

# Golden Plains Wind Farm

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Application to Amend Planning Permit PA1700266

Appendix G: Condition 1 Requirements

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PLAN**

## DOCUMENT HISTORY and STATUS

The following table outlines the revisions made to this document

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## TABLE OF CONTENTS

DOCUMENT HISTORY and STATUS .....	I
TABLE OF CONTENTS .....	II
FIGURES AND TABLES .....	III
1    CONDITION 1 REQUIREMENTS.....	4
2    BROLGA BUFFER ZONE.....	5
3    BATHS SWAMP AND REALIGNMENT OF THE OVERHEAD TRANSMISSION LINE INFRASTRUCTURE.....	6
4    TERMINAL STATION .....	8
5    BUSINESS IDENTIFICATION SIGNAGE .....	11
6    AUSNET TRANSMISSION GROUP EASEMENT .....	14
7    AVIATION SAFETY LIGHTING .....	15
8    BATTERY ENERGY STORAGE SYSTEM (BESS) .....	16

## FIGURES AND TABLES

Figure 1: Brolga Buffer Zones (see also Appendix B.4).....	5
Figure 2: Baths Swamp and 228 WTG layout .....	6
Figure 3: Avoidance of Baths Swamp - 215 WTG layout (see also Appendix A.3) .....	7
Figure 4: Terminal Station location - 228 WTG layout (see also Appendix A.4) .....	9
Figure 5: Terminal Station Location - 215 WTG layout (see also Appendix A.4) .....	10
Figure 6: Business Identification Signage locations (see also Appendix B.5.1).....	12
Figure 7: Business Identification Signage design (see also Appendix B.5.2).....	12
Table 1: Business Identification Signage detail.....	11

## 1 CONDITION 1 REQUIREMENTS

As detailed the Application to amend Planning Permit PA1700266, the remaining subsections of Condition 1 will remain unchanged. This report demonstrates the 215 WTG layout's compliance with the remaining subsections of Condition 1.

The plans required under Condition 1 of the Permit form Appendix B of this submission and have been submitted for the Minister's assessment and endorsement.

## 2 BROLGA BUFFER ZONE

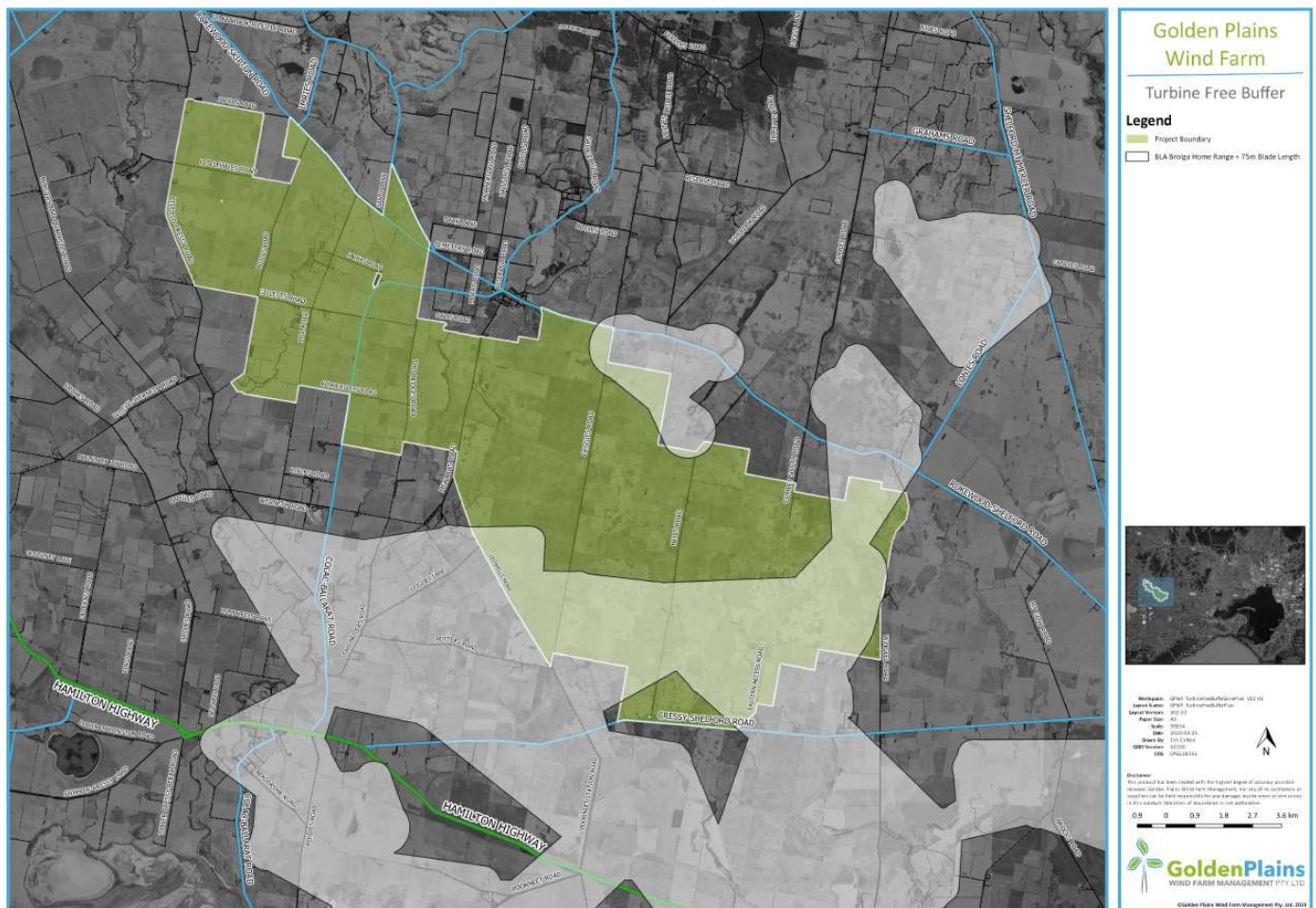
Condition 1c of the Planning Permit states:

*turbine free buffer zones for Brolga in accordance with Document 86 presented to the Golden Plains Wind Farm EES Inquiry and Panel, 'Brett Lane & Associates Plan, BL&A Habitat model turbine free buffers', with the final boundaries to be agreed with DELWP Environment Portfolio*

The plans in Appendix B.4 detail the Project area and the location of the WTG free buffer zones for Brolga as required under condition 1(c) of the Permit. The WTG free buffers shown on the plan aligns with those shown in Document 86 presented to the EES Inquiry panel and are reproduced in Figure 1 below. No changes or modifications have been made to the location of the buffers that were presented to the Inquiry panel.

The WTG free buffer zones for Brolga has also been shown on all layout plans to demonstrate that all WTGs (including blade overhang with a 165m rotor) in the 215 WTG layout have been located outside the buffer area as required by condition 1c of the Permit.

Figure 1: Brolga Buffer Zones (see also Appendix B.4)



### 3 BATHS SWAMP AND REALIGNMENT OF THE OVERHEAD TRANSMISSION LINE INFRASTRUCTURE

Condition 1d of the Permit requires:

*realignment of the proposed grid connection powerline between the collector station on Bells Road and the 500kV terminal station on Geggies Road to avoid Baths Swamp and associated peripheral wetland dependent vegetation*

This condition of the Permit remains unchanged as a result of this amendment application.

Figure 2 is taken from the Development Plans submitted with the original PPA which shows the overhead transmission line (in yellow) and the collector station (in blue) in close proximity to Baths Swamp.

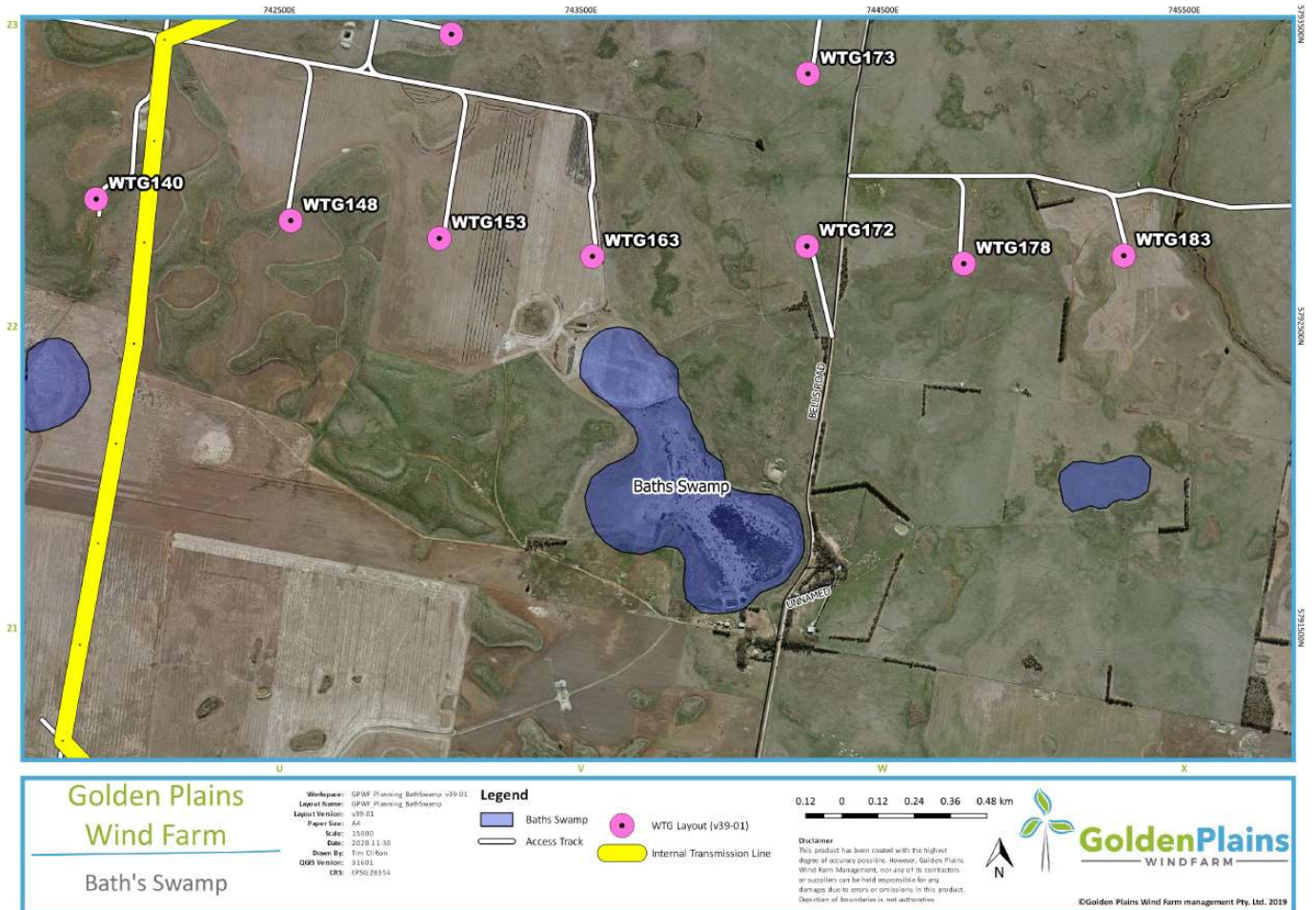
Figure 2: Baths Swamp and 228 WTG layout



In response to the requirement to avoid Baths Swamp and associated peripheral wetland dependant vegetation, the Collector Station on Bells Road has been relocated north. The overhead transmission line infrastructure from the Collector Station to the 500kV Terminal Station now completely avoids Bath Swamp and surrounding wetland dependent vegetation as required by the Permit. The location of Baths Swamp has been added to the revised development plans demonstrating the avoidance of the swamp.

Figure 3 provides a close examination of the modifications to the Collector station and overhead line infrastructure in relation to Baths Swamp to comply with Condition 1d of the Permit.

Figure 3: Avoidance of Baths Swamp - 215 WTG layout (see also Appendix A.3)





## 4 TERMINAL STATION

The EES and PPA processes assessed and approved, respectively, the location of the Terminal Station on a property near Geggies Road, Barunah Park. This location and relevant condition of the Permit remain unchanged as a result of amendment application.

The location of the Terminal Station allows for direct access to the existing 500kV overhead transmission line infrastructure. The location will be the point where the infrastructure built for the project will connect into the existing electricity infrastructure that forms the National Electricity Market (NEM).

In recommending planning approval for the Terminal Station and its associated infrastructure, the Minister's Assessment of the EES considered the following recommendation of the Inquiry panel:

*Define the boundary for wetland 25 from the edge of the Plains Grassy Wetland Ecological Vegetation Class as mapped in the vegetation assessment, not the edge of the wetland. The final boundary of the terminal station site should be determined in conjunction with Department of Environment Land Water and Planning - Environment.<sup>1</sup>*

This recommendation of the Inquiry panel ultimately informed Condition 1e of the Permit which requires the Development Plans to include:

*1.e clear delineation of the boundary for the transmission station site, which must not intrude into the boundary of the Plains Grassy Wetland Ecological Vegetation Class boundary. The boundary of the transmission site must be approved by DELWP Environment Portfolio.<sup>2</sup>*

Figure 4 shows the location of the Terminal Station as assessed by the Inquiry panel, EES and PPA process. The Terminal Station (shown in purple) was directly adjacent to the existing transmission line infrastructure and was directly abutting wetland 25 (outlined in blue) and the Plains Grassy Wetland Ecological Vegetation Class as mapped in the vegetation assessment (shown in orange).

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<sup>1</sup> Golden Plains Wind Farm, Assessment under *Environment Effects Act 1978*, Minister for Planning, October 2018, Table 6 No. 3

<sup>2</sup> Planning Permit No: PA1700266, pp. 5

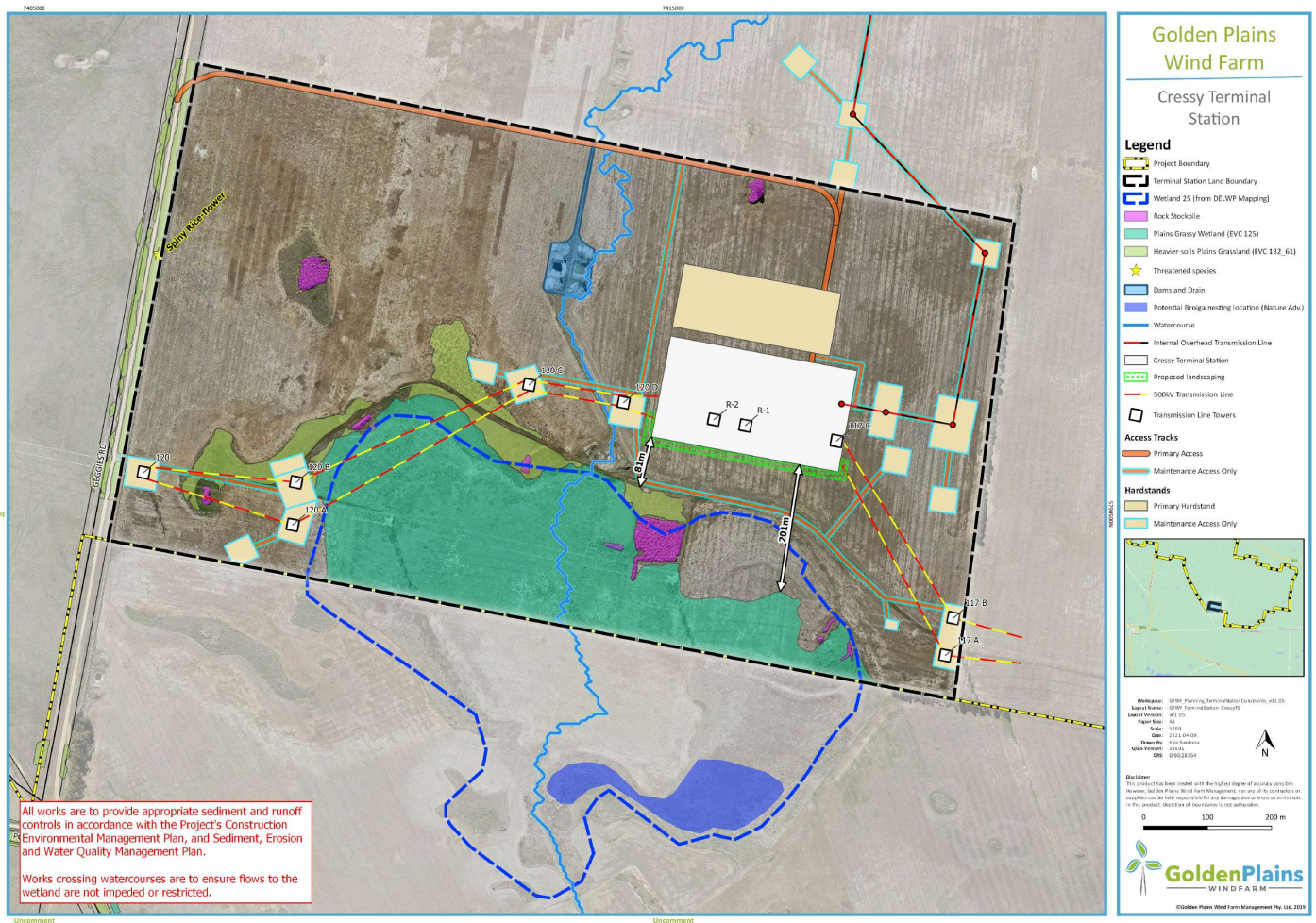
Figure 4: Terminal Station location - 228 WTG layout (see also Appendix A.4.1)



After further consideration of the recommendations of the Inquiry Panel and the Minister’s Assessment, negotiations with the host landholder and consultation with DELWP Environment Portfolio, the Terminal Station was moved to provide greater separation from wetland 25 and the Plains Grassy Wetland Ecological Vegetation Class (EVC) as mapped in the vegetation assessment.

Figure 5 shows the revised location of the Terminal Station to ensure avoidance to wetland 25 and associated peripheral wetland vegetation. This location ensures separation between the Plains Grassy Wetland EVC as required by condition 1e of the Permit, while allowing for the location of the access track and internal overhead transmission line infrastructure to remain clear of the wetland and EVC.

Figure 5: Terminal Station Location - 215 WTG layout (see also Appendix A.4.2)



GPWFM’s consultation with DELWP Environment regarding the location of the Terminal Station is outlined in Section 10.4 of the Application to Amend Planning Permit PA1700266.

DELWP Environment provided confirmation in August 2020 that the Terminal Station location was acceptable, and GPWFM recently provided a refined layout that further reduces impacts on native vegetation while increasing the separation distance to wetland 25. This updated layout is included in Appendix A.4 of the Application.

## 5 BUSINESS IDENTIFICATION SIGNAGE

Condition 1f requires:

*The final design and location of any proposed business identification signage*

Six business identification signs will be installed across five locations within the Project area. The specifications of the business identification signs meet the Victoria Planning Provisions (VPP) definition:

*A sign that provides business identification information about a business or industry on the land where it is displayed. The information may include the name of the business or building, the street number of the business premises, the nature of the business, a business logo or other business identification information.<sup>3</sup>*

Table 1 outlines the detail of each Business Identification Sign:

*Table 1: Business Identification Signage detail*

Business Identification Signage	Details
Branding of operator	Golden Plains Wind Farm Management Pty Ltd
Name of Project	Golden Plains Wind Farm
Dimensions of signs	1200mm (h) X 1800mm (w)
Illumination	No
Materials	Non-reflective Aluminium

A detailed site plan showing the location of the business identification signs is included at Appendix B.5 and an overview of the locations is included in Figure 6. A fully dimensioned plan of the signage content, as described in the table above, is included in Appendix B.5 and shown in Figure 7.

<sup>3</sup> Victoria Planning Provisions, cl. 73.02

Figure 6: Business Identification Signage locations (see also Appendix B.5)

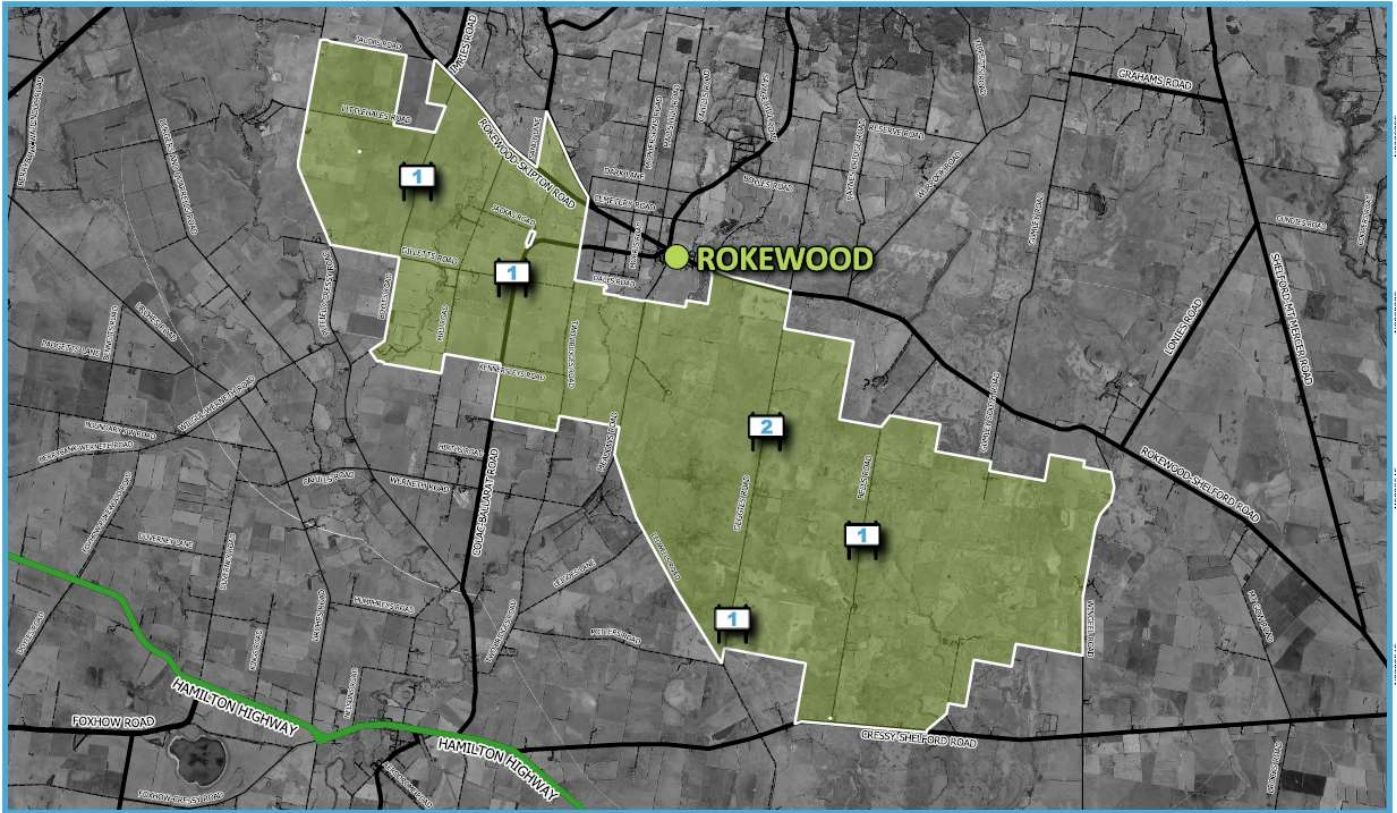


Figure 7: Business Identification Signage design (see also Appendix B.5)


# Golden Plains Wind Farm

## <Infrastructure Type>

<information on project specifications  
eg. number of turbines, MW, type of turbines>

<p>For all project enquiries:</p> <p><a href="http://www.goldenplainswindfarm.com.au">www.goldenplainswindfarm.com.au</a></p> <p><a href="mailto:info@goldenplainswindfarm.com.au">info@goldenplainswindfarm.com.au</a></p> <p>(03) 0000 0000</p>	<p>Principal contractor details:</p> <p>Name _____</p> <p>ABN _____</p> <p>Contact: (03) 0000 0000</p>
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Principal Partner logos



1200mm

1800mm

It is noted that directional and other safety signage will also be present within the Project area to assist during construction and ongoing maintenance of the facility. All direction signs will meet the VPP definition and do not require planning permission:

*A sign not exceeding 0.3 square metre that directs vehicles or pedestrians. It does not include a sign that contains commercial information<sup>4</sup>.*

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<sup>4</sup> Victoria Planning Provisions, cl. 73.02

## 6 AUSNET TRANSMISSION GROUP EASEMENT

Condition 1h of the Permit states:

*no buildings or structures (are permitted) on the existing Ausnet Transmission Group easement, except for access tracks, underground cables and interface works required for the connection of the wind farm electrical system to the existing 500kV Moorabool to Mortlake/Tarrone transmission line.*<sup>5</sup>

The 215 WTG layout complies with condition 1h by ensuring that all wind farm infrastructure is located clear of the AusNet Transmission Group easement (except for an underground cable that crosses between two existing pylons). The only works (other than the underground cable) proposed within the easement are directly related to the interface between the Project and the existing transmission line.

The full extent and width of the AusNet Transmission Group easement (also known as the 500KV Moorabool – Mortlake/Tarrone Transmission Line) is shown on the Development Plans at Appendix B.1.

AusNet Services has provided written confirmation that no buildings or structures shown on the Development Plans are within their easement. A copy of the AusNet Services letter is at Appendix D.5. The letter further confirms that the layout shown on the Development Plans complies with condition 1h of the Permit.

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<sup>5</sup> Planning Permit No: PA1700266, pp. 5

## 7 AVIATION SAFETY LIGHTING

In accordance with Condition 1i of the Permit, no aviation safety lighting will be utilised on any turbine within the Project. The Aviation advice prepared by Chiron Aviation Consultants summarised:

*...given that the airspace volume of the Golden Plains Wind Farm has not increased, the findings of the submitted Aeronautical Impact Assessment remain valid and aviation obstacle lighting is not required.*

<sup>6</sup>.

The requirement for no aviation safety lighting on WTGs is shown on the WTG Specification Plan in Appendix B.3.

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<sup>6</sup> Chiron Aviation Consultants, Aviation Advice Planning Permit Condition 1 for Golden Plains Wind Farm 217 Turbine Layout, 1 April 2020, pp. 3



## 8 BATTERY ENERGY STORAGE SYSTEM (BESS)

The plans that accompanied both the Project's Environment Effects Statement (EES) and Planning Permit Application (PPA) included provision for a Battery Energy Storage System (BESS) adjacent to each on-site substation. (Refer to *Project map book* that formed the final Appendix to the EES.)

The substations and adjacent BESS were shown as combined areas on the Application Plans referred to in Condition 1 of the Permit but for clarity, GPWFM has shown these as separate areas on the Development Plans in Appendix B.1.

The Panel did not focus on the BESS during the Inquiry hearing. GPWFM understands this is because the BESS locations were considered to be of minimal impact when considered in the context of the entire project. Furthermore, the BESS was not raised as a specific matter during public exhibition of the project.

BESS options for the site vary and once selected will all present visually the same. All BESS options will present as the same height and elevation and can be configured to provide different storage capacities and discharge rates that vary greatly regardless of the battery's nameplate capacity. For example, a battery with a nameplate capacity of 100 megawatts (MW) could provide:

- 100 MW across a 10 minute discharge period (16.7 megawatt hours (MWh)); or
- 100 MW across an 8 hour discharge period (800 MWh).

In its initial form, the Hornsdale Power Reserve (more commonly known as the 'Tesla Big Battery') in South Australia had a 100 MW nameplate capacity but was configured to provide a combination of both short term/high power outputs for grid services (70 MW for 10 minutes), and also longer term/lower power outputs for energy arbitrage (30 MW for 3 hours).

GPWFM has allowed for a BESS with a nameplate capacity of 600 MW at the Eastern Collector Station, and two smaller 300 MW BESS at the Central and Western Collector Stations. The final combination or 'mix' of outputs of the BESS will vary to suit market conditions, but this will not affect the location, size and appearance of the systems as shown on the application plans.