



Taralga Wind Farm

Modification to Development Consent DA 241/04

Taralga Wind Farm Pty Ltd

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TABLE OF CONTENTS

Glossary and Abbreviations.....	iii
Executive Summary	iv
1. Introduction	1
1.1. Background	1
1.2. Purpose and Structure of this Report	1
2. Description of the Proposed Modification.....	2
2.1. The Approved Project	2
2.2. Previous Modifications to the Approved Project	3
2.3. The Proposed Modification	3
3. Statutory Planning Framework.....	9
3.1. State Legislation	9
3.2. Commonwealth Legislation	9
3.3. Local Planning Policies and Instruments	10
4. Environmental Assessment.....	14
4.1. Context	14
4.2. Visual Impact	14
4.3. Land Use	17
4.4. Noise and Vibration	17
4.5. Heritage Values	18
4.6. Soil and Water	18
4.7. Flora and Fauna	20
4.8. Traffic and Transport	23
4.9. Greenhouse and Energy Issues	24
4.10. Socio-economic Issues	24
4.11. Infrastructure and Services	24
4.12. Hazards and Risks	25
4.13. Air Quality	25
4.14. Cumulative Impacts	25
5. Justification and Conclusion.....	26
5.1. Justification	26
5.2. Conclusion	26
References	27

FIGURES

Figure 1	Project layout
Figure 2A	Proposed modifications
Figure 2B	Proposed modifications
Figure 2C	Proposed modifications
Figure 3	Approved cable routes
Figure 4	Approved 33kV overhead transmission line and proposed modification
Figure 5	Approved access tracks and proposed modifications
Figure 6	Proposed 33kV Overhead transmission line

TABLES

Table 1	Report structure
Table 2	Previous modifications and status
Table 3	Approved components and proposed modification
Table 4	Relevant provisions of ULLEP
Table 5	Relevant provisions of ULDCP

APPENDICES

Appendix A	Heritage Assessment
Appendix B	Flora and Fauna Assessment
Appendix C	Detailed Design Drawings

Glossary and Abbreviations

CEMP	Construction Environmental Management Plan
EIA	Environmental impact assessment
EIS	Environmental impact statement. Required by Section 112 of the EP&A Act in certain circumstances.
EP&A Act	The NSW Environmental Planning and Assessment Act 1979. Provides the legislative framework for land use planning and development assessment in NSW.
EP&A Regulation	The NSW Environmental Planning and Assessment Regulation 2000
EPBC Act	The Commonwealth Environment Protection and Biodiversity Conservation Act 1999. Provides for the protection of the environment, especially matters of national environmental significance, and provides a national assessment and approvals process.
ESD	Ecologically sustainable development. Development which uses, conserves and enhances the resources of the community so that ecological processes on which life depends, are maintained and the total quality of life, now and in the future, can be increased.
LEP	Local Environmental Plan
NPW Act	National Parks and Wildlife Act 1974
OEH	NSW Office of Environment and Heritage
REF	Review of Environmental Factors
REP	Regional Environmental Plan
SEPP	State Environmental Planning Policy. A type of planning instrument made under Part 3 of the EP&A Act.
SEWPAC	Commonwealth Department of Sustainability, Environment, Water, Population and Communities
TMP	Traffic Management Plan

Executive Summary

The Taralga Wind Farm (the Project) is located approximately 3 to 7 kilometres (km) east of the township of Taralga within the New South Wales southern highlands. The Project will generate more than 271 gigawatt hours of electricity each year, which is equivalent to the annual demand of approximately 37,000 homes. The Project was originally approved in 2007 and has been modified four times. The Project is currently in the initial stages of construction.

This report has been prepared to describe a proposed fifth modification to the originally approved Project and to provide a justification and environmental assessment of the proposed changes. The Modification Application and this accompanying report have been prepared in accordance with Section 75W of the *Environmental Planning and Assessment Act 1979* (EP&A Act).

The proposed modification relates to five elements of the wind farm:

- cabling routes;
- transmission line route;
- access tracks;
- the Operation and Maintenance Building location; and
- additional hardstand area at Turbine 54.

The proposed modifications would reduce the distance of cabling required, increase operational reliability and reduce visual impact of the Project. The proposed modifications are all within the approved Project area.

The proposed modifications have been assessed taking into consideration all of the environmental issues identified in the original Taralga Wind Farm Environmental Impact Statement (Geolyse 2004). Assessment of the proposed modifications included specialist input to address potential ecological and heritage impacts.

This report has identified that the proposed modifications would result in minor changes to the impacts associated with the Approved Project. It is considered that these changes to environmental impacts are consistent with the approved Project. Benefits include decreased visual impact of the 33kV overhead transmission line, a reduction in the length of underground cabling required and a reduction in the construction timeframe associated with the particular element being modified. The negative impacts include a slightly greater area of temporary ground disturbance. The existing management and mitigation measures for the approved Project would be sufficient for potential impacts associated with the proposed modifications.

Based on the environmental assessment and the implementation of the existing management and mitigation measures it is recommended that the proposed modification can be approved without significant impact to the environment.

1. Introduction

1.1. Background

The Taralga Wind Farm (the Project) is located approximately 3 to 7 kilometres (km) east of the township of Taralga within the New South Wales southern highlands. The Project was originally approved in 2007 with four applications for modification having been approved since then by the Department of Planning and Infrastructure (DP&I). The Project is currently in the initial stages of construction. An overview of the approval process and associated timeframes is provided in Section 2 of this report.

The Project will generate more than 271 gigawatt hours of electricity each year, which is equivalent to the annual demand of approximately 37,000 homes.

1.2. Purpose and Structure of this Report

This report has been prepared to describe a proposed fifth modification to the originally approved Development Consent and to provide a justification and environmental assessment of the proposed changes. The Modification Application and this accompanying report have been prepared in accordance with Section 75W of the *Environmental Planning and Assessment Act 1979* (EP&A Act).

The structure of this report identifying the issues addressed in each section is outlined in Table 1 below.

Table 1 Report structure

Section	Issues addressed
Section 1	Introduction – provides background to the Project and outlines the purpose and structure of this report.
Section 2	Description of the proposed modification – provides an outline of the approved project, previous modifications to the approved project and describes the current, proposed modifications.
Section 3	Statutory planning framework – outlines the State, Commonwealth and local government legislation, plans and policies that apply to the approved Project and proposed modifications.
Section 4	Environmental Assessment – assesses the potential impacts associated with the proposed modifications to the environment, social and economic contexts and describes any additional management and mitigation measures that would be implemented.
Section 5	Justification and conclusion – provides a justification for the proposed modifications and summarises the overall findings.

2. Description of the Proposed Modification

2.1. The Approved Project

The approved Taralga Wind Farm Project is for the construction and operation of a wind farm that will have an installed generating capacity of approximately 107 megawatts (MW). The Project consists of the following main components:

- 51 wind turbine generators (1.8 to 3.0 MW);
- Underground cabling and overhead power lines;
- Substation;
- Operation and Maintenance building;
- Meteorological monitoring masts;
- Access tracks; and
- Hardstands.

The Project is to be built along ridgelines that comprise an area of approximately 9km (north-south) by 4km (east-west) and encompasses 10 landowners. The approved layout of the Project is shown in Figure 1.

Construction of the Project has been broken down into several stages. Stage 1 will comprise detailed design and construction of the access track from the intersection of Taralga Road and Old Showground Road, through the site up to the location of original Site Compound. This stage will include the installation of three permanent wind monitoring masts, and five temporary wind monitoring masts (the temporary wind monitoring masts will be removed in Stage 2, after they have collected the necessary wind data). The works done at this point will be restricted to those necessary for the access tracks and wind monitoring masts alone.

Stage 2 works will include all civil works relating to the Project, with exception of the overhead 33kV line. Stage 2 includes:

- the road upgrades along Taralga Road and Bannaby Road;
- concrete batching plant;
- temporary construction compound
- the balance of access tracks from stage 1;
- crane hardstands;
- turbine foundations;
- site compound building foundations (Operation and Maintenance Building, 132kV Substation, and warehouse); and
- underground electrical reticulation which excludes the overhead 33 kV line.

Stage 3 of the project would consist of the balance of the wind farm scope of works, including transport of the wind turbine components, the main substation transformer, and the cranes necessary to erect the turbines. In addition, it includes construction the 33kV overhead reticulation, erecting and commissioning of the wind turbines, site rehabilitation, site cleanup, up to the start of operations. It will also involve the delivery and installation of the Control Building and finalisation of the Operation and Maintenance building, warehouse and the 132 kV substation, and installation of the remaining 5 permanent wind monitoring masts.

Following approval of the Stage 1 Construction Environmental Management Plan (CEMP) by DP&I, construction commenced on Stage 1 activities in September 2013. It is anticipated that Stage 2 activities will commence in December 2013 following approval of the Stage 2 CEMP which occurred on 10 December 2013.

2.2. Previous Modifications to the Approved Project

Consent for the Taralga Wind Farm was given on 23 February 2007 by the Land and Environment Court. Since 2007 there have been four applications to DP&I to modify the original development consent. A summary of the four modifications and their status is presented in Table 2.

Table 2 Previous modifications and status

Modification	Date lodged	Details	Approval date
1	30 November 2007	Increase turbine height	20 April 2009
2	November 2012	Reduction in turbine number	18 June 2013
3	5 September 2013	Change to site compounds	6 November 2013
4	5 September 2013	Additional met masts	6 November 2013

2.3. The Proposed Modification

The currently proposed modification relates to five elements of the wind farm:

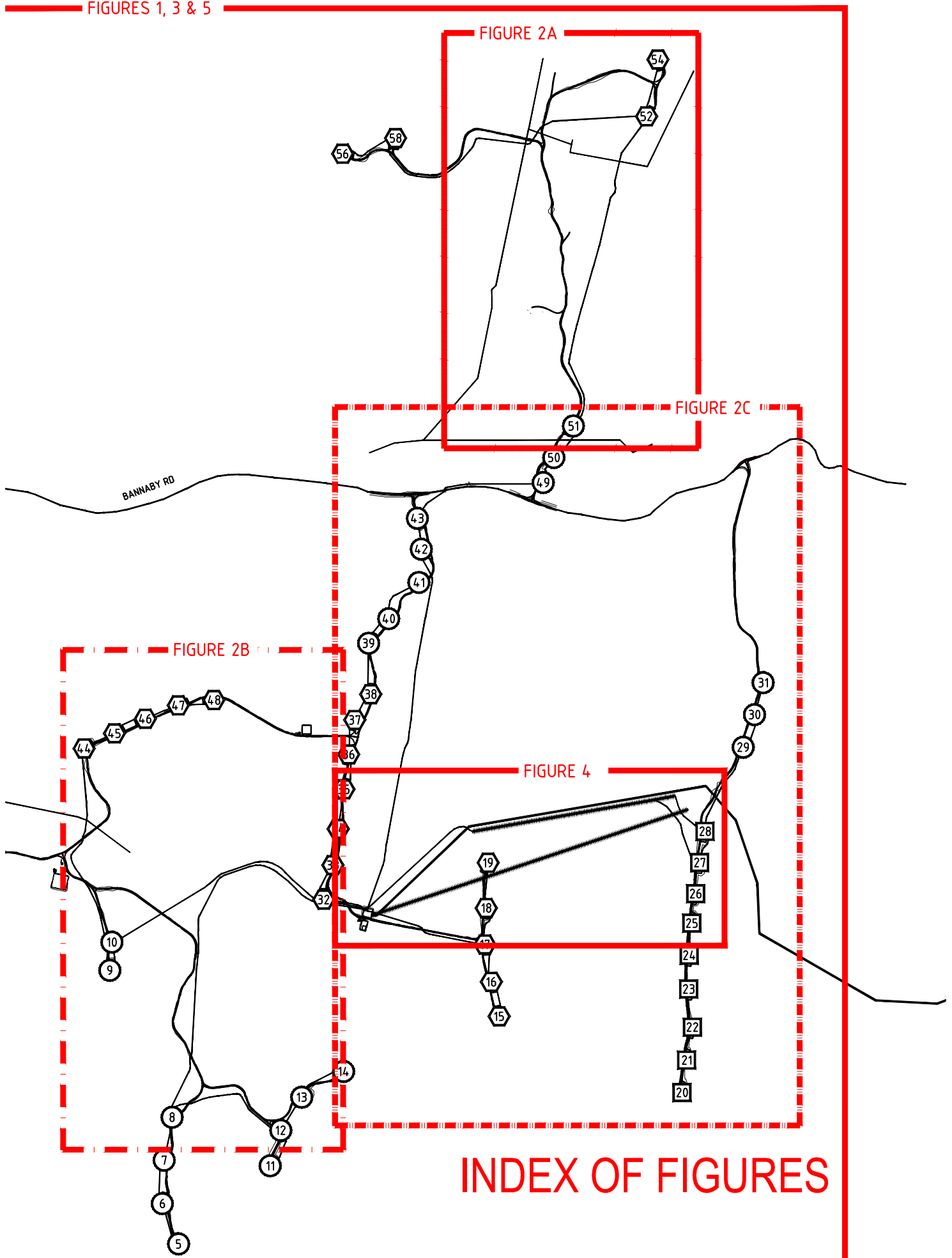
- cabling routes;
- transmission line route;
- access tracks;
- the Operation and Maintenance Building location; and
- additional hardstand area at Turbine 54.

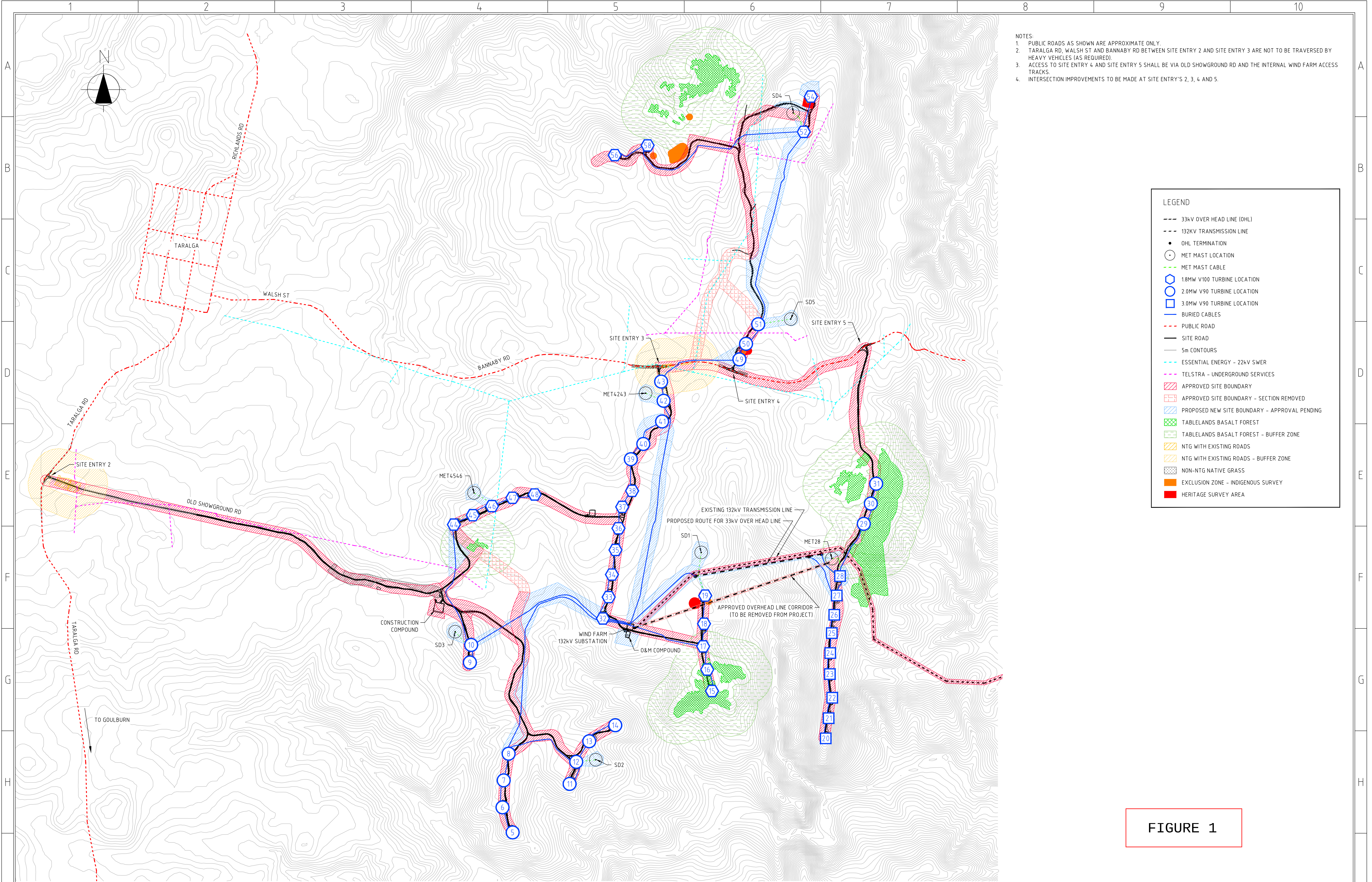
These modifications are outlined in Table 3 with further detail provided in Sections 2.3.1 to 2.3.5 below. Detailed design drawings are presented in Appendix C. The proposed modifications are within the approved Project area.

Table 3 Approved components and proposed modification

Approved component	Relevant consent condition / EIS section	Proposed modification
<i>Underground cabling alignment.</i> The EIS states “all underground power and control cabling between the substation and turbines would be laid in a trench approximately 0.5m wide by 1m deep adjacent to the access track.” The location of approved access tracks is shown in Figure 2.4 of the EIS (and Figure 3 of this report).	• Annexure A Approved Development • EIS Section 2.5.7	It is proposed to modify the alignment of some sections of underground cabling to minimise the length of cabling required and to reduce the number of corners (bends) along the cable route. This would result in the separation of some sections of cabling from approved access tracks. The proposed modified cabling routes are shown in Figures 2A, 2B and 2C. Further detail regarding this proposed modification is presented in Section 2.3.1.
<i>33kV overhead transmission line</i> The EIS identifies that a single pole 33kV overhead transmission line will connect turbine rows 6 and 7 to the substation. The approved route	• Annexure A Approved Development • EIS Section 2.4.7	It is proposed to modify the alignment of the 33kV overhead transmission line as the approved alignment presents significant constructability issues and would not be compatible with the stated requirement in the EIS of having minimal visual impact. The proposed modified route is adjacent to

of this overhead line is shown in Figure 2.4 of the EIS (and Figure 1 of this report).		the approved Essential Energy 132kV overhead transmission line route. The proposed modified 33kV transmission line route is shown in Figure 2C and Figure 4. Part of the modified route would be underground and part overhead line. The section heading north east from the substation would be underground as topography allows for this, while the section heading east across the gully would be overhead line as visual impacts would not be significant. Further detail regarding this proposed modification is presented in Section 2.3.2.
Access tracks The EIS identifies both new and upgraded access tracks. These are shown in Figure 2.4 of the EIS (and Figure 1 of this report).	- Annexure A Approved Development - EIS Section 2.4.6	It is proposed to modify the access track alignment in two locations. These relatively minor changes to alignment would minimise the extent of access track required compared to the approved Project and facilitate delivery of oversize turbine components. The proposed modified access tracks are shown in Figures 2A, 2C and Figure 5. Further detail regarding this proposed modification is presented in Section 2.3.3.
Operation and Maintenance Building The EIS identifies that a 'control building' forms part of the approved Project. However, the exact location of this structure is not clear as it is not shown on the wind farm layout figures.	- Annexure A Approved Development - EIS Section 2.4.4	The term 'Operation and Maintenance Building' is used in this report to identify the structure referred to as the 'Control Building' in the EIS. This report confirms the location of the Operation and Maintenance Building as adjacent to the approved substation. The location of the Operation and Maintenance Building is shown in Figure 2C. Further detail regarding this proposed modification is presented in Section 2.3.4.
Additional hardstand area The EIS identifies indicative hardstand area requirements for turbine erection.	EIS Section 2.5.5	Immediately north of Turbine 54 the typical hardstand area layout may need to be rotated and/or enlarged. Further detail regarding this proposed modification is presented in Section 2.3.5.



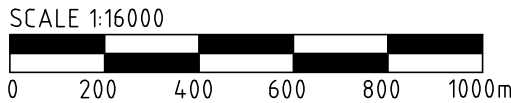


- NOTES:
1. PUBLIC ROADS AS SHOWN ARE APPROXIMATE ONLY.
 2. TARALGA RD, WALSH ST AND BANNABY RD BETWEEN SITE ENTRY 2 AND SITE ENTRY 3 ARE NOT TO BE TRAVERSED BY HEAVY VEHICLES (AS REQUIRED).
 3. ACCESS TO SITE ENTRY 4 AND SITE ENTRY 5 SHALL BE VIA OLD SHOWGROUND RD AND THE INTERNAL WIND FARM ACCESS TRACKS.
 4. INTERSECTION IMPROVEMENTS TO BE MADE AT SITE ENTRY'S 2, 3, 4 AND 5.

LEGEND

- 33kV OVER HEAD LINE (OHL)
- 132kV TRANSMISSION LINE
- OHL TERMINATION
- MET MAST LOCATION
- MET MAST CABLE
- 18MW V100 TURBINE LOCATION
- 2.0MW V90 TURBINE LOCATION
- 3.0MW V90 TURBINE LOCATION
- BURIED CABLES
- PUBLIC ROAD
- SITE ROAD
- 5m CONTOURS
- ESSENTIAL ENERGY - 22kV SWER
- TELSTRA - UNDERGROUND SERVICES
- APPROVED SITE BOUNDARY
- APPROVED SITE BOUNDARY - SECTION REMOVED
- PROPOSED NEW SITE BOUNDARY - APPROVAL PENDING
- TABLELANDS BASALT FOREST
- TABLELANDS BASALT FOREST - BUFFER ZONE
- NTG WITH EXISTING ROADS
- NTG WITH EXISTING ROADS - BUFFER ZONE
- NON-NTG NATIVE GRASS
- EXCLUSION ZONE - INDIGENOUS SURVEY
- HERITAGE SURVEY AREA

FIGURE 1



RESPECT LAND OWNERS.
PLEASE SHUT THE GATE.

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0	18.02.14	REMOVED ALT CABLE S1-S2 FIXED HATCH COLOUR	BW	ABC	ABC		
0	11.02.14	FOR CONSTRUCTION - SUPERSEDES TAR-E-5200(0)	BW	ABC	ABC		

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APPROVED	ABC	12.02.14	
APPROVALS		SCALE	1:16000

TARALGA WIND FARM
WTG COLLECTOR SYSTEM
RETICULATION NETWORK
GENERAL ARRANGEMENT

PROJECT NO. 14.032
DRAWING NO. TAR-E-5200-1

SIZE A1

REV #

