crown Allotment 48A in the Parish of Wombelano. This parcel of land is situated in the south-west corner of the intersection of Charam-Wombelano Rd and Goroke-Harrow Road, shown in Figure 1.

Crown Allotment 48A is a trapezoidal parcel of land, with an area of 252 hectares, and is generally flat, as evidenced by the 10 m contours and regions flagged as *Flats – Subject to Inundation*, shown in Figure 3. The site photo in Figure 4 further highlights the nature of the landscape: flat and intensively farmed, with vegetation most dense in road reserves.

The land parcel extends approximately 2 km north to south and 1.4 km east to west.

To facilitate the connection of the WEF into the Charam Zone Substation, underground powerlines are proposed to:

- Pass through the road reserve on either side of Goroke-Harrow Road, south of the intersection of Charam-Wombelano Road and Goroke-Harrow Road for a distance of 150 m.
- Pass under Goroke-Harrow Road, south of the intersection Charam-Wombelano Road – Goroke-Harrow Road intersection.
- Pass within the road reserve along the northern boundary of Lot 2 PS532436.
- Enter Lot 1 PS532436, which is the Charam Zone Substation, owned by Powercor.

These areas are shown in Figure 1; a zoomed in map of this area, showing dimensions, is shown in Figure 2. These areas form part of the subject site.

There are four access points to the WEF site, that is, Crown Allotment 48A, Parish of Wombelano:

- Existing entrance to the existing shearing sheds and yards on Goroke-Harrow Road, nominally 550 m south of the intersection with Charam-Wombelano Road.
- Existing entrance to the paddocks on Goroke-Harrow Road, nominally 1,600 m south of the intersection with Charam-Wombelano Road.
- New entrance on Goroke-Harrow Road, nominally 2,100 m south of the intersection with Charam-Wombelano Road. Some clearing of native vegetation is required in the road reserve to accommodate the new entrance. This new entrance is selected as it allows access for over-length vehicles to enter the site whilst minimising impact on native vegetation.
- Existing entrance on Charam-Wombelano Road, nominally 1,100 m west of the intersection with Charam-Wombelano Road.

Easements vested in Powercor, shown in Figure 1 and Figure 2, pass through Crown Allotment 48A Parish of Wombelano as well as through Lots 1 and 2 PS532436. These easements, addressed in instrument AC075414L, provide for the installation and maintenance of overhead powerlines.

2.1.2 Land Use and Buildings

The site is currently cropped, with some tracks across the site, and a drain through the centre of the site, running from the north to the south, from the drained swamp in the north-east corner of the site. Shearing sheds are located roughly midway along the eastern boundary of the site. There are five small dams on the site comprising less than 0.3 ha in total. There are no dwellings on the site.

2.1.3 Ecological Characteristics

The ecological characteristics of the site are described in detail in EHP's Biodiversity Assessment presented in Appendix 2: Ecological Impact Report. The property is generally flat; however, there is a wide-spanning basin in the north-eastern corner, and a large majority of the property is currently being used for sheep grazing and cropping on rotation. Large River Red Gums are scattered across the site and a copse of mature Bulokes is located in the south of the site.

According to the DELWP Native Vegetation Information Management (NVIM) Tool, the study occurs within the Wimmera bioregion. It is located within the jurisdiction of the Wimmera Catchment Management Authority (CMA) and West Wimmera Shire Council municipality.

Wetlands on the site are mapped in Figure 2 of EHP's Biodiversity Assessment presented in Appendix 2: Ecological Impact Report.

2.1.4 Site Landscape

The wind farm site is flat, with only very minor undulations. It is *Heavily Modified Farmland*, being grazed and cropped on rotation. Shearing sheds, farm machinery and fences are present on the site. Powerlines are already erected along the northern and eastern site boundaries. Roads and tracks run around much of the perimeter of the site. Artificial drainage lines are also evident. These features are evident in Figure 4, Figure 6 and Figure 7. Native vegetation in the form of large gum trees also dot the site. A mix of native and exotic vegetation is present in the road reserves adjacent to the site. Small areas of remnant native vegetation are also present on the site.

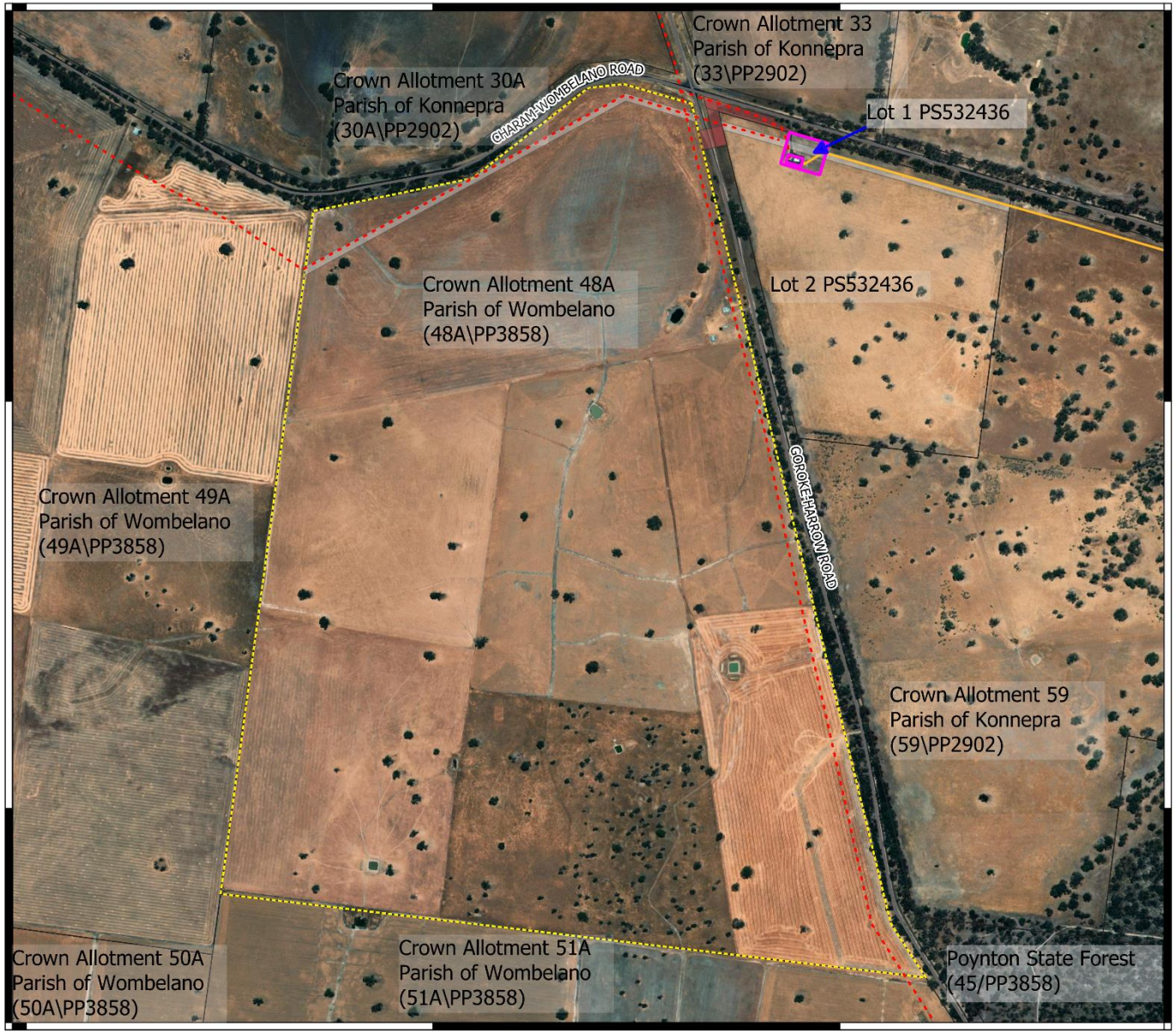


Figure 1: Location of Wombelano Wind Farm – Local context.

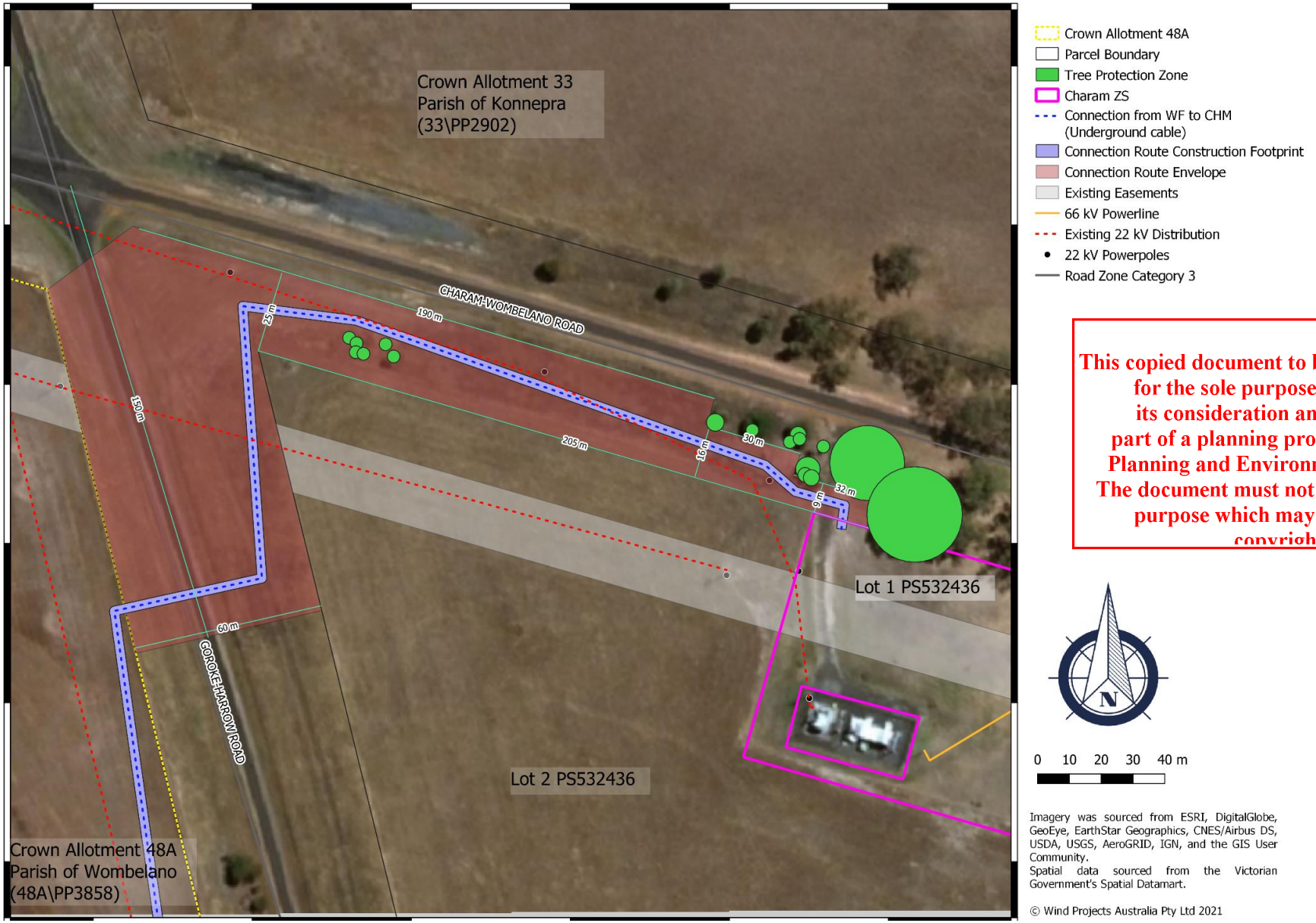
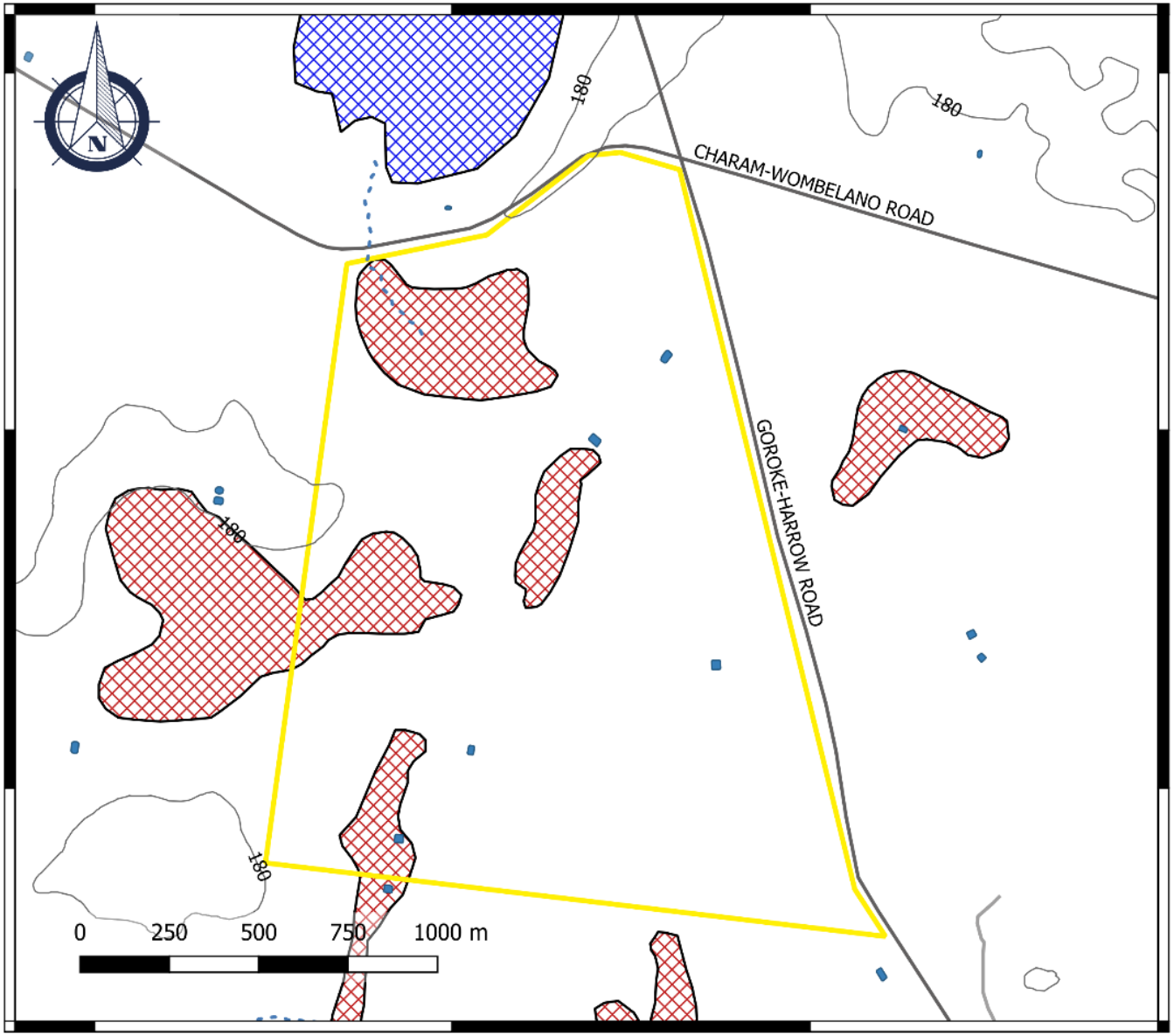


Figure 2: Grid connection envelope.



Road, elevation, hydrological and cadastral data sourced from the Victorian Government's Spatial Datamart.

Figure 3: Elevation contours near Wombelano Wind Farm. 10 m contours are shown. Contour levels are in metres.

Figure 4: View across Crown Allotment 48A, Parish of Wombelano.

Figure 5: CHMP Trigger on Crown Allotment 48A, existing electrical infrastructure and powerline easement, and aerial imagery showing drainage channels across the site.

Figure 6: Drained swamp area, prior to cropping.

Imagery was source from ESRI, DigitalGlobe, GeoEye, EarthStar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community.
Road, elevation and cadastral data sourced from the Victorian Government's Spatial Datamart.

Figure 7: Buildings located on Crown Allotment 48A Parish of Wombelano: Sheds.

2.1.5 Hydrology and Water Quality

The site is generally flat, with a depression through the centre of the property, providing a drainage channel, with water flow from the south of the property to the north, with water being channelled under Charam-Wombelano Road in the north-west of the property into the Konnepra Swamp. Additional drainage channels are visible in the aerial imagery (Figure 5). A further circular depression is present in the north-eastern corner of the site. This was an unnamed swamp, but has been drained, and is used for cropping and general farming.

Flood-prone areas have been identified in Figure 3, while drainage channels and the circular depression are visible in the aerial imagery in Figure 5.

2.1.6 Wind Characteristics

The Proponent deployed a SODAR on site in June 2019, and installed a 120 m tall meteorological mast in January 2021.

One of the key reasons that the Proponent has selected this site for wind farm development is the wind resource. The region is generally flat, open farmland, which will tend to result in consistent wind speeds with lower levels of turbulence. Based on on-site wind measurements, the wind speed at the site at a nominal hub height of 150 m is 7.9 m/s. Wind roses are presented in Figure 8, comparing wind speed distribution between data measured on site and modelled data made available through the Australian Renewable Energy Mapping Interface (AREMI).

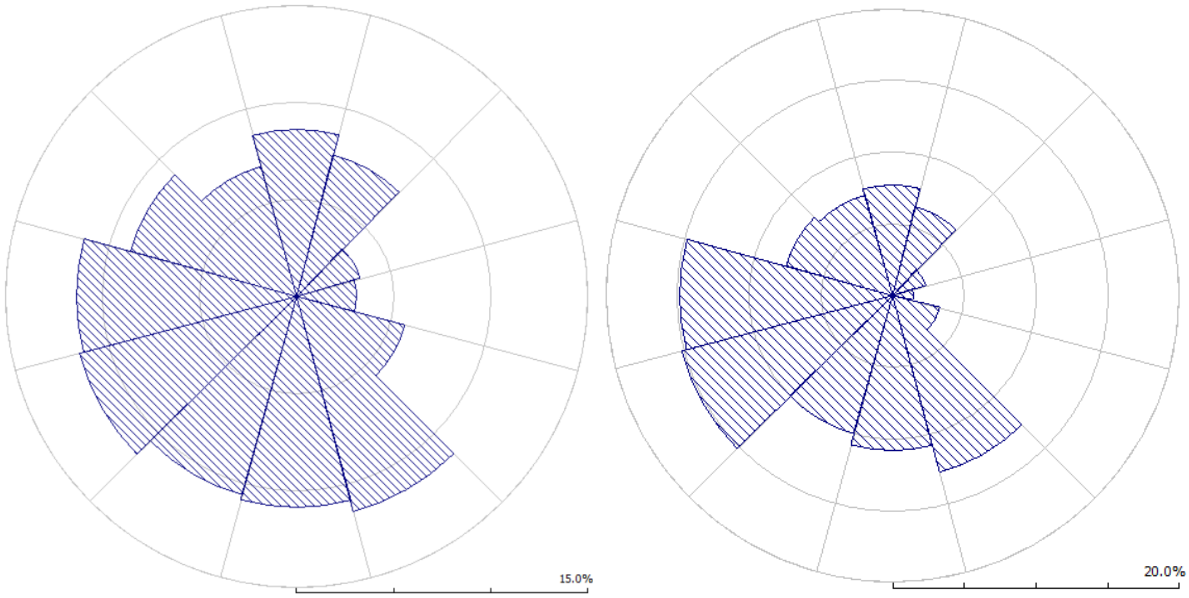


Figure 8: (Left) Wind rose from mesoscale wind modelling – downloaded from the Australian Renewable Energy Mapping Interface. (Right) Wind rose from one year of on-site SODAR data.

2.1.7 Grid Connection

Per Amendment VC157 to the VPP, consideration of the connection from Wombelano Wind Farm's substation to Charam Zone Substation is required, and forms part of this Planning Permit application.

Crown Allotment 48A in the Parish of Wombelano is located adjacent to the Charam Zone Substation, which is serviced by a 33 MVA 22/66 kV transformer, with the 66 kV sub-transmission

line running back to Horsham, and various 22 kV transmission lines servicing the local area, including the nearby townships of Charam and Edenhope. One of the reasons that this parcel of land was identified as being amenable to wind farm development was its proximity to the substation. The substation's location relative to Crown Allotment 48A can be seen in Figure 1 and Figure 2.

2.1.8 Other Notable Features and Constraints

In preparing leasing arrangements with the Landowner, the Landowner expressed concern about losing control of his property through an Option to Lease and Lease agreement. While the specifics of those contracts are confidential, the Proponent and the Landowner were able to find a solution whereby the Proponent would have unrestricted access for the siting of turbines, hardstand areas, access tracks, cabling, etc, from the property boundary to 150 m within the property boundary, except for around the shearing sheds. The Proponent requires explicit consent from the Landowner to place wind farm infrastructure outside of this area. This ensures that the Landowner can maintain farming operations.

As can be seen in Figure 5, there are culturally sensitive areas mapped to the north of the site, with the Cultural Heritage Management Plan (CHMP) mapped area overlapping onto the site by nominally 50 m. A road, property fencing, farming activities and 22 kV overhead powerlines already pass through this trigger area; however, the WEF can be designed to avoid any overlap with this mapped area.

The site has straightforward road access along Goroke-Harrow Road. Secondary access is via Charam-Wombelano Road. New tracks will be required to provide year-round access to the WTGs.

Geotechnical surveys were conducted in September 2020. Two bores were conducted, one located on the central-western side of the site, and a second in the south-east corner of the site. Both bores were dominated by sandy-clay and clayey-sand. No rock was encountered. This implies that medium to large WTG foundations will be required, but that no drilling or blasting will be required. Some lime stabilisation of existing tracks may be required. The report is provided in Appendix 9: Geotechnical Survey. Additional water table monitoring is underway.

2.2 Regional Context

The West Wimmera Municipality spans 9,108 km^2 – spread between National Parks, conservation areas, and over 2,000 wetlands, as well as extensive farming. The West Wimmera is a key Primary Production area, with the farming of grains, livestock, timber and fruit. Consultation by the Proponent with West Wimmera Shire has indicated that sensible and ecologically sensitive renewable energy development would be welcomed, stimulating economic activity and growth in the West Wimmera.

2.2.1 Existing Land Uses

Crown Allotment 48A in the Parish of Wombelano is typical of the various farms in the West Wimmera, having large areas of open, flat farmland dotted with trees, with a high level of vegetation in the road reserves.

As shown in Figure 9, the land and its surrounds are zoned as *Farming Zone* with some swathes of *Public Conservation and Resource Zone* nearby. The Public Resource and Conservation Zones in the vicinity of the site are associated with forested areas and lakes. There are no Regional Growth Corridors in the vicinity of the site. There is no land specified in the Schedule to Clause 52.32 of the VPP, for West Wimmera.

Farming in the region includes cropping and grazing. There is infrastructure in the area to support these activities, including barns, shearing sheds and cattle yards.

In addition to these buildings, the Charam Zone Substation contains a small control room and Rioradan Grains, located 6 km west of the WEF, has extensive grain storage facilities and an administration building.

2.2.2 Above-Ground Utilities: Electrical Utilities

Existing electrical infrastructure and associated powerline easement south of Charam-Wombelano Road are shown in Figure 5.

The Charam Zone Substation (CHM), managed by Powercor, is located adjacent to the site, in the south-eastern corner of the intersection of Charam-Wombelano Road and Harrow-Goroke Road, and is accessible from Wombelano-Charam Road. The substation has a 33 MVA transformer, dropping the voltage from 66 kV, coming from Horsham Terminal Station (HOTS) to 22 kV, distributing to Edenhope and surrounds. Indications from Powercor are that the thermal rating of the existing 66 kV sub-transmission line from CHM to HOTS is 25 MVA.

The 22 kV powerline that services Edenhope runs parallel to Charam-Wombelano Road, on the southern side, in easements marked on the title plans. Further 22 kV lines spread north and south out of CHM, along Goroke-Harrow Road. The line that runs towards the south passes along the eastern boundary of Crown Allotment 48A, Parish of Wombelano; however, there is no easement for this powerline listed on the title plan.

The subject site, Crown Allotment 48A, Parish of Wombelano is a powered lot.

2.2.3 Other Infrastructure

The site is well serviced by road infrastructure from both Portland and from Geelong. Routes to and from the site are addressed in Appendix 4: Traffic Impact Assessment. In the immediate vicinity of the site, the proximity to roads is identified in Figure 9, highlighting the proximity to Nhill-Harrow Road, which is Road Zone Category 1.

2.2.4 Proximity to Nearby Dwellings, Amenities and Infrastructure

The location of the site relative to dwellings, National Parks, conservation areas and water features is shown in Figure 10. A broader location plan is shown in Figure 11.

The number of dwellings within 5 km of the site are specified in Table 1. Specifically, the nearest dwellings to the site are a small dwelling located nominally 0.75 km from the NW corner of the wind farm host property and another dwelling is 1.1 km SSE of the site. Note that the distances refer to the site boundary. With consideration given to micro-siting allowances, it is possible to ensure that the nearest proposed turbine location remains in excess of 1 km from this dwelling.

Siting of WTGs beyond 1 km of dwellings eliminates the need to seek written consent from any nearby dwellings. However, the Proponent acknowledges that this does not preclude any of these residents from consultation.

The Proponent has and will continue to engage with nearby residents and landholders. To this end, the Proponent first engaged with neighbouring landowners in January 2019, as well as staying in regular contact with the West Wimmera Shire Council.

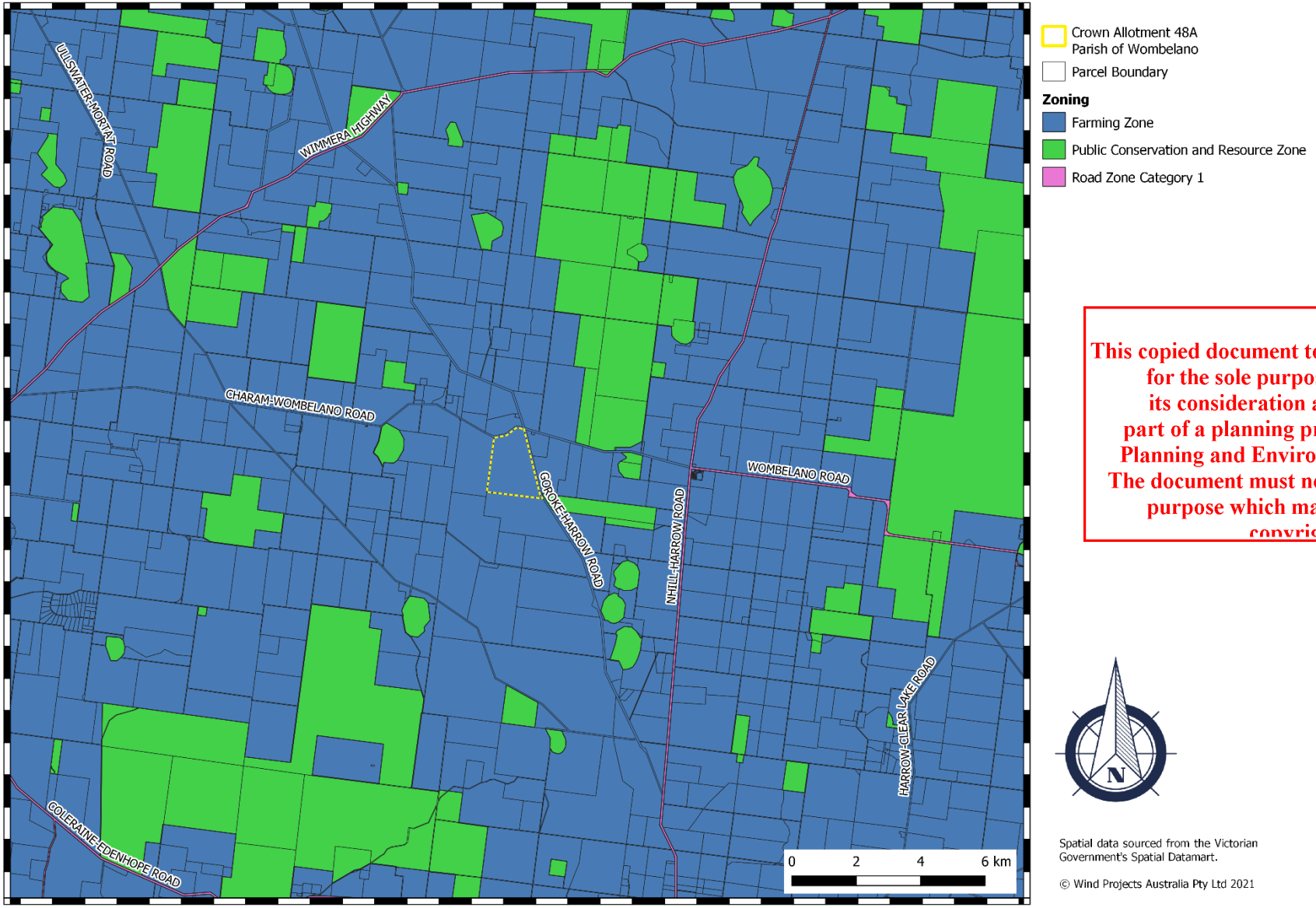


Figure 9: Council zoning in the vicinity of the WEF. Property boundary of Crown Allotment 48A is shown in yellow.

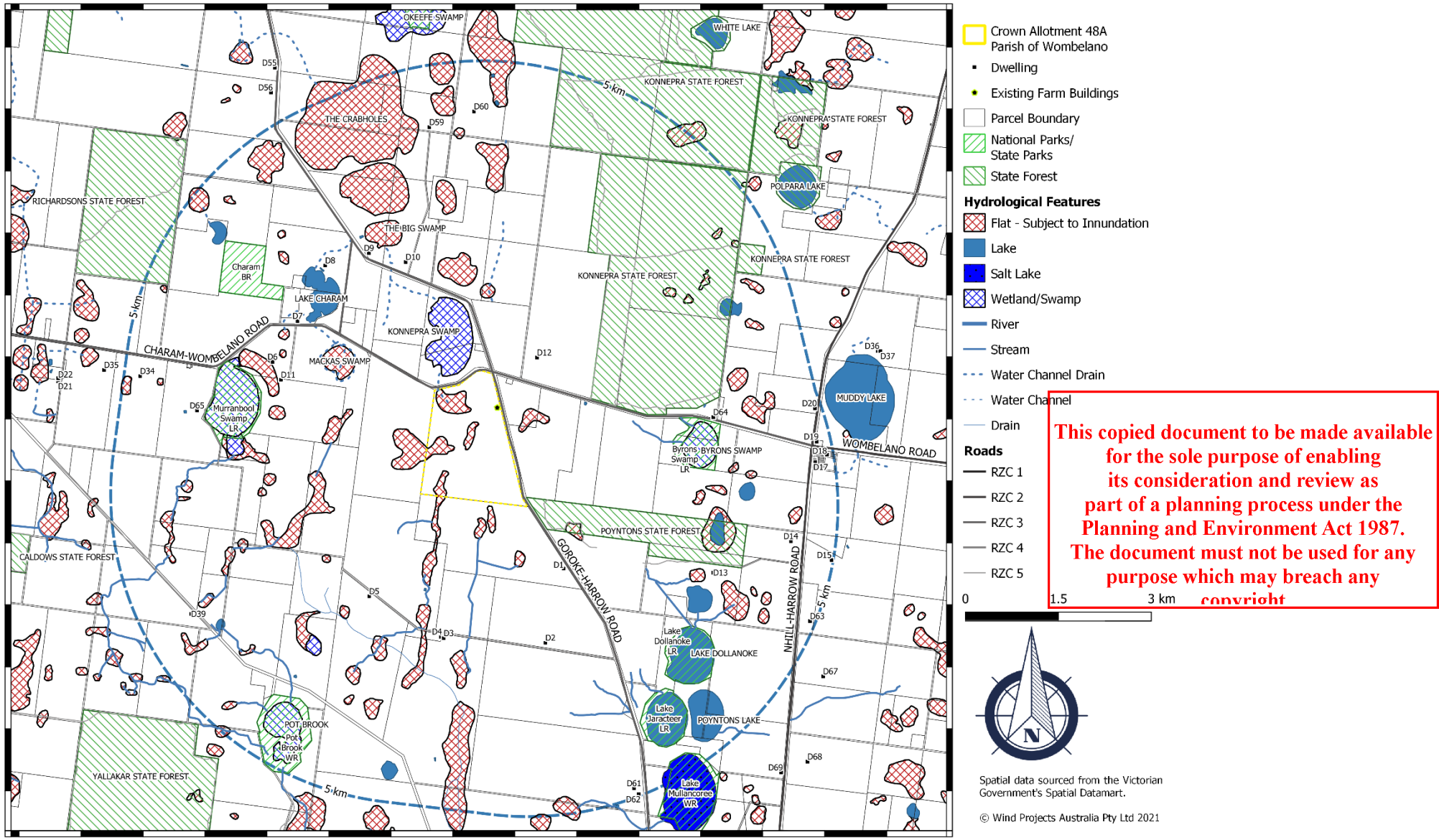


Figure 10: Dwellings, lakes, National Parks, conservation reserves within 5 km of the site. Features are labelled where names are known.

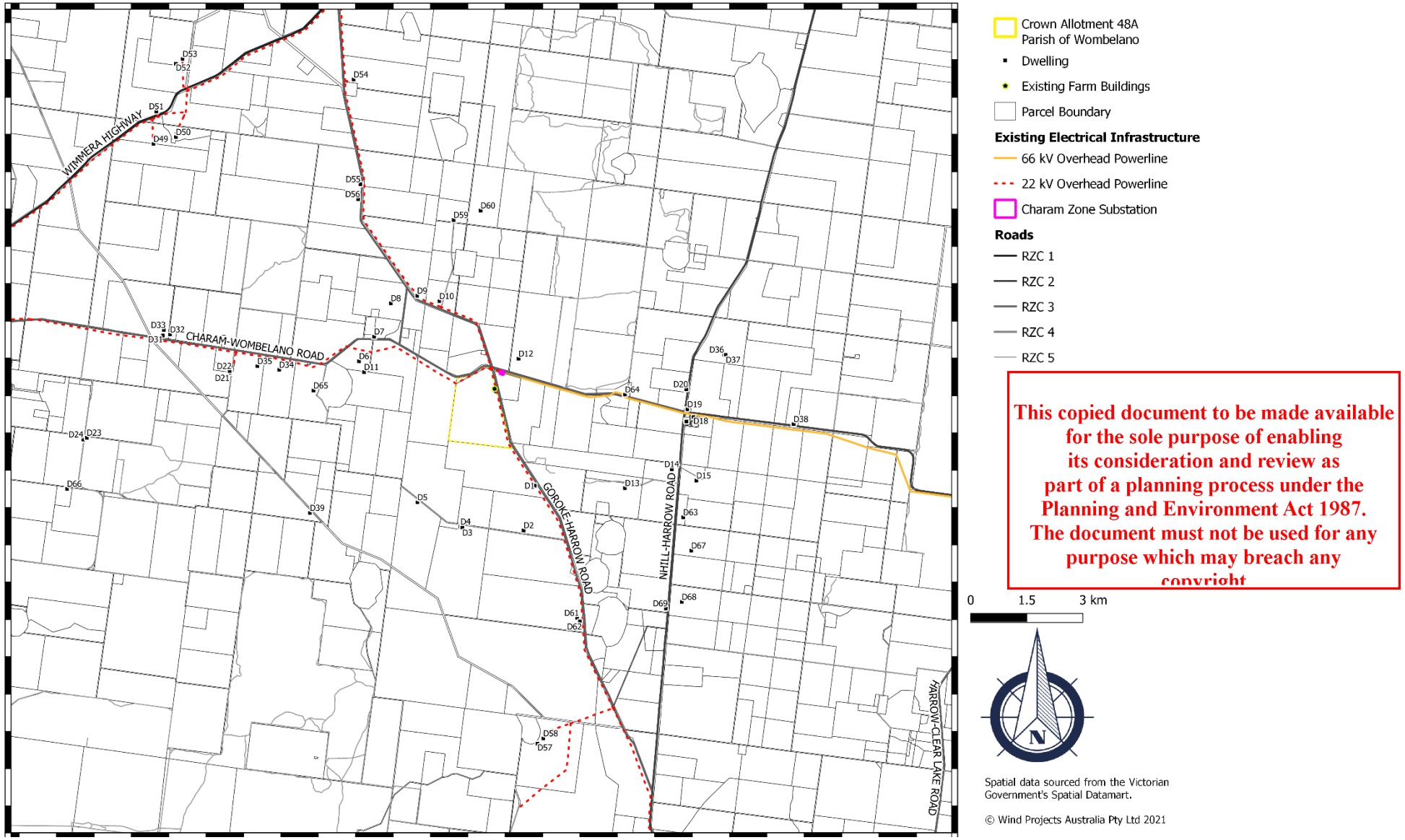


Figure 11: Location Plan.

Table 1: Dwellings within 5 km of site.

Proximity to Site	Number of Dwellings
< 1 km	1
1 – 2 km	2
2 – 3 km	9*
3 – 5 km	15
*** Includes stakeholder residence.**	

In addition to the dwellings, there are a various lakes, wetlands, National Parks and conservation areas in the region, shown in Figure 10. Various chains of lakes exist in the West Wimmera Shire, with Crown Allotment 48A being offset from these chains. Many of these lakes and wetlands are National Parks and conservation reserves and under the management of Parks Victoria.

The broader regional context is presented in Figure 31, highlighting the WEF's proximity to the nearest proposed wind farm (Rifle Butts Wind Farm, over 50 km east of the site); the proximity to the nearest townships (Edenhope, 22 km to the west of the site, Harrow, 17.5 km to the south of the site); the route of the 66 kV sub-transmission line; and the various Conservation Reserves, National Parks, State Parks in that broader regional context.

2.2.5 Aviation

Figure 12 shows the air routes and Aircraft Landing Areas (ALAs)/Airports within 30 nautical miles of Crown Allotment 48A, Parish of Wombelano. The proposed WEF is more than 10 nautical miles (18.52 km) from the nearest ALA recorded in DELWP's VicMap Transport Model[4], with a number of ALAs to the south of the site, and the Edenhope Airport due west of the site, as documented in Table 2. There are no flight routes that pass directly over the site.

The grid LSALT (Lowest Safe Altitude) is based on the highest obstacle within a 10 nautical mile radius. Specifically, the LSALT must be set at 1000 feet above the highest obstacle within 10 nautical miles, rounding up to the nearest 100 feet. Two grid LSALTs are above the site: over the northern portion of the site the grid LSALT is 2600 feet; above the south portion it is 3100 feet.

[4] "TR_AIR_INFRA_AREA_POLYGON", available through DELWP's Spatial DataMart.

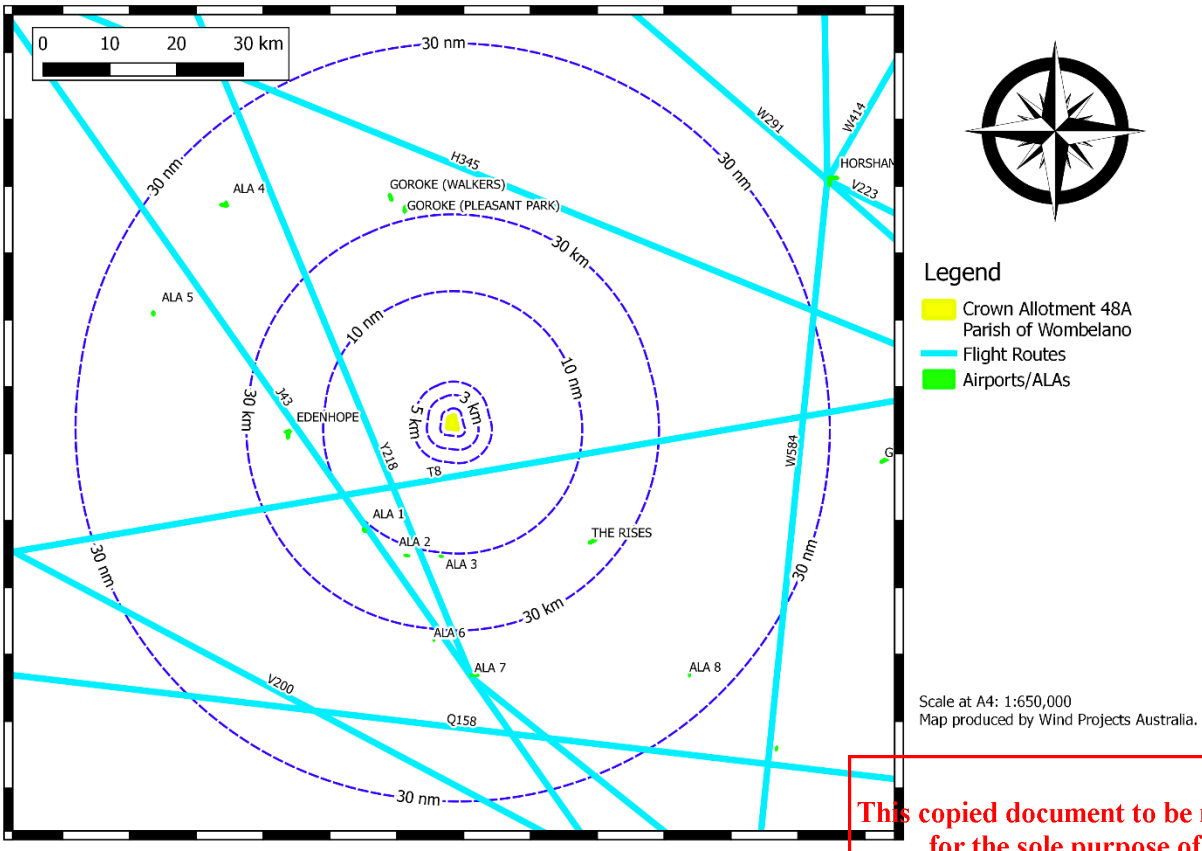


Figure 12: Air routes and Airports/ALAs in the vicinity of the site.

Table 2: ALAs and Airports within 30 nautical miles of the site.

ALA	STATUS	LOCATION	DESCRIPTION
Edenhope	Uncertified, unregistered. Listed with Airservices Australia as an ALA (YEDE/ALA)	23 km West of the site. 3.5 km from Edenhope township.	18/36 Sealed strip, with lighting. Managed by West Wimmera Shire Council. Note, cross-strip is unavailable.
The Rises	Uncertified, unregistered, not listed with Airservices Australia as an ALA.	26 km South-East of the site.	WSW-ENE orientation. Unsealed. No documentation available.
ALA 1	Un-named ALA.	20 km South-West of the site.	NW-SE orientation. Imagery does not show any sign of ALA.
ALA 2	Un-named ALA.	20 km South-West of the site.	WNW-ESE orientation. Imagery does not show any sign of ALA.
ALA 3	Un-named ALA.	19 km South-South-West of the site.	WNW-ESE orientation. Imagery shows very limited signs of ALA.
Goroke – Pleasant Park	Listed with Airservices Australia as an ALA (YPPK/ALA)	31 km North of the site.	NNW-SSE orientation. Unsealed runway.
Goroke – Walkers	Not listed with Airservices Australia as an ALA.	33 km North of the site.	NNE-SSW orientation. Imagery shows very limited signs of ALA.
ALA 4	Un-named ALA.	45 km North-West of the site.	Two strips: E-W and N-S orientation. Imagery shows very limited sign of ALA.
ALA 5	Un-named ALA.	46 km North-West of the site.	N-S orientation. Unsealed runway. Visible on imagery.
ALA 6	Un-named ALA.	31 km South of the site.	N-S orientation.

			Unsealed runway. 900 m runway – markings visible on imagery.
ALA 7	Un-named ALA.	37 km South of the site.	E-W orientation. Unsealed runway. Visible on imagery.
ALA 8	Un-named ALA.	49 km South-East of the site.	N-S orientation. 400 m runway visible on imagery.

2.2.6 Views to and from the site

As prescribed in Clause 52.32 of the VPP, photographs to and from the site are presented.

The photograph locations are mapped in Figure 13. This map also highlights the photographs that were converted to photomontages. Included angles are also shown for the photographs towards the site. The photographs towards the site are shown in Figure 14 to Figure 21. The photographs from the site were taken near the centre of the site, as can be seen in Figure 13. Photographs from the site are presented in Figure 22 through Figure 29, beginning from the north, at 45° increments.

The photos to and from the site highlight the flat topography and that the landscape is heavily modified through farming (grazing and cropping), the development of the road network and existing power infrastructure. Vegetation is most dense in road reserves, providing screening from main roads; large individual eucalypts are typically scattered through paddocks.

Because the region is so flat, utility scale WTGs will inevitably be prominent on the landscape; however, as the project comprises relatively few WTGs, from distances beyond 3 km large trees will provide significant screening to the project.

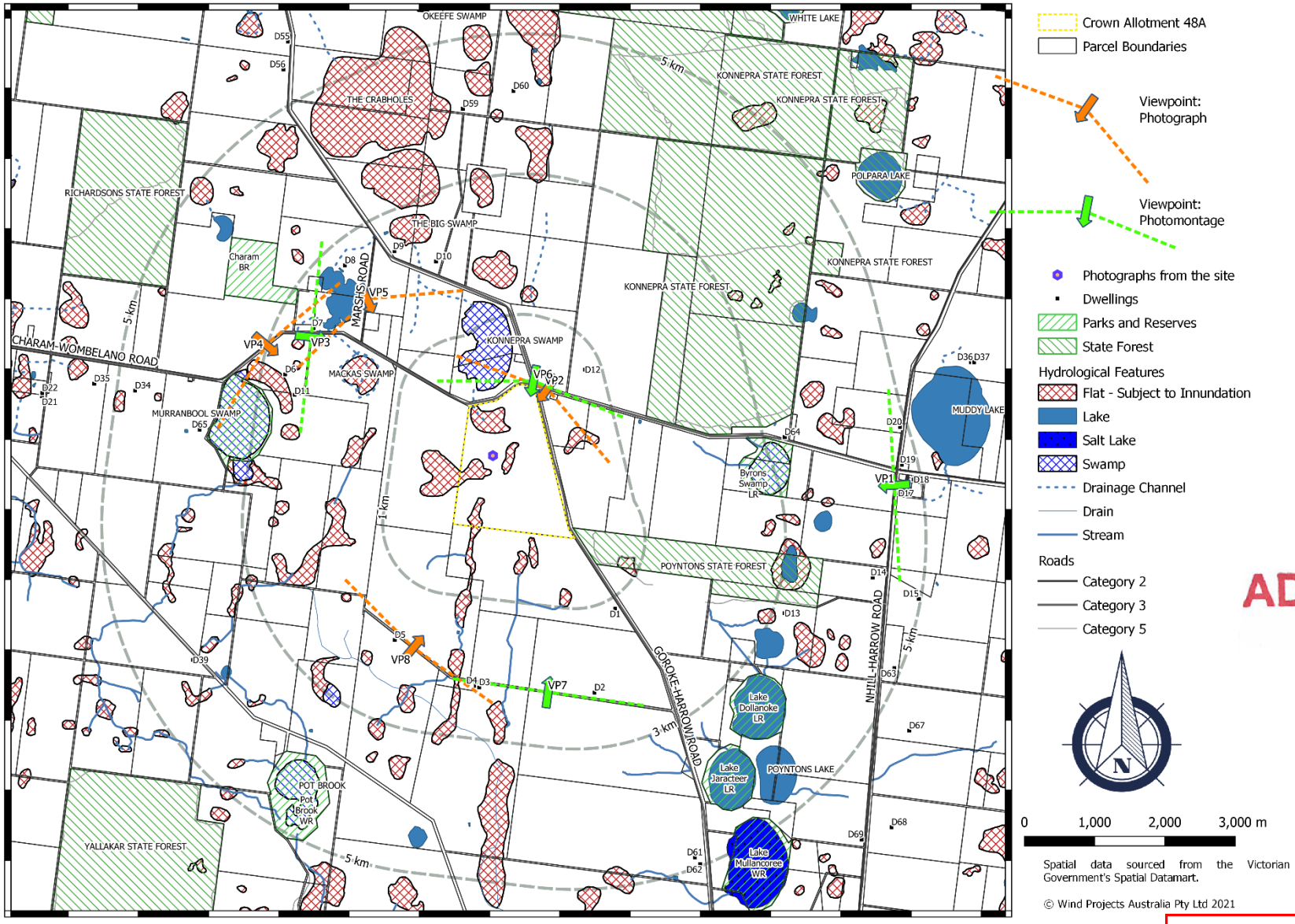


Figure 13: Location of photographs to and from the site. Green photograph locations have been converted to photomontages.

Figure 14: View 1 – View south-west to north-west from the Nhill-Harrow Road

Figure 15: View 2 – View south to west from the Charam-Wombelano Road

Figure 16: View 3 – View east to south from the J Mitchell Road

Figure 17: View 4 – View north-east to south-east from the Charam-Wombelano Road

Figure 18: View 5 – view east to south-west from the Marshs Road

Figure 19: View 6 – View south to south-west from the Harrow-Goroke Road

Figure 20: View 7 – View north-west to north-east from the Pine Hills No.2 Road

Figure 21: View 8 – View north to south-east from the Pine Hills No.2 Road

Figure 22: View from site looking north.

Figure 23: View from site looking north-east.

Figure 24: View from site looking east.

Figure 25: View from site looking south-east.

Figure 26: View from site looking south.

Figure 27: View from site looking south-west.

Figure 28: View from site looking west.

Figure 29: View from site looking north-west.

2.2.7 Sites of Flora and Fauna listed under the FFG Act (1988) and the EPBC Act (1999)

Flora and fauna listed under the *Flora and Fauna Guarantee* (FFG) *Act* (1988) and/or the *Environmental Protection and Biodiversity Conservation* (EPBC) *Act* (1999) (Commonwealth), in the vicinity of the site are provided in Appendix 2: Ecological Impact Report.

2.2.8 Sites of Cultural Heritage Significance

The map shown in shows established sites of Cultural Heritage Significance in the vicinity of the site. The areas of cultural sensitivity are focussed predominantly on the lakes in the region.

The presence of these sensitive sites, located quite close to the WEF, indicates that it is likely that the people of the Barengi Gadjin would have passed across the site, from one lake area to the next. However, the lack of significant water-source on the site implies that it is unlikely that the community would have camped on the site.

In addition to the Aboriginal Heritage, a search was conducted on the Victorian Heritage Database. There were no locations or items listed on the database located at the WEF. The nearest items on the register are the Pot Brook Charcoal Kilns, located on Cameron and Lampards Road, 4.2 km SW of the WEF.

2.2.9 National Parks and State Parks

Land managed by Parks Victoria include both National Parks and State Parks, which is subject to the *National Parks Act* (1975). Parks in the vicinity of the site are shown in Figure 31.

Some 20 to 40 km to the north-east of the site is the Arapiles-Tooan State Park featuring Mount Arapiles, which rises 140 m above the Wimmera plains. This state park is a mecca for rock climbing, and is a popular destination for camping, walking and cycling.

The Jilpanger Nature Conservation Reserve, which is between 10 km and 20 km from the site, is renowned among bird watchers for attracting a diverse range of avifauna. Similarly, the salt and freshwater lake chains that are nearer the site (approximately 3 km) also attract waterbirds.

The WEF is not located on land listed in a schedule to the National Parks Act 1975.

2.2.10 RAMSAR Wetlands

There are no RAMSAR wetlands in the vicinity of the site. The nearest are the Bool and Hacks Lagoons in South Australia, which are over 70 km from the site.

2.2.11 Land Excluded from Wind Farm Development

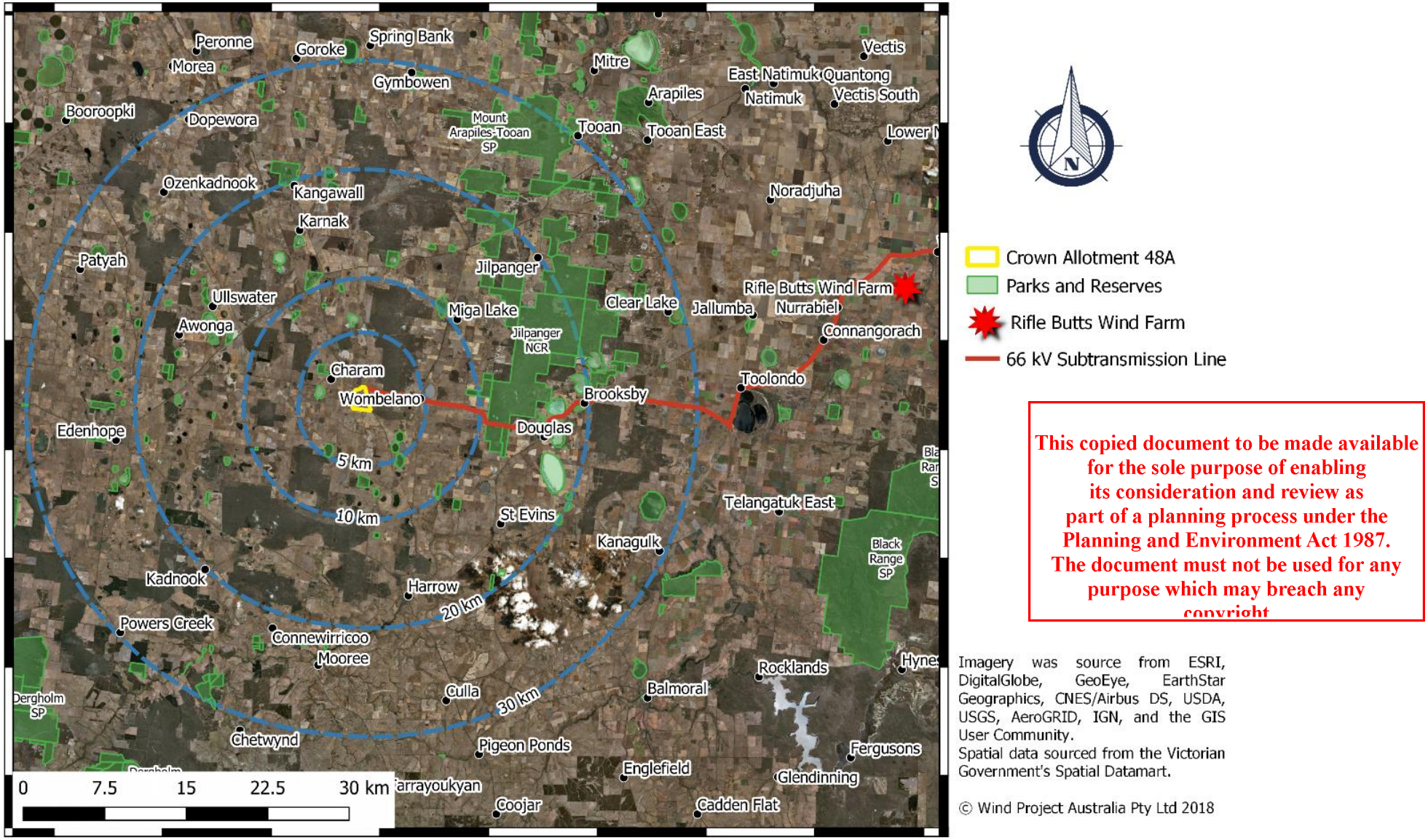
The schedule to Clause 52.32 of the VPP for West Wimmera Shire Council does not feature any land where WEFs are prohibited.

2.2.12 Bushfire Risk

Crown Allotment 48A, Parish of Wombelano is predominantly cleared pasture- and grazing-land, with scattered trees across the site. In the south of the site, there is a copse of Bulokes, which may form a bushfire hazard. The main bushfire risk, however, is from the heavily vegetated land south-east of the site, upon which the Bushfire Management Overlay is centred.

While the bushfire risk on the actual wind farm site is minimal, provision of water tanks and ensuring accessibility for fire fighters must be an integral part of the wind farm design, as stipulated in the CFA Guidelines for Wind Energy Facilities.

Figure 30: Areas of Cultural Sensitivity in the wind farm region, per the Aboriginal Cultural Heritage Information Service online mapping tool.



Imagery was source from ESRI, DigitalGlobe, GeoEye, EarthStar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community.
Spatial data sourced from the Victorian Government's Spatial Datamart.

Figure 31: Wombelano Wind Farm regional context: proximity to nearby wind farms and National Parks.

2.3 State and Federal Context

The Victorian State Government currently has a mandated target of 25% of all energy generated in Victoria to be generated from renewable energy sources by 2020 and 40% by 2025. The State Government are using various market instruments to achieve this.

In contrast, the Commonwealth have developed their Renewable Energy Target (RET) of 33,000 GWh (reduced from 41,000 GWh), representing nominally 20% of Australia's electricity consumption. The RET relies on the generation of Large-scale Generation Certificates (LGCs), which are a tradeable commodity. This scheme is currently set to terminate in 2030.

The Victorian Planning Policy Framework requires that a planning authority make decisions on the basis of fair, orderly, economic and sustainable use and development of land. In this context the Planning Policy Framework contains a specific policy position regarding renewable energy – refer to Clause 19.01-2 (Renewable energy). This is the overarching policy statement regarding wind energy development whose objective is:

> *To promote the provision of renewable energy in a manner that ensures appropriate siting and design considerations are met.*

The proposed strategy is encapsulated in the following:

> *Facilitate renewable energy development in appropriate locations.*
>
> *In considering proposals for renewable energy, consideration should be given to 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.*
>
> *In planning for wind energy facilities, recognise that economically viable wind energy facilities are dependent on locations with consistently strong winds over the year.*

3. PROJECT DESCRIPTION

A WEF comprising of up to seven WTGs, substation and battery energy storage facility, access tracks, cabling, anemometry, underground powerline to Charam Zone Substation, and other ancillaries and laydown areas is proposed for Crown Allotment 48A, Parish of Wombelano. In addition, a temporary batching plant is proposed to facilitate the construction of the WEF. Together, these comprise the WEF: Wombelano Wind Farm, which is the subject of this proposal.

Based on discussion with the Distribution Network Service Provider (DNSP) Powercor, the point of connection may be at the WEF's substation or at CHM. The connection voltage may be either 22 kV or 66 kV. The connection between the WEF and CHM will be via underground cable. The final details will be provided in the Development Plans that will be submitted for endorsement prior to construction and will be dictated by technical requirements stipulated by the DNSP.

It is proposed that the WTGs have a maximum tip height of up to 250 m above ground level and a lower tip height that must remain above 55 m above ground level, as summarised in Table 3. An upper limit of 169 m is proposed for the tower height.

Maps of the proposed development are provided in Figure 32 and Figure 33. Figure 32 shows the layout of the WEF with the full construction impact. While Figure 33 provides a layout of the proposed facility once operational. These maps show the proposed location of WTGs and their micro-siting allowance, tracks, cables and hardstands. Figure 34 provides a zoomed in view of the connection route back to CHM.

An elevation at scale of the highest impact wind turbine that illustrates the limits of the planning envelope is presented in Figure 35, depicting a WTG with 162 m rotor diameter and 169 m hub height. The elevation highlights the maximum impacts of the proposed planning envelope, described in Table 3. The commercially available Vestas V162 WTG is a commercially available WTG that complies with the envelope requirement, as detailed in Table 4. It is noted that turbine manufacturers engineer wind turbine towers to suit different project needs, and additional hub heights are likely to be available. The Proponent will confirm the final wind turbine type and dimensions in the Development Plans that will be submitted for endorsement prior to construction.

The new primary site entrance is shown in Figure 36. Removal of native vegetation has been kept to a minimum, with the new site entrance avoiding the removal of any large trees both on the site and in the road reserve. The entrance is located on a bend in Charam-Wombelano Road, with the entrance resulting in easy access to the site for over-length vehicles both from the north and the south. A Business Identification sign will be placed within the property boundary at the primary site entrance.

Layout and elevations of maintenance facilities, substation and battery storage facility are presented in Figure 37 through Figure 41. As-built drawings for the anemometry that is already constructed as a temporary structure, which would become a permanent structure upon issuance of a permit for this development, are presented in Appendix 12: Anemometry.

Distances from WTGs to dwellings are tabulated in Table 5 and mapped in Figure 53. Allowing for micro-siting, no dwellings are within 1,200 m of a WTG. Distances of WTGs from key State/National Parks, forests, lakes and rivers in the broader region are shown in Figure 54. The distances from dwellings are based on aerial imagery, calculating from the edge of each dwellings' garden fenced area, where such an area exists.

As-built drawings and commissioning report for the anemometry are included in Appendix 12: Anemometry. The anemometry consists of a 117 m lattice mast, with top anemometers at 120 m and a lightning finial extending nominally 1 m above that. The mast is instrumented with Thies First Class cup anemometers at 50 m, 70 m, 80 m, 100 m, 110 m and 120 m (×2); Thies vanes at 47 m, 97 m and 117 m; Vaisala Temperature and Humidity Sensor at 3 m; and R.M. Young Barometer at 1.5 m.

Table 3: Proposed WTG size envelope.

Detail	QTY
Maximum number of WTGs	7
Maximum upper tip height	250 m
Minimum lower tip height	55 m
Maximum rotor diameter	162 m
Maximum hub height	169 m

Table 4: Commercially available wind turbine candidates.

Turbine	Rotor Diameter [m]	Hub Height [m]	Upper Tip Height [m]	Lower Tip Height [m]
Vestas V162	162 m	149/166/169	230/247/250	68/85/88

3.1 General Design Principles and Constraints

Location of WTGs have been determined to satisfy the following:

- Ensuring WTGs and associated micro-siting areas are not within 1 km of existing dwellings.
  - Dwelling 12 is the only dwelling within 1 km of the host property; WTGs have been sited such that the nearest WTG is over 1,200 m from that dwelling, per Figure 53 and Table 5.
- Ensuring noise levels from WTGs comply with relevant noise standards.
  - Being greater than 1,200 m from the nearest dwelling ensures that noise requirements will be comfortably satisfied, as is confirmed in the supporting acoustic study and associated EPA Audit (Appendix 3: Noise Impact Reports).
- Ensuring shadow flicker at neighbouring dwellings is at acceptable levels, as specified in the Victorian Wind Farm Development Guidelines and the Draft National Wind Farm Development Guidelines.
  - More detail on this is provided in Section 5.5.3.
- Ensuring EMI impacts are acceptable.
  - No point to point links pass across the site. There are no broadcasters within relevant thresholds. This has not provided any real constraint in siting the WTGs.
- Setback from property boundary to ensure there is no overhang of WTG blades onto neighbouring land.
  - Layouts have been developed with a 100 m internal buffer from the property boundary.
  - Distances to the property boundary are documented in Table 5 and illustrated in Figure 32 and Figure 42 through Figure 48.
  - DELWP have requested a blade throw risk assessment to demonstrate that the risk of blade throw is acceptable where WTGs are sited within 150 m plus one blade length from property boundaries. This risk assessment is included as Appendix 14: Blade Throw Risk Assessment. This risk assessment estimates the likelihood of a fatal

incident due to blade throw as having a return period of more than 9 million years per WTG, which is characterised as being "broadly acceptable".

- Setting WTGs back suitable distances from existing powerlines. The OEM Vestas have specifications stipulating minimum setbacks.
    - Derived from Section 3.3 of "Crane Pad Requirements" by Vestas, DMS no: 0050-8073.
    - Setback required is 80 m for a hub height of 170 m, thus 80 m setback is used as the minimum setback from powerlines.
- Ensuring the WTGs and associated construction envelope do not impact on native vegetation.
    - EHP surveyed the site area, recording Tree Protection Zones (TPZs) for trees around the site entrances, on the site proper, and along the connection route.
    - The Proponent surveyed the road reserve along Goroke-Harrow Road, specifically measuring the distance of trees from the boundary fence, as well as measuring their diameter at 1.4 m above ground (Diameter at Breast Height – DBH), to determine Tree Protection Zone radii for these trees in accordance with *Guidelines for the removal, destruction or lopping of native vegetation* (the Guidelines), as published by DELWP. Whilst this TPZ data has not been collected by a vegetation assessor registered with DELWP, the assessment is related to a project where native vegetation removal falls within the Intermediate assessment pathway, meaning that an accredited native vegetation assessor is not required (Section 6.5.1 of the Guidelines).

      Taking a worst-case approach, assuming the boundary is lined with trees that are assigned the maximum TPZ (TPZ radius of 15 m associated with a DBH of 1.25 m or greater), the centre of the trees will be a minimum of 0.625 m from the fence line. Thus, a 10 m setback of tracks along this eastern boundary fence ensures the maximum impact on any TPZ is limited to 4.375 m or 9% of the area of the TPZ, which is less than the 10% threshold where a tree is considered "lost".

      This allows only a 1% margin, that is about 20 cm. However, as can be seen in Figure 32, and more clearly in Figure 42 through Figure 44, the actual overlap of the road is significantly less than 4.375 m. The maximum overlap of the track into a TPZ is 2.5 m into one 15 m TPZ, which corresponds to an encroachment of marginally less than 4%.

      In proposing the 10 m setback, it is intended to balance the ecological value of the road reserve vegetation, with minimising the lost farmland and operational requirements. The land nearest the property boundary has the least value to the farmer in terms of grain yield or grazing value, so placing tracks further from the boundary results in loss of land with greater agricultural value, while from an operational perspective, it is necessary to run tracks in straight lines or with high radius curves. Thus, setting the roads 10 m back from the fence-line balances ecological, farming and operational requirements.

      Similarly, two mature Bulokes (DBH of 0.4 m and 0.5 m respectively, labelled 71 and 100 in EHP's Biodiversity Assessment) are located 9.66 m and 8.7 m from the southern boundary fence, as shown in Figure 49. It is not possible for the partially loaded crawler cranes to pass in this gap without impacting the vegetation, therefore

the construction track is shown passing to the north of these Bulokes. An engineered swept path analysis is presented in Figure 50. However, during the operational phase, it is possible to pass a single lane track alongside the fence with width 4.5 m, while impacting less than 10% of the TPZs of these trees (4.5% impact on TPZ with 0.8 m margin to 10% threshold and 2.6% impact with 0.9 m margin to 10% threshold, respectively). The retention of these trees, whilst passing the construction tracks around the trees and operational tracks along the property boundary is another example of balancing the ecological values of the site with the zoned agricultural use.

Further, access along the southern property boundary is shown not to impact on Trees 43 and 96. The wide construction track (11.1 m wide) is shown passing by Tree 43 and Tree 96 in Figure 51 and Figure 52, respectively. The track does not impinge on the TPZ of Tree 43. The track impinges on the TPZ of Tree 96 by 1.5 m, corresponding to 6.1%. This leaves a margin of 0.6 m before the tree is considered impacted, that is having the TPZ impacted by 10% or more.

The construction tracks around these trees, as with the other turns on the site, require a turning radius of at least 70 m to allow passage of blades to the WTG sites. This radius of curvature, specified by the OEM, is respected in the construction layout. However, the operational layout does not rely on the same over-length loads, as such, final operational impact will be significantly less than during construction.

  - It is noted that the TPZ data presented by EHP in Appendix 2: Ecological Impact Report has been collected by vegetation assessors registered with DELWP.
  - Hardstand layouts and construction impact developed based on the following documents prepared by Vestas:
    - "Crane Pad Requirements", DMS no: 0050-8073
    - "Wind Farm Roads Requirements", DMS no: 0054-6051
  - Resulting layouts and proximity to native vegetation are shown in Figure 32 and Figure 42 through Figure 48.
- Siting WTGs and associated infrastructure to minimise impact on productive land.
  - Placing WTGs, tracks and above-ground ancillaries such as substation, batteries and anemometry as close to the edge of paddocks as possible.
- Siting WTGs and associated infrastructure such that they do not impinge upon areas flagged as sensitive from Cultural Heritage perspective.
  - There is a sensitive area that overlaps Crown Allotment 48A along the northern boundary by a margin of up to 50 m. The WEF activity, including the full construction footprint, is setback 150 m from this sensitive area.
- Suitable spacing between WTGs to satisfy structural and fatigue loading requirements.
  - WTGs should typically be placed 2.5D – 3D apart in the non-dominant wind direction and 5D – 7D apart in the dominant wind direction, where D is the rotor diameter. The wake from a WTG, that is, the region downstream of that WTG, is a region of turbulent flow. That increase in turbulence relative to ambient levels results in increased fatigue loading on downstream WTGs. Similarly, the wake region is also associated with a reduction in wind speed, resulting in corresponding reductions in energy production.
  - Dominant wind directions are from the west and the south-west, per Figure 8, however, there is a significant proportion from other directions.

    - WTGs have been sited such that, for the range of possible rotor diameters, there will be sufficient spacing to satisfy spacing requirements. It is noted that, should a WTG be shifted within the micro-siting area, it may require a neighbouring WTG to be adjusted to satisfy these spacing requirements.
    - The OEM will need to sign-off on any WTG layout prior to construction, as they guarantee the performance of the WTGs, including their design life.
- Taking advantage of the higher areas of the land, that is, not siting them near the drainage line depression through the centre of the property.
    - Siting WTGs in the depression that runs through the centre of the property from south to north would result in:
        - An area of lower elevation, implying lower wind speeds and hence, reduced energy generation.
        - Relatively higher water table and increased likelihood of flooding, resulting in more difficult access for both construction and maintenance.
        - Potential impact on the watercourse and the hydrology in the region, which is not permitted, per the requirements of the Wimmera CMA.

Dimensions for the construction envelope have been developed based on consultation with wind turbine manufacturers and scaled to allow for the maximum potential rotor dimensions. The radius of curvature of the construction tracks is generally set to 70 m to allow over-length loads to deliver components to the WTG locations. Tracks during construction have typically been set to 11.1 m wide to allow cranes to manoeuvre across the site without the need to disassemble them between the WTG locations. Where the tracks are not required for the crane, the track widths are generally between 4 m and 6 m wide, with the CFA Renewable Energy Guidelines requiring a minimum width of 4 m, and where the trafficable width of tracks is less than 6 m, 6 m wide passing areas are required every 600 m.

The arrangement of cables and access tracks is designed to:

- Wherever possible, use existing farm tracks, giving the Landowner year-round access to all tracks, improving access on their property;
- Minimise impact on the existing farming operations and, where possible, avoid pockets of unusable land;
- Minimise ecological impact, navigating tracks and cables around native vegetation impacting on no more than 10% of Tree Protection Zones, and where practical, complete avoidance; and siting laydown areas to avoid the trees on the site, resulting in the clearing of only 0.127 hectares of native flora, which is required to give clearance for over-length loads to enter the site;
- Route tracks along existing fence lines, where possible; and
- Avoid any areas flagged as being Culturally Sensitive.

To satisfy engineering requirements:

- OEMs generally specify minimum track widths of 4.5 m – 5.5 m for loads other than crawler cranes.
- Passing areas with road width of 6 m are provided for wind farm operation, in line with CFA requirements for renewable energy facilities.
- During construction, tracks are temporarily set to 11.1 m to allow passage of cranes, without needing to disassemble them.

- During construction, tracks are temporarily set to a radius of curvature of 70 m with a width of 11.1 m, allowing delivery of long loads, including blades and tower sections. The 11.1 m track width provides a buffer on the effective radius of curvature, enabling 100 m long loads to be hauled onto and around the site.
- Cables will be buried at a nominal depth of 1 m and covered with a mix of the original soil and thermally stable sand. The trench width will be nominally 0.3 m per circuit. For this WEF, up to two circuits may be present, resulting in a trench 0.6 m wide in places.
- Cable routes will be sign-posted on fences, and are designed to be at sufficient depth to not inhibit farming activities.

The location of control rooms, substation and battery storage facility are all located near the existing shearing sheds on the Eastern side of the property. This area was chosen for the following reasons:

- Power supply is already in place at the shearing sheds;
- Location is in close proximity to the Charam Zone Substation; and
- Vegetative screening is already in place in the road reserve (there is little to no screening nearer the corner of Charam-Wombelano Road and Goroke-Harrow Road).

Final layout of access tracks, cabling, control rooms, substation and battery storage facilities will be provided as part of the Development Plans that will be submitted for endorsement prior to construction, however indicative dimensioned hard stand areas, cable trench schematics, road cross-sections are provided in Appendix 13: Typical Construction Drawings.

The assessment by Cardno of the preferred Over-Dimension/Over-Size-Over-Mass vehicle route option from the Port of Portland to the Wind Farm site for the transport for WTGs and other imported major components demonstrates, subject to some roadside works and the implementation of traffic management during haulage, has demonstrated that the proposed routes are suitable for the largest blades and haulage design vehicles. This Traffic Impact Assessment, including swept path analysis, are provided in Appendix 4: Traffic Impact Assessment.

Visual simulations of the facility are provided in Appendix 1: Photomontages. Photograph details and associated photomontage development methodology are provided in that appendix. These photomontages use the wind turbine dimensions described in Figure 35. The photomontage locations and their fields of view are mapped in Figure 13.

Indicative fire management facilities are provided in Figure 32 and Figure 33, including location of water storage and appropriate 10 m radius turning circle, per the CFA guidelines; however, final layout and arrangement will be provided in the Development Plans.

Rehabilitation of the site is addressed in Section 5.12.9: Decommissioning Management Plan, with a Decommissioning Management Plan to be submitted with the Development Plans.

As wind turbines become taller, innovations like concrete towers become more feasible, along with innovative construction techniques that reduce requirements for things like cranage. A concrete tower solution that incorporates a tower-climbing crane is being considered for this project. This solution would reduce reliance on large cranes that are capable of lifting 150+ tonne loads over 150 m into the air, which are in short demand. It would also mean a greater local spend as the tower sections would be manufactured on site, relying on local resources. An image of the tower-climbing crane is included in Appendix 13: Typical Construction Drawings.

Table 5: Location of WTGs and dwellings within 3 km of the WEF property, given in GDA94 zone 54. Distances to dwellings based on edge of garden fenced area (where such an area is present), as seen in aerial imagery.

ID	Easting [m]	Northing [m]	Nearest Dwelling/ WTG [m]	Nearest Dwelling/ WTG [m] (Micro-siting)	Distance to Site Boundary [m]	Micro-siting Area to Site Boundary [m]
WTG1	548,723	5,904,928	D12: 1,228	D12: 1,228	106	100
WTG2	548,861	5,904,325	D12: 1,730	D12: 1,644	116	116
WTG3	548,997	5,903,713	D1: 1,340	D1: 1,340	110	109
WTG4	547,592	5,903,889	D5: 1,953	D5: 1,953	100	100
WTG5	547,657	5,904,365	D12: 2,345	D12: 2,245	100	100
WTG6	547,726	5,904,877	D12: 1,967	D12: 1,867	100	100
WTG7	547,848	5,905,322	D12: 1,640	D12: 1,579	160	148
D1	549,787	5,902,587	WTG3: 1,340	WTG3: 1,340	1,098	NA
D2	549,492	5,901,389	WTG3: 2,339	WTG3: 2,339	2,160	NA
D3	547,851	5,901,463	WTG4: 2,436	WTG4: 2,415	2,265	NA
D4	547,803	5,901,488	WTG4: 2,379	WTG4: 2,362	2,232	NA
D5	546,649	5,902,140	WTG4: 1,953	WTG4: 1,953	1,824	NA
D6	545,089	5,905,922	WTG7: 2,781	WTG7: 2,727	2,615	NA
D7	545,493	5,906,581	WTG7: 2,612	WTG7: 2,612	2,416	NA
D8	545,939	5,907,476	WTG7: 2,815	WTG7: 2,815	2,611	NA
D9	546,645	5,907,676	WTG7: 2,620	WTG7: 2,620	2,426	NA
D10	547,237	5,907,533	WTG7: 2,264	WTG7: 2,264	2,090	NA
D11	545,224	5,905,632	WTG6: 2,596	WTG7: 2,595	2,461	NA
D12	549,356	5,905,990	WTG1: 1,228	WTG1: 1,228	757	NA

3.2 Grid Connection and Substation

Whilst the final connection details will be presented in the Development Plans, there are a number of feasible connection scenarios that may be implemented.

The preferred connection voltage is 22 kV, as this will allow connection directly into the Charam Zone Substation (CHM) on its 22 kV bus bar, without need for a substation transformer on site. This approach would take advantage of the under-utilised transformer at CHM. This would imply a reticulation voltage of 22 kV. Similarly, a small kiosk containing switching equipment and metering will be required.

Alternatively, an on-site substation with 33 kV to 66 kV transformer will be required, with connection onto the 66 kV side of the CHM and internal reticulation at 33 kV.

With regards to the physical connection from the WEF (including any Battery Energy Storage installed) to CHM, underground cabling will run from the on-site substation through the existing Powercor easement into CHM. This route is shown in Figure 32 in the context of the wider wind farm, while Figure 34 provides a zoomed in view of the route. The siting of the BESS and substation as shown in the various plans are based on this scenario as it is the highest impact scenario.

If the final design requires only a small kiosk, it will be likely that the location of the kiosk will be optimised.

Underground cabling, as described above, will be at a nominal depth of 1 m, in a trench of width 0.3 m per circuit, with the potential for up to two circuits depending on the final connection

configuration. For trenching, the construction impact is a nominally 3 m wide corridor along the cable path.

The substation layout and associated elevations are provided, based on a 66 kV connection voltage. This is provided in Figure 37 through Figure 41. The substation area allocated on the site map is nominally 60 m × 64 m. This includes the proposed battery energy storage facility, as shown in this substation layout, consisting of five 40 foot containers with mass of nominally 25 tonnes each, which include both the battery and the inverter components. Lithium battery technology is proposed. It also includes elements such as transformer, harmonic filters and other reactive plant that may or may not be required, depending on the final connection agreement with Powercor.

The substation layout in Figure 37 also shows the Operations and Maintenance facility and car parking. The layout provides for four parking spaces.

Final engineering design of both the battery energy storage facility and the final connection arrangement will result in refinement of the substation. The intention is that the substation arrangement shown illustrates the maximum footprint of the substation and associated equipment. The Final Development Plans of the battery energy storage facility will be accompanied by a hazard assessment or similar, demonstrating that the design and layout of the facility is consistent with relevant engineering standards.

Therefore, planning approval is sought for a new, underground connection, at a voltage of up to 66 kV, to the Charam Zone Substation, as shown in Figure 32.

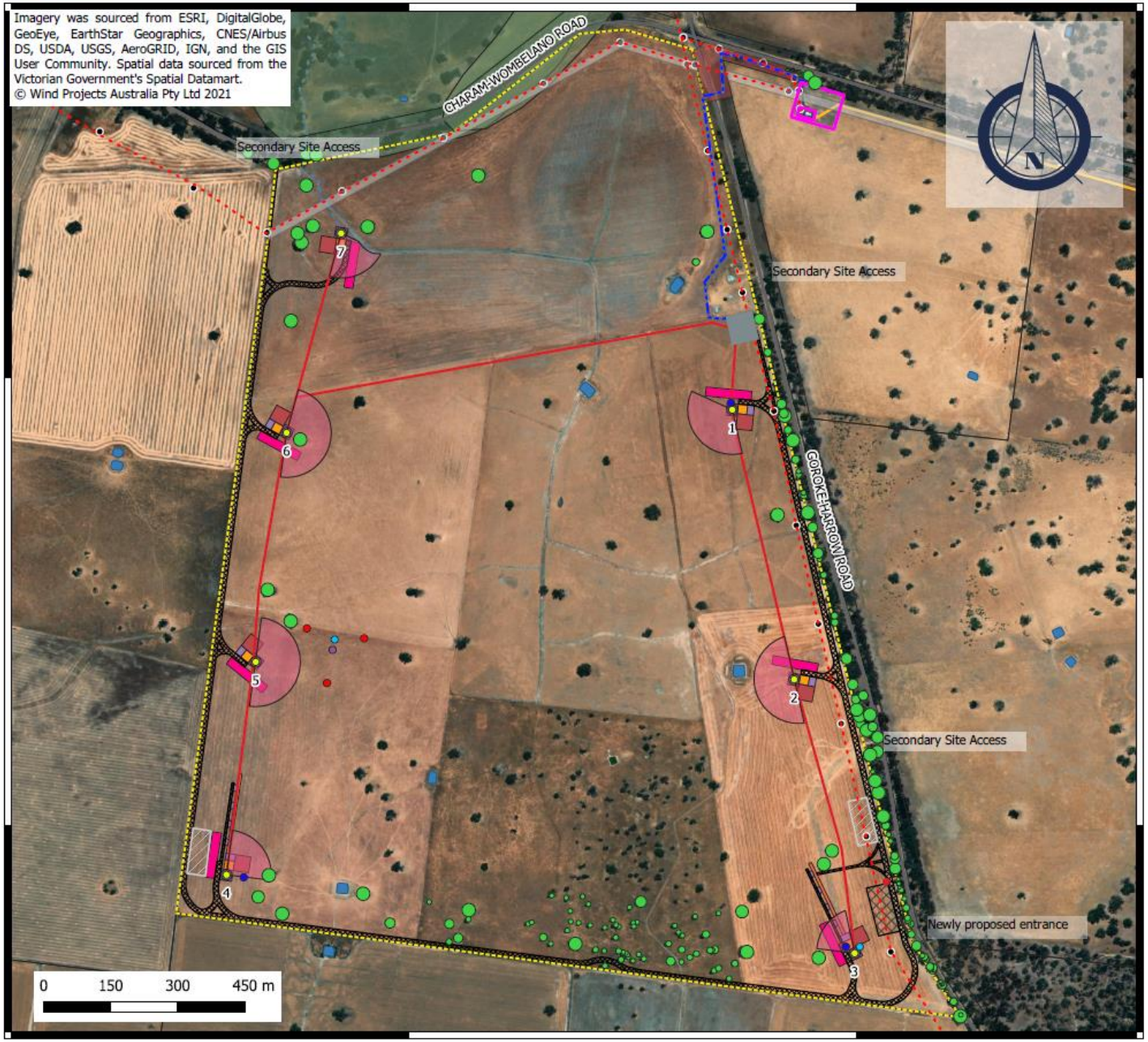


Figure 32: Site layout showing full construction impact.

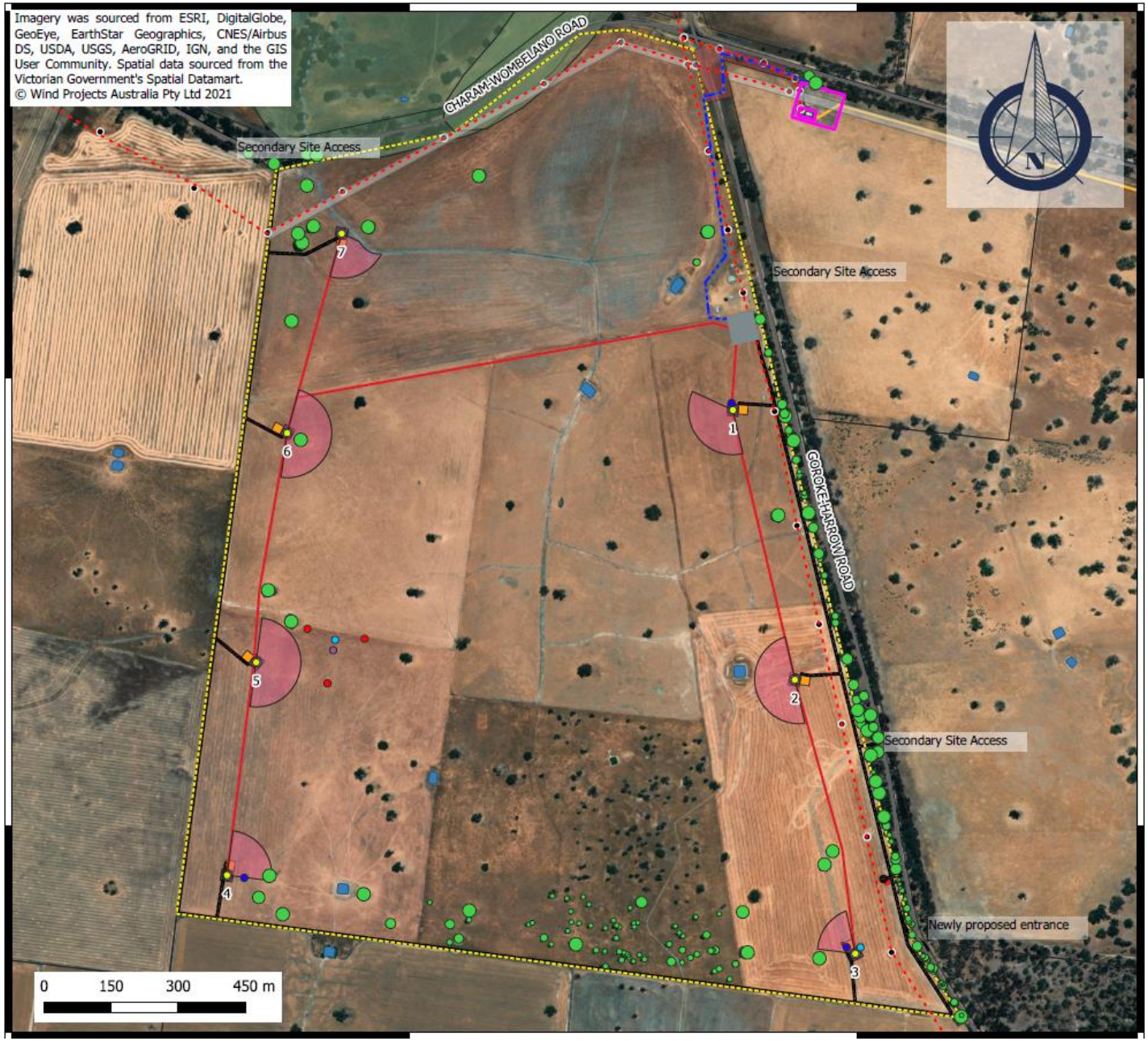


Figure 33: Site layout showing impact through operation of WEF.

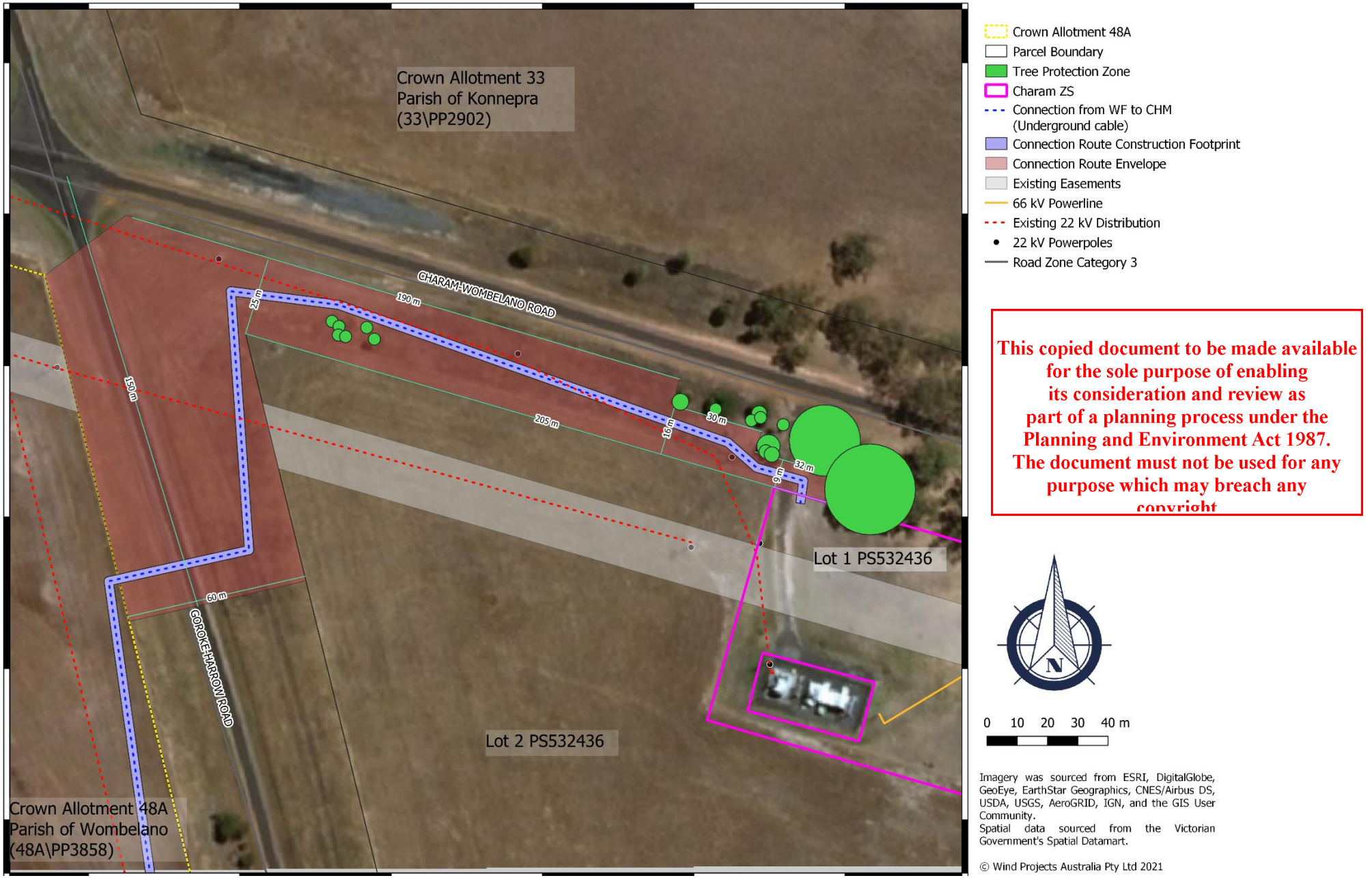


Figure 34: Connection route envelope.

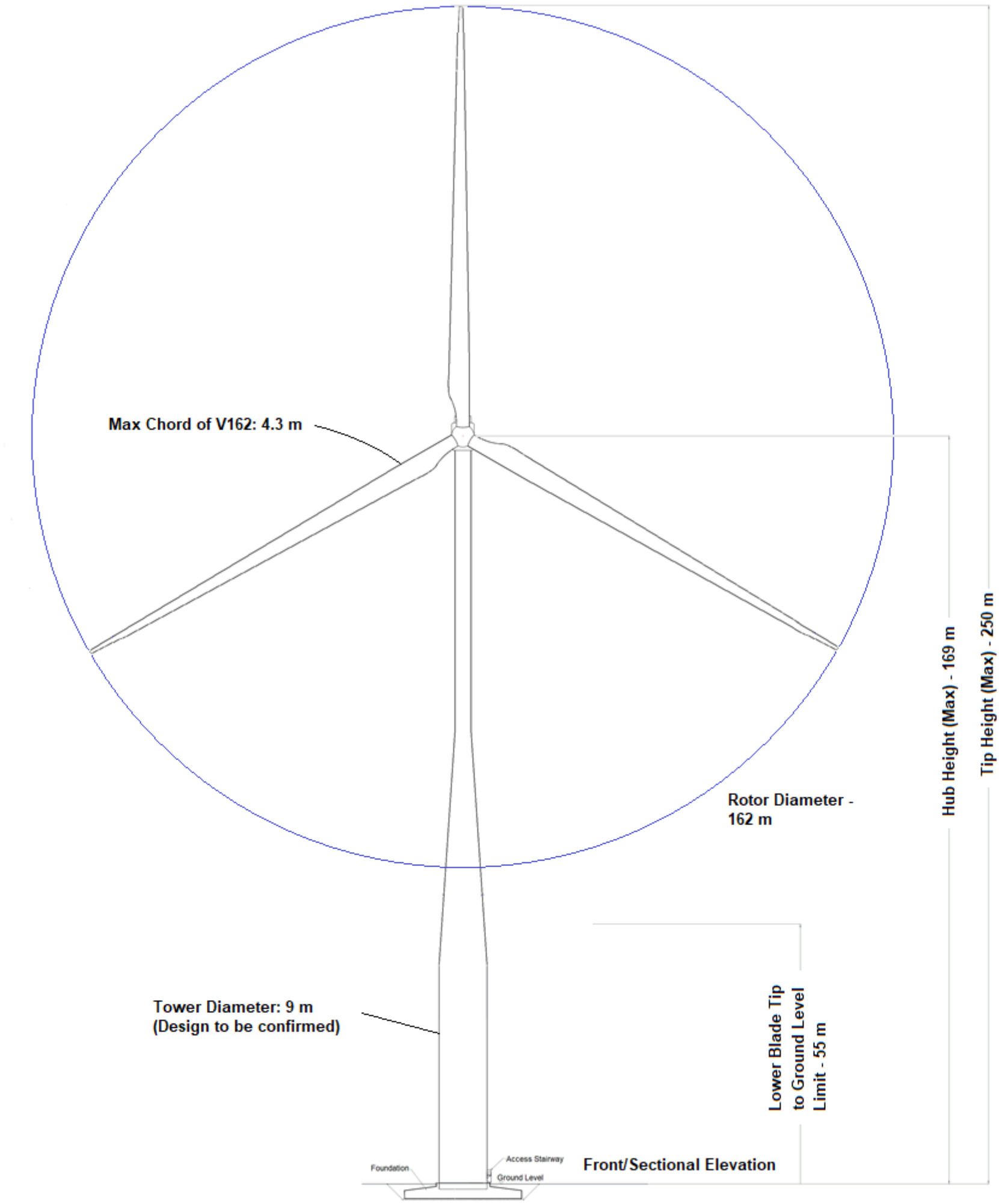


Figure 35: Elevation of V162 WTG, illustrating maximum upper tip height (250 m), showing clearance above minimum lower tip height (55 m). The tower design is based on the design for a concrete tower with the base diameter being 9 m. Drawing is to scale.

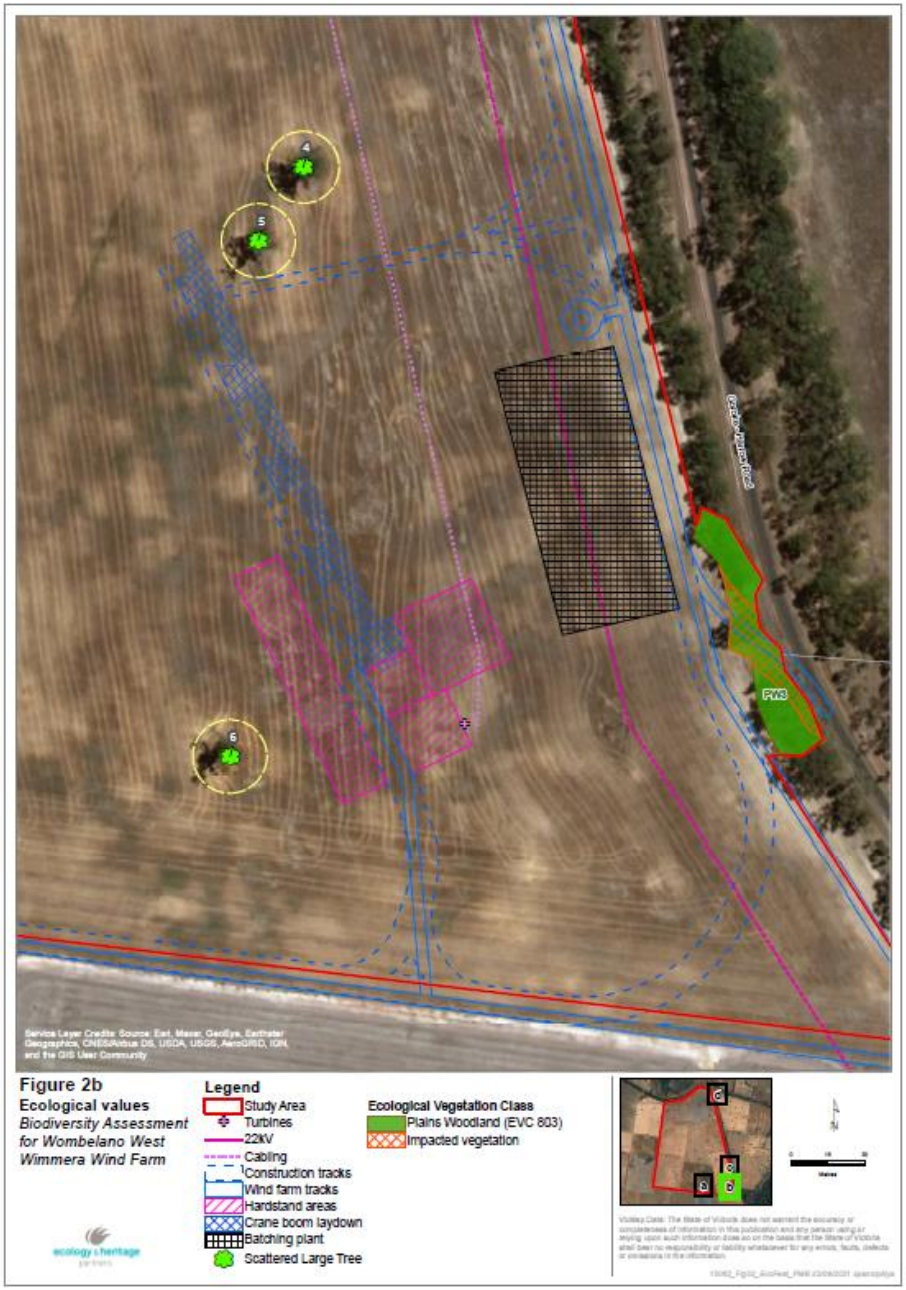


Figure 36: Location of impacted vegetation and required tree clearing from EHP's Biodiversity Assessment (Appendix 2: Ecological Impact Report).

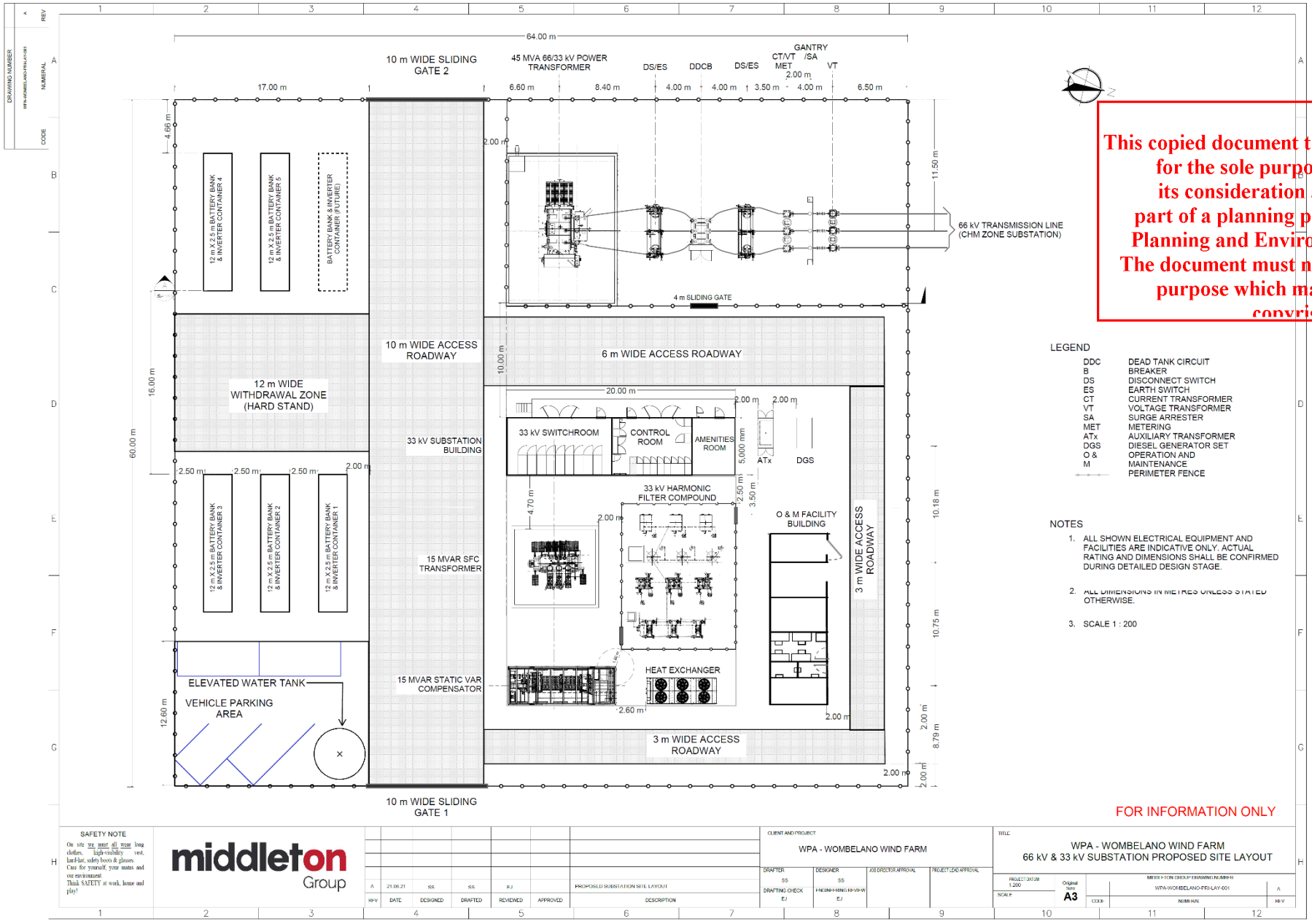


Figure 37: Indicative substation layout for the 66 kV substation connection scenario, including Operations and Maintenance Building and car parking.

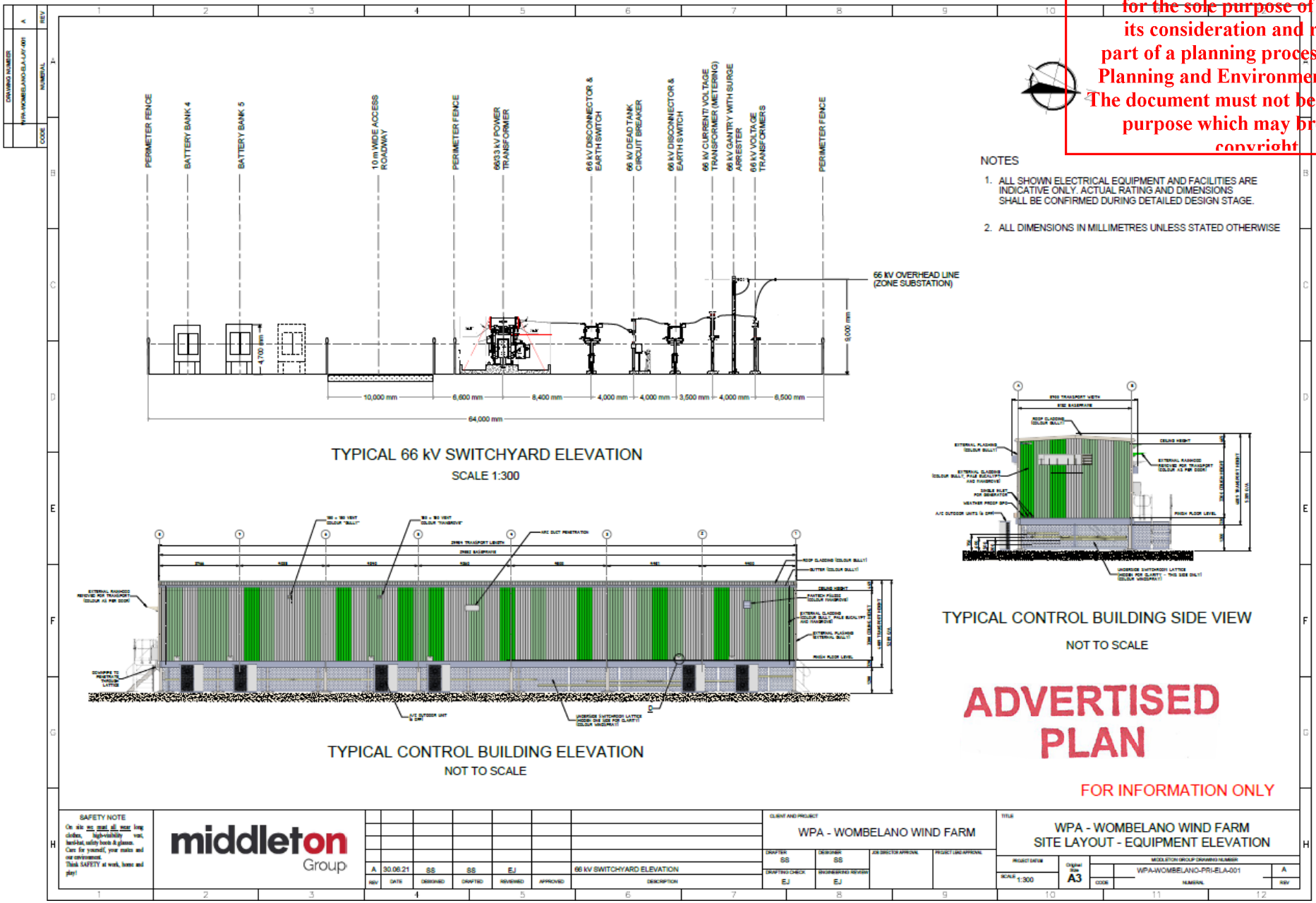


Figure 38: Control building, switchyard and battery bank elevations.

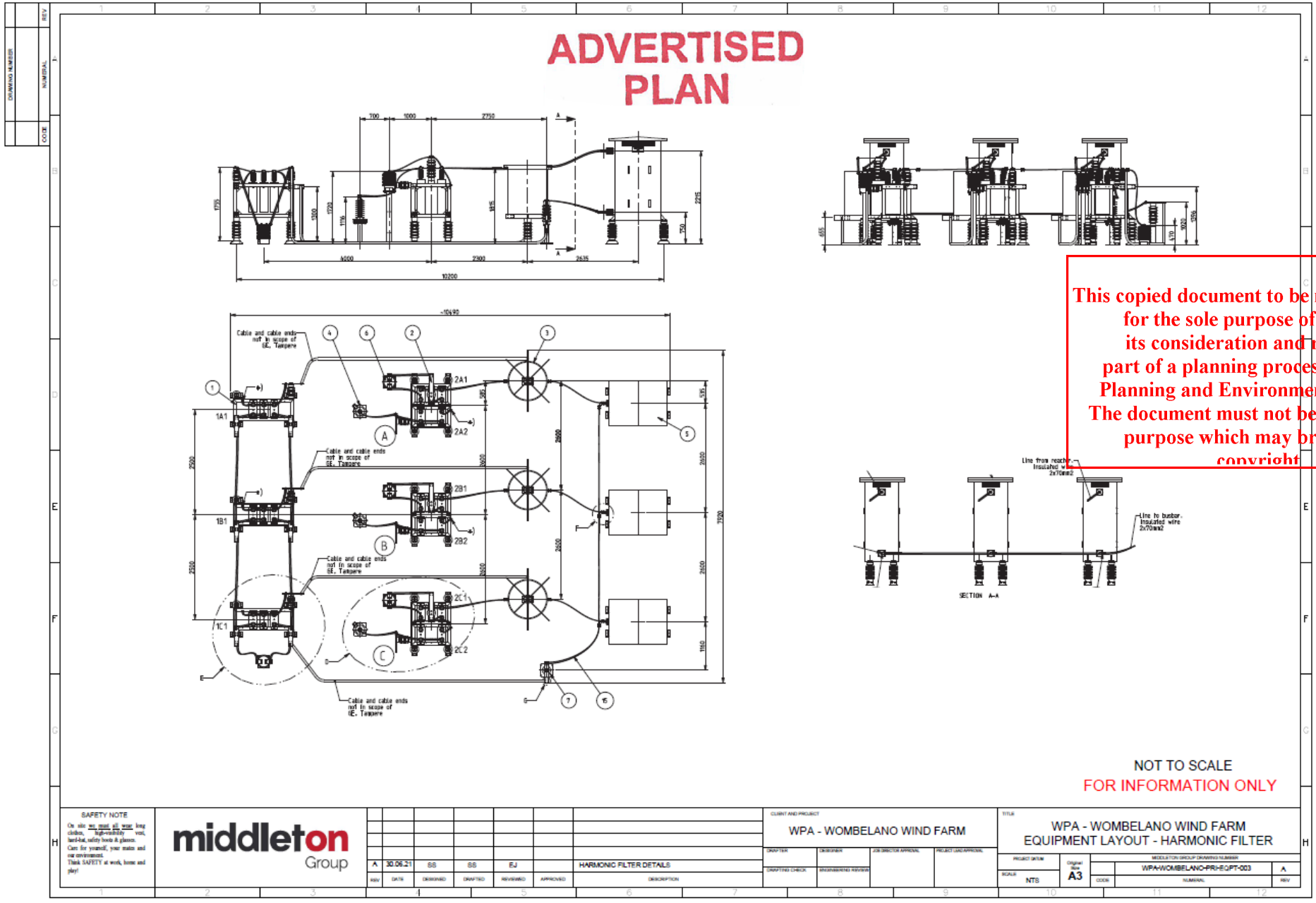


Figure 39: Elevations of substation equipment.

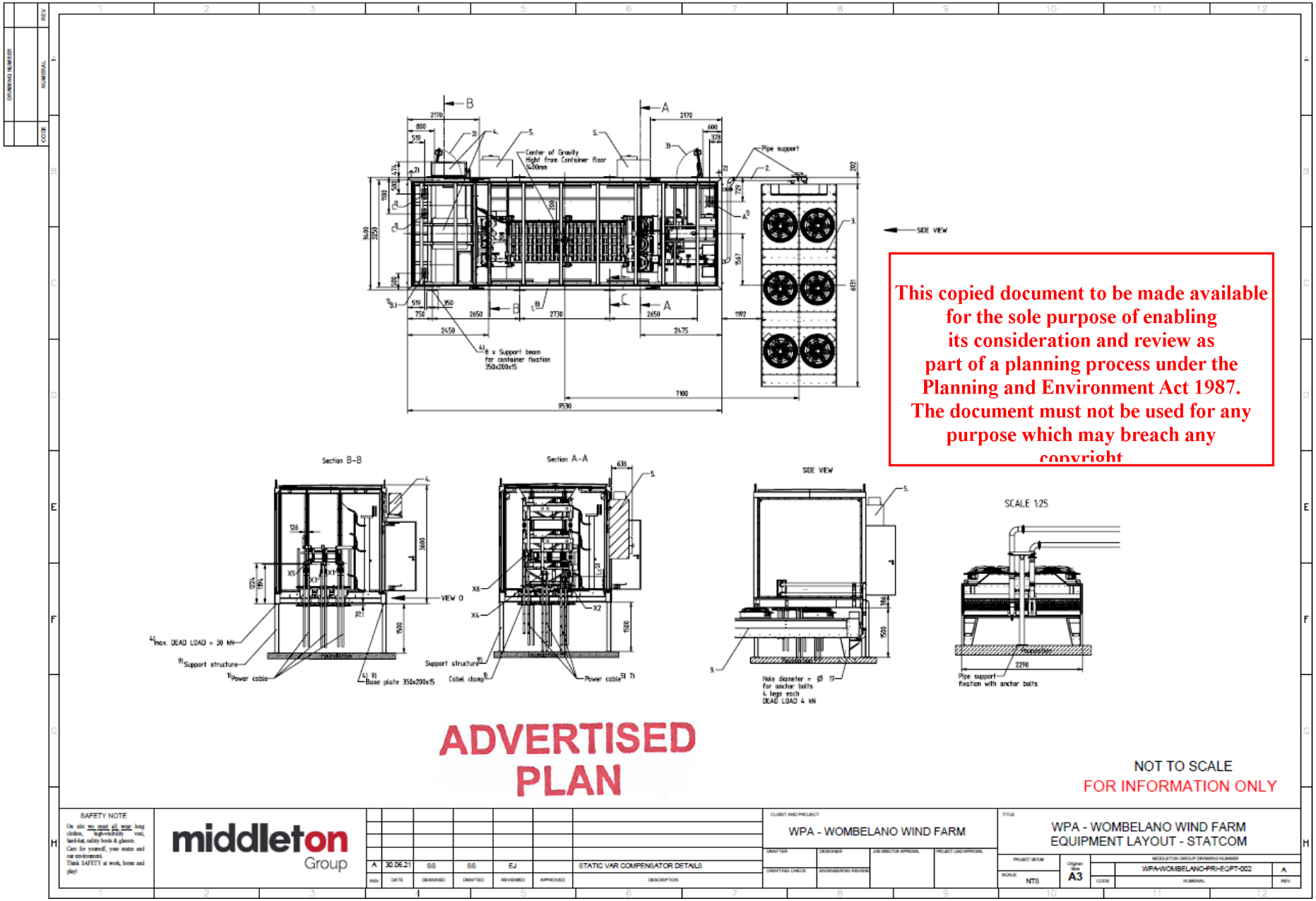


Figure 40: Elevations of substation equipment.

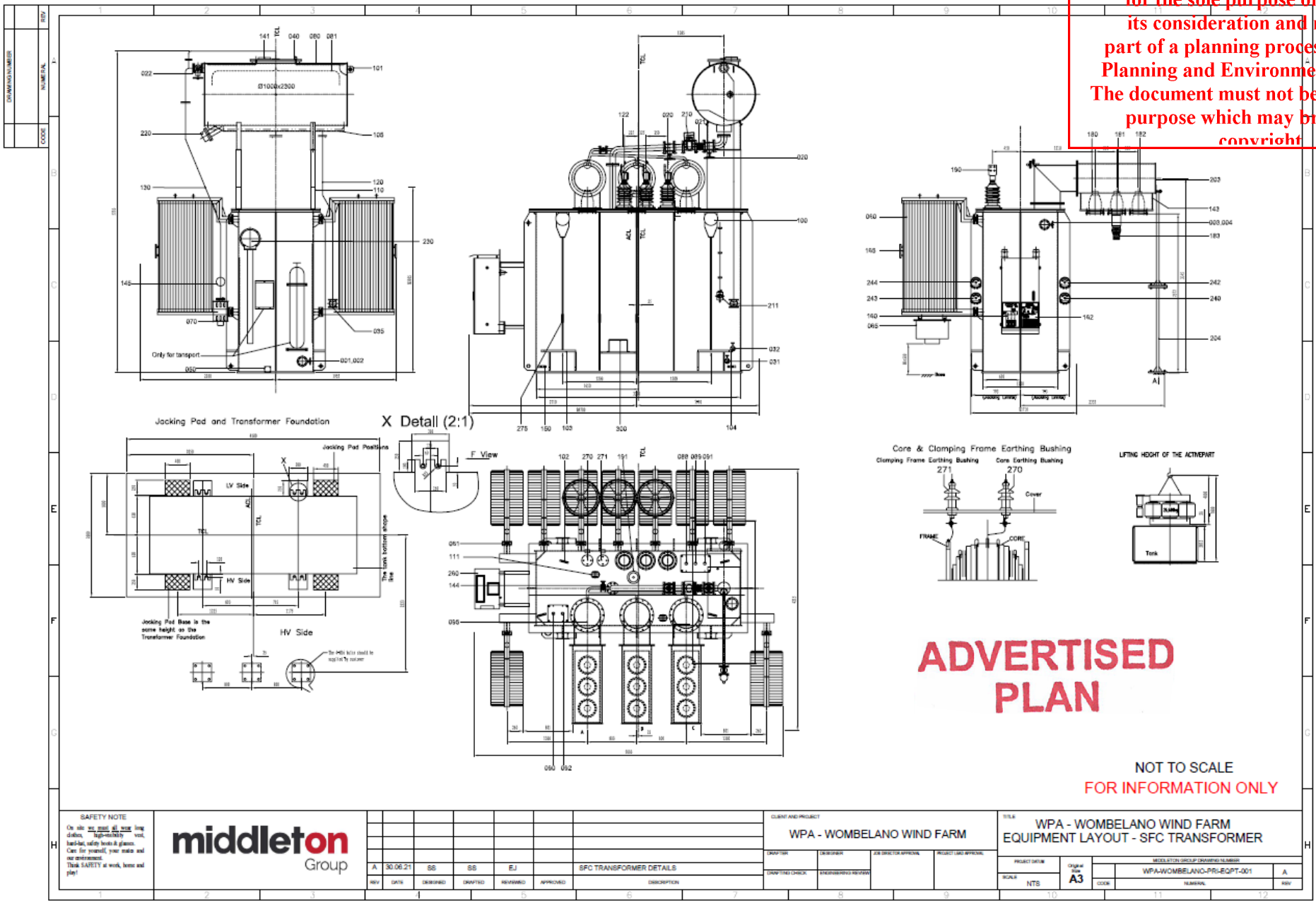


Figure 41: Elevations of substation equipment.

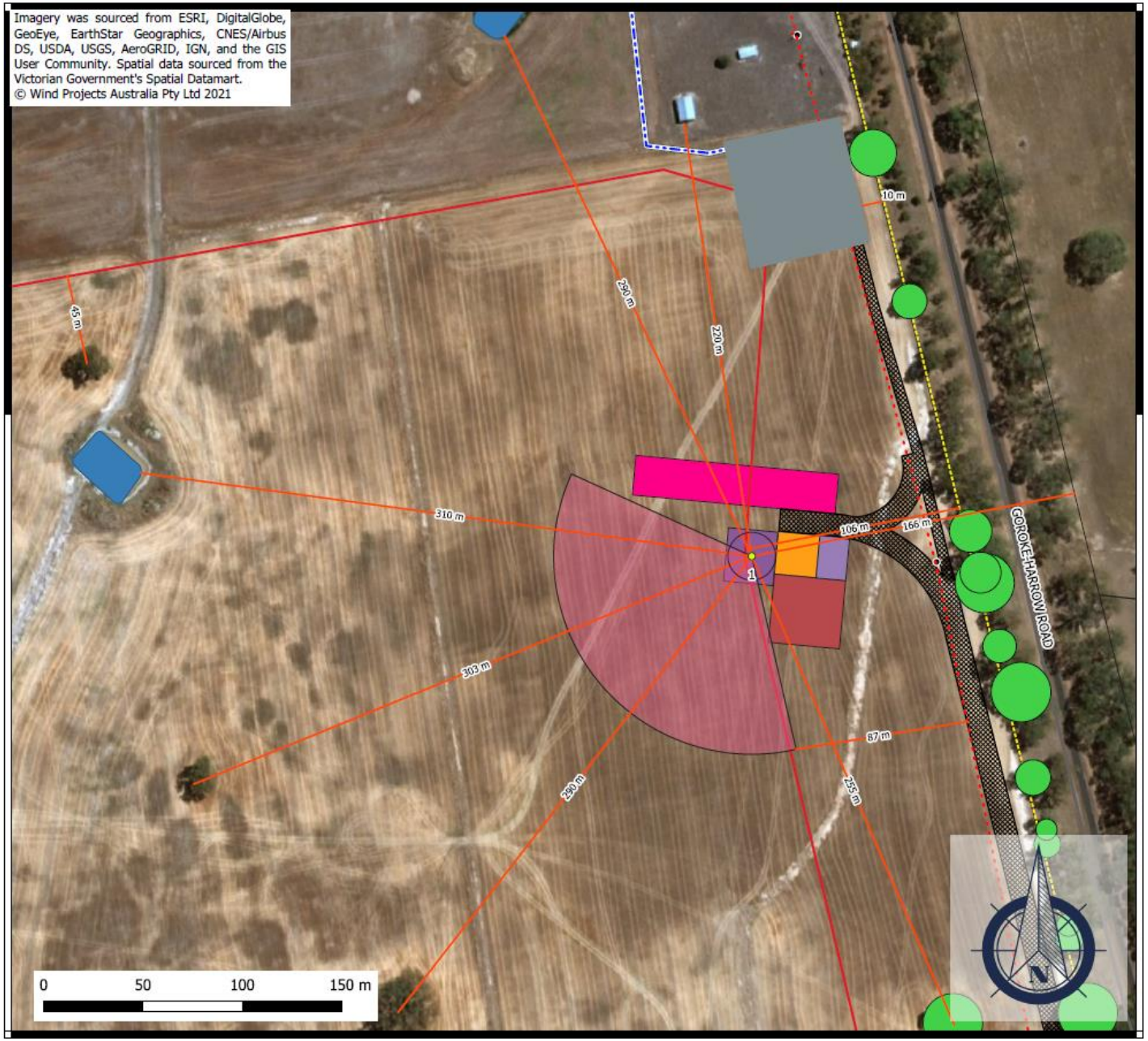


Figure 42: Setbacks from WTG 1.

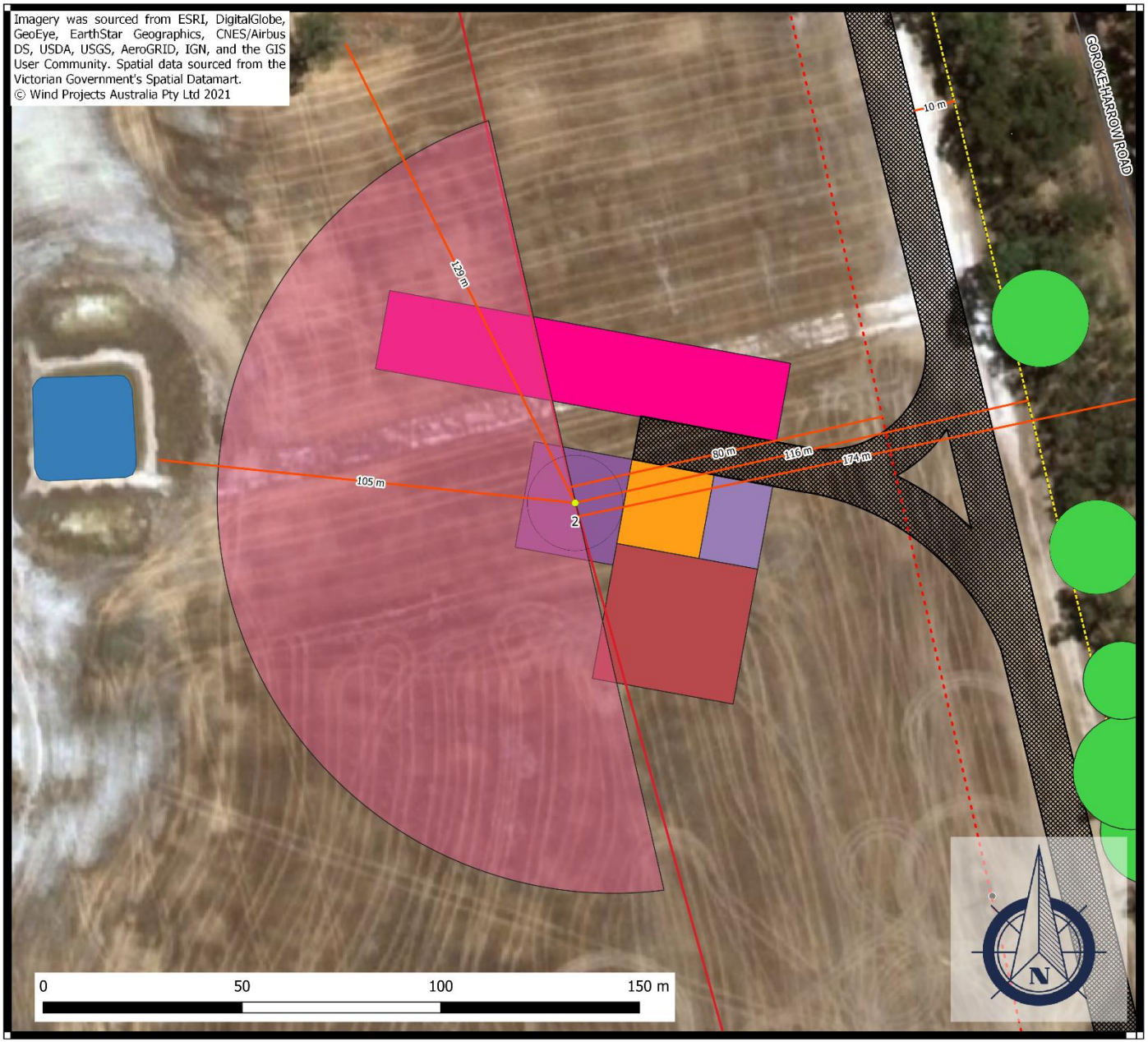


Figure 43: Setbacks from WTG 2.

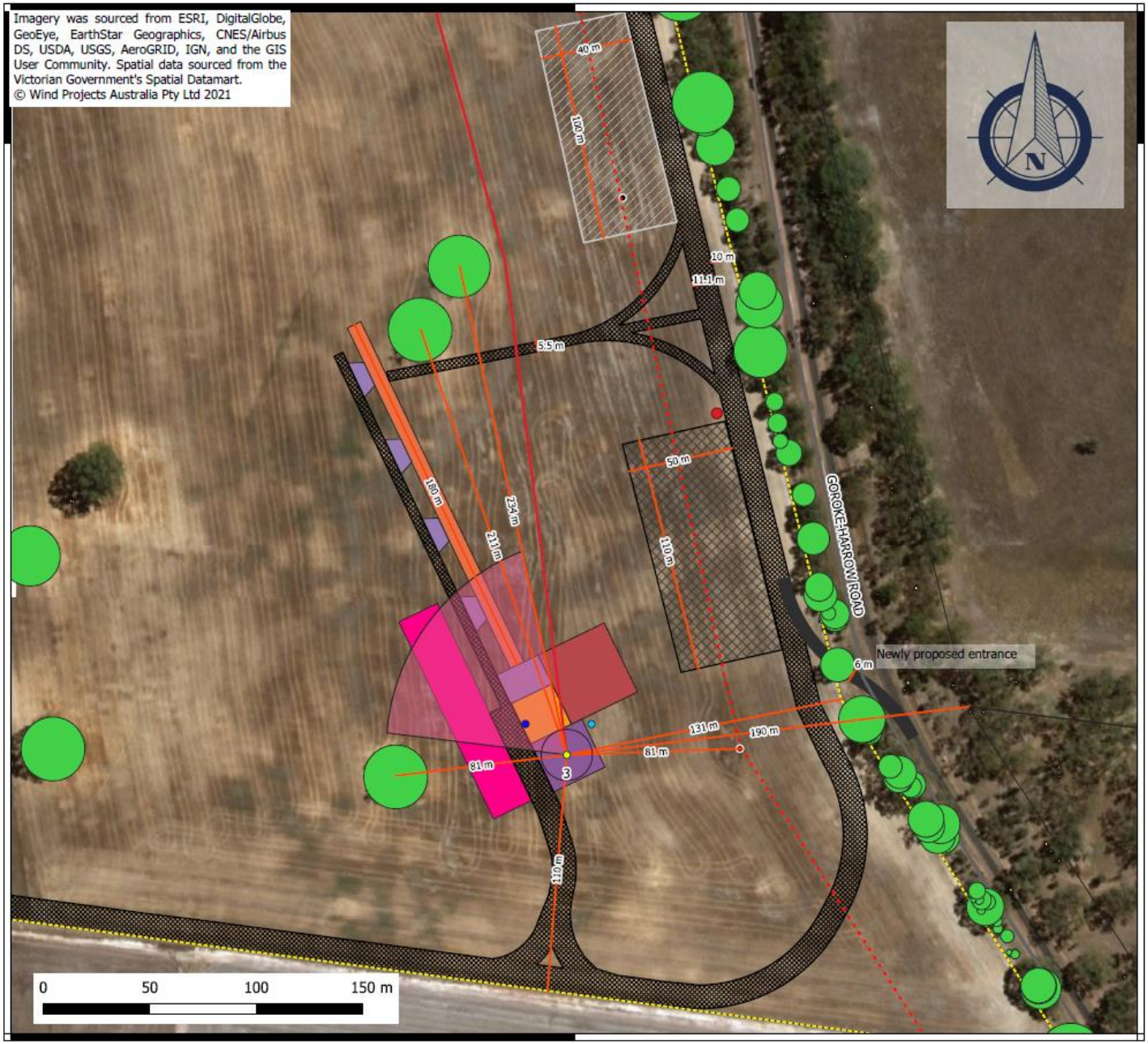


Figure 44: Setbacks from WTG 3.

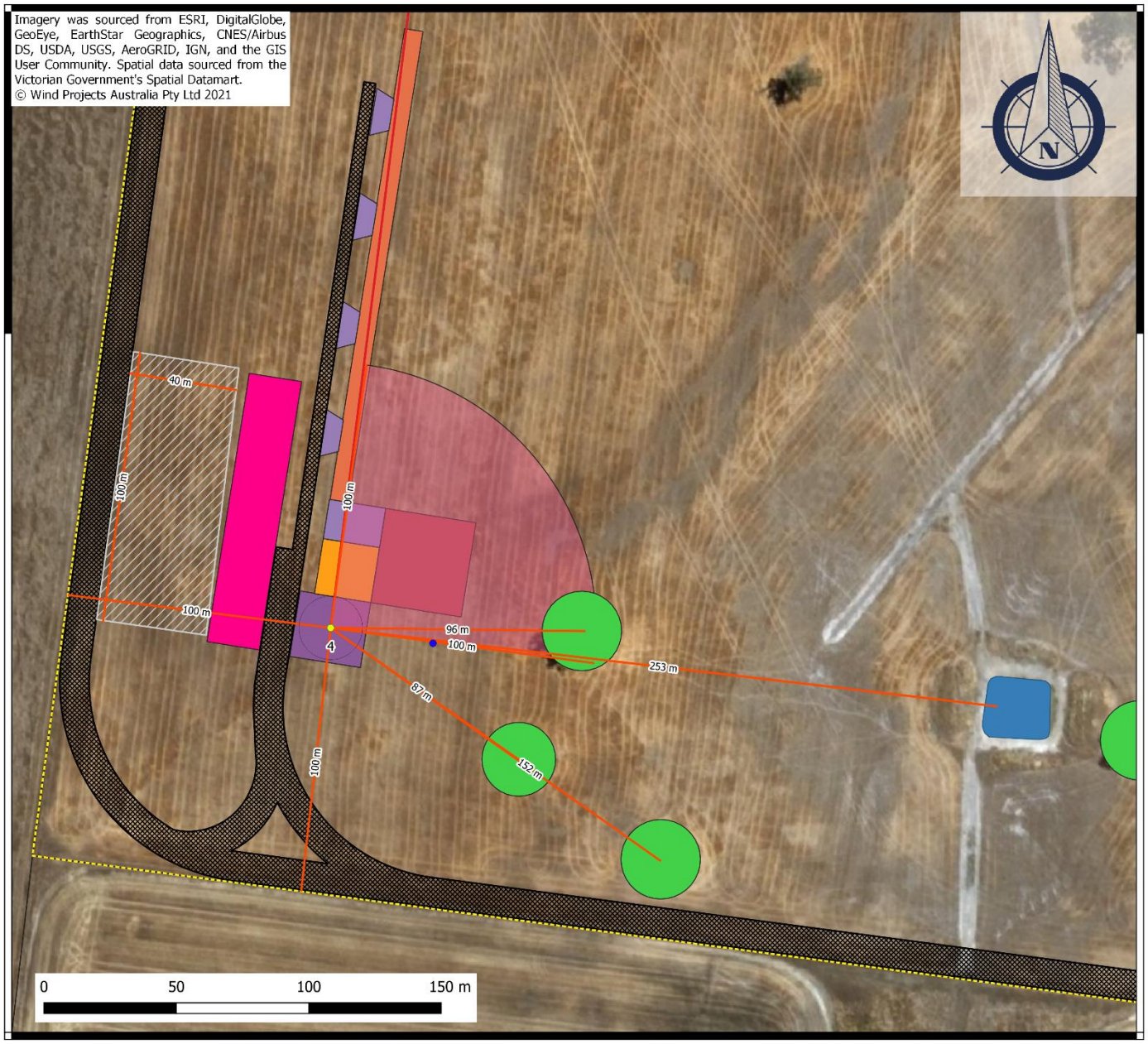


Figure 45: Setbacks from WTG 4.

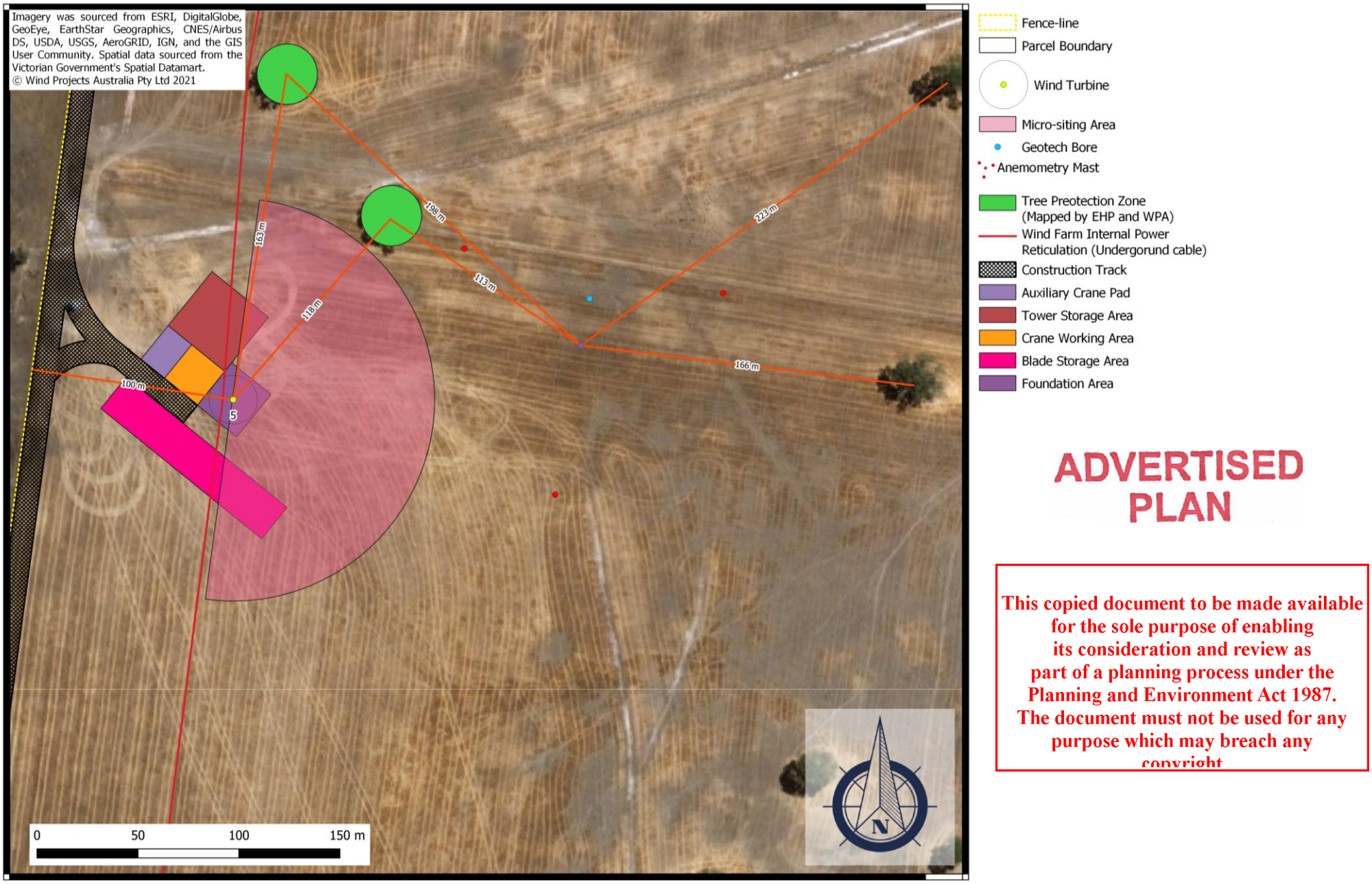


Figure 46: Setbacks from WTG 5.

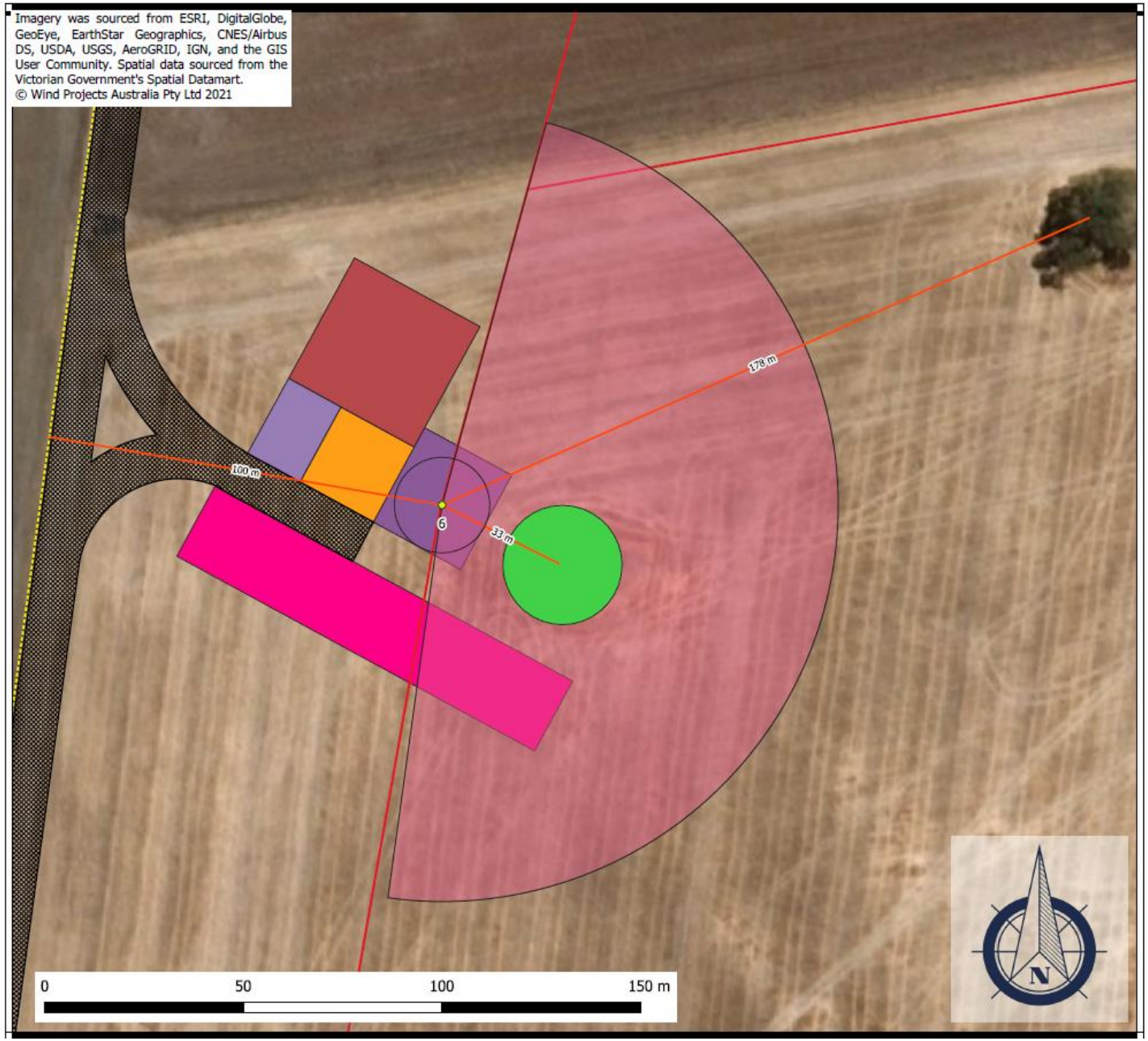


Figure 47: Setbacks from WTG 6.

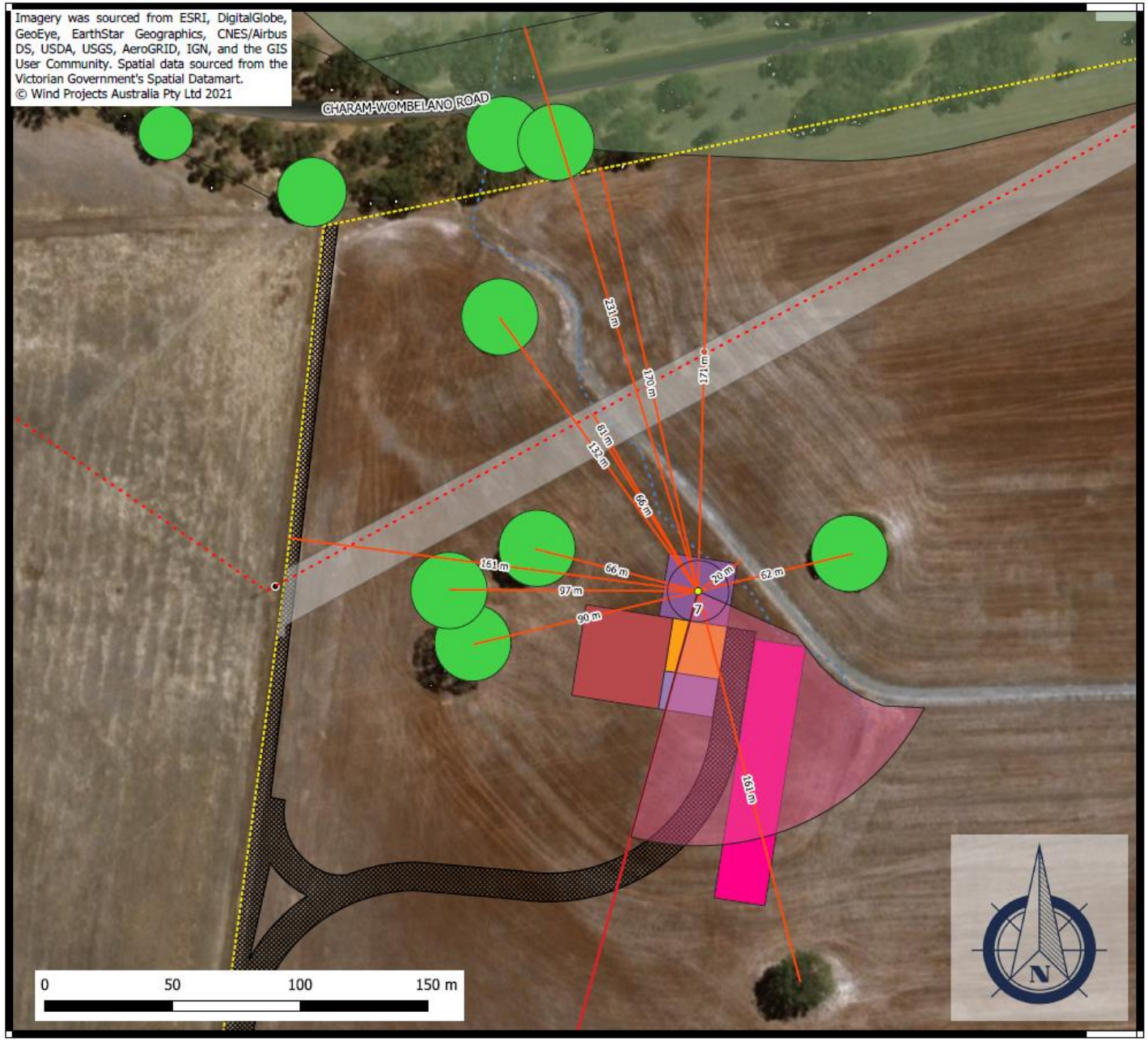


Figure 48: Setbacks from WTG 7.

Figure 49: Setbacks from Bulokes on southern boundary (Trees 71 and 100).

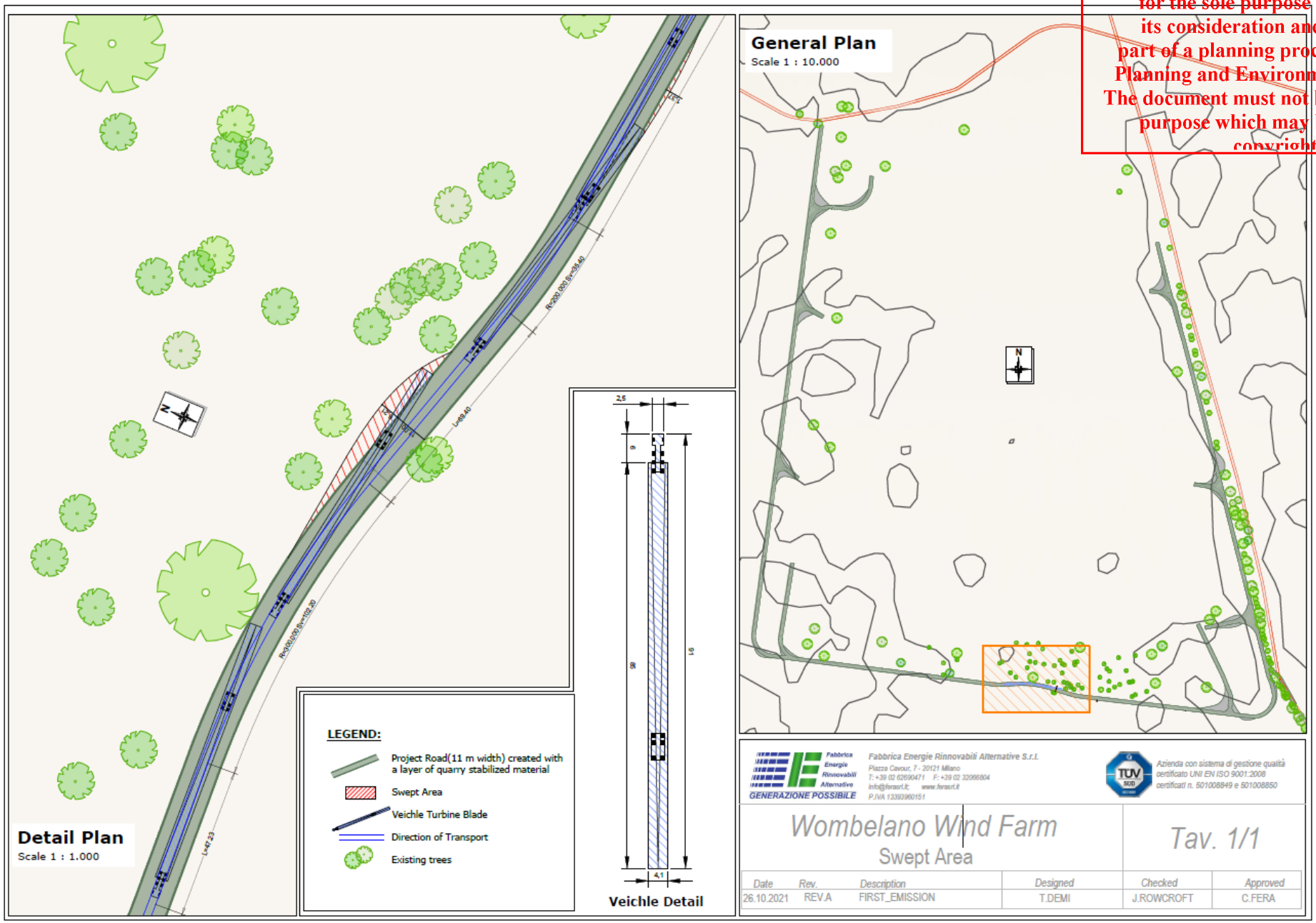


Figure 50: Swept path analysis of loaded blade truck around Bulokes on southern boundary (Trees 71 and 100).

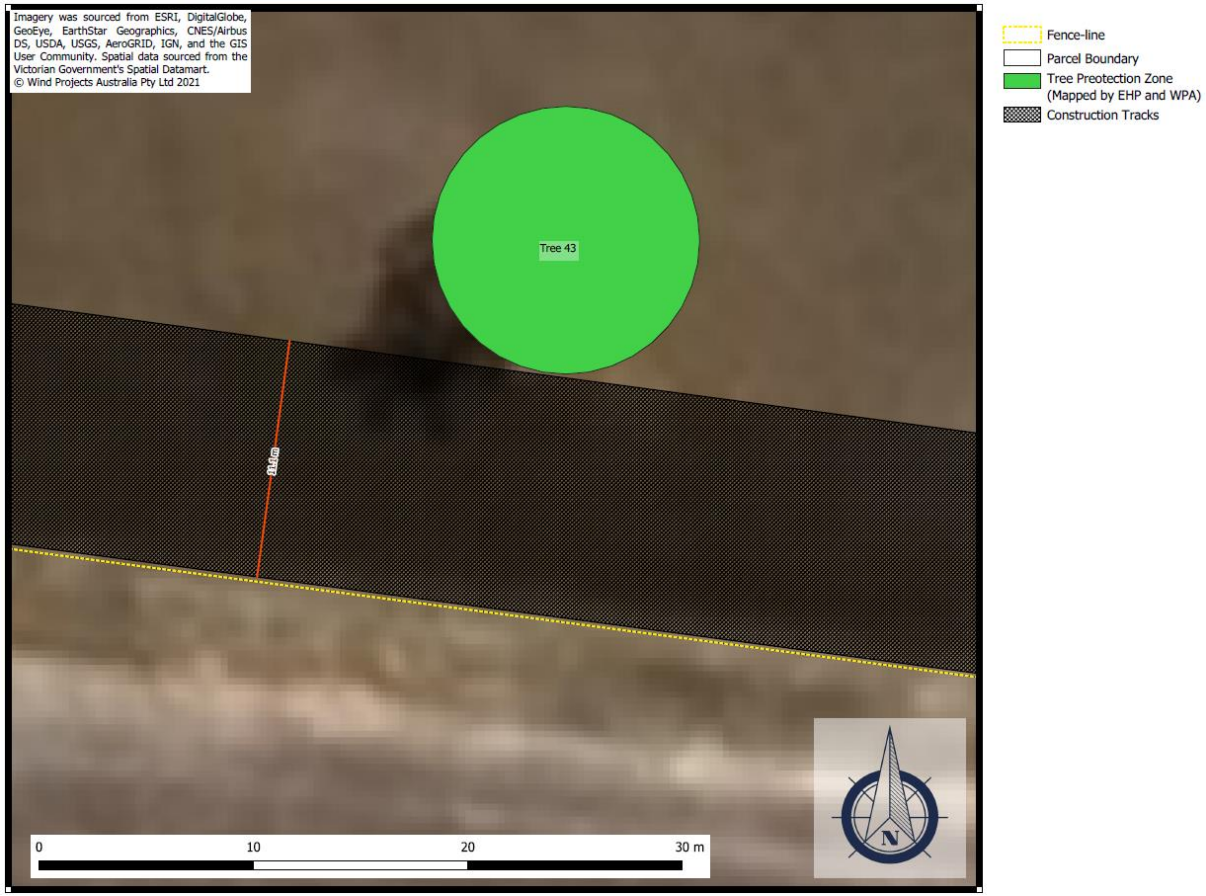


Figure 51: 11.1 m wide construction track passing by Tree 43, as mapped by EHP in their Biodiversity Impact Assessment presented in Appendix 2: Ecological Impact Report. Tree 43 is a Allocasuarina luehmannii with a diameter at breast height of 0.52 m.

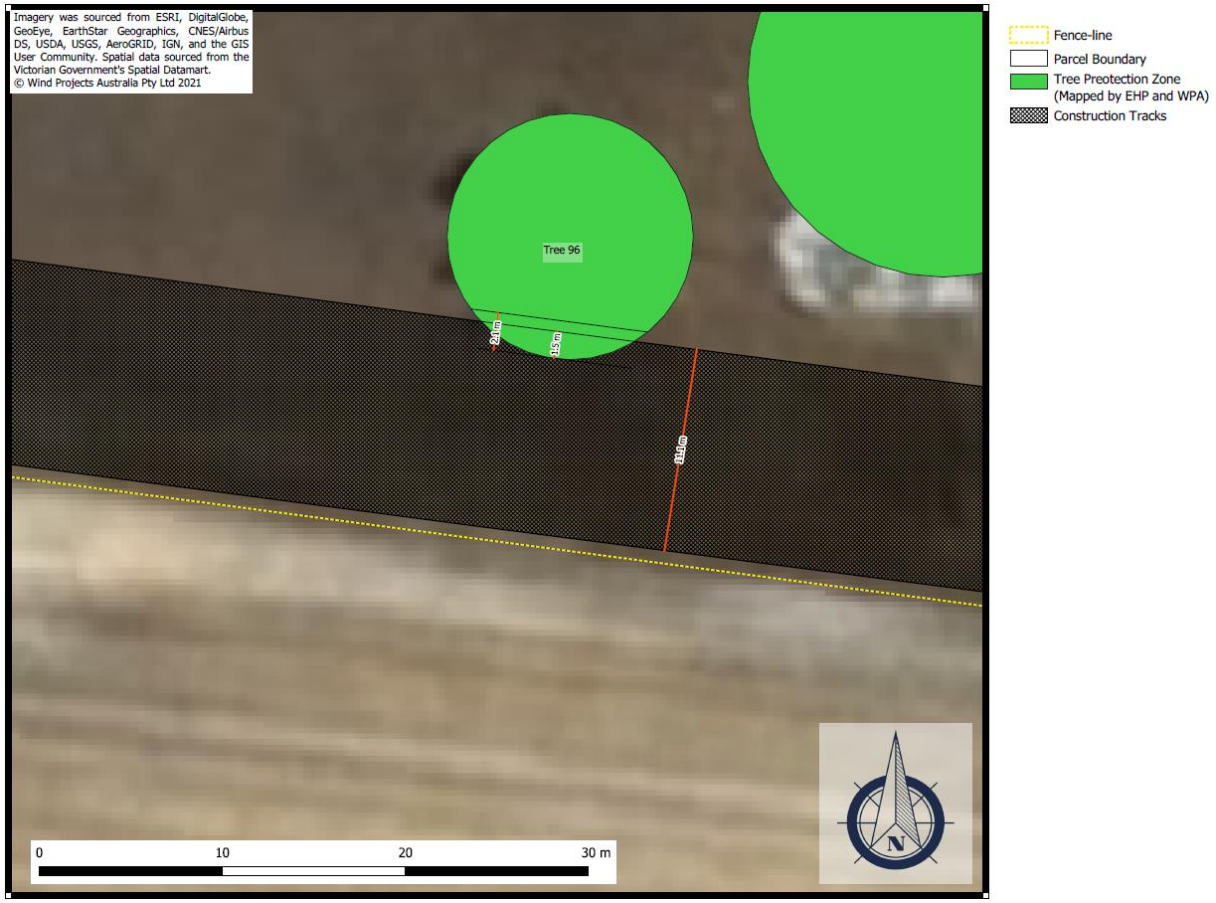


Figure 52: 11.1 m wide construction track passing by Tree 96, as mapped by EHP in their Biodiversity Impact Assessment presented in Appendix 2: Ecological Impact Report. Tree 96 is a Allocasuarina luehmannii with a diameter at breast height of 0.56 m. TPZ is impinged by 1.5 m or 6.1%. Impinging by more than 2.1 m corresponds to more than 10% of the TPZ, in which case the tree would be considered impacted.

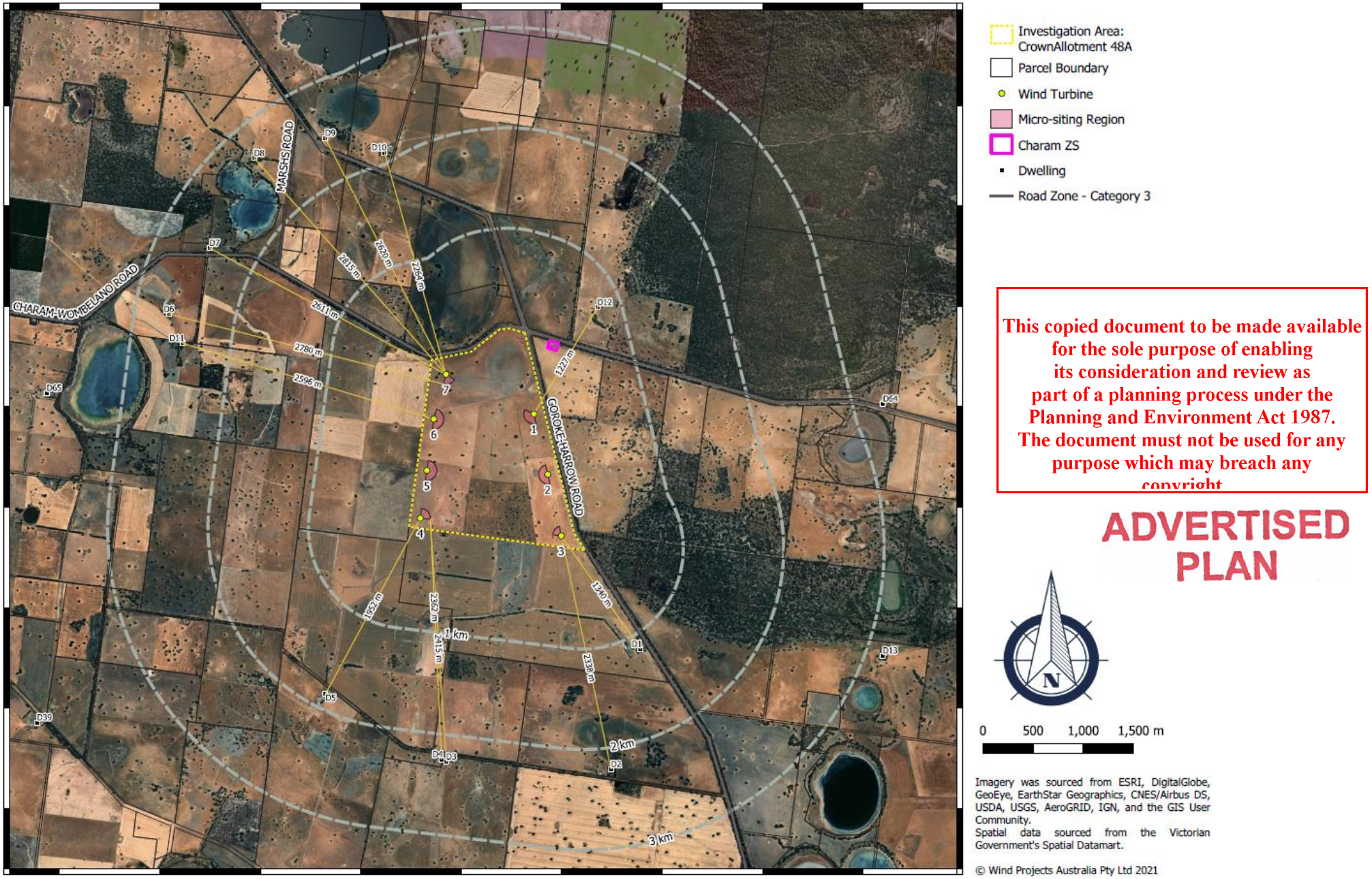


Figure 53: Setback of dwellings within 3 km of site from WTG micro-siting areas.

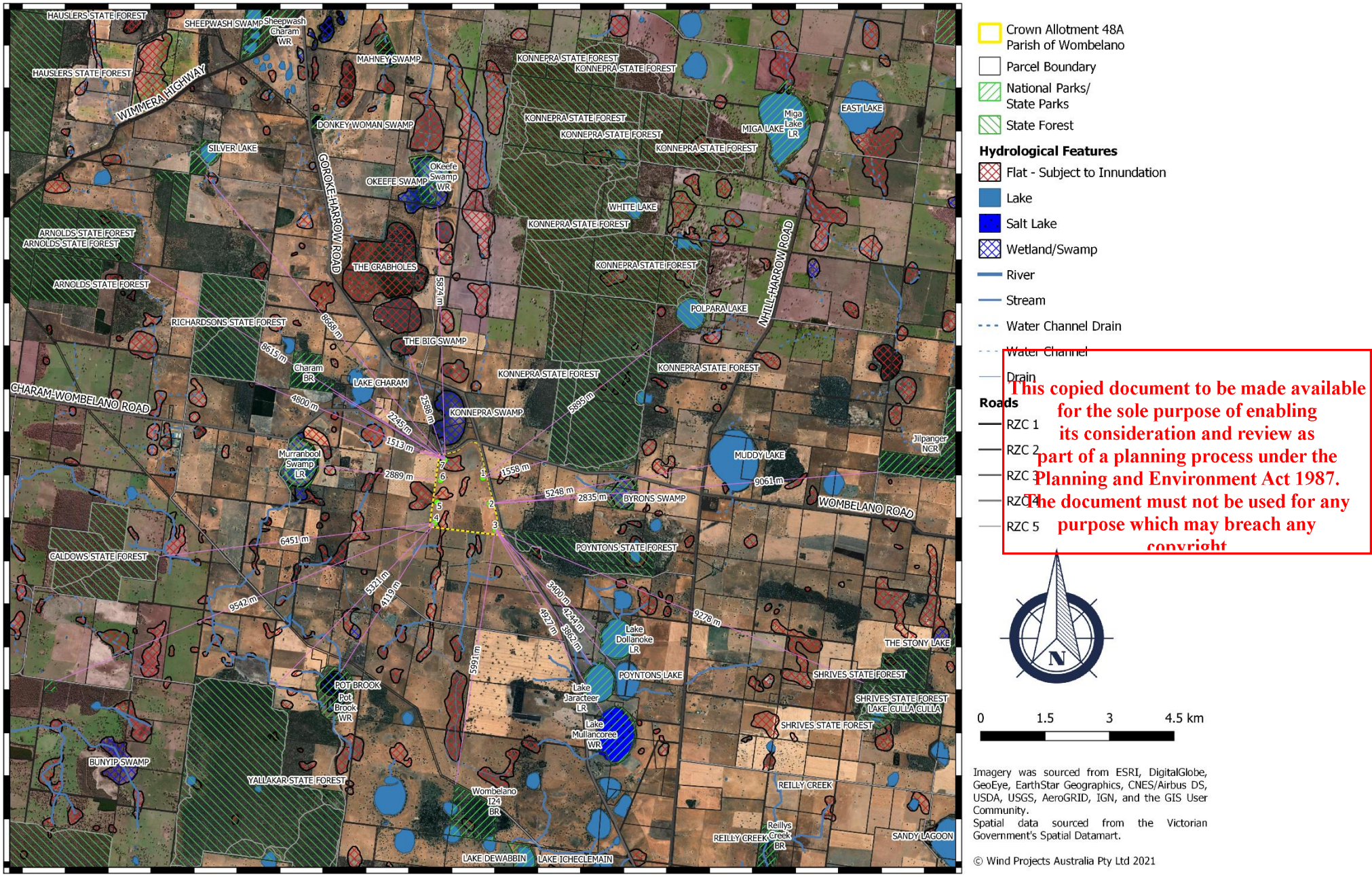


Figure 54: Distance of state/national parks, forests, wetlands and streams from WTGs.

3.3 Site Access

Primary access to the site is via a new site entrance on Goroke-Harrow Road in the south-east corner of the property, as shown on the map in Figure 32 and Figure 44. Some widening of the entrance to allow oversized loads to enter the site will be required, requiring some clearing of vegetation, as shown in Figure 36. As shown in Figure 44 the new site entrance is proposed to be 6 m wide.

This has been selected as the site entrance for the following reasons:

- Approach of over-length vehicles is generally from the south, along Goroke-Harrow Road, however, this entrance affords the flexibility to enter from both the north and the south as the site entrance is at a natural kink in the road which allows the over-length vehicles to enter the site with minimal turning required.
    - Vegetation removal assessment has been completed based on approach of over-length vehicles from the south and this approach is shown in Figure 32 and Figure 44.
- This location was surveyed by EHP, who confirmed that the site does not require clearing of any large trees, and hence does not impact on any nesting habitat for the SERTBC.
- Alternative entrances were considered:
    - North of the shearing sheds where there is some cleared area, however, this was rejected as it would bring the development onto the drained swamp. Advice from ecologists was to avoid this area as it may contain native flora below the surface, which would only be discoverable by breaking the surface. Additionally, this location would increase the development impact on the farming land.
    - 440 m north of the newly proposed entrance is an existing site entrance, however, to accommodate the over-length trucks that require a turning radius of 70 m, at least one large tree would need to be cleared.

Existing site entrances, including the one identified above, form useful secondary access points; these are shown in Figure 32. One secondary access is via Charam-Wombelano Road, along the western site boundary. A further potential secondary access point is at the shearing sheds along Goroke-Harrow Road, however it is intended that this access point be avoided as much as possible to ensure that the Landowner can maintain their core farming business. These secondary access points serve as important alternative access points in particular for emergency response vehicles. The secondary access points do not require any further upgrading or clearing other than general maintenance.

Cardno, in their Traffic Study, provided in Appendix 4: Traffic Impact Assessment, assessed the route from the port of Portland to the WEF, which is the route that will be needed for the supply of heavy and over-sized loads. The route assessed is almost identical to the route assessed by DELWP for the Rifle Butts Wind Farm, which has received planning consent. The route from Portland to Rifle Butts Wind Farm continues along Nhill-Harrow Road, while the route from Portland to the WEF veers off Nhill-Harrow Road onto Goroke-Harrow Road. The entrance to the WEF is 10 km along the Goroke-Harrow Road.

In the Rifle Butts Wind Farm traffic assessment completed by Cardno with inputs from Biosis, it was identified that the only potential impacts on road-side vegetation between Portland and the Rifle Butt Wind Farm occurred on Rifle Butts Road. The turn-off to Goroke-Harrow Road is prior to Rifle Butts Road. For over-sized vehicles, the turn-off to Goroke-Harrow Road and the length of that road does not require any vegetation removal, except at the entrance to the WEF, which is documented in EHP's Biodiversity Assessment, presented in Appendix 2: Ecological Impact Report.

Cardno's assessment of the preferred Over-Dimension/Over-Size-Over-Mass vehicle route option from site for the transport for WTGs and other imported major components demonstrates, subject to some minor roadside works and the implementation of traffic management during haulage, that the proposed routes are suitable for the largest blades and haulage design vehicles. Figure 55 shows the overlay of the swept path of an 85 m blade coming through the new site entrance. The orange hatched area is the area proposed to be cleared as part of the NVR Report submitted to DELWP, and documented in Appendix 2: Ecological Impact Report.

Provision of car parking is shown at the substation, in Figure 37. Four car parking spaces are shown, which is consistent with the number of people likely to be working on site during the operation of the WEF. The car parks have been sized in accordance with Clause 52.06-9 of the Victorian Planning Provisions, specifically, with width of 3.2 m and length of 4.9 m (6.7 m for parallel parking). Final parking provisions will be provided in the final Development Plans.

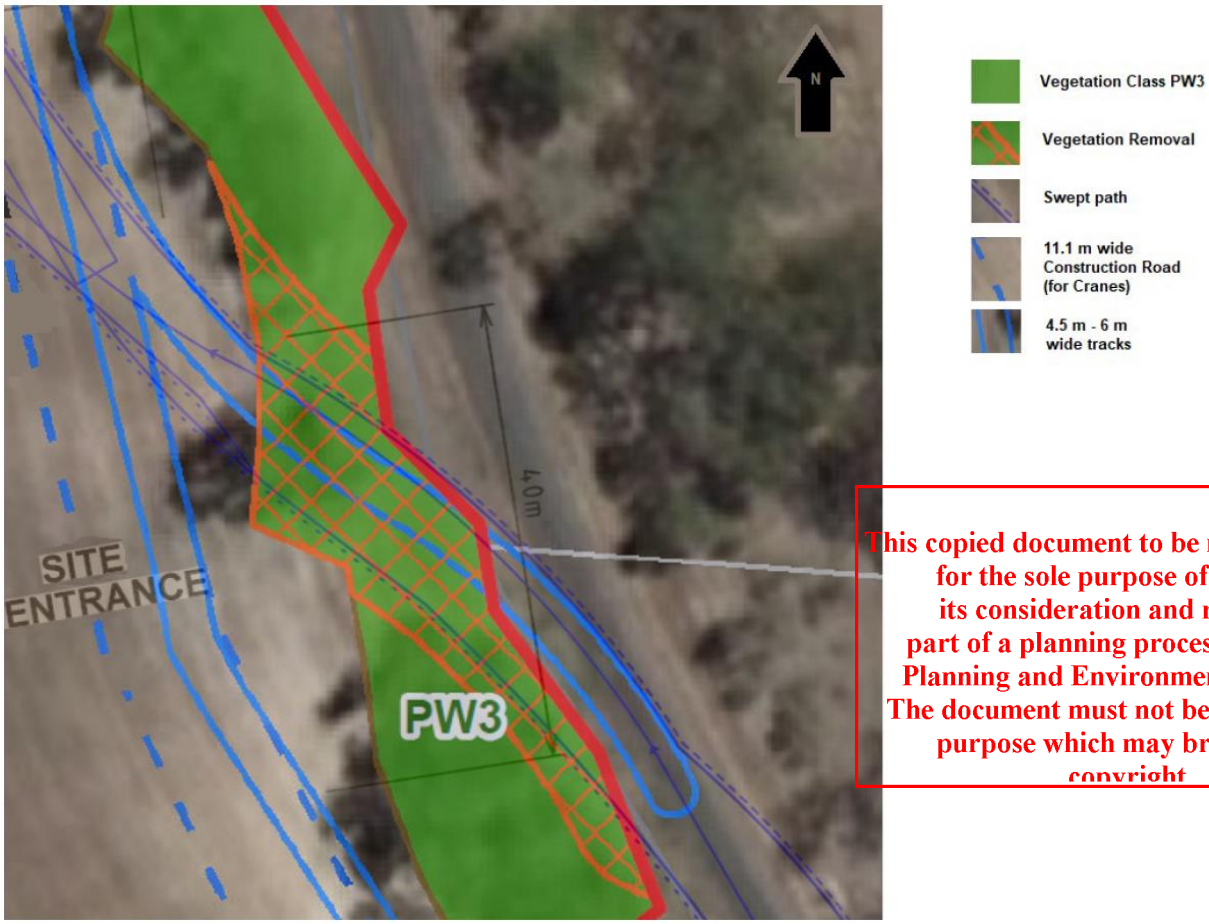


Figure 55: Overlay of swept path from Appendix 4: Traffic Impact Assessment over vegetation removal map from Figure 2B of Appendix 2: Ecological Impact Report.

3.4 Construction: Installation of Temporary Concrete Batch Plant

To facilitate construction, in particular, the pouring of foundations, and preparation of concrete towers, should such a solution be deployed, it is proposed to install a temporary concrete batching plant. This will significantly reduce traffic impact during the construction period.

The location of the proposed batching plant is shown in Figure 32, at the main site entrance.

The proposed area would be cleared, levelled and a stable hardstand created using crushed rock. The temporary hardstand and associated infrastructure will be present on site for the extent of the construction program.

Inclusion of the batch plant will require the following:

- Storage of topsoil for subsequent rehabilitation
- Ground levelling and laying of crushed rock hardstand
- Fencing to protect livestock
- The construction of:
    - The batch plant with loading ramp and office
    - Sediment pond and washout area
    - Slump sand
    - Storage silo and silo refill tanker loading zone
    - Stockpiles, one for sand and one for aggregate, and stockpile refill loading zones
    - Water tanks and a water tank refill loading zone
- The installation of:
    - Storage container
    - Spare generator
    - Additives (Intermediate Bulk Containers in bunds)
    - Diesel fuel (in bunds)
- Decommissioning of the batch plant and rehabilitation of the site:
    - Removal of all infrastructure
    - Removal of crushed rock and rehabilitation of land
    - Return of topsoil

An indicative layout is provided in Figure 56, but will vary based on the final number of WTGs and the final construction materials.

3.5 Significant Landscape Features Identified in the Planning Scheme

No Significant Landscape Features are identified in the West Wimmera Planning Scheme. No Landscape Overlays are included in the West Wimmera Planning Scheme.

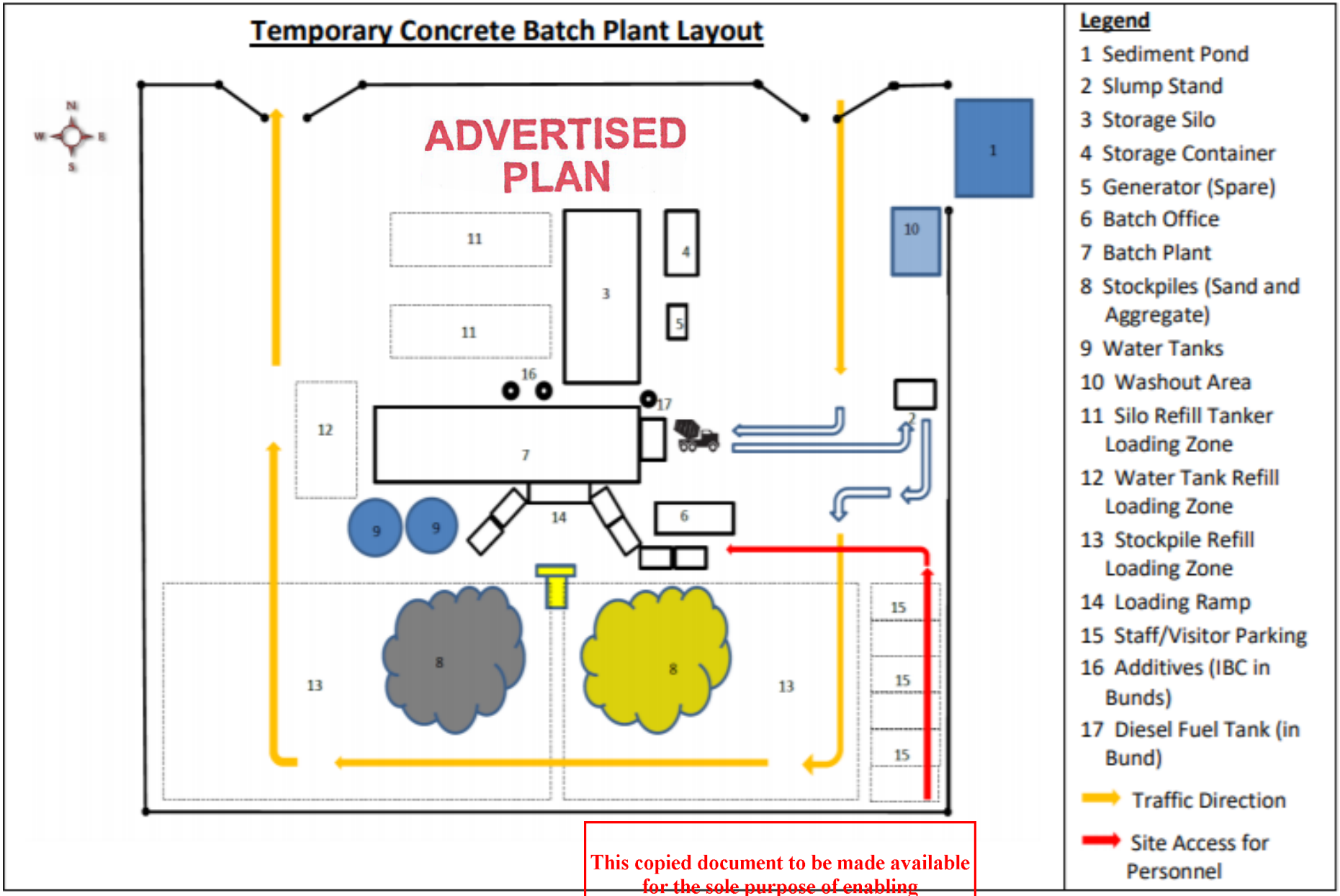


Figure 56: Indicative concrete batch plant layout.

4. PLANNING PROVISIONS

Planning requirements for WEFs are specified in Commonwealth, State and Local Government legislation and provisions. This section outlines the planning pathway and associated requirements for the WEF.

4.1 PERMIT TRIGGERS

As identified in Section 2.2.1: Existing Land Uses, the WEF is located in the *Farming Zone*.

According to Clause 35.07-1 of the VPP, a planning permit is required for the following land use and associated buildings and works within the *Farming Zone*:

- Wind Energy Facility
  - Including a Battery Energy Storage System.
  - Must meet the requirements of Clause 52.32 of the VPP.
- Temporary Concrete Batching Plant

A planning permit is triggered by the removal of native vegetation under Local Planning Provision (LPP) Clause 42.01, Schedule 2 to the Environmental Significance Overlay.

A planning permit is triggered by the removal of native vegetation under LPP 52.17.

4.2 FARMING ZONE

The land is zoned as *Farm Zone.*

According to VPP Clause 35.07, the stated purpose of the *Farm Zone* is:

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

4.3 OVERLAYS

The WEF is covered by an Environmental Significance Overlay (Schedule 2: Red-Tail Black Cockatoos). The objective of this overlay is to protect SERTBC habitat, including ensuring the availability of nesting sites – specifically live and dead hollow bearing trees and other suitable trees within the bird's known nesting area, as well protecting the feeding habitat of Buloke and Stringybark trees. This is pertinent, as there is a copse of Bulokes in the southern part of the site. While the wind turbines pose little risk to SERTBCs as they tend to fly below the lower-tip-height, the wind farm needs to be designed to minimise the impact on the SERTBC's habitat. The design requirements associated with wind farm tracks and cables trigger requirements for a permit under Section 4 of Schedule 2 of the Environmental Significance Overlay for the West Wimmera Shire.

There is also a Bushfire Management Overlay (Section 44.06 of the West Wimmera Shire's LPPs) across the south-eastern corner of the property, shown in Figure 57. While this does not trigger the requirement for a Bushfire Management Plan or Assessment, liaising with the local branch of the Country Fire Authority (CFA) is essential, as is having robust systems in place for fire and emergency management. Application requirements for development with respect to a Bushfire Management Overlay area require:

- Bushfire hazard site assessment;
- Bushfire hazard landscape assessment; and
- Bushfire management statement.

The CFA have published their Guidelines for Renewable Energy Facilities. Adherence to this Guideline is addressed in Sections 4.7 and 5.12.11.

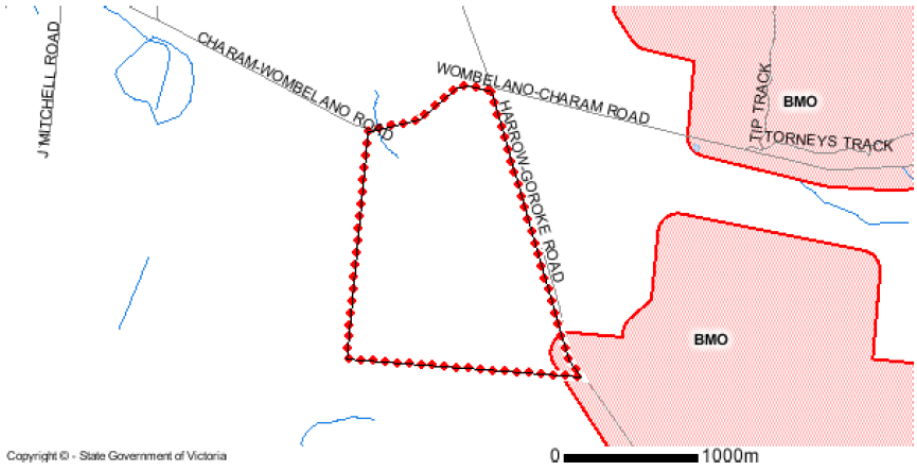


Figure 57: Bushfire Management Overlay (BMO) overlapping the south-eastern corner of the site.

4.4 Particular Provisions – 52.32 and any others

Planning provisions particular to the development of a WEF are provided in Clause 52.32 of the VPP.

Clause 52.32 includes the following elements:

- Purpose – aim of the provisions.
- Application – to whom do the provisions apply.
- Turbines within 1 km of dwellings – provisions for dwellings that live within 1 km of proposed WTGs.
- Application requirements:
    - Site and Context Analysis: Site.
    - Site and Context Analysis: Surrounding Area.
    - Design Response.
    - Mandatory Noise Assessment.
- Decision Guidelines.
- Anemometer – permit requirements for anemometers.
- Application requirements to amend a permit under Section 72 of the Act.
- Application requirements to amend a permit under Section 97I of the Act.

Planning provisions particular to the removal of habitat suitable for SERTBCs are provided in LPP 42.01 – Schedule 2 to the Environmental Significance Overlay.

Clause 42.01 includes the following elements:

- Statement of Environmental Significance.
- Environmental Objectives.
- Permit Requirements.
- Application Requirements.
- Decision Guidelines.
- Referrals.

Planning provisions particular to the removal of native vegetation are provided in LPP 52.17.

Clause 52.17 includes the following elements:

- Purpose.
- Permit Requirements.
  - Permit is required to remove, destroy, or lop native vegetation.
- Application Requirements.
  - Include consideration of: The Guidelines for Removal, Destruction or Lopping of Native Vegetation (DELWP 2017).
- Property Vegetation Plans.
- Decision Guidelines.
- Offset Requirements.
- Transitional Provisions.
- Exemptions.

Car parking is addressed in VPP 52.06, and is required to be considered as the WEF constitutes a new use of land. However, the operation of a wind energy facility or renewable energy facility is not listed in Table 1 of the provisions. Therefore, car parking requirements must be provided to the satisfaction of the Responsible Authority, as specified in Clause 52.06-6.

4.5 General Provisions – Sections 65 and 66

Section 65 of the VPP provides general decision guidelines for assessment of Planning Applications and associated Plans (Clause 65.01) and Applications for Subdivision (Clause 65.02). No subdivision is required, therefore only Section 65.01 is pertinent.

Clause 65.01 stipulates that for the granting of a permit, the following elements must be considered:

- Matters set out in Section 60 of the Act:
  - The relevant Planning Scheme.
  - The objectives of planning in Victoria.
  - All objections and other submissions which it has received and which have not been withdrawn.
  - Any decision and comments of a referral authority which it has received.
  - Any significant effects which the RA considers the use or development may have on the environment or which the RA considers the environment may have on the use or development.

    - Any significant social effects and economic effects which the RA considers the use or development may have.
    - Any strategic plan, policy statement, code or guideline which has been adopted by a Minister, government department, public authority or municipal council.
- The Municipal Planning Strategy and the Planning Policy Framework.
- The purpose of the zone, overlay or other provision.
- Any matter required to be considered in the zone, overlay or other provision.
- The effect on the amenity of the area.
- The proximity of the land to any public land.
- Factors likely to cause or contribute to land degradation, salinity or reduce water quality.
- Whether the proposed development is designed to maintain or improve the quality of stormwater within and exiting the site.
- The extent and character of native vegetation and the likelihood of its destruction.
- Whether native vegetation is to be or can be protected, planted or allowed to regenerate.
- The degree of flood, erosion or fire hazard associated with the location of the land and the use, development or management of the land so as to minimise any such hazard.
- The adequacy of loading and unloading facilities and any associated amenity, traffic flow and road safety impacts.

Section 66 specifies referral and notice provisions. Relevant to this project are the following clauses:

- Clause 66.02-2: Native Vegetation
    - Trigger: Remove, destroy, lop native vegetation.
    - Referral authority: DELWP – Recommending Authority.
- Clause 66.02-4: Major electricity line or easement
    - Trigger: Construct works on land within an electricity transmission easement.
    - Referral authority: Relevant electricity transmission authority (i.e. Powercor – noting that Powercor is a Distribution Network Service Provider rather than a Transmission Network Service Provider) – Determining Authority.

4.6 Wind Energy Guidelines

The *Policy and planning guidelines for development of wind energy facilities in Victoria* (Development Guidelines) published in July 2021 provide a detailed guide to the development of wind energy facilities in Victoria, matching closely with VPP Clause 52.32 described in Sections 4.1 through Section 4.5, whilst providing some additional clarification and guidance. Guidance is provided both in the context of additional details on VPP Clause 52.32, but also in highlighting additional legislation to be considered and documenting the planning pathway for WEFs.

The Development Guidelines provide direction to wind farm developers, helping to identify suitable locations for WEFs, identifying key assessment criteria, relevant planning pathways, application requirements and assessment standards. The Development Guidelines also provide a set of sample permit conditions.

The Development Guidelines provide guidance on meeting the planning requirements through addressing the following items, which are also addressed in response to Clause 52.32 of the VPP:

- Providing evidence of consent from landowners with dwellings located within 1 km of a WTG.
    - This is not relevant for this WEF as no dwellings are located within 1 km of a WTG.

- Site and context analysis.
    - This largely mirrors the requirement set out in Clause 52.32 of the VPP.
    - The Site and Context Analysis is provided in Section 2: Site and locality.
    - The location plan is provided in Figure 11.
- Design response: Development Plans and Written Reports.
    - Development Plans will be finalised once the final WTG make and model are finalised, and submitted to the RA for endorsement.
      The Development Plans will be detailed plans of the proposed development showing:
        - The layout of the wind turbine generators and associated buildings and works (this can include anemometers):
            - The planning envelope is shown in Figure 32.
        - GIS coordinates showing the location of each turbine and key infrastructure:
            - Co-ordinates are shown in Table 5.
        - Distances from each turbine to the closest dwelling and to the site boundary:
            - Distances are shown in Table 5.
        - Location of all houses within one and two kilometres of a turbine:
            - Dwellings are shown in Table 5 and mapped in Figure 10.
        - The location and dimensions of all buildings and works:
            - Indicative locations of buildings and works are shown in the site layout in Figure 32, the elevation of a candidate WTG in Figure 35, an indicative substation layout in Figure 37 and an indicative concrete batch plant layout in Figure 56.
        - The location of all vegetation removal:
            - Shown in Figure 36.
        - Proposed connections to the electricity grid, including the infrastructure required to connect the facility to the electricity network:
            - Site layout showing cable routing, substation location and route to Charam Zone Substation are presented in Figure 32.
        - Access roads on the site:
            - On-site tracks are shown in Figure 32.
        - Access road options and swept path diagrams that demonstrate that oversize vehicles can access the site, and the impact on roadside vegetation:
            - Swept path diagrams shown in Appendix 4: Traffic Impact Assessment.
        - Accurate visual simulations showing the appearance of the development in the context of the surrounding area and from key public viewpoints:
            - Photomontages are presented in Appendix 1: Photomontages.
        - Measures to manage any fire risks associated with the facility or connections to the electricity grid:
            - These are addressed in the Fire Management Plan requirements presented in Section 5.12.11: Fire and Emergency Management Plan and Emergency Information Book.
        - A rehabilitation plan for the site, including plans for revegetation and regeneration works:
            - Decommissioning plan requirements are specified in Section 5.12.9.
- Noise assessments:

- Pre-construction noise report and EPA audit are provided in Appendix 3: Noise Impact Reports.

The Development Guidelines outline requirements of the Environmental Management Plan. In this planning application, it is proposed to prepare multiple management plans. The final management plans will be submitted as part of the final Development Plans for endorsement by the RA. The management plans and their requirements are listed in Section 5.12.

The Development Guidelines identify the following items to be addressed:

- Measures to minimise the amenity and environmental impacts of the construction and decommissioning of the facility:
  - Requirements addressed in Section 5.12.6, Section 5.12.7, and Section 5.12.9.
- Organisational responsibilities, and procedures for staff training and communication:
  - Requirements for management plans for operation of the site are presented in Section 5.12.1 (complaint management), Section 5.12.3 (noise management) as well as in Section 5.12.8 (Bat and Avifauna Management).
- A construction component that includes procedures to manage dust and noise emissions, erosion, mud and stormwater run-off and procedures to remove temporary works, plant, equipment, buildings and staging areas, and reinstate the affected parts of the site, when construction is complete:
  - Requirements of construction environmental management plan presented in Section 5.12.7.
- Complaints management processes:
  - Complaint management plan requirements are specified in Section 5.12.1.

The Development Guidelines identify requirements for assessing the impacts of the WEF on aviation. Landrum & Brown have completed an Aviation Impact Assessment for the WEF, and Airservices Australia have confirmed that the proposed WEF does not pose an undue risk to aviation. The impact assessment and correspondence with Airservices Australia are presented in Appendix 6: Aviation Impact Report.

The Proponent will inform Airservices Australia upon endorsement of the final Development plans.

4.7 CFA Guidelines for Renewable Energy Installations

The CFA's *Guidelines for Renewable Energy Installations* (March 2021) provides prescriptive advice for fire safety and emergency response for utility-scale wind, solar and battery facilities. Advice includes recommendations for cleared areas around WTGs, relevant signage, requirements for firefighting facilities and infrastructure, the need to consult with and provide on-site familiarisation for CFA personnel and requirements of relevant management plans.

4.8 Aboriginal Heritage Act (2006)

Under the Aboriginal Heritage Act (2006), culturally sensitive areas such as waterways, swamps, hill tops, scar trees and the like, provide a statutory trigger for the preparation of a Cultural Heritage Management Plan (CHMP). These areas are mapped in the *Aboriginal Cultural Heritage Register and Information System* (ACHRIS), which is available online.

The Konnepra Swamp and the lunette on the eastern side of the swamp are located on the adjacent land to the north of Crown Allotment 48A, with parts of the statutory buffer zones marginally

overlapping the site, as shown in Figure 5. The Proponent, as demonstrated in this Planning Report, propose to develop the WEF in such a way as to avoid having any overlap of the Activity Area with the Culturally Sensitive Areas. Therefore, a CHMP is not triggered.

It is anticipated that an Environmental Management Plan would be required as a condition of any permit that may issue. As part of our Environmental Management Plan, we will develop chance find protocols for any Aboriginal artefacts that might be uncovered during the wind farm construction. These protocols will be consistent with the chance find protocols provided by Aboriginal Victoria, which currently state:

> *The Aboriginal Heritage Act 2006 requires that the discovery of Aboriginal cultural heritage places or objects on any public or private land in Victoria be reported to Aboriginal Victoria. Landowners who suspect they have discovered Aboriginal cultural heritage on their land can find out what to do on Report and protect a possible Aboriginal place or object.*[6]

The Proponent has also had some informal consultation with the local RAPS group: Barengi Gadjin.

4.9 Other Legislation

The Development Guidelines highlight that the following legislation may have further statutory requirements that must be satisfactorily addressed for the WEF to progress:

- For Victoria:
  - Environment Effects Act 1978: This has self-assessment criteria to determine whether an Environmental Effects Statement is required. The Proponent has completed the self-assessment and determined that no referral is required. This self-assessment has been circulated with DELWP.
  - Aboriginal Heritage Act 2006: This Act includes a range of enforcement provisions to provide better protection for Aboriginal cultural heritage in Victoria.
  - Water Act 1989: Generally, water is issued to individual users by the relevant water corporation, via a water share or a licence. In addition to the licences that are formally issued, the Water Act enables users to take water for domestic and stock purposes from a range of surface water and groundwater sources without a licence.
  - Heritage Act 2017: The Act provides enforcement tools to ensure Victoria's significant heritage places and objects are appropriately protected into the future.
  - Wildlife Act 1975: All native wildlife is protected in Victoria. It is an offence to kill, take, control or harm wildlife under the Wildlife Act 1975. It is also an offence to use poisons to kill, destroy or take wildlife. Severe penalties (including imprisonment and fines) apply to those found guilty of an offence under the Wildlife Act. Anyone wishing to control wildlife must have an authorisation from DELWP. The most common authorisation is an Authority to Control Wildlife.
  - National Parks Act 1975: Provides allowances for National and State Parks.
  - Livestock Disease Control Act 1994: This is the key Act governing livestock biosecurity in Victoria. The Act provides the legislative framework for the prevention, monitoring and control of livestock diseases and is designed to protect domestic and export markets and public health.
  - Plant Health and Plant Products Act 1995: This Act was repealed by the Plant Biosecurity Act 2010. Orders made under the Plant Biosecurity Act 2010 may:

[6] https://www.aboriginalvictoria.vic.gov.au/aboriginal-places-and-objects viewed 6th October 2020.

        - Prohibit the movement of certain material into Victoria to prevent the entry into Victoria of exotic pests and diseases detected in other States or Territories.
        - Allow areas in Victoria to be declared, and conditions imposed on the movement of certain materials, to prevent the entry of a pest or disease into that area.
        - Allow areas in Victoria to be declared, and conditions imposed on the movement of certain materials, to prevent the spread of a pest or disease from that area.
    - Flora and Fauna Guarantee Act 1988 (FFG Act): The aim of the FFG Act is to guarantee the survival of all of Victoria's Flora and Fauna.
        - The Brolga is listed as a protected species under the FFG Act.
    - Catchment and Land Protection Act 1994 (CaLP Act): Under the CaLP Act certain plants are declared as noxious weeds in Victoria. These plants cause environmental or economic harm or have the potential to cause such harm. They can also present risks to human health.
- For the Commonwealth:
    - Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act): The EPBC Act enables the Australian Government to join with the states and territories in providing a truly national scheme of environment and heritage protection and biodiversity conservation. The EPBC Act focuses Australian Government interests on the protection of matters of national environmental significance, with the states and territories having responsibility for matters of state and local significance.
    - Native Title Act 1993: legislation passed by the Australian Parliament, the purpose of which is to provide a national system for the recognition and protection of native title and for its co-existence with the national land management systems.

5. Planning Assessment

This section explains how the proposal responds to the relevant planning provisions.

5.1 Compatibility with Farming Zone: Agricultural Impact of the Proposal

The WEF is playing its role in offsetting greenhouse gas emissions and, in small part, contributing to reducing the impacts of climate change. The impacts of climate change on agricultural production are well documented.

The presence of the WEF does not compromise the continued and sustained use of the land for agricultural purposes as stated in the objectives of the Farm Zone, as, once complete, the WEF will occupy nominally six hectares of the 252 hectare property. The six hectares includes the permanent anemometer, WTG bases, hard stands, substation and battery facility, O&M facilities, and new tracks. In all, this equates to less than 2.5% of the land area.

This WEF will support and enhance agricultural production through the following elements:

- Enable the Landowner to continue farming their land.
    - The land is cropped on rotation and used for sheep grazing – there is no reason why this activity would not continue.
- Improving infrastructure on the site to facilitate year-round access.

    - Through winter months, parts of the land are subject to flooding. New access tracks on the site are required to give the WEF operator year-round access to the facility. The Landowner has access to these tracks, improving their year-round access to their farm.
- Providing guaranteed income to the Landowner.
    - In years of drought or low productivity, revenue to the Landowner is guaranteed – reducing pressure on the Landowner and their need to over-farm.
    - Access to guaranteed income furthers the Landowner's ability to farm sustainably.

For the life of the WEF, the development will remove approximately six of the 252 hectares of land from traditional agricultural production. The development will not impact on soil quality. Underground infrastructure, that is, cabling will be at a depth of nominally 1 m below natural ground level, ensuring pastoral and grazing activities are not impacted.

The WEF will impact on neighbouring farming operations through the following:

- Limit the ability for other properties to host similar utility-scale energy generation facilities.
    - There is nominally 25 MW of capacity for power export back towards Horsham – the WEF is designed to maximise use of this capacity.
- Reduce Distribution Loss Factors for farming operations (and other electricity consumers) supplied by the Charam Zone Substation.
    - Reducing power bills for grid-connected energy consumers in the area.

The WEF will improve the site's ability to sustain the current agricultural use as the WEF provides an alternative source of revenue to the Landowner in years of low income.

The WEF will have a negligible impact on the agricultural qualities of the land. In particular, there will be:

- No impact on soil quality.
    - Substation will be fully bunded in accordance with relevant standards ensuring any leaks are contained.
- No impact on water access.
    - The wind farm will maintain water storage on site for firefighting purposes.
    - Per requirements of the Wimmera Catchment Management Authority, the facility will be designed to ensure that there is no impact on water flow across the site. This is achievable through standard engineering techniques.
    - The site has negligible requirements for water. On-site concrete batching will be supplied through water purchase or tapping of a new bore.
- Improved access to infrastructure.
    - Internal tracks will be improved, designed to withstand over-size and over-weight loads through construction; through operation, tracks will be designed to support maintenance activities in all weather conditions.

This development, on one hand, generates clean and renewable energy, forming part of the action to combat climate change, whilst having no material adverse impact on agricultural production and the agricultural qualities of the land.

5.2 Site Analysis and Design response

Submission requirements for a Planning Application, according to Clause 52.32-4 of the VPP, must include the following elements:

- Site and Context Analysis
- Design Response
- Mandatory Noise Assessment

5.2.1 Requirements of Site and Context Analysis

The Site and Context Analysis is provided in Section 2: Site and locality. Within this, analysis is provided of local and regional contexts.

5.2.1.1 Local Context

The size, shape and dimensions of the site are presented in Section 2.1.1: Site Location and Specifications – the 252 hectare site is approximately 2 km north to south and 1.4 km east to west.

The site orientation and contours are presented in Figure 3, which highlights the flat nature of the site.

The current land use, existing use and siting of buildings and works on the land are identified in Section 2.1.2: Land Use and Buildings. The presence of the WEF would have minimal impact on the current land use, with the upgrading of tracks improving the Landowner's ability to access their site in all weather. The landowner lives off-site. There are shearing sheds on site.

The existing vegetation types, condition and coverage are addressed in Section 2.1.3: Ecological Characteristics. Further detail is provided in Appendix 2: Ecological Impact Report. Remnant vegetation of the study area is represented by small areas of two Ecological Vegetation Classes: Red Gum Swamp (EVC 292) and patches and scattered trees of Plains Woodland (EVC 803). These areas are highlighted in EHP's study of the project area (p.13 – 14 and Plates 1 – 8 of EHP's report, presented in Appendix 2: Ecological Impact Report). Those are largely confined to portions close to the site's boundaries. The majority of the site supports exotic crops, pasture and weeds. Seven indigenous flora species and 19 non-native flora species were recorded within the site. Buloke is the only threatened flora species detected at the site. It is listed as threatened under Victoria's Flora and Fauna Guarantee Act 1988. Publicly accessible databases contain no records of nationally significant (EPBC-listed) flora species from within 10 km of the project site. The majority of the site consists of paddocks that offer habitat for common generalist fauna species that have adapted to modified agricultural and pastoral environments. Artificial waterbodies in the form of dams along the southern boundary and near the centre of the site provide limited resources for common and wide-ranging waterbirds.

The landscape of the site is described in Section 2.1.4: Site Landscape. The site is best described as heavily modified farmland, which is consistent with most other WEFs constructed in Victoria.

Species of flora and fauna listed under the FFG and EPBC Acts are identified in Appendix 2: Ecological Impact Report, specifically the study conducted by EHP, which contains both desktop assessment and site assessment. The work by Biosis, also included in Appendix 2: Ecological Impact Report, assesses the risk to the SERTBC.

The Proponent has submitted an EPBC referral to the Federal Department of Agriculture, Water and the Environment (DAWE) with regards to the potential presence of the SERTBC, White-throated Needletail and Fork-tailed Swift. The result of that referral has determined that the development is

not a controlled action. Documentation of the referral decision is provided in Appendix 2: Ecological Impact Report.

The Brolga is not listed under any category of threat status under the EPBC Act. It is currently listed as Vulnerable in the Advisory List of Threatened Vertebrate Fauna in Victoria[7]. For the proposed listing under the FFG Amendment Act 2019 the species has been provisionally assessed as Endangered. There are no Brolga flocking or breeding sites on the wind farm property nor within 5 km of the site (refer to Appendix 2: Ecological Impact Report). The site offers no other resources that might attract Brolgas.

In late 2020, DELWP released updated draft Brolga standards designed to succeed the 2012 DSE Brolga Guidelines[8]. At the time of writing, the draft standards have completed a period of public consultation and are likely to be enshrined in the planning process. The draft standards have been informed by detailed field studies and assessment of operational wind farms in Victoria.

In their explanatory companion document[9], DELWP notes that, *"There is no evidence of Brolga collision mortalities from wind turbines".* The emphasis of the draft standards is on avoidance of effects on breeding and flocking habitats for Brolgas by the appropriate siting of wind farms and on minimising disturbance of key habitats by the provision of buffers from specified wind energy infrastructure.

Under the draft standards, an application for a wind energy facility must assess the values for Brolgas within a 5 kilometre radius of the proposed wind farm and any external powerline(s).

Overhead powerlines represent a potential collision risk for Brolgas and the draft standard includes provisions for applying a minimum buffer distance of 900 m between Brolga breeding and flocking wetland habitats and overhead powerlines associated with a new wind farm. The Wombelano Wind Farm is sited to utilise existing electrical infrastructure where possible, siting new powerlines underground, and the entire site is more than 5 kilometres from any Brolga breeding or flocking site.

The location is substantially north of the distributional range of the Southern Bent-wing Bat *Miniopterus orianae bassanii*. EHP's Biodiversity Assessment (Appendix 2: Ecological Impact Report) completed a comprehensive review of impact on threatened species, including bats. They found no records of any threatened species of bat within 10 km of the Wombelano wind farm site.

The project has no capacity to result in significant effects on any threatened species of bat.

The WEF will not impact on any sites of cultural heritage significance, as identified in Section 4.8: Aboriginal Heritage Act (2006) and in the broader context, Section 2.2.8: Sites of Cultural Heritage Significance.

Wind characteristics on the site are described in Section 2.1.6: Wind Characteristics in the Site and Context Analysis. The wind characteristics at the site have been derived from publicly available wind maps and validated by data collected by a SODAR on-site. A 120 m meteorological mast was installed in January 2021 to further validate the SODAR data and provide valuable information on the turbulence intensity, which will assist WTG manufacturers in performing their loads' analyses.

[7] Department of Sustainability and Environment (DSE) 2012. Interim Guidelines for the Assessment, Avoidance, Mitigation and Offsetting of Potential Wind Farm Impacts on the Victorian Brolga Population 2011.
[8] Department of Environment, Land, Water and Planning (DELWP) 2020. Brolga assessment and mitigation standards for wind energy facility permit applications.
[9] Department of Environment, Land, Water and Planning (DELWP) 2020. Brolga assessment and mitigation standards for wind energy facilities. Explanatory document.

Additional site characteristics are addressed in Section 2.1.8: Other Notable Features and Constraints. Items identified include contractual obligations towards the Landowner, the Geotechnical survey that was completed, the ease of site access, as well as the proximity of the Charam Zone Substation. The Development Guidelines refer to issues such as soil acidity and instability. While no such issues were identified, a Geotechnical survey was performed, and is presented in Appendix 9: Geotechnical Survey. Monitoring of the water table is currently underway on site. This monitoring will provide valuable information for the design of the WTG foundations.

5.2.1.2 Regional Context

In the surrounding areas, the existing land uses are identified in Section 2.2.1: Existing Land Uses. Land use in the surrounding area is predominantly farming, with some Public Conservation and Resource Zone areas nearby. The WEF is nominally 20 km from the nearest urban zone.

Above ground utilities in the region are principally electrical utilities. These are identified in Section 2.2.2: Above-Ground Utilities: Electrical Utilities.

Access to infrastructure is addressed in both Section 2.2.2: Above-Ground Utilities: Electrical Utilities and Section 2.2.3: Other Infrastructure. These sections address the proximity to electrical and road infrastructure.

The direction to nearby dwellings, townships, urban areas, significant conservation and recreation areas, water features, tourist routes and walking tracks, major roads, and proposed wind energy facilities is all addressed in Section 2.2.4: Proximity to Nearby Dwellings, Amenities and Infrastructure, as well as the siting and use of buildings on adjacent properties; while Section 2.2.5: Aviation addresses the proximity of the WEF from airports and aerodromes. These sections highlight the low population density of the area and the low probability of impact on aviation.

Views to and from the site are presented in Section 2.2.6: Views to and from the site. Because of the nature of the landscape, in particular how flat the West Wimmera is, key vantage points associated with tourist routes are over 30 km away from the site, at Mt Arapiles. Main viewsheds from lookouts at Mt Arapiles are in the opposite direction to the WEF.

Sites of flora and fauna listed under the FFG and EPBC Acts, including significant habitat corridors and movement corridors are identified in Appendix 2: Ecological Impact Report. The EPBC referral is included in this appendix, as is the determination from DAWE. The Buloke is identified as an FFG listed species. The report by EHP, presented in the appendix, highlights that the species is endemic to the area, particularly in road-side vegetation and in the areas zoned as Public Conservation and Resource.

By contrast, the EPBC-listed SERTBC is nomadic through an 18,000 km^2 area in south-eastern South Australia and western Victoria. While not identified on the site of the WEF, the species is known to frequent the Public Conservation and Resource Zones within 10 km of the site. These areas, such as the Jilpanger Nature Conservation Reserve and the Konnepra State Forest are host to large populations of Stringy Bark and Buloke, the two staple food sources for the SERTBC.

The proximity to the site of other FFG and EPBC listed flora and fauna is mapped in EHP's study, presented in Appendix 2: Ecological Impact Report.

Areas of cultural sensitivity – both indigenous and European – are identified in Section 2.2.8: Sites of Cultural Heritage Significance. To the north of the WEF, there is a sensitive area overlay highlighting the likelihood of Aboriginal activity in the area. This overlay comes across the boundary of the cadastral parcel boundary by approximately 50 m, however, the WEF activity area is designed to

avoid encroaching on the overlay, with all project activity set back at least 150 m from the overlay. The nearest item listed on the Victorian Heritage Database is over 4 km from the site.

National and State Parks in the vicinity of the site are identified in Section 2.2.9. The site is over 100 km inland, thus not in any proximity to coastal reserves.

Nearest RAMSAR wetlands are identified in Section 2.2.10. The nearest of these is over 70 km from the WEF.

Section 2.2.11 highlights that there is no land included in the schedule to clause 52.32-2 of the West Wimmera planning scheme.

No other notable features of the region have been identified.

Section 2.2.12 identifies that there is a low risk of bushfire on the WEF site, however, there is dense vegetation nearby. It is noted that the firefighting equipment installed on the site will help reduce the bushfire risk in the area.

The Development Guidelines also require a location plan showing the location of the local electricity grid and access to roads to the site. This location plan is presented in Figure 11.

5.2.2 Design Response Assessment

The Design Response is presented in Section 5.3: Design Response to Site Analysis. This section also forms the written design report as required by Clause 52.32-4 and Clause 4.3.3(b) of the Development Guidelines.

Description of the proposal including plans of the proposed development are presented in Section 3: Project Description. Final plans for construction will be submitted to the RA for endorsement prior to construction commencement, as specified in Section 5.12: Development Plans and Management Plans.

Plans of transmission infrastructure and electricity utility works required to connect the facility to the electricity network are presented in Section 3.2:Grid Connection and Substation. Elevations of electrical infrastructure have been provided in Figure 38 through Figure 41. These elevations reflect a maximum impact with the substation presented capable of exporting nominally 50 MW. Once the final design is confirmed, updated elevations will be provided in the development plans, which will require endorsement by the RA.

Access road options are described in Section 3.3: Site Access. Primary and secondary site access points are shown. The detailed transport study is provided in Appendix 4: Traffic Impact Assessment, which includes swept path diagrams for oversize vehicles, consistent with the requirements of the Development Guidelines.

Accurate visual simulations of the development in the context of the surrounding area and from key public viewpoints are provided in Appendix 1: Photomontages. This appendix provides both the photomontages, a map showing where the photographs were taken and the included angles of the photographs, the photographs without the wind farm for direct comparison with the wind facility, as well as the methodology used to develop the photomontages. It is noted that no ancillaries are visible in the photomontages as these are either shielded by vegetation or existing farm buildings.

The site's rehabilitation plan will be submitted as part of the final Development Plans, to be endorsed by the RA prior to construction. Site rehabilitation requirements are addressed in Section 5.12.9: Decommissioning Management Plan.

The written design report is contained within Section 3: Project Description. The different elements of the WEF, including the maximum number of WTGs and their allowable envelope are presented in this section. Further details are provided in the consultant reports appended to this planning report.

Section 5.3: Design Response to Site Analysis provides a description of how the proposed design derives from and responds to the site analysis. For example, the site is already heavily modified farmland adjacent to a zone substation, implying that the WEF can be developed with minimal vegetation clearing and undergrounding of new powerlines; the topography in the region is very flat, which results in very high shear, implying that taller WTGs will be able to access this wind resource and result in the best business case for the project. This section also highlighted the key risk associated with the presence of avifauna. Increasing the height of the lower tip height to ensure it is above 55 m will help minimise impacts on avifauna, shifting the rotor above the flight height of most avifauna. Further, the identification of a new site entrance reflects the challenging operational requirements associated with the transport of wind turbine blades. The new site access point was chosen as it resulted in the lowest ecological impact, as assessed by consulting ecologists EHP.

Section 3.5 highlights the fact that no significant landscape features are identified in the West Wimmera planning scheme, while Section 5.6: Landscape and Visual Impact provides a detailed assessment of the visual impact of the development with respect to the surrounding land use, including other farmland, state and national parks and other wetlands. The WEF will not be visible from coastal areas. The assessment is consistent with the requirements of Section 5.1.3 of the Development Guidelines. This section highlights that the large WTGs, with rotor diameters' in excess of 150 m and tip heights of up to 250 m will be visible from a significant distance as the landscape is generally flat. While the visual impact is both significant and obvious, the existing landscape is itself heavily modified. The WEF will have a significant visual impact on its immediate surrounds, thus vegetative screening will be offered to dwellings within 3 km where those dwellings have a view of the WEF (existing vegetation may already screen the development). Beyond the immediate vicinity of the wind farm, because the WEF consists of only up to seven WTGs, the impact on an observer's field of view is minimal. The impacts are summarised in Table 10: Visual Impact Assessment Table.

The impacts on species listed under the FFG and EPBC Acts is presented in Section 5.7. The layout has been designed to minimise the amount of land to be cleared. It is highlighted that the clearing proposed in no way jeopardises the viability of the species. The main question with regards to risk for EPBC-listed fauna was associated with collisions. The SERTBC study conducted by Biosis (see Appendix 2: Ecological Impact Report) and the post-construction analysis of Victorian WEFs conducted by Symbolix[10] demonstrate that the collision risk posed by the WEF to the EPBC-listed species is minor, as the likelihood of collision is remote due to the height of the rotor swept area above the ground.

The noise impacts of the proposal have been prepared in accordance with NZS6808:2010, Acoustics – Wind Farm Noise by Resonate Consulting, and an EPA Audit of that study has been conducted by Infotech Research. These reports are provided in Appendix 3: Noise Impact Report. These reports identify that:

- The maximum modelled noise level at any noise sensitive area is 33 dB(A), significantly less than the limit of 40 dB(A) or background plus 5 dB(A) (whichever is greater).
- There are no high amenity noise limits applicable.

[10] Symbolix 2020. Post construction bird and bat monitoring at wind farms in Victoria. Ver. 1.0 Public report 13th Wind Wildlife Research Meeting 2020.

Impacts on Aboriginal and non-Aboriginal cultural heritage are unlikely, as highlighted in Section 5.9: Minimisation of Impacts on Aboriginal and Non-Aboriginal Heritage, as there are no sensitive areas triggering a CHMP overlapping with the activity area, nor are there any listings on the Victorian Heritage Database for any articles in the immediate proximity of the site.

Section 5.11: Statement of Suitability provides a summative statement of why the site is suitable for a WEF. Key elements that make the site suitable for a WEF are the wind resource, proximity to existing electricity infrastructure, the low population density and the co-location of existing agricultural activities with the WEF.

A number of management plans for the WEF will be presented with the Development Plans for endorsement by the RA prior to construction commencing. These plans address the requirements of Environmental Management Plans as stated in Clause 52.32-4 of the VPP. The requirements of the management plans are laid out in Section 5.12: Development Plans and Management Plans.

5.3 Design Response to Site Analysis

Section 2: Site and locality has highlighted various opportunities and challenges related to the site, directly influencing the wind farm design, as described below.

5.3.1 Opportunities

- **Wind resource**
  - Renewable energy generation harnessing the power of the wind;
  - SODAR data collected at height ranges between 50 m and 200 m on the site suggests a moderate resource at 100 m AGL and an excellent resource at 150 m AGL, with further yield potential with a 170 m hub height (noting the maximum requested hub height is 169 m); Weibull distributions indicate that the site will tend to experience consistent moderate to strong winds, rather than being subjected to extreme wind events. Because of this, the Proponent anticipates the use of WTGs with the largest possible rotors as wind conditions are likely to be favourable for such configurations.
  - The diurnal wind speed profile, obtained from SODAR measurements, demonstrates that the wind speed tends to be inversely correlated to solar generation, with the wind speed tending to increase at dusk.
- **Proximity to existing electrical infrastructure**
  - The site is adjacent to the Charam Zone Substation, which has a 33 MVA transformer; based on thermal line ratings, preliminary indications are that there is 25 MVA capacity on the 66 kV sub-transmission line from Charam Zone Substation to Horsham Terminal Station.
- **Site topography**
  - The site is extremely flat, with excellent access, resulting in lower capital costs;
  - The flat site also results in low levels of atmospheric turbulence and high wind shear, implying that tall turbines with large rotors will be well suited to the site, maximising energy yield;
  - This results in well-spaced turbines to cater for large rotor diameters, in excess of 150 m; at the time of writing, the largest rotor (on-shore) on the market is the Siemens Gamesa SG6.0-170 wind turbine with a 170 m rotor.
- **Proximity to existing dwellings**

- There are no dwellings (including stakeholder dwellings) within 1.2 km of proposed wind turbine locations and the extent of their micro-siting allowances. It is proposed to offer dwellings within 3 km of WTGs vegetative screening.

- **Population density**
  - There are three dwellings within 2 km of the site and twelve dwellings within 3 km of the site. Because of this, the Proponent has developed a layout that places turbines along the eastern and western boundaries, while avoiding any blade overhang onto neighbouring properties.
  - The Proponent has estimated a return period of more than one in one-million years of operation associated with loss of life due to blade throw.
- **Proximity to high visual amenity areas**
  - The Mount Arapiles-Tooan State Park lies between 20 km and 40 km east of the site, as can be seen in Figure 31. However, Mount Arapiles is 37 km from the site, with each of the lookouts having easterly views back over the sheer cliffs of Mount Arapiles, across the Wimmera Plains towards Horsham. The Wombelano Wind Farm is located in the opposite direction, and thus will have no visual impact from the Mount Arapiles lookouts;
  - No Significant Landscape Features are identified in the West Wimmera Planning Scheme; and
  - No Landscape Overlays are included in the West Wimmera Planning Scheme.
- **Ecology**
  - WTGs have been sited to avoid impacting on vegetation;
  - Minimum tip height has been increased to minimise risk to avifauna;
  - Undergrounding of powerlines reduces risk to avifauna; and
  - For construction of the project, required land clearing is limited to 0.127 hectares of native vegetation, equivalent to 0.044 General Habitat Units.
    - Section 3.3 provides reasoning for the positioning of the primary site access.
    - Figure 55 demonstrates that the clearance allowance for the site entrance gives ample margin for WTG blades (longest load) to enter the site.
    - Undergrounding of powerline back to the substation results in modest loss of native vegetation, however, it means that overhead powerlines are avoided, reducing risks to avifauna, as described in Appendix 2: Ecological Impact Report.
- **Zoning**
  - The land is Zoned as *Farming Land* in the West Wimmera Municipality. There is no land specified in the schedule to Clause 52.32 of its planning provisions.

5.3.2 Risks and Challenges

- **Ecology**
  - South-Eastern Red-tailed Black Cockatoos (SERTBCs)
    - The prevalence of the SERTBC in the West Wimmera municipality was a significant concern, identified very early in the project development process.
    - Being nomadic, a traditional site survey to observe SERTBC behaviour on site would not be effective.
    - The Proponent commissioned Biosis to conduct a study, assessing SERTBC flight heights across a range of habitats.
      - The study observed over 1,000 birds and over 3,600 flights.

- Consistent with anecdotal descriptions of the flight or fight response of the species, the Biosis ecologists noted:
    - "Occasional movements out of the feeding patch were observed for birds moving between feeding patches or large groups flushed out of the woodland by a bird of prey. When flushed RTBC would form a tight group and circle above the woodland for several minutes emitting an alarm call."
    - Only 0.3% of flights occurred greater than 40 m above ground.
    - The highest observed flight was 54 m above ground.
- Two options for risk mitigation are proposed:
    - Set a minimum lower tip height limit – ensuring the blade pass remains greater than 55 m above ground level.
    - Avoid placement of turbines above potential SERTBC flocking sites and woodlands.

- Brolgas
    - Advice from EHP is that there are no known breeding sites within 10 km of the site, and thus, Wombelano Wind Farm will comply with the Victorian Interim Brolga Guidelines (Interim Guidelines)[11].
    - The site offers no other resources that might attract Brolgas to the site.
    - The project will entail no potential loss of *critical habitat* for the Brolga.
    - In late 2020, DELWP released updated draft Brolga standards[12]. At the time of writing, the draft standards have completed a period of public consultation and are likely to be enshrined in the planning process. The draft standards have been informed by detailed field studies and assessment of operational wind farms in Victoria.
    - Under the draft standards, an application for a wind energy facility must assess the values for Brolgas within a 5 km radius of the proposed wind farm and any external powerline(s).
    - The WEF is more than 5 km from any Brolga breeding or flocking site, with new powerlines passing underground.
    - As such, there is no likelihood of the project causing a long-term loss of a significant proportion of known remaining habitat or population of the Brolga.

- Minimising impacts on existing farming operations
    - To minimise impacts on farming operations, above ground infrastructure, including WTGs, substation and battery storage facility, and tracks are placed as close to the property boundary as possible, whilst avoiding any overhang over property boundaries.
    - Mast anemometry is placed along an internal fence line, to minimise encroachment into the agricultural land.
- Optimising wind farm design
    - The site is suitable for hosting up to seven WTGs, however, to enable this whilst maintaining wake losses and wake induced rotor loads at acceptable levels, the

[11] Interim Guidelines for the Assessment, Avoidance, Mitigation and Offsetting of Potential Wind Farm Impacts on the Victorian Brolga Population, 2011, revised 2012.
[12] Department of Environment, Land, Water and Planning (DELWP) 2020. Brolga assessment and mitigation standards for wind energy facility permit applications.

WTGs must be separated as much as possible, particularly in the predominant wind direction, which is shown in Figure 8.

These various elements result in the site layout presented in Figure 32 and the proposed turbine size constraints shown in Table 3.

5.3.3 Mandatory Noise Assessment

Given a noise assessment must accompany the permit application under Clause 52.32-4 of the VPP, the following permit conditions must be included, per Clause 52.32-5:

- A post-construction noise assessment report prepared in accordance with the New Zealand Standard NZS6808:2010, Acoustics – Wind Farm Noise demonstrating whether the wind energy facility complies with the Standard, must be submitted to the RA. If the wind energy facility is constructed in stages, additional post-construction noise assessment reports for each stage must be submitted to the RA.
- Each post-construction noise assessment report must be accompanied by an environmental audit report prepared under Part IXD, Section 53V of the Environment Protection Act 1970 by an environmental auditor appointed under Part IXD of the Environment Protection Act 1970. The environmental audit report must verify that the acoustic assessment undertaken for the purpose of the post-construction noise assessment report has been conducted in accordance with the New Zealand Standard NZS6808:2010, Acoustics – Wind Farm Noise.

These conditions are included in the proposed permit conditions presented in Appendix 10: Proposed Permit Conditions.

It is noted that in August 2021 new noise provisions for WEFs were introduced under the Environmental Protection Act 2017. The noise standards under these updated provisions are not changed, however, the new provisions require:

- Ongoing compliance with the relevant noise standard (the New Zealand Noise Standard NZS 6808 1998 or 2010, depending on the planning permit)
- Implementation of a noise management plan, including a complaints management plan
- Providing an annual statement detailing the actions that have been taken to ensure compliance
- Completing a post-construction noise assessment
- Conducting noise monitoring every five years.

5.4 Contribution to Government Policy

Government policy – State and Federal – was identified in Section 2.3: State and Federal Context.

The Wombelano Wind Farm, being a locally developed project, will be a prime candidate for participation in the Victorian Government's market instrument, and make a noteworthy contribution to Victoria's Renewable Energy Target. Similarly, Wombelano Wind Farm will be an active contributor to the Commonwealth Government's RET.

In terms of the Victorian State Policy Planning Framework (SPPF) Objective and Strategy, the development of the WEF is:

- Proposed such that appropriate siting and design considerations are met.
    - The location is selected to:
        - minimise impact on existing land use (farming)

- Taking less than 3% of the site's area – of that 3%, a large percentage of which is tracks, which are already in place and will be upgraded to ensure year-round access to the site, allowing necessary operations and maintenance access, but will be freely available for the landowner to use for faming purposes.

- minimise amenity impacts on the existing human population.
  - No WTGs located within 1 km of dwellings, with dwellings within 3 km of WTGs to be offered vegetative screening to minimise visual impacts from dwellings.
  - Noise levels will comfortably comply with NZS6808:2010.
  - Dwellings are beyond the impact zone for shadow flicker.
  - No material EMI impacts are likely.
- minimise impact on native flora and fauna.
  - The WEF is located on heavily modified farmland, with minimal clearing of native vegetation required.
  - At a minimum height of 55 m, the rotors of the WTGs are located above typical flight heights of the EPBC-listed SERTBC; no other avifauna are likely to be impacted by the WEF.
  - Undergrounding of powerlines further minimises impact on avifauna.

- The scale of the project is such that:
  - it will generate sufficient electrical energy to power the area serviced by the Charam Zone Substation.
  - it will allow more load to connect into the zone substation with fewer electrical losses.
  - it will reduce local power bills through lowering the DLF.
- The WEF will provide both short-term construction and on-going jobs in the region.

As such, the Wombelano Wind Farm is an activity that is promoted under the Victorian Policy and Planning Framework.

The Wimmera Southern Mallee region, consisting of the West Wimmera, Horsham, Hindmarsh, Northern Grampians and Yarriamback LGAs have developed region-specific planning objectives that marry up to the SPPF. These planning objectives balance protection of environmental and cultural heritage considerations (VPP Clause 12, 13 and 15) against the requirements of Primary Production (VPP Clause 14), housing (VPP Clause 16), diversification of the economy (VPP Clause 17), managing the transport infrastructure to promote liveability and the prosperity of industries and businesses (VPP Clause 18), and ensuring provisions are in place to support strong communities through critical infrastructure elements including (VPP Clause 19):

- Health
- Education
- Water and waste management
- Energy
- Telecommunications
- Emergency services
- Cultural and Social Facilities

Within this framework is explicit policy in support for the development of locally generated renewable energy (VPP Clause 19.01-2R).

5.5 Amenity Impacts – Noise, Blade Glint, Shadow Flicker, Electromagnetic Interference

The WEF will have acceptable noise, blade glint, shadow flicker and EMI impacts.

5.5.1 Noise

Acoustic impacts are assessed in accordance with the New Zealand noise standards for wind farms: NZS6808:2010, and the pre-construction study has undergone an EPA audit. The noise levels at neighbouring dwellings will not exceed L_{A90} noise levels of 40 dBA. Detailed report and associated EPA audit are found in Appendix 3: Noise Impact Reports.

5.5.2 Blade Glint

A non-reflective finish on the WTGs will be used to ensure that the impacts associated with blade glint are acceptable. This is addressed in the permit conditions (Condition 1g):

> *The colours and finishes of all buildings and works (including turbines), which must be non-reflective so as to minimise the visual impact of the development on the surrounding area.*

5.5.3 Shadow Flicker

No detailed shadow flicker study has been completed. The Draft National Wind Farm Guidelines[13] sets a threshold of impact of 265 times the maximum chord of the wind turbine blade. Beyond this distance, according to the Guidelines, the lighting differential is considered negligible, and thus, the impact is negligible.

Maximum chords for wind turbine blades are typically around 4 m, with the candidate WTG, the Vestas V162 having a maximum chord of 4.3 m. Various wind turbines and their corresponding impact extent are presented in Table 6.

The smallest distance between a proposed WTG and a dwelling is 1,227 m (based on extent of micro-siting region, which would require a maximum chord in excess of 4.63 m to generate noticeable shadow flicker at the nearest dwelling. It is also noted that the nearest dwellings are North and South of their nearest turbine. The effect of shadow flicker extends in a butterfly formation to the East and West – mirroring the sun's rising and setting.

[13] National Wind Farm Development Guidelines – Draft, Environment Protection and Heritage Council, Commonwealth of Australia, July 2010.

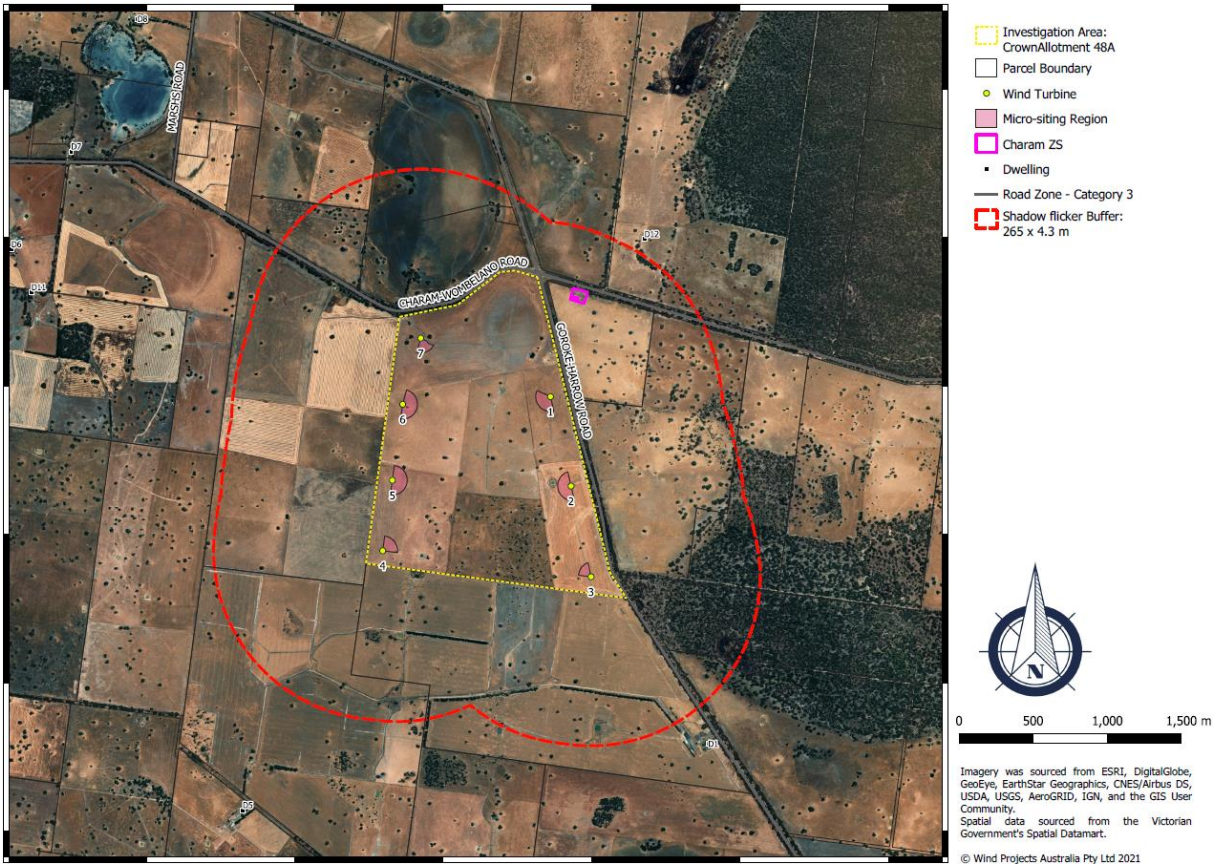


Figure 58: Location of dwellings relative to shadow flicker impact threshold buffer. Setback of 1139.5 m is from the micro-siting area, which corresponds to 265 × 4.3 m.

Table 6: Maximum chord for various wind turbine models.

TURBINE	MAX CHORD [m]	IMPACT [m]
GE-6.0-164 (164 m rotor diameter, Cypress Platform)	4.00	1,060
Vestas V150 (150 m rotor diameter, Enventus Platform)	4.20	1,113
Vestas V162 (162 m rotor diameter, Enventus Platform)	4.30	1,140

5.5.4 EMI

There are no broadcast points, receivers, or point-to-point microwave links in the vicinity of the site that will be affected by the WEF. As such there will be no material EMI impacts. A detailed assessment is presented in Appendix 5: Electro-Magnetic Interference Report.

The nearest weather radar is BoM's Rainbow Radar, which is sited over 118 km from the nearest wind turbine. The World Meteorological Organisation specify that wind turbines should not be sited within 5 km of a radar; within 20 km some re-orientation or re-siting may be required to minimise impact; and WTGs will generally be visible up to 45 km. Beyond 45 km, proponents should notify the BoM of the development.[15]

[15] WMO (2010). Commission for instruments and methods of observation, Fifteenth session WMO-No.1046, World Meteorological Organization.

5.6 Landscape and Visual Impact

In assessing the visual impact of the proposed WEF, the aim is to demonstrate that the level of visual impact of the facility in the landscape is acceptable.

This assessment relies on the following tools:

1. Photographs to and from the site to assess the landscape, including identifying landscape features;
2. Zone of Visual Impact (ZVI) analysis to assess from where the project can be observed;
3. Trigonometric analysis to assess the impact on observers; and
4. Photomontages to further contextualise the WEF in its landscape.

This approach to the assessment of visual impact builds on the framework presented in Section 5.1.3 of the Development Guidelines.

With reference to Section 2: Site and locality, the landscape character is defined, including identifying areas of potential sensitivity.

An assessment is then made of the visibility of the turbines within the landscape generally, as well as in the context of those areas of potential sensitivity.

Finally, conclusions are drawn with regards to the impact of the WEF's impact on the landscape and its general suitability.

5.6.1 Landscape Character

The following landscapes can be identified in the region:

1. *Heavily Modified Farmland*: Predominantly cleared; land is grazed or cropped; farm infrastructure such as sheds are present; dwellings are spread out; utility infrastructure is present, such as powerlines; road access is available.
2. *Industrial Area*: Large factories, sheds or processing facilities are present.
3. *Urban Area*: Densely populated areas such as townships.
4. *Scenic Parkland – 1*: Densely vegetated with native vegetation. These areas are the focus of visual attention – inward focussed. Likely protected as a National Park or State Park.
5. *Scenic Parkland – 2*: Densely vegetated with native vegetation. These areas provide views of the region – outward focussed. Likely protected as a National Park or State Park.
6. *Conservation Area and Forest*: Forest, bush and scrubland. These areas include State Forest as well as groves of vegetation private land. These areas do not have the same scenic value as scenic parkland.

The landscape character of key concern is *Scenic Parkland – 2* as development of WEFs have the potential to materially impact those landscapes; any impacts on *Scenic Parkland – 2* landscapes require further investigation; whereas WEFs are generally consistent with or compatible with the remaining landscape characters.

5.6.1.1 The Wind Farm Site

The wind farm site is flat, with only very minor undulations. It is *Heavily Modified Farmland*, being grazed and cropped on rotation. Shearing sheds, farm machinery and fences are present on the site. Powerlines are already erected along the site boundary. Roads and tracks run around much of the perimeter of the site. Artificial drainage lines are also evident. These features are all evident in Figure 59. Native vegetation in the form of large gum trees also dot the site. A mix of native and exotic

vegetation is present in the road reserves adjacent to the site. Small areas of remnant native vegetation are also present on the site.

Figure 59: Northern area of the site; existing powerlines are visible as are roads, sheds, drains and evidence of cropping.

5.6.1.2 Local Context

The local context within 5 km of the site contains a mix of *Heavily Modified Farmland*, *Scenic Parkland – 1* and *Conservation Area*.

The adjacent land to the east of the site, shown in Figure 60, is a further example of *Heavily Modified Farmland*.

Figure 60: Land adjacent to the proposed WEF.

Large areas of both *Scenic Parkland – 1* and *Conservation Area* are present in the region within 5 km of the site, as can be seen in Figure 62. Lake chains and wetlands are present both to the north and to the east of the site. The lakes in particular may attract some visitors, while some of the areas of *Scenic Parkland – 1* and *Conservations Areas* in the West Wimmera are known to be frequented by ornithologists. Because of the topography of the region these areas do not afford the visitor a view over the region; rather, they entice the visitor to focus on the water feature or the flora and fauna that is present in the area. Roads and sub-transmission easements pass through these *Conservation Areas*. An example is shown in Figure 61.

Figure 61: Example of Conservation Area near the WEF.

Figure 62: Swamps and lakes are present within 5 km of the site. Large areas of dense vegetation are also present.

5.6.1.3 Broader Local Context

Between 5 km and 20 km from the wind farm, the same landscape features are present as recorded within 5 km. However, there are some additional features, such as the *Industrial Area* associated with the Riordan Grains depot approximately 6 km west of the site.

The small township of Douglas is located between 15 km and 20 km east of the site. This small township, with population of approximately sixty-five, is adjacent to a series of lakes. Again, the lakes provide a focal point for residents and tourists.

The slightly larger town of Harrow (population circa 200) is located a similar distance to the south of the site. Harrow is located on the Glenelg River, as can be seen in Figure 64. The terrain in the vicinity of Harrow is more undulating and provides a contrast to the flat plain to the north, as can be seen in Figure 65. The township has a small *Urban Area*.

The Jilpanger Nature Conservation Reserve and the Mount Arapiles-Tooan State Park occupy large areas between 10 km and 30 km of the site, as highlighted in Figure 66. These areas are renowned for bird watching.

Figure 63: Aerial imagery of broader region.

Figure 64: Harrow Caravan Park on the Glenelg River. Photo from www.ontheroad.com.au.

Figure 65: Houses in Harrow, showing the more undulating topography in the area.
By Mattinbgn - Own work, CC BY-SA 3.0, https://commons.wikimedia.org/w/index.php?curid=12255421

Figure 66: Aerial imagery showing Nature Conservation Reserves and State Parks in the vicinity of the site.

5.6.1.4 Regional Context

Beyond 20 km is the town of Edenhope. Edenhope is a regional centre for the West Wimmera and is considered to be an *Urban Area.* It has a population of nominally one-thousand people. An aerial photograph of Edenhope is presented in Figure 67.

Mount Arapiles, located north-east of Tooan, over 30 km from the site, is renowned for its walking trails and views across the region. The actual site of Mount Arapiles is *Scenic Parkland – 2* as the walking tracks and lookouts focus out, away from Mount Arapiles. Mount Arapiles rises 140 m above the plane.

Figure 67: Aerial view of Edenhope, with Lake Wallace in the background.

5.6.2 Visibility of the Development

The vertical field of view in humans, for detailed perception, typically consists of an arc extending from 10° above eye level or 10° below eye level to eye level[16]. As this arc increases, visual perception reduces; the ability to perceive shape, colour, and finally, movement reduces as the field of view increases. The threshold of impact typically used in wind farm assessments is 5% of the field of view associated with detailed perception (i.e. 0.5°). Thus, for a wind farm with a tip height of 250 m, the threshold of impact corresponds to 30 km. This assumes that the full extent of the WTG is visible.

The Zone of Visual Influence (ZVI) has been calculated and is presented in Figure 68. This analysis assesses how many turbines are visible at each grid point within a 30 km radius from the site centre, based on a 30 m resolution grid based on the topography. The 1-second resolution topography data from Geoscience Australia[17] was used in conjunction with an indicative turbine with 170 m rotor diameter and 250 m tip height. The observer height was set to 2 m. This provide some conservatism relative to the candidate WTG.

The key limitation of ZVI analysis is its failure to account for screening – whether through vegetative screening or through the presence of buildings. For example, the key thoroughfares through the region, such as the Wimmera Highway, are predominantly screened by native vegetation in the road

[16] Zelnik, M. and Panero, J., 1979. Human dimension and interior space. *New York: Whitney Library of Design*; *Wiley: The Measure of Man*
and Woman: Human Factors in Design, Revised Edition - Alvin R. Tilley, Henry Dreyfuss Associates.
[17] *SRTM-derived 1 Second Digital Elevation Models Version 1.0* available at https://elevation.fsdf.org.au/, which is managed by Geoscience Australia.

reserve. Similarly, in urban environments such as in Edenhope, approximately 20 km from the WTGs, the presence of buildings will screen the development from most locations.

Nevertheless, the analysis provides a useful picture of the areas where the project is potentially visible.

While it is unlikely that aviation lighting is required, if the Proponent is directed to install aviation lighting, the WEF will be visibility at night, obviously increasing its visual impact.

It is noted that the nearest operating WEF to the proposed WEF is Murra Warra Wind Farm, approximately 90 km away. Other proposed WEFs are Rifle Butts Wind Farm, Jung Wind Farm and Wimmera Plains Wind Farm, all of which are 50 km or more from the WEF, implying cumulative impact is not an issue.

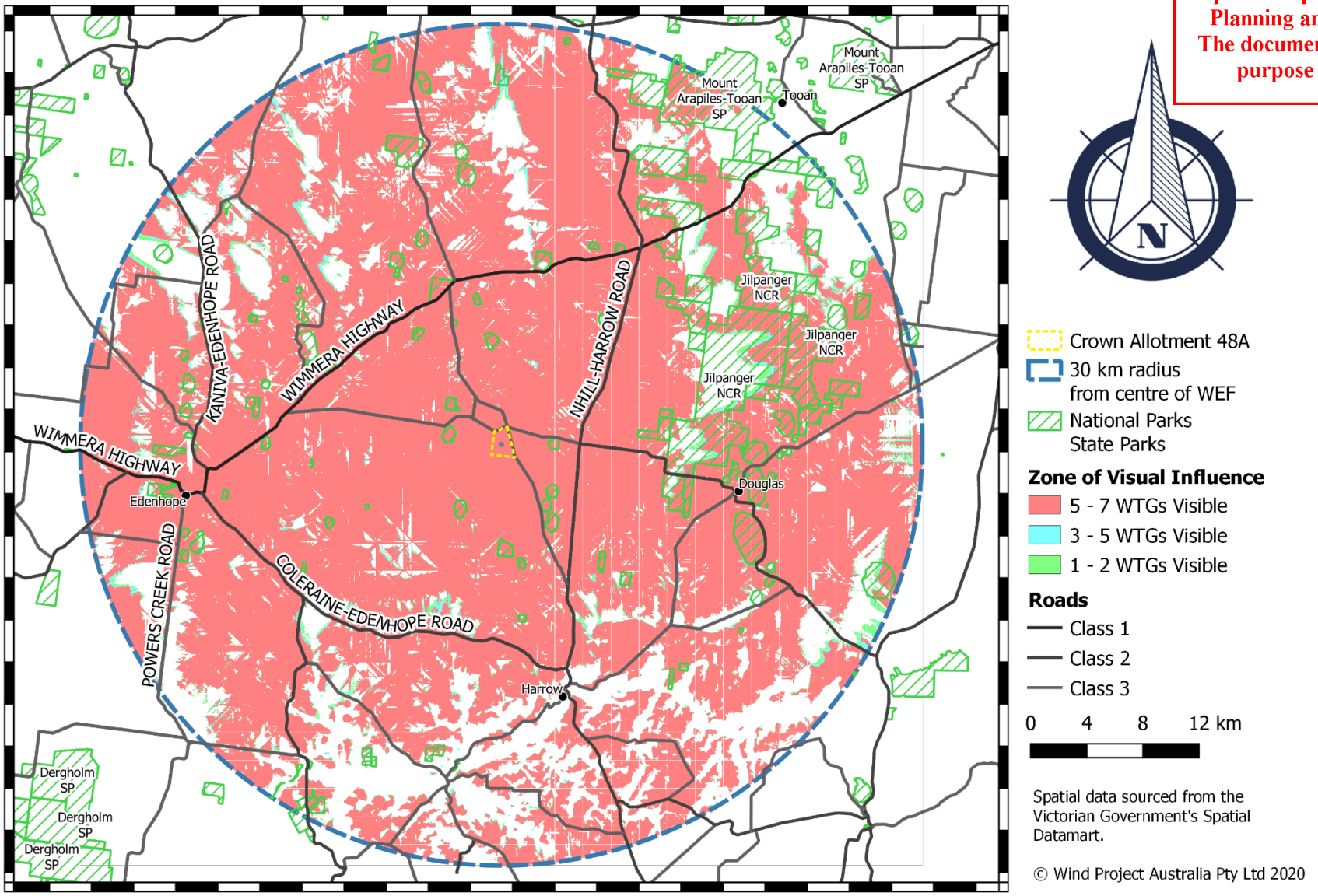


Figure 68: Zone of Visual Influence (ZVI) analysis.

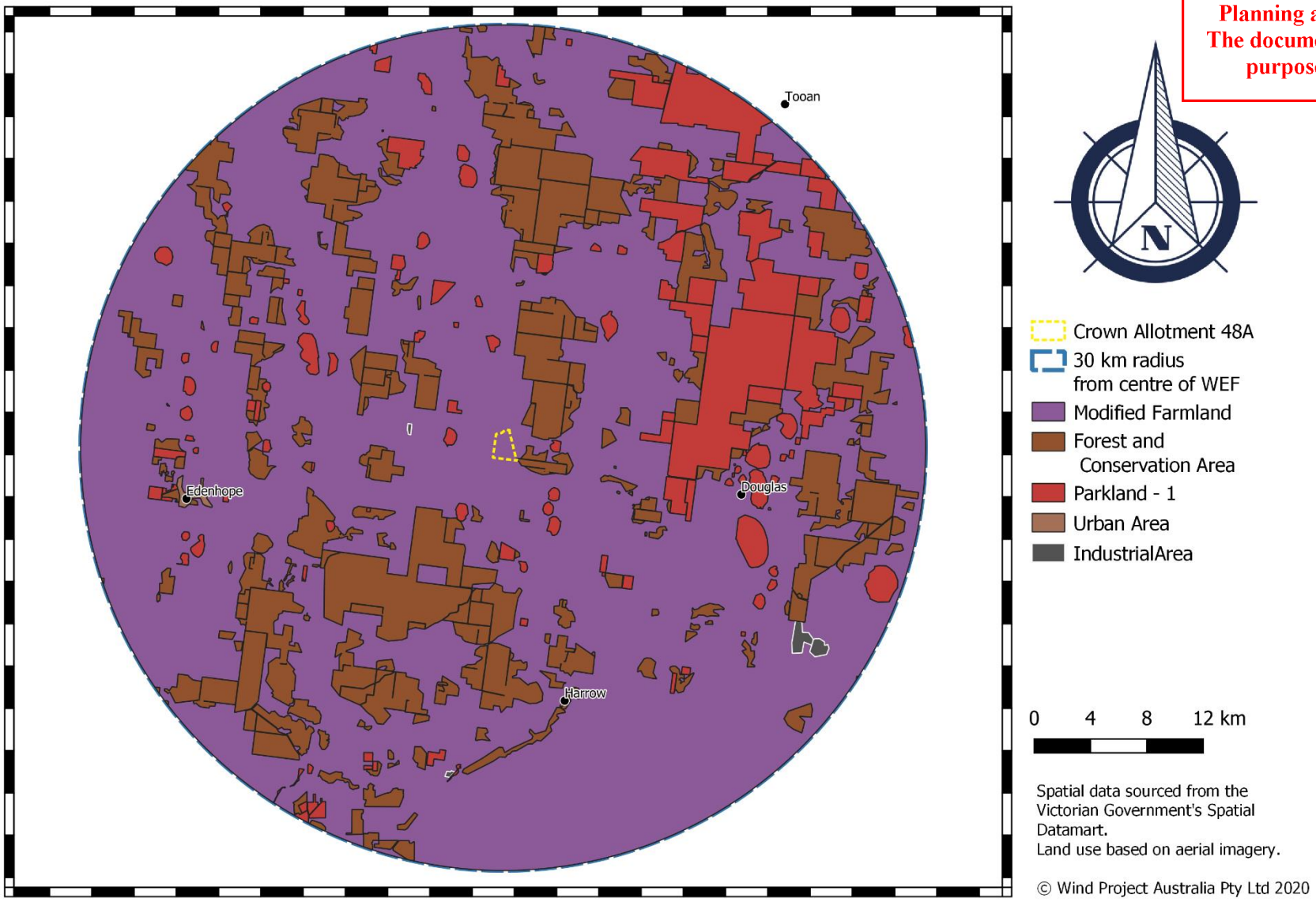


Figure 69: Land use map.

5.7 Impact on species listed under the FFG and EPBC Acts

Impacts on species listed under the FFG and EPBC Acts are assessed in reports by Biosis (SERTBC study) and EHP (Biodiversity Assessment) as well as the EPBC referral document and associated determination. DAWE determined that the project is not a controlled action. These are presented in Appendix 2: Ecological Impact Report. As identified in Section 2.1.3, the following species have been identified:

FFG Act: Buloke *Allocasuarina luehmannii*

FFG Act: Brolga *Antigone rubicunda*

EPBC Act: SERTBC *Calyptorhynchus banksii graptogyne*

EPBC Act: White-throated Needletail *Hirundapus caudacutus*

EPBC Act: Fork-tailed Swift *Apus pacificus*

With respect to impact, the removal of Buloke saplings at the site entrance, for which an FFG permit will be required, has no realistic potential to significantly impact on the species.

The potential impact on the SERTBC is presented in Table 7, while the potential impacts on the White-throated Needletail and the Fork-tailed Swift are addressed below in Section 5.7.1.

It is noted that the layout of the WEF has been developed so as to minimise impacts on flora and fauna. This is discussed in the *Avoid and Mitigate Statement* (Section 6) included in EHP's Biodiversity Assessment, presented in Appendix 2: Ecological Impact Report. Additionally, the project design has evolved to reduce the ecological impact of the WEF from the design presented to DAWE.

Table 7: Impact Assessment of the WEF on the SERTBC.

Significant impact criteria	Likelihood of significant impact	Rationale
Lead to a long-term decrease in the size of a population	Remote	The annual co-ordinated count of South-eastern Red-tailed Black-Cockatoos in May 2019 recorded 1193 birds. COVID-19 restrictions limited the capacity for a similar count in 2020 (South-eastern Red-tailed Black-Cockatoo Recovery Program website: http://www.redtail.com.au/news/138/72/Locals-Look-to-the-Skies-for-Red-tailed-Black-Cockatoos.html). The removal of between 10 and 15 Buloke *Allocasuarina luehmannii* saplings will not lead to a long-term decrease in the size of the population. The site contains no substantive habitat that would attract South-eastern Red-tailed Black-Cockatoos to the site, but they may pass through the site on occasions during movements within the region. A study of approximately 380 South-eastern Red-tailed

		Black-Cockatoos by Biosis (2020) documented 2006 flights by the species over open areas similar to the project site and within 25 km of it. Of those flights a total of 9 (0.4%) were between 50 and 54 metres high. All other flights were lower. Turbines proposed for the project will have rotors that are no lower than 55 metres from the ground, and may be higher. On that basis, it is considered that fatal collisions by the species are unlikely to occur. The potential for the project to lead to a long-term decrease in the size of the population is considered to be negligible.
Reduce the area of occupancy of the species	Remote	The total extent of occurrence of the taxon is approximately 18,000 km² with about 28% of that area occupied by habitat. The removal of between 10 and 15 Buloke *Allocasuarina luehmannii* saplings will result in an insignificant reduction in the potential area of occupancy of the species. There is no evidence to indicate that the presence of the proposed wind farm would alienate the area from use by the species.
Fragment an existing population into two or more populations	Remote	The population of South-eastern Red-tailed Black-Cockatoos moves widely within its overall distributional range and the proposed wind farm does not have potential to fragment the existing population.
Adversely affect habitat critical to the survival of a species	Remote	The *National recovery plan for the South-eastern Red-tailed Black-Cockatoo* (p. 4) notes that all Buloke within the normal range of the Red-tailed Black Cockatoo is considered habitat critical to survival. It also notes (p. 3) that thick regrowth of trees on roadsides are too young and too dense to produce large amounts of seed, and to be suitable for foraging by Red-tailed Black-Cockatoos. The proposed removal of up to 15 Buloke saplings has no realistic potential to significantly impact upon the species.
Disrupt the breeding cycle of a population	Remote	Red-tailed Black Cockatoos breed in hollow eucalypts. One juvenile small River Red-gum tree is proposed to be removed in roadside at the proposed vehicle access to the site. Removal of this tree is proposed to enlarge the access point. Investigation has found that the tree does not represent breeding habitat for the species. No hollow-bearing eucalypts are proposed to be affected by the project. The population breeds widely across its distributional range. The project has no meaningful capacity to disrupt the breeding cycle of the species.
Modify destroy, remove, isolate or decrease the availability or quality of habitat to the extent that the species is likely to	Remote	The project has no potential to modify, destroy, remove, isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline.

decline		
Result in invasive species that are harmful to a critically endangered or endangered species becoming established in the endangered or critically endangered species' habitat	Remote	The project does not include any known mechanism that would result in establishment of invasive species that are not already present in the relevant environment.
Introduce disease that may cause the species to decline	Remote	The project does not include any known mechanism that would result in introduction of any disease that is not already present in the relevant environment.
Interfere with the recovery of the species	Remote	As outlined in responses above, the project is not likely to interfere with the recovery of the species.

5.7.1 Impact on White-throated Needletail and Fork-tailed Swift

An assessment has been made of the potential impacts associated with the project against significant impact criteria for vulnerable species (as defined in EPBC Act Significant Impact Policy Statement 1.1) and in reference to Referral guideline for 14 birds listed as migratory species under the EPBC Act.). The Referral guideline notes that in most cases, significant impacts on these birds are unlikely to occur and consideration for them in a referral is not required, but that a referral is recommended:

When an action is likely to lead to substantial loss or modification of important habitat (as defined in Table 2 of the Referral guideline) meeting or exceeding the upper thresholds (1%) of habitat identified in Table 4 of the Referral guideline.

- When an action is likely to lead to serious disruption to an ecologically significant proportion of a population (having predicted annual mortality rates or affecting breeding cycles of a number of individuals) meeting or exceeding the upper of the thresholds (1%).
- The proposed Wombelano Wind Farm will not entail loss or modification of any habitat for either of these two species.

It is highly unlikely that the proposed Wombelano Wind Farm will result in loss of a number of individuals that meets or exceeds the 1% threshold of the populations of either species (defined by the Referral guideline as 100 White-throated Needletails or 1,000 Fork-tailed Swifts). A recent review by Symbolix[18] of bird and bat collision data collected over five years at 10 wind farms in Victoria encompassing a total of 5,432 turbine-searches, reported no collisions by either species.

A significant impact on White-throated Needletail or on Fork-tailed Swift is not likely to occur as a result of the WEF.

[18] Symbolix 2020. Post construction bird and bat monitoring at wind farms in Victoria. Ver. 1.0 Public report 13th Wind Wildlife Research Meeting 2020.

5.7.2 Impact on Brolgas

The Brolga is not listed under any category of threat status under the *EPBC* Act. It is currently listed as Vulnerable in the *Advisory List of Threatened Vertebrate Fauna in Victoria* (DSE 2013). For the proposed listing under the *FFG Amendment Act 2019* the species has been provisionally assessed as Endangered.

There are no Brolga flocking or breeding sites on the wind farm property nor within 5 km of the site based on EHP's Biodiversity Assessment (refer to Appendix 2: Ecological Impact Report). The site offers no other resources that might attract Brolgas. As such, the wind farm will not result in loss of habitat for Brolgas.

In late 2020, DELWP released updated draft Brolga standards[19]. At the time of writing, the draft standards have completed a period of public consultation and are likely to be enshrined in the planning process. The draft standards have been informed by detailed field studies and assessment of operational wind farms in Victoria.

The explanatory notes for the new Brolga standards[20] state that, *"There is no evidence of Brolga collision mortalities from wind turbines"*. The emphasis of the draft standards is on avoidance of effects on breeding and flocking habitats for Brolgas by the appropriate siting of wind farms and on minimising disturbance of key habitats by the provision of buffers from specified wind energy infrastructure.

Under the draft standards, an application for a wind energy facility must assess the values for Brolgas within a 5 km radius of the proposed wind farm and any external powerline(s).

Overhead powerlines represent a potential collision risk for Brolgas[19, 20] and the draft standard includes provisions for applying a minimum buffer distance of 900 m between Brolga breeding and flocking wetland habitats and overhead powerlines associated with a new wind farm. The Wombelano wind farm project is sited to utilise existing electrical infrastructure as well as undergrounding new powerlines. The entire site is more than 5 km from any Brolga breeding or flocking site.

As such, there is no likelihood of the project causing a long-term loss of a significant proportion of known remaining habitat or population of Brolgas within Victoria.

5.8 Acoustic Impacts

The acoustic impact of the WEF is measured against the New Zealand noise standard for wind farms: NZS6808:2010. This specifies an acceptable noise limit at dwellings – also known as Noise Sensitive Areas (NSAs) – measured as $L_{A90(10min)}$, is the lower of 40 dB or background plus 5 dB. $L_{A90(10min)}$ is the A-weighted noise level exceeded for 90% of the measurement time based on a 10-minute mean, as required under NZS 6808:2010. The L_{A90} is used to assess wind farm and background noise, as it is less likely to be adversely affected by extraneous noise than other noise descriptors.

The noise emissions from the WEF have been modelled by Resonate Consulting, and a summary of their results is mapped in Figure 70. Their modelling demonstrates that all NSAs have sound levels – L_{A90} less than 35 dB, based on the layout of seven Vestas V162 WTGs on the site.

[19] Department of Environment, Land, Water and Planning (DELWP) 2020. Brolga assessment and mitigation standards for wind energy facility permit applications.
[20] Department of Environment, Land, Water and Planning (DELWP) 2020. Brolga assessment and mitigation standards for wind energy facilities. Explanatory document.

Based on this modelling, the WEF is compliant with NZS6808:2010. An EPA audit of the modelling demonstrates that the modelling was carried out in accordance with NZS6808:2010. Both the Resonate Consulting modelling report and the EPA Audit conducted by Infotech Research are presented in Appendix 3: Noise Impact Reports.

It is also noted that no significant impacts are expected on wildlife in the vicinity of the WEF, including in the Poynton State Forest, located to the east of the site, as noted in Section 6.4 of EHP's Biodiversity Assessment (Appendix 2: Ecological Impact Report).

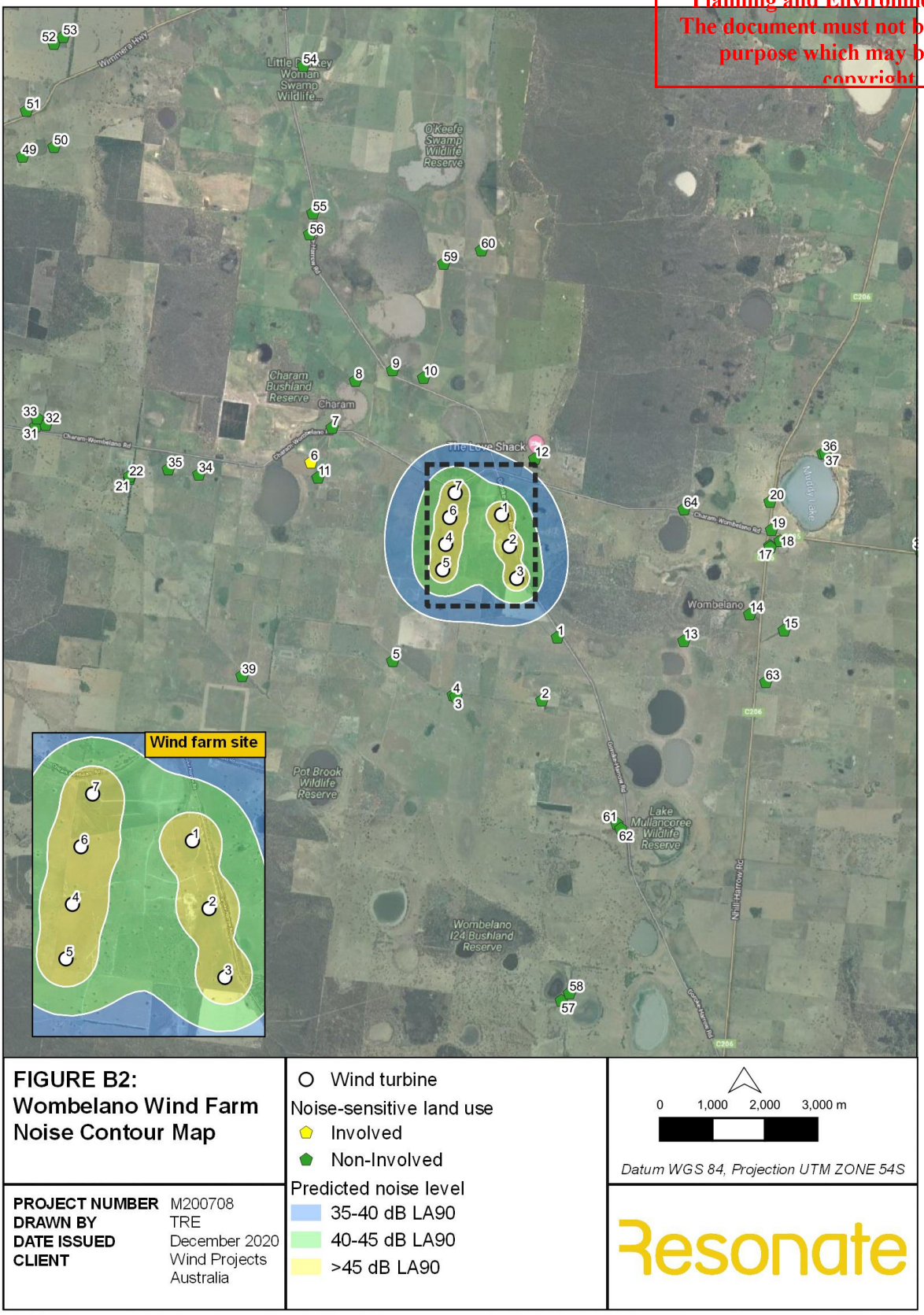


Figure 70: Noise model map from Resonate's noise study.

5.9 Minimisation of Impacts on Aboriginal and Non-Aboriginal Heritage

As identified in Section 2.2.8: Sites of Cultural Heritage Significance, the Konnepra Swamp and a lunette around the swamp and their 200 m buffers immediately north of the site protrude up to 50 m over the northern property boundary of Crown Allotment 48A Parish of Wombelano. Within the 200 m buffer area, are the following existing land use and infrastructure:

- Land used for cropping and grazing.
- Existing 22 kV powerlines (including power poles), which are not part of this development.
- Fencing around the property boundary, which is solely for the current agricultural use of the land.
- Class 3 Road (Charam-Wombelano Road), which is a road managed by the West Wimmera Shire Council.

However, the activity area of the development has been developed to ensure that there is no overlap with this sensitive area, as seen in Figure 32. As such, there are no sensitive areas that trigger the need for a Cultural Heritage Management Plan, and minimal impact on Aboriginal Heritage is anticipated. Nevertheless, the Proponent will develop an unanticipated finds protocol, as specified in Section 5.12.10: Unanticipated Finds Plan.

Section 2.2.8: Sites of Cultural Heritage Significance also identifies that the nearest items on the Victorian Heritage Register are the Pot Brook Charcoal Kilns, located on Cameron and Lampards Road, 4.2 km SW of the WEF. Because there are no items on the Victorian Heritage Register in the immediate proximity to the site, a material impact on non-Aboriginal heritage is unlikely.

5.10 Impact Assessments

Assessments are made, per the requirements of Clause 52.32 of the VPPs, and the items are summarised in Table 8.

Table 8: Assessment items.

ITEM	ASSESSMENT	SUMMARY	REFERENCE
Visual impact on the surrounding landscape	Dwellings within 3 km to be offered vegetative screening. Otherwise, acceptable impact.	Large turbines, with rotor diameters' in excess of 150 m, and tip heights of up to 250 m will be visible from a significant distance. The landscape is generally flat. The wind farm will have a significant visual impact on its immediate surrounds. Vegetative screening to be offered to dwellings within 3 km. Beyond the immediate vicinity of the wind farm, because the WEF consists of only up to seven WTGs, the impact on an observer's field of view is minimal. While the visual impact is both significant and obvious, the existing landscape is itself heavily modified.	Refer to: *Appendix 1: Photomontages* for photomontages.
Visual Impact on abutting land that is described in a schedule to the *National Parks Act 1975*, Ramsar wetlands, and coastal areas	No impact.	No land listed in a schedule to the *National Parks Act 1975* abuts the site. No Ramsar wetlands abut the site. No coastal areas abut the site.	Nil.
Impact on species listed under the *Environment Protection and Biodiversity Conservation Act 1999 (Cwth)* and *Flora and Fauna Guarantee Act 1985*	Low impact with lower tip height restriction.	Key risk species is the SERTBC. Assessment made that the risk to this species is negligible through EPBC referral and decision.	Refer to: *Appendix 2: Ecological Impact Report* for full assessment.
Noise impacts, measured in accordance with NSZ6808, including assessment of whether a high amenity area applies	Acceptable impact.	There are no high amenity areas in the vicinity of the wind farm. All predicted noise levels from the Wombelano Wind Farm at dwellings are less than 35 dB(A). These conclusions are presented by independent acoustic consultant Resonate, and validated through completion of EPA audit completed by	Refer to: *Appendix 3: Noise Impact Report*

		Infotech Research.	
Impacts upon Aboriginal and non-Aboriginal cultural heritage	Low impact: ensure project area does not encroach upon CHMP trigger area. Develop chance find protocol for incorporation into the Construction Environmental Management plan.	The development has been designed to minimise impact on both Aboriginal and non-Aboriginal cultural heritage.	Refer to Figure 5.
Impacts on Traffic	Acceptable Impact	Key routes have been mapped for standard and oversized loads. A Traffic Management Plan for specific deliveries will be developed to ensure impacts are minimised on local road users. This will specify requirements for pre-construction survey, post-construction survey and restoration.	Refer to: *Appendix 4: Traffic Impact Assessment*
Electromagnetic Interference (EMI)	No material impact	There are no broadcast points, receivers, or point-to-point microwave links in the vicinity of the site that will be affected by the WEF.	Refer to: *Appendix 5: Electro-Magnetic Interference Report*
Shadow Flicker	No material impact	No dwellings are within the impact zone (265 × maximum chord), based on a maximum WTG blade chord of 4.3 m, which is associated with the candidate WTG.	*Refer to: Section 5.5.3: Shadow Flicker*
Aviation	No material impact Ensure notification to Airservices Australia.	The Aviation Impact Statement and Aviation Impact Report highlight that there are no ALAs within 10 nm of the site, and no flight routes pass over the site. No Grid LSALTs will need to be raised. Airservices Australia has formed the view that the WEF will not impact on the safety, efficiency or regularity of existing, or future air transport operations into or out of any airport. Airservices Australia will need to be notified of the new obstacles for inclusion in Pilot NOTAMs and maps. The Proponent has consulted with landowners owning the land adjacent to the proposed development. No issues have been raised by those landowners with the Proponent with respect to their own Farm Aviation practices.	Refer to: *Appendix 6: Aviation Impact Report*

5.11 Statement of Suitability

The Proponent has identified the site as being suitable for a WEF for the following reasons:

- the wind resource – resulting in a high yielding WEF, ultimately driving down the cost of electrical energy;
- the proximity to the electricity network – specifically the Charam Zone Substation which is located nominally 250 m from the site, minimising capital costs associated with the grid connection;
- the available capacity for new electricity generation at the Charam Zone Substation;
- the heavily modified landscape associated with intensive farming and existing power infrastructure (powerline easements) – implying that a WEF is consistent with the character of the landscape and will require minimal removal of native vegetation;
- the immediate vicinity of the WEF is sparsely populated, with no dwellings (stakeholder and non-stakeholder) within 1 km of proposed micro-siting areas, and less than thirty dwellings located within 5 km of the host property;
- the nearest dwelling is more than 1,200 m from a WTG, resulting in modelled Sound Pressure Levels of 33 dBA or less – a significant margin less than 40 dBA, which is required under NZS6808:2010 Acoustics – Wind farm noise, the Standard specified in VPP Clause 52.32;
- the ecological impacts have been assessed, and, in conjunction with the sensitive design, the WEF poses a minimal risk to native flora and fauna, whilst positively contributing to decreasing greenhouse gas emissions; and
- Constructability of the wind farm – the site is flat with minimal clearing required and good access.

Ultimately, this Planning Permit Application demonstrates that the WEF is a significant net benefit:

1. SOCIALLY: The development will create approximately fifty Full-Time Equivalent (FTE) local jobs during engineering and construction and five on-going roles. During construction, it is estimated that $700,000 will be spent in the region. In addition, the Proponent is committed to sharing the financial benefits of the wind farm with neighbours and the local community through the development of a community fund;
2. ENVIRONMENTALLY: The WEF will power up to 15,000 homes with clean, renewable energy. The WEF has been designed in such a way as to minimise its impact on native flora and fauna, with the proposed removal of 0.127 ha of native vegetation being captured by the bio-banking process; and
3. FINANCIAL: The WEF is in a region of good wind resource, on land that facilitates a low-cost build and connection. All of this contributes to ensuring the viability of the project for investors, while providing clean electricity to consumers at the most competitive price.

5.12 Development Plans and Management Plans

Prior to construction commencement, the Proponent will submit to the Responsible Authority (RA) the final amended development plans for approval and endorsement by the RA. When endorsed, the plans will form part of this permit.

These plans will show the final number and dimension of turbines, layout of tracks and cables and all other infrastructure associated with the WEF as well as any micro-siting allowances. These plans will also show the final grid connection details.

In addition to the Development Plans, Management Plans and relevant reports will be submitted to the RA, in accordance with any permit requirements.

The following Management Plans will be provided for certification with the Development Plans:

1. Complaint Investigation and Response Plan
2. Landscaping Plan
3. Television and Radio Signal Strength Study
4. Noise Management Plan
5. Traffic Management Plan
6. Environmental Management Plan
7. Construction Environmental Management Plan
8. Bat and Avifauna Management Plan
9. Decommissioning Management Plan
10. Emergency Management Plan.

In addition to the plans, above, which are mandated by the standard permit conditions found in the Policy and Planning Guidelines for Development of Wind Energy Facilities in Victoria, an unanticipated discovery plan, to address potentially culturally sensitive finds during construction will be prepared.

Key items to be address in each Plan are outlined below.

5.12.1 Complaint Investigation and Response Plan and Complaint Register

The Complaint Investigation and Response Plan and associated registers will be prepared in accordance with the *Australian/New Zealand Standard AS/NZS 10002:2014 – Guidelines for complaint management in organisations*, and respond to all aspects of the construction and operation of the WEF. The Plan will contain the following:

- Processes for investigation and resolution of complaints
- Toll-free telephone number and email address for submission of complaints

Once endorsed by the RA, the Plan will be made publicly available through the project website.

The Complaint Register will contain the following information for every complaint received:

- The complainant's name and address (if provided), including (for noise complaints) any applicable property reference number contained in the Wombelano Wind Farm Acoustic Assessment.
- A receipt number for each complaint, which must be communicated to the complainant.
- The time and date of the incident, and the prevailing weather and operational conditions at the time of the incident.
- A description of the complainant's concerns, including (for a noise complaint) the potential occurrence of special audible characteristics.
- The process for investigating the complaint, and the outcome of the investigation, including:
    - The actions taken to resolve the complaint.
    - For noise complaints, the findings and recommendations of an investigation report undertaken in accordance with the endorsed Noise Management Plan.

A complete copy of the Complaints Register along with a reference map of complaint locations must be provided to the RA on each anniversary of the date of this permit, and at other times on request.

5.12.2 Landscaping Plan

There are no public viewsheds that require mitigation through landscaping. However, dwellings within 3 km of the wind farm will be offered landscaping.

The Landscaping Plan will:

- Identify the dwellings eligible for landscaping.
- Identify preferred vegetation for planting, relying on native vegetation.
- Identify preferred distances and orientations for vegetation planting to optimally mitigate visual impacts of the WEF from dwellings.
- Develop a program of works, scheduling the following items:
    - Desktop assessments of eligible landowners.
    - Surveying eligible landowners with proposed screening measures.
    - Site preparation, planting, and irrigation.
    - Site reviews to two years from planting.
- Include a register for recording:
    - The offer that has been made to relevant landowners.
    - Whether the offer has been accepted.
    - Status of actioning the landscaping plan.
    - The register shall be submitted to the RA on an annual basis and available on an ad hoc basis on request.

5.12.3 Noise Management Plan

The Noise Management Plan will provide:

- A schedule for completion of post-construction noise monitoring reports, assessing compliance with the Noise Standard, AS/NZS6808:2010.
    - This will include environmental audit report prepared under Part IXD, Section 53V of the Environment Protection Act 1970 by an environmental auditor appointed under Part IXD of the Environment Protection Act 1970
    - Upon completion, post construction noise reports will be submitted to the RA.
- An investigation procedure to address any noise complaints that is compliant with the Complaint Investigation and Response Plan and Complaint Register.
- Noise remediation plans, detailing procedures should non-compliance with the Noise Standard be detected.

5.12.4 Television and Radio Signal Strength Study and Management Plan

This study will include testing at selected locations within 5 km of the facility to enable the average television and radio reception strength to be determined.

The Management Plan will provide a methodology for the assessment of any complaints received.

If implementation of the methodology indicates that the WEF has had a detrimental impact on the quality of reception at a pre-existing dwelling, the Proponent will restore reception to at least the quality determined in the Television and Radio Reception Strength Survey required by this permit, to the satisfaction of the RA.

5.12.5 Traffic Management Plan and Road Survey

As part of the Development Plan, the Traffic Management Plan and Road Survey will be submitted to the RA for endorsement.

The Survey, completed by a suitably qualified expert, will assess the suitability, design, condition and construction standard of the relevant public roads and access points, with recommendations, if any for necessary upgrades, will be approved by VicRoads before submission to the RA for endorsement.

The Traffic Management Plan, to be completed by a suitably qualified expert, will specify measures to be taken to manage traffic impacts associated with the construction of the WEF, and include a program to inspect, maintain and (where required) repair public roads used by construction traffic. This will be prepared in consultation with VicRoads and the local roads management authority.

Any road upgrades will require submission of detailed plans and program of works to the relevant road management authority for approval.

5.12.6 Environmental Management Plan

The Environmental Management Plan (EMP), to be submitted to the RA with the Development Plans, will describe measures to minimise any amenity and environmental impacts of the construction and decommissioning of the facility.

It will also detail organisational responsibilities such as staff training and inductions.

5.12.7 Construction Environmental Management Plan

The Construction Environmental Management Plan (CEMP), to be submitted to the RA with the Development Plans, will include:

- Procedures to manage dust and noise emissions, erosion, mud and stormwater run-off.
- Procedures to remove temporary works, plant, equipment, buildings and staging areas, and reinstate the affected parts of the land, when construction is complete.

The CEMP will incorporate the Unanticipated Finds Plan as well as documenting site exclusion zones to minimise potential impacts on Aboriginal Heritage and flora and fauna.

The CEMP will stand alongside the Traffic Management Plan to ensure that the construction of the WEF has as small an impact on the community as possible.

5.12.8 Bat and Avifauna Management Plan

The Bat and Avifauna Management Plan, to be submitted to the RA with the Development Plans, will include:

- A statement of the objectives and overall strategy for minimising bird and bat strike arising from the operation of the facility.
- A mortality monitoring program specifying:
    - procedures for reporting any bird and bat strikes to DELWP (Environment Portfolio) monthly.
    - information on the efficacy of searches for carcasses of birds and bats, and, where practicable, information on the rate of removal of carcases by scavengers, so that correction factors can be determined to enable calculations of the likely total number of mortalities.
    - procedures for the regular removal of carcasses likely to attract raptors to areas near WTGs.

This program is to span a minimum of two years from the commissioning of the first WTG or a date agreed with DELWP (Environment portfolio). It is noted that DELWP (Environment Portfolio) must approve the Plan prior to submission.

The Bat and Avifauna Management Plan will include all reporting requirements.

5.12.9 Decommissioning Management Plan

A Decommissioning Management Plan will be prepared outlining the process for decommissioning, including the following requirements:

- Notification of RA.
- Preparation of a Decommissioning Traffic Management Plan.
- The standard required for site remediation and reinstatement.

Site remediation will include the removal of above-ground infrastructure, with the exception of access tracks, which will be retained. Underground infrastructure such as cabling and foundations will remain in place, however, they will be cleared to a depth of 0.5 m below natural ground level to ensure that the Landowner will continue to farm the land, unimpeded by the underground infrastructure.

5.12.10 Unanticipated Finds Plan

Whilst an endorsed Cultural Heritage Management Plan is not required, an Unanticipated Finds Plan will be developed that:

- Specifies training requirements for workers on site; and
- Specifies a procedure to implement in the event that Aboriginal artefacts are discovered.

This will be incorporated into the Construction Environmental Management Plan.

5.12.11 Fire and Emergency Management Plan and Emergency Information Book

Consistent with the Country Fire Association (CFA) Guide for Renewable Energy Installations[21] (CFA Guide), an Emergency Management Plan will be prepared for the project, specifically for the Construction and Commissioning phases. The required contents of that plan are provided in the Guide. The Proponent will submit the Plan to the CFA for their endorsement prior to construction.

An Emergency Information Book will also be developed for the Operations phase of the facility. The Emergency Information Book will be developed to ensure consistency with the requirements of the CFA Guide. The Proponent will submit the Emergency Information Book to the CFA for their endorsement through the commissioning phase of the project.

The Guide also recommends site familiarisation tours for the CFA and training in emergency management procedures for all wind farm staff. The Proponent intends to adhere to these recommendations.

The following addresses both the requirements of the WTGs, the substation, associated infrastructure including meteorological masts, as well as any battery energy storage system that may be installed on the site.

With respect to the design of the WEF, the CFA Guide provides recommendations on:

- Site Access

[21] Country Fire Authority, *Guidelines for Renewable Energy Installations*, 2019.

- Water Supply
- Dangerous Goods Storage and Handling

The site access requirements are addressed below:

- A four (4) metre perimeter road should be constructed within the ten (10) metre perimeter fire break.
    - The perimeter access track is proposed to be 4.5 m wide.
    - Farming – intensive grazing and cropping – are proposed to continue alongside the tracks, to ensure minimal productive land is lost.
- Roads are to be of all-weather construction and capable of accommodating a vehicle of 15 tonnes.
    - All roads will be constructed primarily for access of wind farm construction vehicles, which exceed the requirements of the CFA Guide.
    - All tracks will be of all-weather construction, primarily due to the operational requirements of the WEF.
- Constructed roads should be a minimum of four (4) metres in trafficable width with a four (4) metre vertical clearance for the width of the formed road surface.
    - Final Development Plans will confirm final width of roads is greater than or equal to 4 m, with greater than 4 m clearance.
    - The only constraint is the requirement for vehicles to pass under the existing 22 kV powerline, over traversable ground. This line is built to Powercor standards – owned and operated by Powercor.
- The average grade should be no more than 1 in 7 (14.4% or 8.1°) with a maximum of no more than 1 in 5 (20% or 11.3°) for no more than 50 metres.
    - Based on the SRTM-derived 1 Second Digital Elevation Model, no areas on the site have gradient greater than 14.4%.
- Dips in the road should have no more than a 1 in 8 (12.5% or 7.1°) entry and exit angle.
    - The final Development Plans will confirm adherence with this requirement.
- Incorporate passing bays at least every 600 m which must be at least 20 m long and have a minimum trafficable width of 6 m. Where roads are less than 600 m long, at least one passing bay is to be incorporated.
    - The final Development Plans will confirm adherence with this requirement.
- Road networks must enable responding emergency services to access all areas of the facility.
    - The proposed tracks currently allow access to all areas of the facility; however, the final Development Plans will ensure adherence to this requirement.
- The provision of at least two (2) but preferably more access points to the site, to ensure safe and efficient access to and egress from areas that may be impacted or involved in fire. The number of access points should be informed through a risk management process.
    - Primary and three secondary site access points are shown in Figure 32.
    - Additional access is limited as this would require either access through non-stakeholder land or require further clearing of roadside vegetation.
    - Given the size of the WEF, access via the primary and secondary access points, listed, allow for good access to WTGs and other infrastructure for emergency service vehicles.

The firefighting water supply requirements are addressed as follows:

- The static water storage tank shall be of not less than 45,000 litres effective capacity. The static water storage tank(s) must be an above-ground water tank constructed of concrete or steel. The location and number of tanks should be determined as part of the site's risk management process and in consultation with a CFA delegated officer.
    - Final Development Plans will confirm adherence with this requirement.
    - The proposed location of the water storage tank is shown in Figure 32.
- The static storage tanks shall be capable of being completely refilled automatically or manually within 24 hours.
    - Given the high water table, this requirement will be satisfied by sinking a bore, with adequate pumping requirements.
    - Final specifications will be provided in the Final Development Plans.
- The hard-suction point shall be provided, with a 150 mm full bore isolation valve equipped with a Storz connection, sized to comply with the required suction hydraulic performance. Adapters that may be required to match the connection are 125 mm, 100 mm, 90 mm, 75 mm, 65 mm Storz tree adapters with a matching blank end cap to be provided.
    - Final Development Plans will confirm adherence with this requirement.
- The hard-suction point shall be positioned within 4 m to a hardstand area and provide clear access for fire personnel.
    - Final Development Plans will confirm adherence with this requirement.
- The road access and hardstand shall be kept clear at all times.
    - Final Development Plans will confirm adherence with this requirement.
- The hard-suction point shall be protected from mechanical damage (I.e. bollards) where necessary.
    - Site security in conjunction with the site layout will ensure that there is no thoroughfare past the hard-suction point, reducing risk of any mechanical damage.
    - Final Development Plans will confirm presence or otherwise of bollard protection.
- Where the access road has one entrance, a 10 m radius-turning circle shall be provided at the tank.
    - Final Development Plans will confirm adherence with this requirement. Preliminary plans have allowed this turning circle.
- An external water level indicator is to be provided to the tank and be visible from the hardstand area.
    - Final Development Plans will confirm adherence with this requirement.
- Signage (Figure 71) shall be fixed to each tank. Fire water signage to comply with AS 2419.1 section 5.4.5.

Figure 71: Signage to be affixed to tanks.

- Final Development Plans will confirm adherence to this requirement.

- Signage (Figure 72) shall be provided at the primary entrance to the site, indicating the direction to the static water tank and being to the satisfaction of a CFA delegated officer.

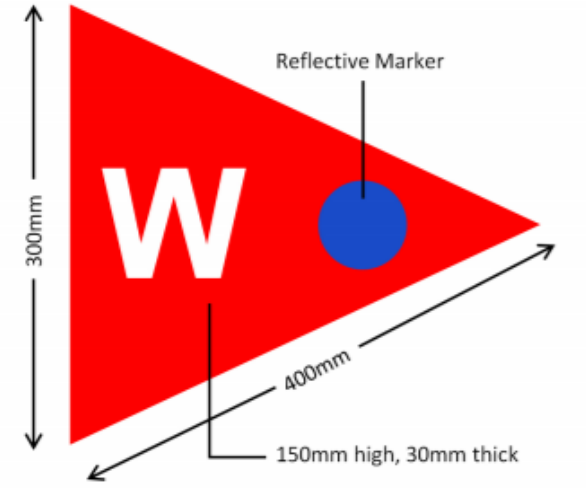


Figure 72: Directional signage: fade resistant, fixed to rigid post in contrasting lettering, white sign writing on red background, with a circle reflective marker. 'W' in 150mm upper case lettering.

- Final Development Plans will confirm adherence to this requirement.

Dangerous goods storage requirements are addressed in the following:

- Designs will adhere to relevant Australian Standards.
- Signage and labelling will be compliant with the Dangerous Goods (Storage and Handling) Regulations 2012, and the relevant Australian Standard is to be provided.
- All dangerous goods stored on-site will have a current safety data sheet (SDS). Safety data sheets will be contained in the site's emergency information book, in the emergency information container.
- Appropriate material (including absorbent, neutralisers, equipment and personal protective equipment) for the clean-up of spills will be provided and available on-site.

Provisions for the Operations and Maintenance of the WEF are provided in the following:

- Maintenance and repair activities that involve flame cutting, grinding, welding or soldering (hot works) are to be performed under a 'hot work permit' system or equivalent hazard or risk management process.

The Guide recommends the following provisions for on-site fuel management:

- Grass is to be maintained at below 100 mm in height during the declared Fire Danger Period.
    - Due to the fact that cropping is the Landowner's core business, it is anticipated that grass heights will be managed by the Landowner.
- A fire break area of ten (10) metres width is to be maintained around the perimeter of the facilities, electricity compounds and substations. This area is to be of non-combustible mulch or mineral earth.
- The fire break area must commence from the boundary of the facility or from the vegetation screening (landscape buffer) inside the property boundary. The fire break must be constructed using either mineral earth or non-combustible mulch such as crushed rock. The fire break must be vegetation free at all times. No obstructions are to be within fire break area (e.g. no stored materials of any kind).
    - This is achievable around specific elements of the WEF, such as the WTGs, substation, etc.
    - Final compliance is to be addressed in the Final Development Plans.
- Adhere to restrictions and guidance during the Fire Danger Period, days of high fire danger and Total Fire Ban days
    - Management Plans will demonstrate compliance.
- All plant and heavy equipment are to carry at least a 9-litre water stored-pressure fire extinguisher with a minimum rating of 3A, or firefighting equipment as a minimum when on-site during the Fire Danger Period.
    - Management Plans will demonstrate compliance.
- There is to be no long grass or deep leaf litter in areas where plant and heavy equipment will be working.
    - Management Plans will demonstrate compliance.

The Guide's specific recommendations with regards to WEFs is as follows:

- Where practicable, wind energy installations can be sited on open grassed areas (such as grazed paddocks). Vegetation is to be managed as per the requirements of this guideline, or as informed through a risk management process.
    - The land is cropped on rotation. Sheep are also run on the land. Vegetation will be managed through a risk management process.
- Wind turbines are to be located no less than 300 metres apart. This provides adequate distance for aircraft to operate around a wind energy facility given the appropriate weather and terrain conditions. Fire suppression aircraft operate under visual flight rules. As such, fire suppression aircraft only operate in areas where there is no smoke and can operate during the day or night.
    - Final Development Plans will confirm adherence to this requirement.
- Installed weather monitoring stations can be high and difficult to see and are hazardous to CFA flight operations during fires. CFA requires the following in relation to the installation of these monitoring stations:
        - Monitoring towers higher than 100 feet must be clearly marked and guy wires fitted with markers

        - The installation must be notified to CFA and Geoscience Australia (for inclusion in the Vertical Obstruction Database).
    - CFA and Geoscience Australia will be notified of details of any permanent wind monitoring masts installed as part of the WEF.
- Adjoining property use and distances to habitable buildings must be considered in the design of wind energy installations, with regard made to turbine height and prevailing wind speeds.
    - Land use in the region has been considered in the design of the WEF.
- Wind turbine manufacturers must provide specifications for safe operating conditions for temperature and wind speed. This information must be provided within the content of the emergency information book.
    - This information will be included in the Emergency Information Book.
- A wind energy facility emergency plan must include maximum operational wind speed and temperature conditions and operating procedures to limit fire risk. This information must be provided within the content of the emergency information book.
    - This information will be included in the Emergency Information Book.

For the installation of any battery energy storage facility that may be installed, the Guide recommends the following:

- Containers/infrastructure for battery installations are to be located so as to be directly accessible to emergency responders (e.g. provided with a suitable access road).
    - Final Development Plans will confirm adherence to this requirement.
- Adequate ventilation of the battery container/storage area is to be provided where required under (DR) Australian Standard 5139 Electrical Installations – Safety of battery systems for use with power conversion equipment; the manufacturer's requirements and/or SDS for battery storage.
    - Final Development Plans will confirm adherence to this requirement.
- Containers/infrastructure for battery installations are to be provided with appropriate spill containment/ bunding that includes provision for fire water runoff.
    - Final Development Plans will confirm adherence to this requirement.
- Battery installations that contain dangerous goods may have to comply with the requirements of the Dangerous Goods Act 1985; the Dangerous Goods (Storage and Handling) Regulations 2012; and relevant Australian Standards.
    - The battery facility will adhere to relevant Australian Standards.
    - Final design of facility will be signed off by a suitably qualified design engineer.
- Battery storage manufacturers must provide specifications for safe operating conditions for temperature and the effects on battery storage if involved in fire. This information must be provided within the content of the emergency information book.
    - This information will be included in the Emergency Information Book.
- Battery installations are to be kept free of extraneous materials and combustible materials of all kinds. Regular inspections and housekeeping are to be conducted to ensure materials do not accumulate.
    - Final design of facility will be signed off by a suitably qualified design engineer.
    - Inspection requirements will be provided as part of operational protocols.
- Battery installations are to be serviced/maintained as per the manufacturer's requirements.
    - Servicing requirements will be provided as part of operational protocols.

- Containers/infrastructure for battery installations must be clear of vegetation for 10 metres on all sides, including grass. CFA requires non-combustible mulch such as stone or mineral earth within this 10-metre area.

Final Development Plans will confirm adherence to this requirement.

5.13 Flora and Fauna Impact Assessment

The Proponent has engaged appropriately qualified ecological consultants, Biosis and Ecology and Heritage Partners (EHP) to report on flora and fauna on and around the site, conducting both desktop and site surveys. EHP conducted a site survey in spring (4th – 5th October 2018). Biosis conducted further surveys in August 2020. EHP resurveyed the site in winter 2021 (19th – 20th July 2021)

The ecology report is presented in Appendix 2: Ecological Impact Report.

This appendix contains the following documents:

A. Ecological Impact Report Cover Note.
B. Biodiversity Assessment: Wombelano West Wimmera Wind Farm, Victoria, prepared by Ecology and Heritage Partners.
C. Summary of Red-tailed Black-Cockatoo flight behaviour investigation for Wombelano Wind Farm, prepared by Biosis.
D. EPBC Referral to the DAWE.
E. DAWE referral assessment.

By way of summary, the proposed development will need to be assessed against the following legislation:

- Commonwealth: EPBC Act (1999)
- Victoria: Flora and Fauna Guarantee (FFG) Act (1988)
- Victoria: Planning and Environment Act (1987)
- Victoria: Wildlife Act (1975) and Wildlife Regulations (2013)
- Victoria: Catchment and Land Protection Act (1994)

A summary of the relationship between the WEF and the various legislation is summarised in Table 9.

Table 9: Biodiversity and Ecological Impact legislation and its relationship with the WEF.

Jurisdiction and Act	Purpose	Impact on Wombelano WF
Commonwealth: EPBC Act (1999)	Assessing the proposal's impact on matters of National Environment Significance.	The SERTBC is a species native to the West Wimmera region and is an EPBC listed species. The Proponent has referred this project under the EPBC Act. DAWE has determined that the project is not a controlled action.
Victoria: Flora and Fauna Guarantee (FFG) Act (1988)	FFG required for removal of native flora on public land such as road reserves.	Any removal of native buloke saplings in the road reserve will trigger a permit requirement under the FFG Act.

Victoria: Planning and Environment Act (1987)	Incorporates the Local Government Planning Schemes	Farming Zone – a Planning Permit is required to build a wind farm on this land type; the RA for issuing the permit is DELWP; Wimmera Shire Council is responsible for ensuring that the project progresses in accordance with any permit conditions.
		Bushfire Management Overlay – no Planning Permit is triggered by this overlay.
		Environmental Significance Overlay Schedule 2 – a permit is required from West Wimmera Shire Council to remove native vegetation listed in the schedule. None is proposed to be removed.
		The study area is within Location 2, with 0.127 ha of native vegetation proposed to be removed. As such, the permit application falls under the intermediate assessment pathway. The offset requirement of native vegetation removal is 0.044 General Habitat Units. A Planning Permit from the RA is required to remove, destroy or lop any native vegetation under Clause 52.17.
Victoria: Wildlife Act (1975) and Wildlife Regulations (2013)	Authorisation to remove habitat under this Act provided under licence granted under the Planning and Environment Act (1987) or Forests Act (1958).	This relates primarily to fauna. The removal or relocation of fauna is not anticipated as part of this project.
Victoria: Catchment and Land Protection Act (1994)	Weed management should be conducted in accordance with this act.	Spear Thistle was identified on the site and needs to be managed in accordance with this Act.

Survey details and assessment of the WEF on the legislation outlined in Table 9 are addressed in Appendix 2: Ecological Impact Report.

The Development Guidelines give further direction in the assessment of flora and fauna impacts. The proponent engaged Ecology and Heritage Partners (EHP) and Biosis to ensure impact assessments were completed in accordance with the requirements of the Development Guidelines. The proponent, with the assistance of EHP and Biosis have consulted extensively with the wind farm team in Statutory Planning Services at DELWP.

The reports developed by EHP and Biosis to address the requirements of the Development Guidelines, the requirements of Clause 52.32 of the VPP and Schedule 2 of the Environmental Significance Overlay in the West Wimmera Planning Scheme are presented in Appendix 2: Ecological

Impact Report. A summary of the impact assessment on species listed under the FFG and EPBC Acts is presented in Section 5.7.

EHP have prepared an Avoid and Minimise statement (Section 6.1 of the Biodiversity Assessment in Appendix 2: Ecological Impact Report). This statement highlights the way that the design has evolved:

- Avoiding the loss of Buloke saplings and River Red Gums at the site entrance by identifying an alternative site entrance.
- Avoiding the loss of mature Bulokes along the southern boundary by ensuring construction tracks pass around the TPZ of these trees.
- Avoiding compaction of roots of road reserve vegetation by ensuring that tracks are set back 10 m from the eastern boundary.
- Undergrounding the powerline between the WEF and CHM – eliminating risks to avifauna.
- Generally siting WTGs, tracks, cables and other ancillaries such that they do not impact on native vegetation.

5.14 Visual Impact Assessment

An assessment of land type based on GIS data from the Victorian Government, as well as a review of satellite imagery identifying urban, industrial and conservation regions was conducted. A map of the region is shown in Figure 69. The map highlights the fact that within 30 km of the wind turbine site, that is, the region where the WEF may have a visual impact, the land is predominantly *Heavily Modified Farmland* and *Forest and Conservation Area*. Combined, these land uses make up over 90% of the region. A further 8% is made up of *Parkland – 1*, which is land designated as National Park or State Park that does not afford views over the region. *Parkland – 2* areas are present beyond the 30 km radius.

The *Forest and Conservation Areas* in particular, are scattered through the *Modified Farmland*, which will result in extensive screening of the WEF.

A summary of the visual impact of the wind farm is presented in Table 10.

The WEF will have a moderate to high impact in the region in the immediate vicinity of the WEF; however, beyond this the impact is reduced. In spite of having a significant impact, the various land uses are able to absorb the presence of the WEF.

There are no Significant Landscape features identified in the West Wimmera local planning scheme, nor are there any other WEFs within 50 km of the project either constructed or in development, that are in the public domain, implying that there will be no cumulative impacts.

Photomontages of the WEF have been prepared by Green Bean Design and DNV. These are presented in Appendix 1: Photomontages, including specifications and methodologies. The photomontages present a 170 m rotor with a 250 m tip height to provide some conservatism in the assessment relative to the candidate WTG.

Table 10: Visual Impact Assessment Table.

	Heavily Modified Farmland	Industrial Area	Urban Area	Scenic Parkland – 1	Scenic Parkland – 2	Forest and Conservation Area
Description	Predominantly cleared; land is grazed or cropped; farm infrastructure such as sheds are present; dwellings are spread out; utility infrastructure is present, such as powerlines; road access is available.	Large factories, sheds or processing facilities are present.	Densely populated areas such as townships.	Densely vegetated with native vegetation. These areas are the focus of visual attention – inward focussed. Likely protected as a National Park or State Park.	Densely vegetated with native vegetation. These areas provide views of the region – outward focussed. Likely protected as a National Park or State Park.	These areas are not specified as National Park or State Park, but are identified as dense vegetation through aerial mapping. It is assumed that these areas do not have visual value.
On site	**Low/medium impact; Low/medium consequence:** Land is extensively cleared; landscape further modified through installation of roads, powerlines, scattered dwellings, and sheds. But WTGs will be prominent in Local contexts.	Not present	Not present	Not present	Not present	**High Impact; Low Consequence**: Visual impact on grove of native vegetation in the south of the site will be highly impacted. There is no public access, thus the consequence is low.
Local Context		**Low/Medium Impact; Low Consequence:** likely to be visible, however existing landscape character of Industrial Area is low.	Not present	**Medium Impact; Medium Consequence**: WTGs likely to be visible from these areas, but focus is internal to the park, rather than having an outlook over the WEF.	Not present	**Medium/Low Impact; Low Consequence**: WTGs are likely to be visible above bush and scrub but will be predominantly screened by the vegetation and completely screened by taller trees. These areas do not generally have a human population – whether permanent of visiting.
Broader Local Context		**Low impact; Low Consequence**: potentially visible from	**Low impact; Medium Consequence**: Not visible from Harrow; Some visibility from	**Low-Medium Impact; Medium Consequence**: Views to WTGs will be highly obscured by	Not present	**Low Impact; Low Consequence**: WTGs may be visible above bush and scrub but will be predominantly screened by the vegetation and completely

	Heavily Modified Farmland	Industrial Area	Urban Area	Scenic Parkland – 1	Scenic Parkland – 2	Forest and Conservation Area
		some Industrial Areas	Douglas.	the nature of the dense vegetation endemic to these areas. Additionally, these parklands have an inward focus – e.g. to a body of water or to flora or fauna within the park, rather than having a view across the WEF.		screened by taller trees. These areas do not generally have a human population – whether permanent of visiting.
Regional Context			**Low Impact; Medium Consequence**: Potentially visible from Edenhope, however the project will be fully screened when an observer is standing within 100 m of any object more than 3 m tall that is between them and the WEF. Typically, buildings within the Urban Area will fully screen the project.	**Low impact; Medium Consequence**: The densely vegetated nature of these areas means that the WEF will not be visible.	**Low impact; High Consequence**: views from lookouts at Mt Arapiles across the Wimmera Plain are towards the east and south east, rather to the west, in the direction of the site. From a distance of over 30 km from the site, the WEF will impact less than 5% of a typical person's vertical field of view. This is a typical threshold for "Low Impact".	**Low Impact; Low Consequence**: WTGs are unlikely to be visible above bush and scrub. Taller trees will completely screen the WEF. These areas do not generally have a human population – whether permanent of visiting.

5.15 Hydrology and Water Quality Impact Assessment

The proposed WEF is unlikely to result in the discharge of contaminated runoff or waste to waterways. Water quality in nearby waterways will be protected through the implementation of a Construction Environmental Management Plan and an Environmental Management Plan that will be submitted as part of the Development Plans.

The Proponent consulted with the Wimmera CMA. The Wimmera CMA highlighted that they would support West Wimmera Shire Council's assessment of the project, subject to the following conditions:

- Wastewater should not be discharged into the wetland and should be contained wholly within the development.
- The development and associated works should not degrade the ecological condition of the wetland.
- The development and runoff from additional hard surface areas should not result in an alteration to quality or quantity of surface water flows.
- The development should not result in a change to surface water drainage patterns, an increase in sediments entering the wetland or wastewater and pollutants entering the wetland.
- Soil erosion and resultant contamination of runoff from the allotment during construction must be minimised to ensure the quality of water entering nearby wetlands is maintained. The authority recommends that the guidelines documented in EPA Publication 275 – Construction Techniques for Sediment Pollution Control are followed.
- Works construction must not lead to alterations in the hydrology from preconstruction conditions of natural wetlands that receive drainage from the allotment.

These requirements can be adhered to through standard engineering practices.

5.16 Impact Assessment on Aboriginal and Non-Aboriginal Heritage

As identified in Section 4.8: Aboriginal Heritage Act (2006), there are no sensitive areas that overlap the activity area that trigger the need for a Cultural Heritage Management Plan. The activity area has been designed to avoid the up to 50 m incursion over the property boundary of the sensitive area, with the WEF activity area set back at least 150 m from the mapped area.

While no impact on Aboriginal Heritage is anticipated, the Proponent will develop an unanticipated finds protocol, as specified in Section 5.12.10: Unanticipated Finds Plan, which will form part of the EMP.

It is noted that major ground disturbance has already occurred through the sensitive area to the north of the site with the construction of Charam-Wombelano Road and the 22 kV powerline that runs from Charam Zone Substation through to Edenhope, as well as through intensive farming.

Section 2.2.8: Sites of Cultural Heritage Significance also identifies that the nearest items on the Victorian Heritage Register are the Pot Brook Charcoal Kilns, located on Cameron and Lampards Road, 4.2 km south-west of the WEF.

Because there are no items on the Victorian Heritage Register in the immediate proximity to the site, a material impact on non-Aboriginal heritage is unlikely.

5.17 Aircraft Safety

Landrum & Brown have conducted an Aviation Impact Assessment, shown in Appendix 6: Aviation Impact Report. This assessment concludes that the proposed WEF:

- will not infringe the OLS for any airport;
- will not infringe the LSALT protection surfaces of any IFR air route or Grid LSALT;
- will not have an adverse impact upon take-off and landing operations at any airport or known airfield;
- will not infringe the PANS OPS surface of any airport;
- will not have an adverse impact upon the operation of aviation navigation aids;
- will not have an adverse impact upon any ATC radar clearance Surveillance system;
- will provide a prominent visual navigation feature in the area.

Airservices Australia have reviewed the Aviation Impact Assessment and concur with the finding of Landrum & Brown. Correspondence with Airservices Australia is also included in Appendix 6: Aviation Impact Report.

5.18 Construction Impacts and Decommissioning

Construction impacts will be minimised through the preparation and adherence to relevant management plans. All management plans will be submitted to the RA for endorsement, accompanying the Development Plans.

The relevant management plans associated with the construction and decommissioning of the WEF are listed below:

- Traffic Management Plan (Section 5.12.5)
  - To be prepared for both construction and decommissioning, which will specify requirements for site access, including times of travel, as well as documenting the process for assessment of public roads and any rehabilitation required.
- Environmental Management Plan (Section 5.12.6)
  - Describe measures to minimise any amenity and environmental impacts of the construction and decommissioning of the facility.
  - Detail organisational responsibilities such as staff training and inductions.
- Construction Environmental Management Plan (Section 5.12.7)
  - Plans to minimise dust and noise as well as to manage any wastewater runoff.
  - Specify exclusion zones to minimise risk of impacting on Aboriginal Heritage.
- Decommissioning Management Plan (Section 5.12.9)
  - Notification requirements.
  - Preparation of a Decommissioning Traffic Management Plan.
  - The standard required for site remediation and reinstatement, including removal of all above ground infrastructure and below ground infrastructure to a depth of 50 cm below nature ground level, with the exception of access tracks.
- Unanticipated Finds Plan (Section 5.12.10)
  - Protocols if Aboriginal artefacts are identified on site.

These management plans, once endorsed by the RA, will form part of the Planning Permit.

5.19 Summary Tables of Planning Pathway

Table 11 through Table 15 provide a summary of the planning assessments required for the WEF under the VPP. These are as follows:

- Table 11: Assessment against VPP Clause 52.32
- Table 12: Assessment against VPP Clause 52.17
- Table 13: Decision requirements specified under LPP Clause 42.01 SCHEDULE 2 TO THE ENVIRONMENTAL SIGNIFICANCE OVERLAY
- Table 14: Decision requirements specified under VPP Clause 65
- Table 15: Assessment of Section 60 of the Planning and Environment Act 1987.

Table 11: Assessment against VPP Clause 52.32

Clause	Description	Response	Cross-Reference
52.32-1	**Application**	Planning application for WEF submitted in accordance with requirements of VPP S52.32	Land details: *Section 1: Introduction* *Section 2: Site and locality*
52.32-2	**Permit required for use and development of WEF.** **Prohibitions and conditions (Table to Clause 52.32-2)**	Planning application for WEF submitted in accordance with requirements of VPP S52.32 Conditions outlined in Table to Clause 52.32-2 are met: - No turbines within 1 km of existing dwellings - No part of the WEF located on land described in schedule to the National Parks Act 1975 - No part of the WEF located on land declared a Ramsar wetland - No land is listed in the schedule to Clause 52.32-2.	Land details: *Section 1: Introduction* *Section 2: Site and locality* Assessment against Table to Clause 52.32-2: 1. Proximity to Dwellings: *Section 2.2.4: Proximity to Nearby Dwellings, Amenities and Infrastructure* 2. National Parks: *Section 2.2.9: National Parks and State Parks* 3. Ramsar: *Section 2.2.10: RAMSAR Wetlands* 4. Schedule: *Section 2.2.11: Land Excluded from Wind Farm Development*
52.32-3	**Turbine within 1 km of a dwelling**	No WTGs are proposed to be located within 1 km of an existing dwelling. No consents are required.	Proximity to Dwellings: *Section 2.2.4: Proximity to Nearby Dwellings, Amenities and Infrastructure*
52.32-4	**Application Requirements**		
	Site and Context Analysis: Site		*Section 2.1: Local Context*
	Site shape, dimensions and size	Single parcel: 252 ha	*Section 2.1.1: Site Location and*

Clause	Description	Response	Cross-Reference
		Underground powerline in road reserve to adjacent substation.	*Specifications*
	Orientation and contours		*Figure 3*
	Current land use	Cropping and sheep grazing	*Section 2.1.2: Land Use and Buildings*
	The existing use and siting of buildings or works on the land	Storage, shearing.	*Section 2.1.2: Land Use and Buildings* *Figure 7*
	Existing vegetation types, condition and coverage	Sparse covering of eucalypts. Copse of Buloke in the south of the site.	*Section 2.1.3: Ecological Characteristics* *Appendix 2: Ecological Impact Report*
	The landscape of the site	Flat.	*Section 2.2.6: Views to and from the site*
	Species of flora and fauna listed under the Flora and Fauna Guarantee Act 1988 and the Environment Protection and Biodiversity Conservation Act 1999 (Cwth)	Addressed in ecological reports. DAWE have determined that the project is not a controlled action under the EPBC Act.	*Section 2.2.7: Sites of Flora and Fauna listed under the FFG Act (1988) and the EPBC Act (1999)* *Appendix 2: Ecological Impact Report*
	Sites of cultural heritage significance	No sites of cultural heritage significance present on the activity area.	*Section 2.2.8: Sites of Cultural Heritage Significance*
	Wind characteristics	Flat cleared land results in high shear with a strong diurnal profile. The high shear means that WTGs with higher hub heights will perform well. SODAR data indicates that the wind resource is generally consistent.	*Section 2.1.6: Wind Characteristics*
	Any other notable features, constraints or other characteristics of the site		*Section 2.1.8: Other Notable Features and Constraints*
	Site and Context Analysis: Surrounding Area		*Section 2.2: Regional Context*

Clause	Description	Response	Cross-Reference
			Section 2.3: State and Federal Context
	Existing land uses	Located in the *Farming Zone*.	*Section 2.2.1: Existing Land Uses*
	Above-ground utilities	- 22 kV distribution powerlines run along northern and eastern boundaries - Charam Zone Substation located adjacent to the site	*Section 2.2.2: Above-Ground Utilities: Electrical Utilities*
	Access to infrastructure	- Shearing shed is powered - 22 kV distribution powerlines run along northern and eastern boundaries - Charam Zone Substation located adjacent to the site - Site is serviced by sealed council roads	*Section 2.2.2: Above-Ground Utilities: Electrical Utilities* *Section 2.2.3: Other Infrastructure* *Section 2.2.4: Proximity to Nearby Dwellings, Amenities and Infrastructure*
	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	Mapping is provided.	General: *Section 2.2.4: Proximity to Nearby Dwellings, Amenities and Infrastructure* *Figure 10, Figure 31* Aviation: *Section 2.2.5: Aviation*
	The siting and use of buildings on adjacent properties	Buildings on adjacent properties are predominantly dwellings, farm sheds and the like.	*Section 2.2.4: Proximity to Nearby Dwellings, Amenities and Infrastructure*
	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	Photographs to and from the sites provided. There are no real vantage points for views of the site.	*Section 2.2.6: Views to and from the site*
	Sites of flora and fauna listed under the Flora and Fauna Guarantee Act 1988 and Environment Protection and Biodiversity Conservation Act 1999 (Cwth), including	Addressed in the ecological studies. DAWE have determined that the project is not a controlled action under the EPBC Act.	*Section 2.2.7: Sites of Flora and Fauna listed under the FFG Act (1988) and the EPBC Act (1999)*

Clause	Description	Response	Cross-Reference
	significant habitat corridors, and movement corridors for these fauna		*Appendix 2: Ecological Impact Report*
	Sites of cultural heritage significance	Aboriginal Heritage likely to be present around named water bodies on properties in the vicinity of the WEF. Non-Aboriginal heritage sites registered over 4 km from the site.	*Section 2.2.8: Sites of Cultural Heritage Significance*
	National Parks, State Parks, Coastal Reserves and other land subject to the National Parks Act 1975	National and State Parks located in vicinity of the WEF.	*Section 2.2.9: National Parks and State Parks* *Figure 31*
	Land declared a Ramsar wetland as defined under section 17 of the Environment Protection and Biodiversity Conservation Act 1999 (Cwth)	Nearest Ramsar wetland over 70 km away.	*Section 2.2.10: RAMSAR Wetlands*
	Location of any land included in the schedule to clause 52.32-2 of the planning scheme	None	*Section 2.2.11: Land Excluded from Wind Farm Development*
	Any other notable features or characteristics of the area	None noted.	
	Bushfire risks	Fire Management and Emergency Management Plan to be submitted with the Development Plans for endorsement by the responsible authority.	*Section 2.2.12: Bushfire Risk* *Section 5.12: Development Plans and Management Plans*
	Design Response		
	Detailed plans of the proposed development	Final Development Plans to be submitted to the satisfaction of the responsible authority.	*Section 5.12: Development Plans and Management Plans*
	Plans and elevations of transmission infrastructure and electricity utility works required to connect the facility to the electricity network, and access road options	Options are proposed for the connection of assets into the Charam Zone Substation. Final Development Plans to be submitted to the satisfaction of the responsible authority.	*Section 3.2:* Grid Connection and Substation *Figure 32*
	Accurate visual simulations illustrating the development in the context of the surrounding area and from key public view points.	Photomontages prepared.	*Appendix 1: Photomontages*

Clause	Description	Response	Cross-Reference
	A rehabilitation plan for the site.	Rehabilitation plan for the site is consistent with the contractual arrangements between the proponent and the landowner. Final Decommissioning Management Plan to be submitted for endorsement by the responsible authority with Development Plans.	*Section 5.12: Development Plans and Management Plans*
	A description of the proposal	Up to seven WTGs and associated infrastructure, including a Battery Energy Storage System	*Section 3: Project Description*
	An explanation of how the proposed design derives from and responds to the site analysis		*Section 5.3: Design Response to Site Analysis*
	A description of how the proposal responds to any significant landscape features for the area identified in the planning scheme	No landscape features are identified by the West Wimmera Planning Scheme	*Section 3.5: Significant Landscape Features Identified in the Planning Scheme* *Section 5.14: Visual Impact Assessment*
	An assessment of the visual impact of the proposal on the surrounding landscape	Includes assessment of landscape character, and the WEF's impact in that context.	*Section 5.14: Visual Impact Assessment*
	An assessment of the visual impact on abutting land that is described in a schedule to the National Parks Act 1975 and Ramsar wetlands and coastal areas.	- National Parks: Low to moderate impact - Ramsar wetlands: No impact - Coastal areas: No impact	*Section 5.14: Visual Impact Assessment* *Table 10*
	An assessment of the impact of the proposal on any species (including birds and bats) listed under the Flora and Fauna Guarantee Act 1988 or the Environment Protection and Biodiversity Conservation Act 1999 (Cwth).	Key risk species is the SERTBC. Assessment made that the risk to this species is low.	*Appendix 2: Ecological Impact Report*
	Assessment of the noise impacts of the proposal prepared in accordance with the New Zealand Standard NZS6808:2010, Acoustics - Wind Farm Noise, including an assessment of whether a high amenity noise limit is applicable,	Modelling in accordance with NZS6808 demonstrates noise levels from the WEF (including substation) less than 35 dBA at all dwellings. Noise assessment and audit report presented in appendix.	*Appendix 3: Noise Impact Report*

Clause	Description	Response	Cross-Reference
	as assessed under Section 5.3 of the Standard		
	Assessment of the impacts upon Aboriginal or non-Aboriginal cultural heritage.	Low impact: ensure project area does not encroach upon CHMP trigger area. Develop chance find protocol for incorporation into the Construction Environmental Management plan. No non-Aboriginal cultural heritage risks have been identified.	*Section 2.2.8: Sites of Cultural Heritage Significance* *Section 5.9: Minimisation of Impacts on Aboriginal and Non-Aboriginal Heritage*
	A statement of why the site is suitable for the wind energy facility	- Close proximity to electricity grid - Good wind resource - Low population density - Flat terrain for easier build - Good road access	*Section 5.11: Statement of Suitability*
	An environmental management plan including any rehabilitation and monitoring requirements.	Management plans, including Environmental Management Plan will be submitted in conjunction with the Development Plans to the responsible authority for approval.	*Section 5.12: Development Plans and Management Plans*
	Mandatory Noise Assessment		
	A pre-construction (predictive) noise assessment report demonstrating that the proposal can comply with the New Zealand Standard NZS6808:2010, Acoustics – Wind Farm Noise, including an assessment of whether a high amenity noise limit is applicable under Section 5.3 of the Standard.	High amenity noise limit is not applicable. Noise assessment demonstrates that noise levels at neighbouring dwellings all less than 35 dBA.	*Appendix 3: Noise Impact Report*
	An environmental audit report of the pre-construction (predictive) noise assessment report prepared under Part IXD, Section 53V of the Environment Protection Act 1970 by an environmental auditor appointed under Part	This audit is appended to the pre-construction noise report.	*Appendix 3: Noise Impact Report*

Clause	Description	Response	Cross-Reference
	IXD of the Environment Protection Act 1970. The environmental audit report must verify that the acoustic assessment undertaken for the purpose of the pre-construction (predictive) noise assessment report has been conducted in accordance with the New Zealand Standard NZS6808:2010, Acoustics – Wind Farm Noise.		
53.32-5	If a mandatory noise assessment must accompany an application under Clause 52.32-4, any permit or amended permit issued with respect to that application must include the following conditions: - A post-construction noise assessment report prepared in accordance with the New Zealand Standard NZS6808:2010, Acoustics – Wind Farm Noise demonstrating whether the wind energy facility complies with the Standard, must be submitted to the Responsible Authority. If the wind energy facility is constructed in stages, additional post-construction noise assessment reports for each stage must be submitted to the Responsible Authority. - Each post-construction noise assessment report must be accompanied by an environmental audit report prepared under Part IXD, Section 53V of the Environment Protection Act 1970 by an environmental auditor appointed under Part IXD of the Environment Protection Act 1970. The environmental audit report must verify that the acoustic assessment undertaken for the	Requirements included in proposed permit conditions.	*Appendix 10: Proposed Permit Conditions*

Clause	Description	Response	Cross-Reference
	purpose of the post-construction noise assessment report has been conducted in accordance with the New Zealand Standard NZS6808:2010, Acoustics – Wind Farm Noise.		
52.32-6	**Decision Guidelines** Before deciding on an application, in addition to the decision guidelines of Clause 65, the responsible authority must consider, as appropriate, the items, below.		
	The Municipal Planning Strategy and the Planning Policy Framework	The proposal is consistent with the Victorian PPF and the Wimmera Southern Mallee regional planning framework.	*Section 5.4: Contribution to Government Policy*
	The effect of the proposal on the surrounding area in terms of noise, blade glint, shadow flicker and electromagnetic interference	Noise assessments considered in accordance with NZS6808:2010 and reviewed by an EPA Audit. Blade glint addressed through WTG surface finish. No dwellings within shadow flicker threshold distance, so no material shadow flicker impacts. No material electromagnetic interference impacts.	Noise Assessment: *Section 5.5.1:* Noise *Appendix 3: Noise Impact Report* Blade Glint: *Section 5.5.2: Blade Glint* Shadow Flicker: *Section 5.5.3: Shadow Flicker* EMI: *Section 5.5.4: EMI* *Appendix 5: Electro-Magnetic Interference Report*
	The impact of the development on significant views, including visual corridors and sightlines	No impact on significant views.	*Section 3.5: Significant Landscape Features Identified in the Planning Scheme* *Section 5.14: Visual Impact Assessment*
	The impact of the facility on the natural environment and natural systems	The development is sensitive to the natural environment, requiring minimal land clearing, and minimising impacts on fauna including avi-fauna	Local Ecological Assessment *Section 2.1.3* Regional Ecological Assessment

Clause	Description	Response	Cross-Reference
		because of the elevated lower tip height and undergrounding of powerlines.	*Section 2.2.7* Ecological Impact Assessment *Appendix 2: Ecological Impact Report* Summative Assessment: *Section 5.13: Flora and Fauna Impact Assessment* Hydrology *Section 5.15: Hydrology and Water Quality Impact Assessment*
	The impact of the facility on cultural heritage	No material impact on Aboriginal and non-Aboriginal cultural heritage.	*Section 5.16: Impact Assessment on Aboriginal and Non-Aboriginal Heritage*
	The impact of the facility on aircraft safety	No material impact on aircraft safety.	*Section 5.17: Aircraft Safety* *Appendix 6: Aviation Impact Report*
	Policy and Planning Guidelines for Development of Wind Energy Facilities in Victoria (Department of Environment, Land, Water and Planning, March 2019)	Management plans and assessments have been completed consistent with the Policy and Planning Guidelines for Development of Wind Energy Facilities in Victoria	Management Plans: *Section 5.12: Development Plans and Management Plans*
	The New Zealand Standard NZS6808:2010, Acoustics - Wind Farm Noise	Acoustic assessment contains internal audit showing compliance with NZS6808:2010. EPA Audit also provided.	*Appendix 3: Noise Impact Report*
52.32-7	**Anemometer** Despite anything to the contrary in this scheme a permit may be granted to use and develop land for the purpose of wind measurement by an anemometer for a period of more than three years.	A temporary 120 m mast instrumented with anemometers and vanes is installed on site. Airservices Australia have assessed the impact of the anemometer installation. Upon granting of this permit, the temporary mast will be permanent.	*Figure 32: Site layout showing full construction impact.* *Appendix 6: Aviation Impact Report*
52.32-8	**Application to amend a permit under section 72 of the Act** An application to amend a permit made under section 72 of the Act is exempt from the	Not applicable: new planning permit.	

Clause	Description	Response	Cross-Reference
	decision requirements of section 64(1), (2) and (3) and the review rights of section 82(1) of the Act if the - amendment of the permit does not: increase the number of turbines; or - change the location of a turbine so that the centre of the tower (at ground level) is located closer to an existing dwelling (within one kilometre of a permitted turbine) than the centre of the tower (at ground level) of the closest permitted turbine to that dwelling		
52.32-9	**Application to amend a permit under section 97I of the Act** An application to amend a referred wind energy facility permit made under section 97I of the Act is wholly exempt from the requirements of section 97E(1) of the Act if the application does not seek to: - increase the total number of turbines; or - increase the maximum height of any turbine; or - change the location of a turbine so that the centre of the tower (at ground level) is located closer to an existing dwelling (within one kilometre of a permitted turbine) than the centre of the tower (at ground level) of the closest permitted turbine to that dwelling. The requirements of section 97E(1) of the Act	Not applicable: new planning permit. 	

Clause	Description	Response	Cross-Reference
	are modified so as to require referral of objections and submissions to an advisory committee established undersection 151 of the Act if an application to amend a referred wind energy facility permit made under section 97I of the Act does not seek to: - increase the total number of turbines by more than 15%; or - increase the maximum height of any turbine by more than 20%; or - change the location of a turbine so that the centre of the tower (at ground level) is located closer to an existing dwelling (within one kilometre of a permitted turbine) than the centre of the tower (at ground level) of the closest permitted turbine to that dwelling.		

Table 12: Assessment against VPP Clause 52.17

Clause	Description	Response
52.17-1	**Permit Requirements** A permit is required to remove, destroy or lop native vegetation, including dead native vegetation unless: • Clause 52.17-7 provides an exemption • A relevant vegetation precinct plan is in place • A schedule to this clause provides an exemption	A permit is required to remove the 0.127 ha of native vegetation in the road reserve at the site entrance and along the powerline route. • There is no exemption under Clause 52.17-7. • No relevant vegetation precinct plan is in place. • Schedule 52.17 does not provide an exemption.
52.17-2	**Application Requirements** An application to remove, destroy or lop native vegetation must comply with the application requirements specified in the *Guidelines for the removal, destruction or lopping of native vegetation* (DELWP, 2017) (the	Application requirements are addressed in this Planning Report and EHP's Biodiversity Assessment, provided in Appendix 2: Ecological Impact Report, specifically:

	Guidelines). Application requirements specified in the Guidelines are provided below: 1. Information about the native vegetation to be removed, including: • The assessment pathway and reason for the assessment pathway. This includes the location category of the native vegetation to be removed. • A description of the native vegetation to be removed that includes: - whether it is a patch or a scattered tree (or both) - the extent (in hectares) - the number and circumference (in centimetres measured at 1.3 metres above ground level) of any large trees within a patch - the number and circumference (in centimetres measured at 1.3 metres above ground level) of any scattered trees, and whether each tree is small or large - the strategic biodiversity value score - the condition score - if it includes endangered Ecological Vegetation Classes - if it includes sensitive wetland or coastal areas. • Maps showing the native vegetation and property in context and containing: - scale, north point and property boundaries - location of any patches of native vegetation and the number of large trees within the patch proposed to be removed location of scattered trees proposed to be removed, including their size • The offset requirement, determined in accordance with section 5 of the Guidelines, that will apply if the native vegetation is approved to be removed. Note: A report from DELWP systems and tools contains information required to address this application requirement.	1. EHP have prepared a Scenario Testing Native Vegetation Removal (NVR) report and submitted relevant mapping files to DELWP. The final NVR report addresses all the items required in Item 1. This is provided in Appendix 3 of EHP's Biodiversity Assessment, provided in Appendix 2: Ecological Impact Report. The NVR report demonstrates that there is an offset requirement of 0.044 General Habitat Units. 2. Relevant land information, including mapped wetlands and waterways is presented in Figures 1 and 2 in EHP's Biodiversity Assessment, while elevation data is presented in Figure 3 of this report. 3. Photographs of vegetation to be removed are provided in Plates 4 and 5 in EHP's Biodiversity Assessment, provided in Appendix 2: Ecological Impact Report. 4. No native vegetation has been approved or approved to be removed on the site or contiguous land in the same ownership in the last five years. 5. Avoid and Minimise statement is provided in Section 6.1 of EHP's Biodiversity Assessment, provided in Appendix 2: Ecological Impact Report. 6. No Property Vegetation Plan is in place. 7. Vegetation removal is not directly related to defendable space, however, one of the areas of vegetation removal is related to the undergrounding of powerlines, which eliminates a key bushfire risk. 8. Application is made under Clause 52.17; thus item 8 is not applicable. 9. Evidence of availability of suitable offsets is

	2. Topographic and land information relating to the native vegetation to be removed, showing ridges, crests and hilltops, wetlands and waterways, slopes of more than 20 percent, drainage lines, low lying areas, saline discharge areas, and areas of existing erosion, as appropriate. This may be represented in a map or plan. 3. Recent, dated photographs of the native vegetation to be removed. 4. Details of any other native vegetation approved to be removed, or that was removed without the required approvals, on the same property or on contiguous land in the same ownership as the applicant, in the five year period before the application for a permit is lodged. 5. An avoid and minimise statement. The statement describes any efforts to avoid the removal of, and minimise the impacts on the biodiversity and other values of native vegetation, and how these efforts focussed on areas of native vegetation that have the most value. The statement should include a description of the following: • Strategic level planning – any regional or landscape scale strategic planning process that the site has been subject to that avoided and minimised impacts on native vegetation across a region or landscape • Site level planning – how the proposed use or development has been sited or designed to avoid and minimise impacts on native vegetation. • That no feasible opportunities exist to further avoid and minimise impacts on native vegetation without undermining the key objectives of the proposal. 6. A copy of any Property Vegetation Plan contained within an agreement made pursuant to section 69 of the Conservation, Forests and Lands Act 1987 that applies to the native vegetation to be removed. 7. Where the removal of native vegetation is to create defendable space, a written statement explaining why the removal of native vegetation is necessary. This statement must have regard to other	provided in Appendix 4 of EHP's Biodiversity Assessment, provided in Appendix 2: Ecological Impact Report.

	available bushfire risk mitigation measures. This statement is not required when the creation of defendable space is in conjunction with an application under the Bushfire Management Overlay. 8. If the application is under Clause 52.16, a statement that explains how the proposal responds to the Native Vegetation Precinct Plan considerations at decision guideline 8. 9. An offset statement providing evidence that an offset that meets the offset requirements for the native vegetation to be removed has been identified, and can be secured in accordance with the Guidelines. A suitable statement includes evidence that the required offset: • is available to purchase from a third party, or • will be established as a new offset and has the agreement of the proposed offset provider, or • can be met by a first party offset.	
52.17-3	**Property Vegetation Plans** A permit granted to remove, destroy or lop native vegetation in accordance with a property vegetation plan must include the following condition: "This permit will expire if one of the following circumstances applies: The removal, destruction or lopping of native vegetation does not start within two years of the date of this permit. The removal, destruction or lopping of native vegetation is not completed within ten years of the date of this permit."	Application not related to a Property Vegetation Plan.
52.17-4	**Decision guidelines** Before deciding on an application, in addition to the decision guidelines in Clause 65, the responsible authority must consider the decision guidelines specified in the Guidelines as appropriate. The Guidelines specify that applications should be considered on the following bases: 1. Efforts to avoid the removal of, and minimise the impacts on, native vegetation should be commensurate with the biodiversity and other values of the native vegetation, and should focus on areas of	The application satisfies the Guideline requirements through the following: 1. The proposed use (the WEF) has been developed to minimise impacts on native vegetation, whilst minimising impacts on the existing agricultural land use (grazing and cropping). It may be possible to further reduce native vegetation removal by reverting to overhead powerlines – however, the decision to

	native vegetation that have the most value. Taking this into account consider whether: • the site has been subject to a regional or landscape scale strategic planning process that appropriately avoided and minimised impacts on native vegetation • the proposed use or development has been appropriately sited or designed to avoid and minimise impacts on native vegetation • feasible opportunities exist to further avoid and minimise impacts on native vegetation without undermining the key objectives of the proposal 2. The role of native vegetation to be removed in: • Protecting water quality and waterway and riparian ecosystems, particularly within 30 metres of a wetland or waterway in a special water supply catchment area listed in the Catchment and Land Protection Act 1994. • Preventing land degradation, including soil erosion, salination, acidity, instability and water logging particularly: - where ground slopes are more than 20 per cent - on land which is subject to soil erosion or slippage - in harsh environments, such as coastal or alpine areas. • Preventing adverse effects on groundwater quality, particularly on land: - where groundwater recharge to saline water tables occurs - that is in proximity to a discharge area - that is a known recharge area. 3. The need to manage native vegetation to preserve identified landscape values. 4. Whether any part of the native vegetation to be removed, destroyed or lopped is protected under the Aboriginal Heritage Act 2006. 5. The need to remove, destroy or lop native vegetation to create defendable space to reduce the risk of bushfire to life and property, having regard to other available bushfire risk mitigation measures.	underground the powerline results in a small amount of native vegetation removal, but reduces risk to avifauna, reduces bushfire risk and reduces visual impact. At a high level, the project is part of the transition to renewable energy, thus, playing a role in reducing anthropomorphic climate change. 2. The land is not within 30 m of a wetland or waterway, as seen in in Figures 1 and 2 in EHP's Biodiversity Assessment. The land is flat, as shown in Figure 3 of this report. The 0.127 ha of vegetation removal is not likely to have any material impact on groundwater. 3. According to Section 5.3 of EHP's Biodiversity Assessment, provided in Appendix 2: Ecological Impact Report, the operation of the WEF is unlikely to significantly increase cumulative impacts on ecological values within the broader landscape as the wind farm is sited at great distance from other WEFs and the development footprint of the WEF is located within a cleared and uniform landscape, outside the likely common distribution range and/or flight paths of key species that might be potentially impacted by WEFs. 4. None of the vegetation is protected under the Aboriginal Heritage Act 2006. 5. Part of the vegetation removal is to facilitate the undergrounding of a powerline from the WEF to CHM. One advantage of this approach is to minimise bushfire risk. 6. No Property Vegetation Plan is in place. 7. Evidence of availability of suitable offsets is provided in Appendix 4 of EHP's Biodiversity

	6. Whether the native vegetation to be removed is in accordance with any Property Vegetation Plan that applies to the site. 7. Whether an offset that meets the offset requirements for the native vegetation to be removed has been identified and can be secured in accordance with the Guidelines. 8. For Clause 52.16 applications, consider in relation to the native vegetation to be removed: • The purpose and objectives of the Native Vegetation Precinct Plan. • The effect on any native vegetation identified for retention in the Native Vegetation Precinct Plan. • The potential for the effectiveness of the Native Vegetation Precinct Plan to be undermined. • The potential for the proposed development to lead to the loss or fragmentation of native vegetation identified for retention in the Native Vegetation Precinct Plan. • Offset requirements in the Native Vegetation Precinct Plan. 9. For applications in both the Intermediate and Detailed Assessment Pathway only – consider the impacts on biodiversity based on the following values of the native vegetation to be removed: • The extent. • The condition score. • The strategic biodiversity value score. • The number and circumference of any large trees. • Whether it includes an endangered Ecological Vegetation Class. • Whether it includes sensitive wetlands or coastal areas 10. For applications in the Detailed Assessment Pathway only – consider the impacts on habitat for rare or threatened species. Where native vegetation to be removed is habitat for rare or threatened species according to the Habitat importance maps, consider the following: • The total number of species' habitats. • The species habitat(s) that require a species offset(s).	Assessment, provided in Appendix 2: Ecological Impact Report. 8. This application is not made under Clause 52.16. 9. According to Section 3.4.1 of EHP's Biodiversity Assessment, provided in Appendix 2: Ecological Impact Report, the areas of vegetation to be removed are dominated by exotic pasture grasses and are therefore considered unlikely to support significant species. 10. This application falls under the Intermediate pathway.

	• The proportional impact of the native vegetation removal on the total habitat for each species, as calculated in section 5.3.1. • The conservation status of the species (per the Advisory Lists maintained by DELWP). • Whether the habitats are highly localised habitats, dispersed habitats, or important areas of habitat within a dispersed species habitat	
52.17-5	**Offset Requirements** If a permit is required to remove, destroy or lop native vegetation, the biodiversity impacts from the removal, destruction or lopping of native vegetation must be offset, in accordance with the Guidelines. The conditions on the permit for the removal, destruction or lopping of native vegetation must specify the offset requirement and the timing to secure the offset.	Suitable offsets are available and can be secured prior to work commencing.
52.17-6	**Transitional Provisions** Transition associated with Amendment VC138.	Not Applicable.
52.17-7	**Exemptions** Table of exemptions.	None relevant to the current activity.

Table 13: Decision requirements specified under LPP Clause 42.01 SCHEDULE 2 TO THE ENVIRONMENTAL SIGNIFICANCE OVERLAY

Clause	Description	Response	Cross-Reference
1.0	**Statement of environmental significance** The Red-tailed Black Cockatoo (Calyptorhynchus banksii graptogyne) of south-eastern Australia has been classified as an endangered species. The current population is estimated at about 1000 birds with approximately 600 – 700 breeding birds. The Red-tailed Black Cockatoo is a highly nomadic species and its population ranges throughout parts of the West Wimmera Shire Council and the Glenelg Shire Council in Victoria, as well as part of the Tatiara District	SERTBC are known to frequent the region; it is not known if they frequent the site of the WEF. The Environmental Significance Overlay 2 covers the site. The proponent has sponsored studies into the behaviour of the SERTBC, specifically the flight height to better understand potential impacts of the WEF on the bird. Clearing of hollow-bearing trees and mature Buloke is avoided.	*Appendix 2: Ecological Impact Report*

	Council, Naracoorte-Lucindale Council, Wattle Range Council, and District Council of Grant in South Australia. The absence of Red-tailed Black Cockatoos from a locality within its range does not mean that the locality does not provide habitat for this species. The Red-tailed Black Cockatoo's Stringybark feeding habitat is mainly located on public land while its Buloke feeding and eucalyptus nesting habitat is mainly located on private land. Live and dead hollow bearing eucalypts provide suitable nesting sites for the species, while seed producing Buloke (Allocasuarina leuhmannii) and Stringybark (Eucalyptus baxteri, Eucalyptus arenacea) provide feeding habitat for the species. Buloke have separate male and female trees and both male and female trees are required to allow female trees to produce seed. The feeding and nesting habitat of the Red-tailed Black Cockatoo must be protected in order to secure the long term survival of the species. The aim of the national Red-tailed black cockatoo recovery program is to increase the size of the current population. It is therefore important to ensure that there are adequate nesting and feeding resources available to support an expanded population into the future.	No permit requirement is triggered under LPP Clause 42.01 Schedule 2 to the Environmental Significance Overlay.	
2.0	**Environmental Objectives** - To protect the habitat of the endangered Red-tailed Black Cockatoo. - To ensure the availability of suitable nesting sites for the Red-tailed Black Cockatoo through the protection of live and dead hollow bearing trees and other suitable trees within the bird's known nesting area.		

	- To protect the feeding habitat of the Red-tailed Black Cockatoo through the retention of Buloke and Stringybark trees.		
3.0	**Permit Requirement** A permit is not required - to construct a building or construct or carry out works. - to remove, destroy or lop vegetation in accordance with a Property Management Plan approved by the responsible authority and endorsed by Department of Sustainability and Environment. - to remove, destroy or lop any dead vegetation, except dead eucalyptus trees with a trunk diameter greater than 40 centimetres at 1.3 metres above ground level. - to remove, destroy or lop the minimum extent of native vegetation necessary for the maintenance of farm fences. The combined maximum width of clearing permitted either side of the fence is 4m. - to remove, destroy or lop any live vegetation, unless the vegetation is: • a hollow bearing eucalypt tree. • Buloke with a trunk diameter of greater than 20 centimetres at 1.3 metre above ground level. • Buloke with a density of more than 1 tree per 10 hectares of development. • Stringybark with a trunk diameter of greater than 30 centimetres at 1.3 metre above ground level.	Removal of vegetation to construct the WEF constitutes the carrying out of works, however, no relevant trees are proposed to be removed.	*Appendix 2: Ecological Impact Report* Summative Assessment: *Section 5.13: Flora and Fauna Impact Assessment*
4.0	**Application Requirements** An application to remove vegetation must be		

	accompanied by a report which addresses the items below.		
	Provides full details of the vegetation to be removed, destroyed or lopped, including species, age, dimensions and number of plants to be removed, destroyed or lopped.		*Appendix 2: Ecological Impact Report – EHP Biodiversity Assessment: Wombelano West Wimmera Wind Farm, Victoria*
	Identifies whether any Buloke or Stringybark trees: - are in close proximity to other Bulokes to facilitate pollination; - produce large seed crops or have a history of producing large seed crops; and – are known or have been recorded as having been used by Red-tailed Black Cockatoo for feeding.	No Bulokes are proposed to be removed from the 20 ha copse of Buloke trees. No Stringybark trees are on the site.	*Appendix 2: Ecological Impact Report – EHP Biodiversity Assessment: Wombelano West Wimmera Wind Farm, Victoria*
	Includes a detailed, scaled site map showing the location of vegetation proposed to be removed.	NA	*Appendix 2: Ecological Impact Report – EHP Biodiversity Assessment: Wombelano West Wimmera Wind Farm, Victoria, Figure 2B and Figure 2D.*
	Demonstrates conclusively that the vegetation removal is essential	Site access for the large WTGs is not possible without some vegetation removal. The WEF has been designed to minimise the amount of native vegetation removal. Track along southern boundary has been altered to avoid clearing of two mature Bulokes that might otherwise have been removed.	*Appendix 2: Ecological Impact Report– EHP Report: Section 6 Avoid and Mitigate Statement*
	Provides details of the native vegetation offset planned to mitigate the loss of the vegetation.	Offset of the 0.044 General Offset Units are available through Over The Counter offset providers.	*Appendix 2: Ecological Impact Report– EHP Biodiversity*

			Assessment: Wombelano West Wimmera Wind Farm, Victoria, Appendix 3 Offset Availability
5.0	**Decision Guidelines** Before deciding on an application, the responsible authority must consider, as appropriate:		
	Whether the proposal conflicts with the objectives of the overlay	The underlying objective of the overlay is to preserve the SERTBC. This is achieved through the protection of suitable trees (both live, and dead trees with suitable hollows) that provide food and nests. One of the key risk factors identified in the Draft Recovery Plan[22], the update to the SERTBC Recovery Program is the risk of anthropomorphic climate change. Impacts of climate change includes the increase in frequency and intensity of bushfires and the destruction of habitat and food source for the SERTBC. This development seeks to play a part in reducing reliance on fossil fuels and hence helping to curb climate change.	
	The significance of the vegetation identified for removal as nesting and/or feeding sites for the Red-tailed Black Cockatoo	No Stringy Bark, mature Bulokes or hollow-bearing River Red Gum trees will be removed. No evidence of SERTBC nesting.	*Appendix 2: Ecological Impact* Report*Appendix 2: Ecological Impact Report – EHP Biodiversity Assessment: Wombelano West Wimmera Wind Farm,*

[22] Burnard, T., Pritchard, R., National Recovery Plan for the South-eastern Red-tailed Black-Cockatoo, Calyptorhynchus banksii graptogyne, First Draft, 2012. Updated for the 2012 – 2017 period.

			Victoria, Section 3.2.1.
	The significance of vegetation to be removed in relation to the levels of Buloke and Stringybark in the vicinity	NA	*NA*
	Whether the proposed development can be accommodated on land where no Buloke or Stringybark are required to be removed	Avoid and Mitigate Statement highlights the efforts to avoid and minimise impacts on native vegetation.	*Appendix 2: Ecological Impact Report– EHP Biodiversity Assessment: Wombelano West Wimmera Wind Farm, Victoria: Section 6 Avoid and Mitigate Statement*
	Whether proposed vegetation offsets are commensurate with the significance of vegetation to be removed, and particularly if the offset includes the protection of large old trees consistent with the large old tree objectives of Appendix 4 of Victoria's Native Vegetation Management – A Framework for Action, 2002	Off-set requirements have been assessed in accordance with DELWP's 2017 *Guidelines for the removal, destruction or lopping of native vegetation*.	*Appendix 2: Ecological Impact Report – EHP Biodiversity Assessment: Wombelano West Wimmera Wind Farm, Victoria.*
	Whether there are statutory requirements under the Environment Protection and Biodiversity Conservation Act 1999 or the Flora and Fauna Guarantee Act 1988.	Project has been referred for EPBC assessment. DAWE have determined that the project is not a controlled action under the EPBC Act.	*Appendix 2: Ecological Impact Report*
6.0	**Referrals** All applications must be referred in accordance with Section 55 of the Act to the referral authority as specified in the schedule to Clause 66.04.	Clause 66.04 stipulates that the Secretary to the Department of Environment, Land, Water and Planning is the determining referral authority.	

Table 14: Decision requirements specified under VPP Clause 65

Clause	Description	Response	Cross Reference
65	Because a permit can be granted does not imply that a permit should or will be granted. The responsible authority must decide whether the proposal will produce acceptable outcomes in terms of the decision guidelines of this clause.	Only Section 65.01 (Approval of an Application or Plan) is required. Section 65.02 (Approval of an Application to subdivide land) is not relevant.	
65.01	**Approval of an Application or Plan** Before deciding on an application or approval of a plan, the responsible authority must consider, as appropriate, the items below.		
	The matters set out in section 60 of the Act.	Detailed assessment carried out in Table 15.	*Table 15*
	The Municipal Planning Strategy and the Planning Policy Framework.	Addressed in the decision requirements provided in VPP Section 52.32-6.	*Table 11, Section 5.4: Contribution to Government Policy*
	The purpose of the zone, overlay or other provision	*Farming Zone*	*Section 2.1.2: Land Use and Buildings*
	Any matter required to be considered in the zone, overlay or other provision	Development of a WEF in the *Farming Zone* is an activity that requires a permit, subject to the provisions specified in Section 52.32. Clearance of vegetation requires a permit under Schedule 2 of the Environmental Significance Overlay.	Section 52.32 Assessment: *Table 11* *ESO Schedule 2* Assessment: *Table 13*
	The effect on the amenity of the area	Visual impact varies with distance from the WEF. Acoustic assessment completed in accordance with NZS6808:2010.	Visual Assessment: *Section 5.14: Visual Impact Assessment* Acoustic assessment: *Appendix 3: Noise Impact Report*
	The proximity of the land to any public land	The WTGs do not protrude over any public land. Final Development Plans to provide final details of underground powerlines to connect to Charam Zone Substation.	*Figure 10*

	Factors likely to cause or contribute to land degradation, salinity or reduce water quality	Standard engineering solutions will be implemented to ensure that the WEF does not cause or contribute to land degradation, salinity or reduce water quality.	*Section 2.1.5: Hydrology and Water Quality*
	Whether the proposed development is designed to maintain or improve the quality of stormwater within and exiting the site	Standard engineering solutions will be implemented to ensure that the WEF maintains the quality of stormwater within the existing site.	*Section 2.1.5: Hydrology and Water Quality*
	The extent and character of native vegetation and the likelihood of its destruction	Minimal native vegetation to be destroyed.	*Appendix 2: Ecological Impact Report*
	Whether native vegetation is to be or can be protected, planted or allowed to regenerate	Design of WEF has predominantly avoided any impact on native vegetation.	*Appendix 2: Ecological Impact Report*
	The degree of flood, erosion or fire hazard associated with the location of the land and the use, development or management of the land so as to minimise any such hazard	Flood and erosion risks will be mitigated through standard engineering design. Fire hazard will be mitigated through the development of and adherence to the Fire Management and Emergency Management Plan and the Emergency Information Book. Provisions are in place to ensure access for emergency services vehicles, and suitable water storage for firefighting.	*Section 5.12: Development Plans and Management Plans*
	The adequacy of loading and unloading facilities and any associated amenity, traffic flow and road safety impacts	Provisions have been made for hardstand areas, laydown areas and internal tracks, with the final site layout to be provided with the Development Plans. Routes from port to the WEF are well established. Traffic Management Plans will be prepared for movement of equipment to site, and on-site.	*Section 3.3: Site Access* *Section 5.12: Development Plans and Management Plans* *Appendix 4: Traffic Impact Assessment*

Table 15: Assessment of Section 60 of the Planning and Environment Act 1987.

Clause	Description	Response	Cross-Reference

	What matters must a responsible authority consider? Before deciding on an application, the responsible authority must consider—		
1(a)	the relevant planning scheme; and	Relevant Scheme is the West Wimmera Planning Scheme.	*Section 2.2: Regional Context*
1(b)	the objectives of planning in Victoria; and	Planning objectives in Victoria are to promote the construction of Renewable Energy Facilities in appropriate locations.	*Section 5.4: Contribution to Government Policy*
1(c)	all objections and other submissions which it has received and which have not been withdrawn; and	Application not yet on public display.	
1(d)	any decision and comments of a referral authority which it has received; and	Application not yet on public display.	
1(e)	any significant effects which the responsible authority considers the use or development may have on the environment or which the responsible authority considers the environment may have on the use or development; and	These considerations are extensively considered throughout the whole Planning Report and its Appendices.	
1(f)	any significant social effects and economic effects which the responsible authority considers the use or development may have.	Will drive significant economic activity in the West Wimmera LGA.	*Appendix 8: Economic Impact Assessment*
1A	Before deciding on an application, the responsible authority, if the circumstances appear to so require, may consider—		
(b)	the approved regional strategy plan under Part 3A; and	Relevant Part: PART 3A--UPPER YARRA VALLEY AND DANDENONG RANGES--REGIONAL STRATEGY PLAN Not relevant to this Permit.	
(c)	any amendment to the approved regional strategy plan under Part 3A adopted under this Act but not, as at the date on which the application is considered, approved by the Minister; and	Relevant Part: PART 3A--UPPER YARRA VALLEY AND DANDENONG RANGES--REGIONAL STRATEGY PLAN Not relevant to this Permit.	
(d)	the approved strategy plan under Part 3C; and	Relevant Part: PART 3C--MELBOURNE AIRPORT ENVIRONS STRATEGY	

		PLAN Not in the vicinity of Melbourne Airport Environs.	
(e)	any amendment to the approved strategy plan under Part 3C adopted under this Act but not, as at the date on which the application is considered, approved by the Minister; and	Relevant Part: PART 3C--MELBOURNE AIRPORT ENVIRONS STRATEGY PLAN Not in the vicinity of Melbourne Airport Environs.	
(ea)	the approved strategy plan under Part 3D; and	Relevant Part: PART 3D--WILLIAMSTOWN SHIPYARD SITE STRATEGY PLAN Not in the vicinity of Williamtown Shipyard Site.	
(eb)	any amendment to the approved strategy plan under Part 3D adopted under this Act but not, as at the date on which the application is considered, approved by the Minister; and	Relevant Part: PART 3D--WILLIAMSTOWN SHIPYARD SITE STRATEGY PLAN Not in the vicinity of Williamtown Shipyard Site.	
(f)	any relevant State environment protection policy declared in any Order made by the Governor in Council under section 16 of the Environment Protection Act 1970; and	All relevant environmental protection policies are addressed in the Ecological Impact Report.	*Appendix 2: Ecological Impact Report*
(g)	any other strategic plan, policy statement, code or guideline which has been adopted by a Minister, government department, public authority or municipal council; and	Consideration given to Wimmera South Mallee strategic plan.	*Section 5.4: Contribution to Government Policy*
(h)	any amendment to the planning scheme which has been adopted by a planning authority but not, as at the date on which the application is considered, approved by the Minister or a planning authority; and	The Proponent is not aware of any such amendments.	
(i)	any agreement made pursuant to section 173 affecting the land the subject of the application; and	The Proponent is not aware of any agreements made between either the owner of the subject land or future owners of the subject land.	
(j)	any other relevant matter.	The Proponent is not aware of any other relevant matters.	
(1B)	For the purposes of subsection (1)(f), the responsible authority must (where appropriate) have regard to	While the Proponent acknowledges that the WEF may arouse some level of objection, the project is being	

	the number of objectors in considering whether the use or development may have a significant social effect.	developed in accordance with all relevant statutes and legislation to ensure strong economic, environmental and social benefit whilst minimising and mitigating adverse outcomes.	
(2)	The responsible authority must not grant a permit which allows the removal or variation of a restriction (within the meaning of the Subdivision Act 1988) unless it is satisfied that the owner of any land benefited by the restriction (other than an owner who, before or after the making of the application for the permit but not more than three months before its making, has consented in writing to the grant of the permit) will be unlikely to suffer—	Apart from subdivisions that may be required by the electrical utility, this application does not involve the subdivision of any land.	
(a)	financial loss; or	NA	
(b)	loss of amenity; or	NA	
(c)	loss arising from change to the character of the neighbourhood; or	NA	
(d)	any other material detriment—	NA	
	as a consequence of the removal or variation of the restriction.		
(3)	Despite subsection (1)(c), if no notice is required to be given under section 52(1) or 57B or the planning scheme of an application, the responsible authority is not required to consider any objection or submission received in respect of the application before deciding the application.	For consideration by the responsible authority.	
(3A)	If an application for a permit is of a class that is exempted by a planning scheme wholly or in part from the requirements of subsections (1)(b) to (f), (1A) and (1B), the responsible authority is not required to consider the exempted matters before deciding the application.	For consideration by the responsible authority.	

(4)	Subsection (2) does not apply to any restriction which was—		
(a)	registered under the Subdivision Act 1988 ; or	NA	
(b)	lodged for registration or recording under the Transfer of Land Act 1958 ; or	NA	
(c)	Created — before 25 June 1991	NA	
(5)	The responsible authority must not grant a permit which allows the removal or variation of a restriction referred to in subsection (4) unless it is satisfied that—	NA	
(a)	the owner of any land benefited by the restriction (other than an owner who, before or after the making of the application for the permit but not more than three months before its making, has consented in writing to the grant of the permit) will be unlikely to suffer any detriment of any kind (including any perceived detriment) as a consequence of the removal or variation of the restriction; and	NA	
(b)	if that owner has objected to the grant of the permit, the objection is vexatious or not made in good faith.	NA	
(6)	If an application for a permit to remove or vary a restriction referred to in subsection (4) was made on or after 25 June 1991 and the responsible authority had made a decision in respect of the application before the commencement of section 15 of the Planning and Environment (Amendment) Act 1993 , the Tribunal must determine in accordance with subsection (5) any appeal under this Act in respect of that decision.	NA	
(7)	Nothing in subsection (4), (5) or (6) affects the validity of a permit to remove or vary a restriction issued under this Act before the commencement of section	NA	

	15 of the Planning and Environment (Amendment) Act 1993.		

6. CONCLUSION

This planning report has addressed the planning controls associated with the development of the Wombelano Wind Farm in the West Wimmera Shire, with reference to the Victorian Planning Policy Framework, the Victorian Planning Provisions and the Local Planning Provisions of the West Wimmera Shire Council, as well as the Victorian Wind Farm Development Guidelines.

The following planning triggers have been identified:

- VPP Clause 35.07-1 identifies that a permit is required for the construction of a WEF in a *Farm Zone.*
    - Must meet the requirements of VPP Clause 52.32.
- VPP Clause 35.07-1 identifies that a permit is required for the construction of a temporary concrete batch plant in a *Farm Zone*.
- A planning permit is triggered by the removal of native vegetation under LPP 52.17.

The requirements specified in these triggers are addressed in the body of this planning report, with further detailed assessment included in the appendices.

Key benefits of this WEF are:

- the generation of electricity through harvesting the power in the wind – that is, sustainable electricity generation, leveraging an excellent wind resource and the close proximity to an existing zone substation.
- the generation of local investment, with between fifty and seventy-five jobs generated during construction and up to five full-time equivalent positions.
- low impact on existing land use, allowing continued farming on the land, and low amenity impacts on neighbouring dwellings.
- low impact on flora and fauna with only 0.127 ha of native vegetation requiring to be removed (predominantly in road reserve).

The Wombelano Wind Farm is sited and designed in a sensitive manner such that it is consistent with the Victorian Planning Policy Framework and relevant planning provisions. It is a project that, according to the objective specified in Clause 19.01-2 of the framework, ought to be promoted.

The Proponent will submit to the RA Development Plans and associated management plans that are consistent with the design envelope specified in this report for endorsement. Once endorsed, these Development Plans and management plans will form part of the Planning Permit.

APPENDIX 1: PHOTOMONTAGES

This appendix contains:

- Description of the methodology used to develop the photomontages
- Map of the photomontage locations and the included angles of the photomontages
- Photos and photomontages

APPENDIX 2: ECOLOGICAL IMPACT REPORT

The Ecological Impact Report comprises the following documents prepared by suitably qualified experts:

A. Ecological Impact Report Cover Note.
B. Biodiversity Assessment: Wombelano West Wimmera Wind Farm, Victoria, prepared by Ecology and Heritage Partners.
C. Summary of Red-tailed Black-Cockatoo flight behaviour investigation for Wombelano Wind Farm, prepared by Biosis.
D. EPBC Referral to the DAWE.
E. DAWE referral assessment.

A. COVER NOTE

In preparing this planning application, the Proponent first engaged Ecology and Heritage Partners (EHP) to prepare a Biodiversity Assessment (Appendix 2.B). Upon review of the work by EHP it was clear that the majority of the work that they had completed was appropriate and fit for purpose. However, it was felt that the risk that the WEF may pose to the SERTBC had not been sufficiently addressed. In early stage meetings with DELWP, and in particular, the Grampians Regional Biodiversity Team, it became abundantly clear that the assessment of the wind farm in the context of the SERTBC was insufficient.

As a result, the Proponent engaged Biosis to assess the risk that the WEF may pose to the SERTBC. As the SERTBC is nomadic, it was noted by DELWP, EHP and Biosis that there was little to be gained by watching for the species on site, as it was possible that the species may never cross the site. Thus, Biosis proposed to assess the flight height of the SERTBC at locations that were known to be hosting the birds. This study (Appendix 2.C) demonstrated that the WEF, with lower tip height of 55 m, would pose negligible risk to the SERTBC population.

During consultation with DELWP, the Grampians Regional Biodiversity Team were insistent that the project be referred under the EPBC Act. As such, an EPBC Referral was prepared and submitted to DAWE (Appendix 2.D). The EPBC determination was that the development and operation of the WEF is not a controlled action (Appendix 2.E).

Between the time of EHP's original assessment and this planning submission, legislation changed to include the wind farm connection assets as part of the definition of the WEF rather than as Minor Utility Installations. At the time of the original Biodiversity Assessment, the connection assets were not considered to be part of the WEF, but rather a Minor Utility Installation, not requiring a planning permit. In consultation with DELWP and EHP, the opportunity was taken to generate an updated Biodiversity Assessment and incorporate project design changes into the assessment.

Key changes included avoiding the removal of two large River Red Gums and two mature Bulokes, which was part of the previous design; including the commitment to undergrounding the connection asset; and the proposal of a new site entrance that avoided removal of said River Red Gums. These changes were incorporated, as was the survey of the powerline route in the road reserve between the WEF and the substation: CHM.

APPENDIX 3: NOISE IMPACT REPORTS

This Appendix consists of the following documents:

A. Wombelano Wind Farm Environmental Noise Assessment, prepared by Resonate Consultants.
B. Pre-Construction Noise Assessment Audit, prepared by Infotech Research.

APPENDIX 4: TRAFFIC IMPACT ASSESSMENT

This Appendix consists of the following document:

- Traffic Impact Assessment, prepared by Cardno.

APPENDIX 5: ELECTRO-MAGNETIC INTERFERENCE REPORT

This Appendix consists of the following document:

- Electro-Magnetic Interference Assessment, prepared by Wind Projects Australia.

APPENDIX 6: AVIATION IMPACT REPORT

The Aviation Impact Report includes:

A. Aviation Impact Assessment, completed by Landrum & Brown Worldwide (Australia) Pty Ltd
B. Correspondence with Airservices Australia

APPENDIX 7: BOOKLET OF MAPS

This Appendix consists of maps, plans and elevations from this Planning Report proper (Appendix 7A) and from EHP's Biodiversity Assessment, found in Appendix 2: Ecological Impact Report (Appendix 7B).

Appendix 7A consists of the following figures from this Planning Report:

- Figure 1: Location of Wombelano Wind Farm – Local context.
- Figure 2: Grid connection envelope.
- Figure 3: Elevation contours near Wombelano Wind Farm. 10 m contours are shown.
- Figure 5: CHMP Trigger on Crown Allotment 48A, existing electrical infrastructure and powerline easement, and aerial imagery showing drainage channels across the site.
- Figure 7: Buildings located on Crown Allotment 48A Parish of Wombelano: Sheds.
- Figure 9: Council zoning in the vicinity of the WEF. Property boundary of Crown Allotment 48A is shown in yellow.
- Figure 10: Dwellings, lakes, National Parks, conservation reserves within 5 km of the site.
- Figure 11: Location Plan.
- Figure 12: Air routes and Airports/ALAs in the vicinity of the site.
- Figure 13: Location of photographs to and from the site.
- Figure 30: Areas of Cultural Sensitivity in the wind farm region, per the Aboriginal Cultural Heritage Information Service online mapping tool
- Figure 31: Wombelano Wind Farm regional context: proximity to nearby wind farms and National Parks.
- Figure 32: Site layout showing full construction impact.
- Figure 33: Site layout showing impact through operation of WEF.
- Figure 34: Connection route envelope.
- Figure 35: Elevation of V162 WTG, illustrating maximum upper tip height (250 m), showing clearance above minimum lower tip height (55 m). The tower design is based on the design for a concrete tower with the base diameter being 9 m. Drawing is to scale.
- Figure 36: Location of impacted vegetation and required tree clearing from EHP's Biodiversity Assessment (Appendix 2: Ecological Impact Report).
- Figure 37: Indicative substation layout for the 66 kV substation connection scenario, including Operations and Maintenance Building and car parking.
- Figure 38: Control building, switchyard and battery bank elevations.
- Figure 39: Elevations of substation equipment.
- Figure 40: Elevations of substation equipment.
- Figure 41: Elevations of substation equipment.
- Figure 42: Setbacks from WTG 1.
- Figure 43: Setbacks from WTG 2.
- Figure 44: Setbacks from WTG 3.
- Figure 45: Setbacks from WTG 4.
- Figure 46: Setbacks from WTG 5.
- Figure 47: Setbacks from WTG 6.
- Figure 48: Setbacks from WTG 7.
- Figure 49: Setbacks from Bulokes on southern boundary (Trees 71 and 100).
- Figure 50: Swept path analysis of loaded blade truck around Bulokes on southern boundary (Trees 71 and 100).

- Figure 51: 11.1 m wide construction track passing by Tree 43, as mapped by EHP in their Biodiversity Impact Assessment presented in Appendix 2: Ecological Impact Report. Tree 43 is a Allocasuarina luehmannii with a diameter at breast height of 0.52 m.
- Figure 52: 11.1 m wide construction track passing by Tree 96, as mapped by EHP in their Biodiversity Impact Assessment presented in Appendix 2: Ecological Impact Report. Tree 96 is a Allocasuarina luehmannii with a diameter at breast height of 0.56 m. TPZ is impinged by 1.5 m or 6.1%. Impinging by more than 2.1 m corresponds to more than 10% of the TPZ, in which case the tree would be considered impacted.
- Figure 53: Setback of dwellings within 3 km of site from WTG micro-siting areas.
- Figure 54: Distance of state/national parks, forests, wetlands and streams from WTGs.
- Figure 55: Overlay of swept path from Appendix 4: Traffic Impact Assessment over vegetation removal map from Figure 2B of Appendix 2: Ecological Impact Report.
- Figure 56: Indicative concrete batch plant layout.
- Figure 57: Bushfire Management Overlay (BMO) overlapping the south-eastern corner of the site.
- Figure 58: Location of dwellings relative to shadow flicker impact threshold buffer. Setback of 1139.5 m is from the micro-siting area, which corresponds to 265 × 4.3 m.
- Figure 62: Swamps and lakes are present within 5 km of the site. Large areas of dense vegetation are also present.
- Figure 63: Aerial imagery of broader region.
- Figure 66: Aerial imagery showing Nature Conservation Reserves and State Parks in the vicinity of the site.
- Figure 68: Zone of Visual Influence (ZVI) analysis.
- Figure 69: Land use map.
- Figure 70: Noise model map from Resonate's noise study.

Appendix 7B consists of the following figures extracted from EHP's Biodiversity Assessment, found in Appendix 2: Ecological Impact Report:

- Figure 1: Location of the study area.
- Figure 2: Overview Ecological values
- Figure 2a: Ecological values
- Figure 2b: Ecological values
- Figure 2c: Ecological values
- Figure 2d: Ecological values
- Figure 3: Previously documented significant flora within 10 km of the study area
- Figure 4: Previously documented significant fauna within 10 km of the study area

APPENDIX 8: ECONOMIC IMPACT ASSESSMENT

This Appendix contains the following report:

- Economic Benefit Statement, prepared by Wind Projects Australia.

APPENDIX 9: GEOTECHNICAL SURVEY

A. Geotechnical Investigation prepared by Australian Geotechnical Testing
B. Correspondence with Wimmera Catchment Management Authority

APPENDIX 10: PROPOSED PERMIT CONDITIONS

This Appendix contains the proposed permit conditions for the Wombelano Wind Farm.

APPENDIX 11: LAND TITLES

This Appendix contains the following Land Titles and Plans:

A. Title – Crown Allotment 48A Parish of Wombelano
B. Plan – Crown Allotment 48A Parish of Wombelano
C. Title – Lot 2 on Plan of Subdivision 532436T
D. Plan – Lot 2 on Plan of Subdivision 532436T
E. Title – Lot 1 on Plan of Subdivision 532436T
F. Plan – Lot 1 on Plan of Subdivision 532436T

APPENDIX 12: ANEMOMETRY

This appendix contains the as-built drawings for the on-site anemometry.

APPENDIX 13: TYPICAL CONSTRUCTION DRAWINGS

The following drawings are appended to provide indicative designs for various construction elements. These are not representative of highest or lowest impact design, but rather what a typical design will look like.

The following drawings are included:

A. 4.5 m road cross-section.
B. Cable trench cross-section (dual circuit).
C. WTG Assembly Area (including crane pads and lay-down areas).
D. Tower-climbing crane for use with concrete towers.

APPENDIX 14: BLADE THROW RISK ASSESSMENT

Blade throw risk assessment prepared by the Proponent.