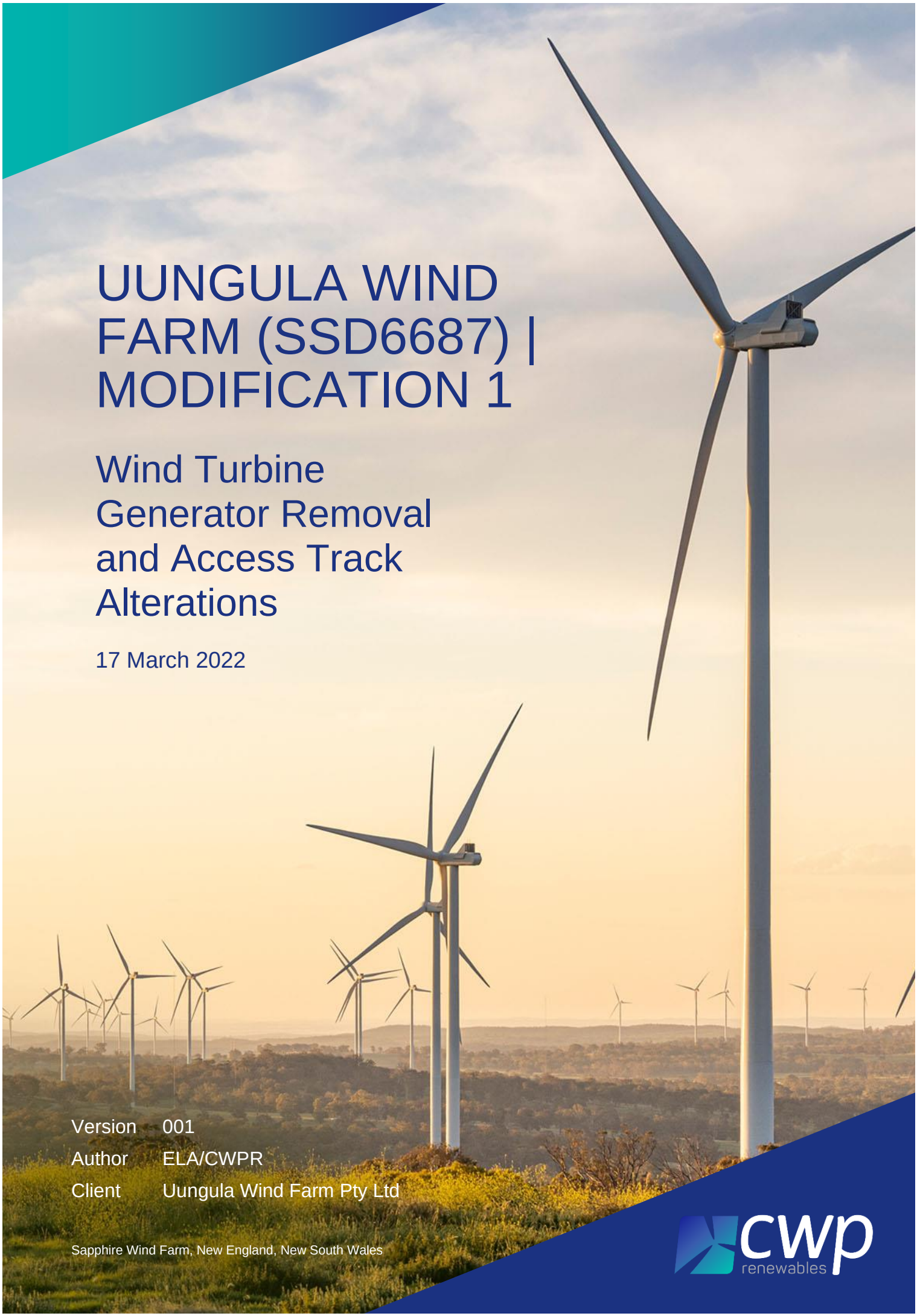

UUNGULA WIND FARM (SSD6687) | MODIFICATION 1

Wind Turbine Generator Removal and Access Track Alterations

17 March 2022

Version 001
Author ELA/CWPR
Client Uungula Wind Farm Pty Ltd

Sapphire Wind Farm, New England, New South Wales

cwp renewables

REVISION CONTROL

Revision	Date	Issue	Author	Reviewed	Approved	Signature
001	17/03/22	Final/Issued	ELA/CWP	MF	EM	EM

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Executive Summary

CWP Renewables Pty Ltd, on behalf of Uungula Wind Farm Pty Ltd (the Proponent), has prepared this application to modify the Project Development Consent (SSD 6687) under section 4.55 (1A) of the *Environmental Planning and Assessment Act 1979* (EP&A Act) (the Modification).

This Modification (Mod 1) that is sought will update the Schedule of Land, and provide for minor alterations to the approved layout and Development Corridor in order to reduce environmental and non-associated residence impacts. The Modification will do this through:

- Addition of three freehold land lots in an updated Schedule of Land (being Crown Roads that have been closed and transferred since Development Consent SSD 6687 was granted).
- Removal of four WTGs.
- Avoided creek crossings in Crown Waterways.
- Reduction in track length, underground cabling and clearing required.

The Modification would result in an overall net reduction in the Project Development Footprint of 11.15 hectares, and a reduction in the length of access tracks and cables of 2.5 km. In redesigning the tracks to avoid the creek crossings and reducing the length of tracks and cables, two small sections extend outside of the currently approved layout, necessitating the Modification to the Development Consent.

The Modification is sought under Section 4.55 (1A) of the EP&A Act because:

- The Project as modified is substantially the same as the Project for which consent was originally granted; and
- The proposed Modification is of minimal environmental impact.

An assessment of environmental impacts as a result of the Modification has been undertaken, including the preparation of separate biodiversity and heritage assessments. This impact assessment has concluded that there will be a reduction in impacts through the reduction of the area of disturbance.

Impact mitigation measures developed for the Project EIS were reviewed against the Modification and have been updated accordingly in an amended Statement of Commitments included as part of this application of Modification.

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Key Terms

Term	Definition
Ancillary Infrastructure	All wind farm infrastructure with the exception of WTGs and ESF, including but not limited to Collector Substation, Switching Station, permanent offices and site compounds, underground and overhead electricity transmission lines, Permanent Meteorological Masts, communication cables (includes control cables and earthing), water storage tank, hardstands and Internal Roads.
APZ	Asset protection zone.
Clearing	As defined in Part 5A of the Local Land Services Act 2013 and does not include Pruning.
Construction	The construction of the Project, including but not limited to the construction of WTG, ESF, Ancillary Infrastructure but excluding Pre-construction Minor Works.
Development Consent	State significant development consent to carry out the Project granted by the consent authority under the Environmental Planning and Assessment Act 1979.
Development Corridor	The area generally bound by a buffer of 100 m radius around the Development Footprint as shown in Appendix G. For the absence of doubt, the oversail of WTGs may extend beyond this Development Corridor but will be within the Project Site.
Development Footprint	The extent of ground disturbance including but not limited to earthworks associated with Permanent Infrastructure and Temporary Facilities (other than Temporary Field Laydown Areas) in the Project Site. For the absence of doubt: • The oversail of WTGs may extend beyond the Development Footprint but will be within the Project Site. • Temporary Field Laydown Areas may occur outside the Development Footprint (refer to Temporary Field Laydown Areas definition).
Energy Storage Facility (ESF)	Compound for storing and discharging energy comprised of buildings, shipping containers and other infrastructure required to connect the ESF, WTGs, and Substations via underground and/or overhead cables.
External Road Upgrades	Upgrade of roads external to the Project Site and associated vegetation clearing and/or pruning, required to transport Project-related components and materials to and from the Project Site.
Ground Disturbance	Activities that cut into the existing ground surface. For the absence of doubt this does not include activities that occur on the ground surface including but not limited to driving vehicles on the ground, parking vehicles, placing infrastructure or materials such as stockpiles on the ground.
Heavy Vehicle	Rigid vehicle over 8 tonnes GVM or has more than 2 axles. An articulated vehicle with three or more axles, or a vehicle configuration which does not require a permit from the National Heavy Vehicle Regulator.
Internal Roads	The roads established within the Project Site for the purposes of constructing, operating, maintaining and decommissioning the Project (sometimes referred to as 'tracks' or 'access tracks') and includes all waterway crossings).
Light Vehicle	Car or rigid truck to 8T GVM or bus to 12 seats.
Meteorological Masts	Temporary and permanent masts up to hub height of the WTGs and of a guyed, narrow lattice or tubular steel design and concrete footings of approximately 4 m^2 for each of the mast and guy wires. Guy wires may extend beyond 100 m from the base of the mast. The final number and location of the masts will be determined post-Development Consent, post-WTG selection and detailed design. The masts and the guy wires that secure them may need to be located outside of the Development Corridor, however they will remain within the Project Site.
Operation	Occurs when the entire wind farm is commissioned and formally handed over to the Project's owners. It does not include commissioning trials of equipment or use of Temporary Facilities.

Term	Definition
OSOM	Over Size, Over Mass vehicle; vehicle configuration which requires a permit from the National Heavy Vehicle Regulator.
Permanent Infrastructure	Infrastructure that will remain on the Project site during for the operational phase of the Project, including WTGs, ESF and Ancillary Infrastructure.
Pre-construction Minor Works	Includes the following activities which are necessary to undertake detailed design and prepare for the commencement of construction: • Surveys. • Building/road dilapidation surveys. • Investigative drilling, excavation or salvage. • Minor clearing or translocation of native vegetation. • Establishing temporary site office and compounds. • Installation of environmental impact mitigation measures, fencing, enabling works, Meteorological Masts. • Flora and fauna investigations and pre-clearing surveys, inspections, specific habitat feature removal, relocation. • Establishing Project Site access points, minor access roads and minor adjustments to services/utilities, signage etc. including associated vegetation removal and heritage artefact salvage.
Project	The Uungula Wind Farm the subject of the Development Consent.
Project Site	The land required for the Project as shown in Appendix F and Appendix G, and includes Crown land, Crown waterways, Crown roads and Council roads.
Pruning	The selective removal of certain parts of a tree or shrub such as branches, limbs or foliage.
Substations	Infrastructure required to collect the internal electrical reticulation to increase the voltage for transmission to connect to the grid. Typically includes include step-up transformers, an array of cable marshalling, busbars, switchgear and protection, various voltage and current transformers, operation and facilities building with parking, communication facilities and tower, diesel generator, lighting, a buried earth grid, lightning masts, power conditioning equipment, a reactive power control system, and other network equipment as required and agreed with TransGrid (or other transmission network system operator).
Temporary Field Laydown Areas	Areas that components may be placed on the ground in preparation for moving or relocating around the Project Site. These areas will mostly not require earthworks and therefore are outside of, and not included in the Development Footprint. They will occur within the Project Site.
Temporary Facilities	Facilities used for the construction, repowering and/or decommissioning of the Project, including but not limited to temporary site offices, amenities, and compounds, rock crushing facilities, concrete or asphalt batching plants, stockpiles and materials storage compounds, Temporary Field Laydown Areas, minor 'work front' construction access roads and temporary Meteorological Masts.
WTG	Wind Turbine Generator; turbines used for the generation of electricity by wind, including the tower, blades and all associated components.

1 Introduction and Background

Uungula Wind Farm (the Project) is an approved wind farm, located in the Central-West Orana Renewable Energy Zone (REZ), within the Dubbo Regional Council LGA, 14 km east of Wellington, within the NSW Central West. The Project generally consists of the installation, operation, maintenance and decommissioning of up to 97 Wind Turbine Generators (WTGs) up to 250 m in height, an energy storage facility (ESF), Ancillary Infrastructure and Temporary Facilities, and is estimated to have an installed generating capacity of approximately 400 MW. The Project will connect to the 330 kV transmission line running approximately east-west within the northern part of the Project Site.

CWP Renewables Pty Ltd, on behalf of Uungula Wind Farm Pty Ltd (the Proponent), has prepared this application to modify the Project Development Consent (SSD 6687) under section 4.55 (1A) of the *Environmental Planning and Assessment Act 1979* (EP&A Act) (the Modification).

This Modification (Mod 1) is sought to update the Schedule of Land, and to alter the approved layout and Development Corridor. The Modification will enable a reduction on the environmental and non-associated residence impacts that were previously approved in the Development Consent, through the:

- Addition of three freehold land lots in an updated Schedule of Land which are Crown Roads that have been closed and transferred since Development Consent.
- Removal of four WTGs.
- Removal of the need for the approved creek crossings.
- Reduction in track length and clearing required.

The approved Project layout and an overview of the proposed Modification is shown in Appendix A, with the proposed changes shown in detail in Appendix B. In redesigning the internal access tracks to avoid the creek crossings and reducing the length of tracks and cables, two small sections extend outside of the Development Corridor, necessitating the Modification to the Development Consent.

The application for Modification has been prepared in accordance with the NSW *State significant development guidelines – preparing a modification report* (DPIE 2021 - Appendix E to the state significant development guidelines)[1]. The details of the Modification are described in Section 2. Subsequent sections of this report include the statutory context, environmental impact assessment and mitigation. A biodiversity assessment and a heritage assessment have been prepared to support this application for Modification and are included in Appendix C and D respectively. The Project Statement of Commitments is included in Appendix E. An updated Schedule of Land table is included in Appendix F and an updated Project Layout is included in Appendix G.

1 NSW Department of Planning, Industry and Environment 2021. *State significant development guidelines – preparing a modification report; Appendix E to the state significant development guidelines*. https://www.planning.nsw.gov.au/-/media/Files/DPE/Guidelines/Policy-and-legislation/SSD/15694_DPIE-SSD-Guide-App-E.pdf

2 Proposed Modification Description

The purpose of this Modification is to include land lots created by the Crown Roads that have closed since the grant of the Development Consent, provide certainty to non-associated residences over the WTGs contingent on the neighbour agreement, to reduce the area of ground disturbance and to reduce the number of creek crossings required for construction and operation of the Project. The proposed Modification is detailed in Table 1 and shown in figures contained in Appendix A and Appendix B, with updated Schedule of Land in Appendix F.

Table 1: Modification details

Area	Modification	Figure Reference	Linear Distance (centreline) (m)	Area (ha)
Northern Area	Update Schedule of Land (Appendix 1 to the Development Consent) to add the new references to the freehold lots created after Crown Roads were closed and transferred since Development Consent	NA	NA	NA
Northern Area	Remove WTGs 1,2,3 and 4, retaining access track	Appendix B1	870	- 8.19
Northern Area	New track and underground cable to link WTGs 11,12 and 13	Appendix B2	410	+1.89
Northern Area	Remove track link between Uungula Road and WTG 17, avoiding one waterway crossing	Appendix B2	1,732	-4.74
Northern Area	Remove tracks and underground cable south of Uungula Road, avoiding one waterway crossing	Appendix B2	350	-0.81
Southern Area	New track and underground cable to realign the link between WTGs 86 and 87 and WTGs 83, 84 and 85 south of Ilgingery Creek	Appendix B3	980	+3.19
Southern Area	Remove track between WTGs 86 and 87 and WTGs 83, 84 and 85, avoiding two crossings over Ilgingery Creek, shifting one proposed waterway crossing south.	Appendix B3	917	-2.46
	Sum Addition		1,390	5.08
	Sum Reduction		-3,869	-16.21
	Net Balance		**-2,479**	**-11.14**

These alterations will result in a net reduction in ground disturbance and will reduce the number of waterway crossings required for the construction and operation of the Project by removing four waterway crossings. The reduction in native vegetation clearing is described in detail in the biodiversity assessment in Appendix C, however in summary the net reduction in clearing native vegetation is 11.14 ha.

There are no identified cultural heritage artefacts in the proposed new impact areas and realignment will result in the avoidance of a previously identified Aboriginal object, locale SU96/L6 (Appendix D).

Consultation has been undertaken with the affected landowners with no issues raised.

These considerations have been fundamental to the development of the proposed Modification to ensure that the Project can continue to deliver a net gain to the local community.

2.1 Project Benefits

The Project would have an overall positive impact on the local and wider economy during both the construction and operational period. In particular, the Project will have the following economic benefits:

- Direct and Indirect Employment: The Project will support 250 direct and 400 indirect full-time equivalent (FTE) positions over the construction period. Once operational, 12 direct and 35 indirect FTE jobs will be supported by the Project. Of these 47 total FTE jobs, it is expected that 19 will be sourced locally within the Dubbo Regional Council area.
- Industry and Business Participation Opportunities: The Project will maximise local business participation through contracted work.
- Local Wage Spending Stimulus: Non-local construction workers living in the region would be expected to inject approximately $5.6 million in additional spending to the regional economy over the construction phase, supporting approximately 28 FTE jobs in the service sector.
- Ongoing Economic Stimulus: The Project will make approximately $180 million in payments over 30 years to associated landholders.
- Returns to Council and the Community: Increases in Council rates caused by the Project, community benefit contributions (via a fully negotiated planning agreement committing to $3,309 per constructed WTG per annum) and community co-investment opportunities (subject to market testing).

2.2 Land Tenure

The proposed Modification will not impact on the land tenure or the Licences and Leases already held by the Proponent. The Modification is seeking to amend the Schedule of Land to now include the new references to the freehold land lots that have been created by the closure and transfer of Crown Roads that has occurred since the Development Consent was issued. The Proponent has Option to Lease agreements in place with the owners of the affected portions of land.

Note that these parcels of land are not new additions to the Project Site. As per the Note to Appendix 1 of the Development Consent, the crown land and road reserves have are within the “Site” the subject of the Development Consent. Accordingly, this component of the Modification is merely an update to the references to these parcels of land.

Table 2 shows the Lots on which the Modification areas are located.

Table 2: Land tenure

Area	Modification	Lot/DP
Northern Area	Update Schedule of Land (Appendix 1 to the Development Consent) to add freehold lots created after Crown Roads were closed and transferred since Development Consent	2/DP1267507 3/DP1267507 4/DP1267507
Northern Area	Remove WTGs 1,2,3 and 4, retain track aligned through area	175/DP754290 24/DP750778 25/DP750778 30/DP750778

Area	Modification	Lot/DP
Northern Area	New track and underground cable required between WTGs 11,12 and 13	124/DP750778
Northern Area	Remove track from near Uungula Road up to WTG 17	1/DP1207200 26/DP750778 32/DP750778 33/DP750778 36/DP750753 91/DP750778
Southern Area	New track and underground cable south of (and replacing) current approved	2/DP233294 83/DP750779
Southern Area	Remove track which crosses the creek twice unnecessarily	1/DP1207626 1/DP406094 2/DP233294 83/DP750779

2.3 Consultation

Notification of the proposed modification, specifically outlining the proposal to remove WTGs 1, 2, 3 and 4, was made in writing to the nearest non-associated residences (TMR022, TMR023, TMR 031).

3 Statutory Context

3.1 Environmental Planning and Assessment Act 1979

State Significant Development Consent (SSD 6687) was issued for the Project on 7 May 2021, for the construction and operation of up to 97 WTGs, an ESF, Ancillary Infrastructure and Temporary Facilities.

This Modification is sought under Section 4.55 (1A) of the EP&A Act because:

- The Project as modified is substantially the same as the Project for which the Development Consent was originally granted; and
- The proposed Modification is of minimal environmental impact.

Indeed, the proposed Modification will result in a net environmental benefit through:

1. the reduction of the approved area of surface disturbance and clearing of native vegetation by 11.15 ha;
2. the reduction in the visual amenity impacts through the removal of WTGs approved in the Development Consent;
3. a reduction in impacts to landscape stability (erosion and sedimentation) and aquatic ecology from the avoidance of four waterway crossings; and
4. the conservation of Aboriginal object locale SU96/L6, which is now outside the proposed new road and underground cable in the Southern Area of the Project Site.

This is the position set out in Table 1 at page 6 above, and is confirmed in more detail in the attached biodiversity and heritage assessments (Appendix C and Appendix D respectively).

3.2 Biodiversity Conservation Act 2016

In accordance with Section 7.17 (2C) of the NSW *Biodiversity Conservation Act 2016* (BC Act), a further biodiversity development assessment report is not required to be submitted if the authority or person determining an application for modification (or determining the environmental assessment requirements for the application) is satisfied that the modification will not increase the impact on biodiversity values.

Based on both the net reduction in surface disturbance and the findings of the biodiversity assessment (Appendix C), it is expected that Section 7.17 (2C) of the BC Act will apply and no further assessment of impacts to biodiversity will be required to support the application for Modification.

3.3 Environment Protection and Biodiversity Conservation Act 1999

Approval was granted for the Project on 3 August 2021 under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) (EPBC 2013/7026) to construct and operate a wind farm including up to 97 WTGs, an ESF, Ancillary Infrastructure and Temporary Facilities. The proposed Modification will be constructed within the existing EPBC Act Approval and no changes to that approval are required to be sought. The Proponent will continue to comply with the notification requirements in conditions 16 and 17 of that approval that relate to this application for the Modification.

4 Assessment of Impacts

An assessment of impacts to the environment as a result of the Modification has been undertaken and is presented below in Table 3.

Table 3: Impact assessment

Impact	Key element(s) of the Modification	Consideration of change in impact	Summary of findings / recommendations
Landscape and Visual	Removal of WTGs 1, 2, 3 and 4. Not constructing the track between Uungula Road and WTG 17, south of Uungula Road and between WTGs 85–87. Construction of two new sections of access track between WTGs 11, 12, and 13 and between WTGs 85-87.	Six dwellings within 3.35 km of the nearest WTG where mitigation measures are recommended. Further four dwellings within 3.35 – 5 km of the nearest WTG where screening may be required. The proposed Modification will result in a reduction in the overall footprint of the project. Visibility of the project is reduced with the removal of four WTGs, with a consequent improvement in the visual amenity to be experienced by neighbours..	The Modification has been designed to ensure that the landscape and visual impacts approved in the Development Consent are now reduced as the overall footprint of the project is reduced.
Noise and Vibration	Removal of WTGs 1, 2, 3 and 4. Not constructing the track between Uungula road and WTG 17, south of Uungula Road and between WTGs 85–87. Construction of two new sections of access track between WTGs 11, 12, and 13 and between WTGs 85-87.	Potential impacts of noise and vibration throughout the construction and operation phases of the wind farm do not require mitigation. The Modification will not result in changes to the overall noise or vibration level but is predicted to reduce the duration of the approved noise impacts during the construction phase.	The Modification will result in a reduction in the overall footprint of the project which in turn will lead to a reduction in the duration of construction and traffic noise and vibration.
Biodiversity (see Appendix C)	Removal of WTGs 1, 2, 3 and 4. Not constructing the track between Uungula road and WTG 17, south of Uungula Road and between WTGs 85–87. Not constructing four creek crossings. Construction of two new sections of access track between WTGs 11, 12, and 13 and between WTGs 85-87.	The proposed Modification will reduce the approved area of surface disturbance and clearing of native vegetation by 11.14 ha. The two new sections proposed to be added will be adequately compensated for by the exclusion of larger areas of like-for-like vegetation types and habitat potential. The reduction in the area of surface disturbance will equate to a reduction in impacts to threatened species habitat. The removal of four creek crossings will reduce potential impacts to aquatic ecology, including indirect impacts through sedimentation.	The proposed Modification will reduce the approved area of surface disturbance and clearing of native vegetation by 11.14 ha. Whilst two new areas are proposed to be added to the Development Footprint as described above, these will be adequately compensated for by the exclusion of larger areas of the same vegetation types and habitat potential. Subsequently, impacts to biodiversity as assessed in the UWF EIS and approved in the Development Consent will be reduced. The Modification has been designed to ensure that on-ground impacts are reduced. This has been achieved by realigning access areas, reducing the overall footprint of the access tracks, and avoiding four creek crossings.

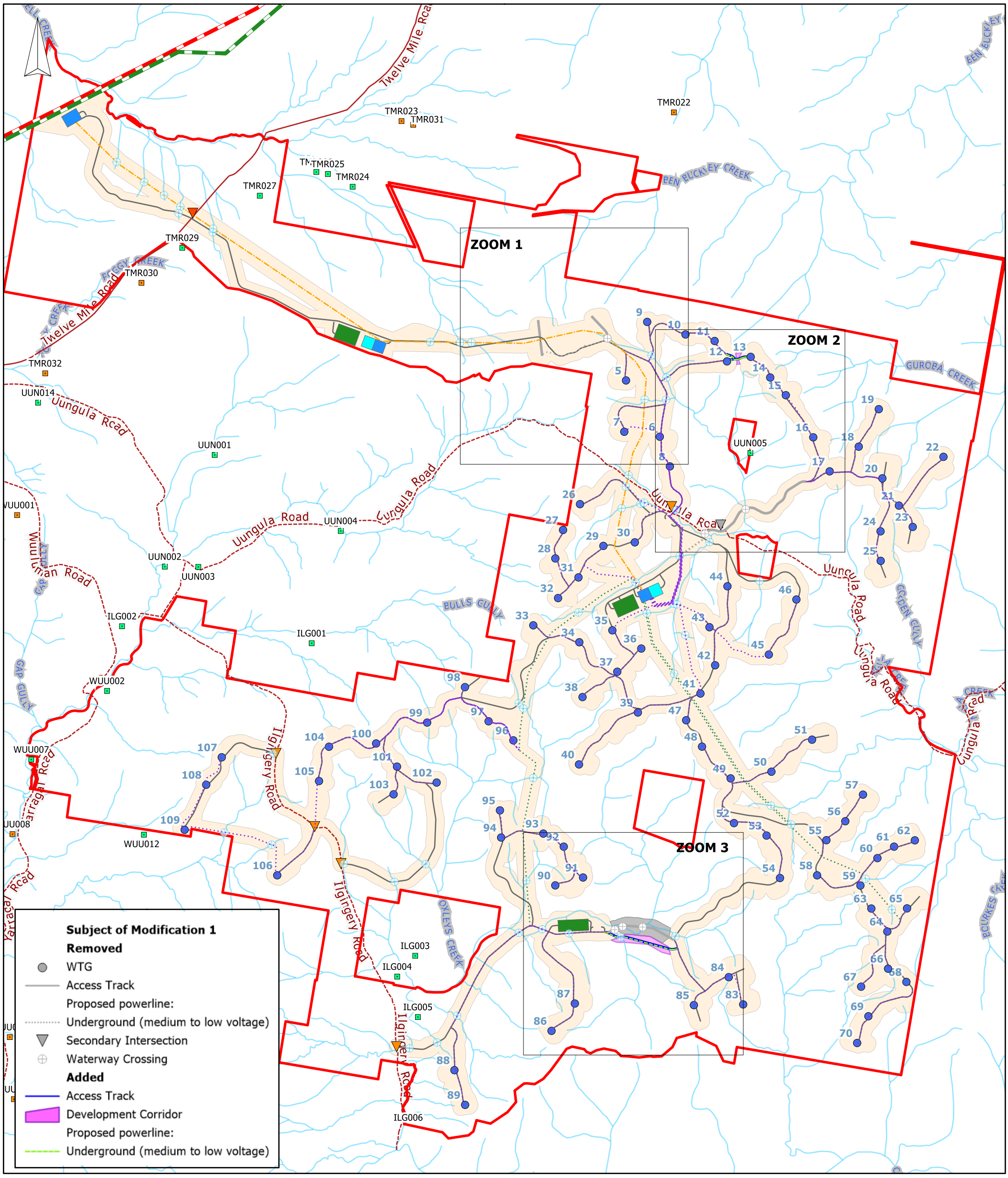
Impact	Key element(s) of the Modification	Consideration of change in impact	Summary of findings / recommendations
Traffic and Transport	Removal of WTGs 1, 2, 3 and 4. Not constructing the track between Uungula road and WTG 17, south of Uungula Road and between WTGs 85–87. Construction of two new sections of access track between WTGs 11, 12, and 13 and between WTGs 85-87.	The transport of WTGs and other components via public roads will be reduced by the Modification as smaller trucks have been identified for the transport of WTGs. The Modification also proposes the removal of four WTGs from the footprint, reducing the number of trucks needed to transport materials into the site. The Modification has reduced the overall access tracks by 2.5 km. This will decrease the duration of road construction and required materials.	The Modification will result in a reduction in the overall footprint and transport requirements of the project. The Modification has reduced the overall access tracks by 2.5 km. This will decrease the duration of road construction and required materials. This will lead to an overall reduction in the duration of construction and traffic. There will be no impact to aviation activities.
Hazards / Risks	Removal of WTGs 1, 2, 3 and 4. Not constructing the track between Uungula road and WTG 17, south of Uungula Road and between WTGs 85–87. Construction of two new sections of access track between WTGs 11, 12, and 13 and between WTGs 85-87.	The Modification reduces the development footprint by a total of 11.14 ha and removes four WTGs. This reduces the potential for impacts to aviation, telecommunications, health, blade throw, bushfire, and electrical fire.	The Modification has been designed to ensure that on-ground impacts are reduced. This has been achieved by realigning access areas, reducing the overall footprint of the Project.
Heritage (see Appendix D)	Removal of WTGs 1, 2, 3 and 4. Not constructing the track between Uungula road and WTG 17, south of Uungula Road and between WTGs 85–87. Construction of two new sections of access track between WTGs 11, 12, and 13 and between WTGs 85-87.	The Modification will not impact areas or items of heritage value. The proposed Modification in the southern area would result in the conservation of Aboriginal object locale SU96/L6 which is now outside the proposed new road and underground cable.	The Modification has been designed to ensure that on-ground impacts are reduced. This has been achieved by realigning access areas, reducing the overall footprint of the Project. The Modification will result in a net benefit to cultural heritage values through the avoidance and conservation of a previously identified Aboriginal object locale (SU96/L6).
Water and Soils	Avoidance of four creek crossings: • Either side of Uungula Road; • Relocation of the access track to southern side of Ilgingery Creek.	The topography of the Project Site is generally gently undulating to undulating with numerous valleys and peaks. Water quality within the region is below the healthy thresholds of the relevant ANZECC guideline. The Modification will not change the predicted impacts of the Project on soils or groundwater. However, impacts to surface water are predicted to be decreased with the removal of four creek crossings.	The Modification has been designed to ensure that on-ground impacts are reduced. This has been achieved by realigning access areas, reducing the overall footprint of the access tracks, and avoiding four creek crossings. The potential impact of the Project on water quality within the creek catchment will be reduced by the removal of four creek crossings. The shifting of one waterway crossing in the southern area slightly south will not materially change the impacts.

Impact	Key element(s) of the Modification	Consideration of change in impact	Summary of findings / recommendations
Waste	Removal of WTGs 1, 2, 3 and 4. Not constructing the track between Uungula road and WTG 17, south of Uungula Road and between WTGs 85–87. Construction of two new sections of access track between WTGs 11, 12, and 13 and between WTGs 85-87.	Waste streams generated during the construction of the Project would be managed using the waste hierarchy approach of avoidance and re-use before consideration of disposal. The Modification reduces the overall Project footprint by 11.14 ha. This reduces the amount of construction required for the Project and therefore the amount of waste produced.	The Modification has been designed to ensure that on-ground impacts are reduced.
Socio-Economic Factors	Removal of WTGs 1, 2, 3 and 4. Not constructing the track between Uungula road and WTG 17, south of Uungula Road and between WTGs 85–87. Construction of two new sections of access track between WTGs 11, 12, and 13 and between WTGs 85-87.	The Modification is not predicted to change the impacts of the Project on socio-economic factors.	The Modification has been designed to ensure that on-ground impacts are reduced. Impacts will remain consistent with the findings of the Project EIS (as amended).

5 Impact Mitigation

A review of the impact mitigation measures for the Project has been undertaken in consideration of the proposed Modification. Mitigation measures as developed and detailed in the Project EIS (as amended) remain relevant. A reviewed and updated Statement of Commitments for the Project is included in Appendix E.

Appendix A Approved Project Layout and Modification Overview



LEGEND

- Residences:
  - Involved
  - Non-involved
- Existing Unsealed Road
- Existing Sealed Road
- Development Corridor
- Project Site
- Access tracks
- Primary Project Site entry
- Secondary intersections
- Waterway Crossing
- Removed
- Wind Turbine Generator (WTG)
- Site Compound
- Substation
- Energy Storage Facility
- Existing Powerlines:
  - 132kV
  - 330kV
- Proposed powerlines:
  - Overhead (high voltage)
  - Overhead (medium to low voltage)
  - Underground (medium to low voltage)

SCALE BAR

0 — 5 km

COMPANY				
UUNGULA WIND FARM PTY LTD				
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Project Layout showing Modification 1 Detail				
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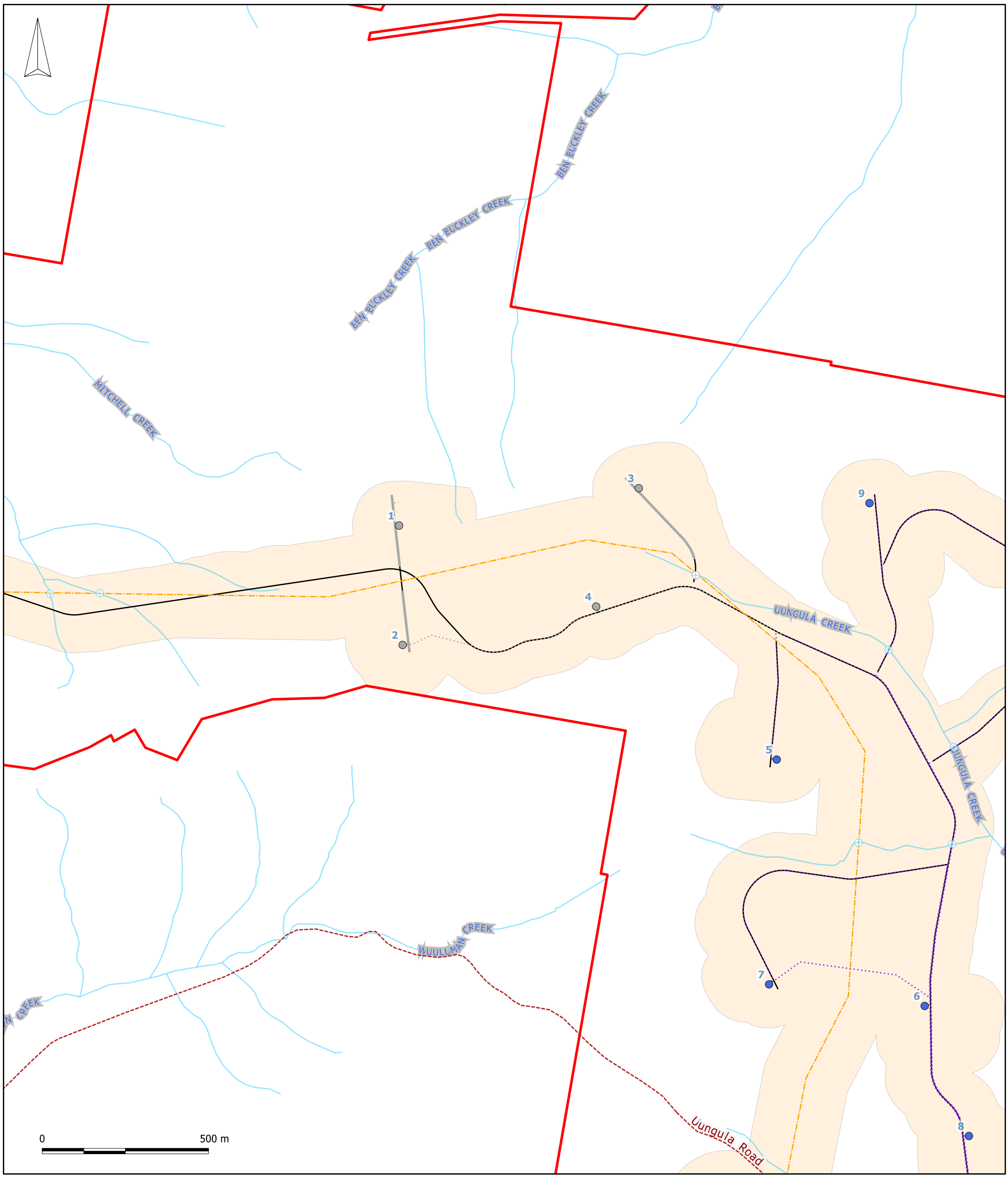
Appendix B Detailed Modification

Appendix B.1 Northern section – WTGs 1, 2, 3 and 4
Appendix B.2 Northern section – WTGs 11, 12 and 13 and Uungula Road
Appendix B.3 Southern section – WTGs 83-85 and 86, 87



LEGEND

- Development Corridor
- Existing Unsealed Road
- Project Site
- Access tracks
- Wind Turbine Generator (WTG)

Proposed powerlines:

- Overhead (high voltage)
- Overhead (medium to low voltage)
- Underground (medium to low voltage)

Subject of Modification 1

Removed

- WTG
- Access Track

Proposed powerline:

- Underground (medium to low voltage)
- Waterway Crossing

Added

- Access Track

Proposed powerline:

- Underground (medium to low voltage)

COMPANY

UUNGULA WIND FARM PTY LTD

cwp renewables

TITLE

Project Layout showing Modification 1 Detail – Zoom #1

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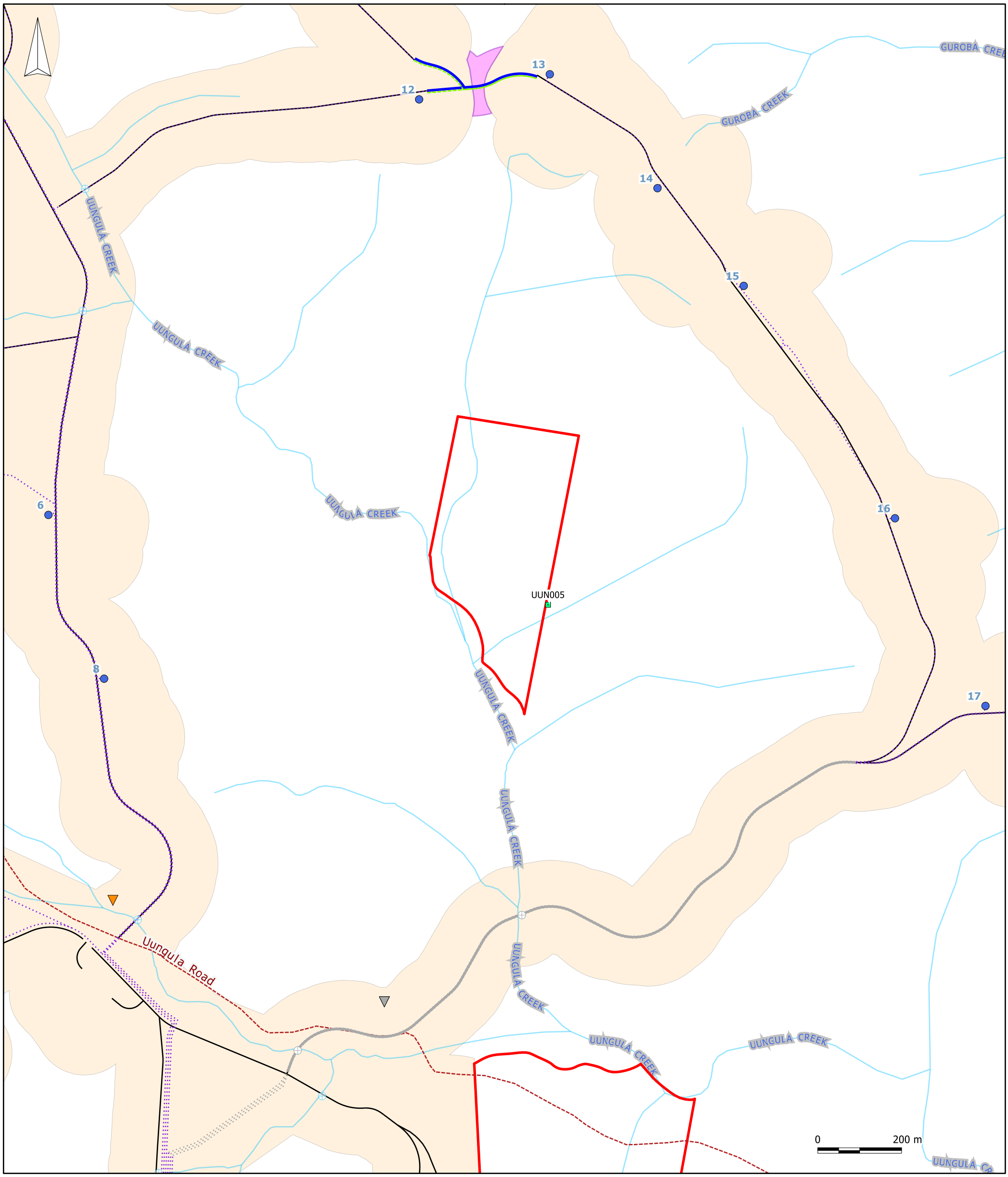


LEGEND

Residences:
- Involved
- Existing Unsealed Road
- Development Corridor
- Project Site
- Access tracks
- Secondary intersections
- Waterway Crossing
- Wind Turbine Generator (WTG)

Proposed powerlines:
- Overhead (high voltage)
- Overhead (medium to low voltage)
- Underground (medium to low voltage)

Subject of Modification 1

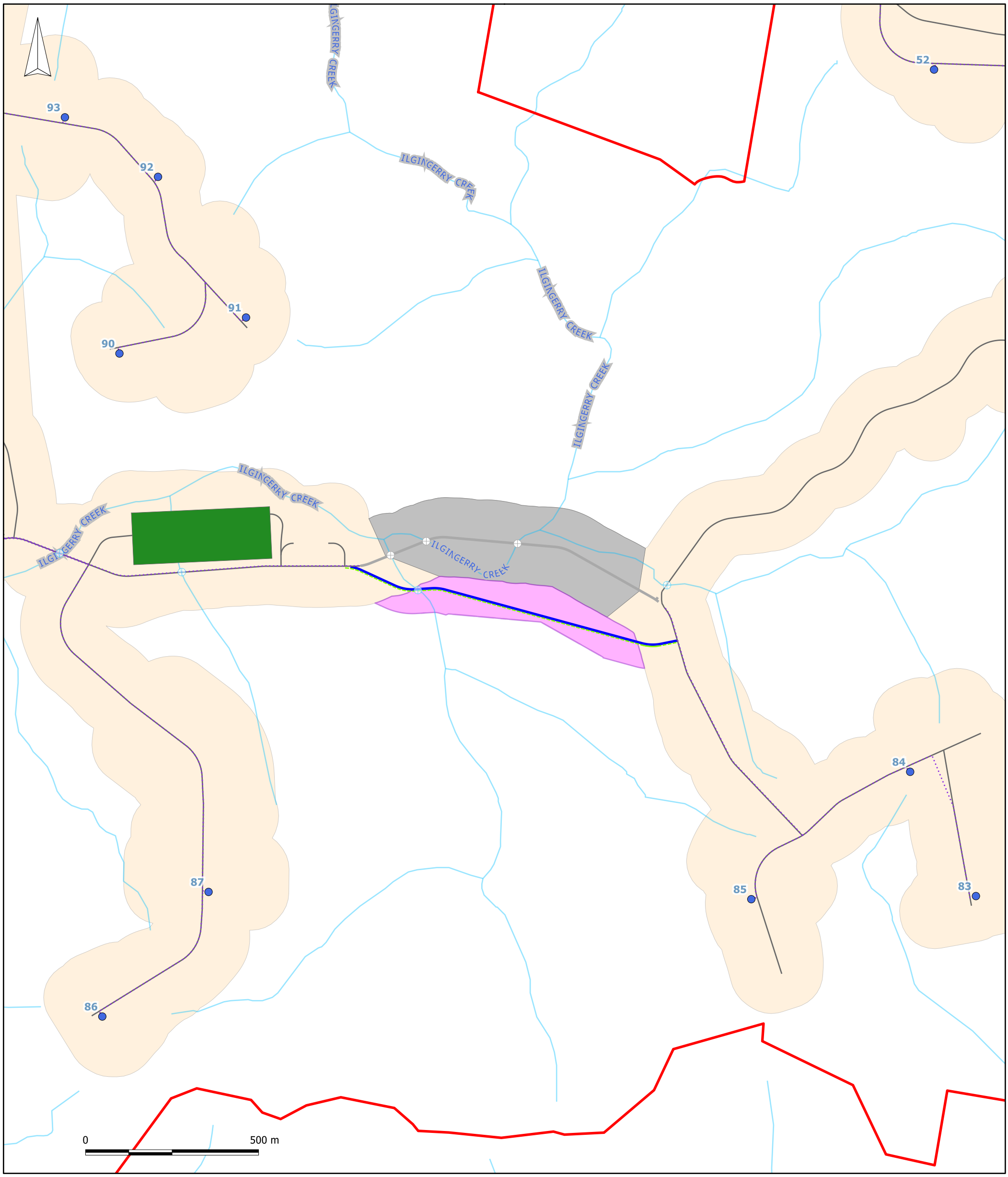
Removed
- WTG
- Access Track

Proposed powerline:
- Underground (medium to low voltage)
- Secondary Intersection
- Waterway Crossing

Added
- Access Track
- Development Corridor

Proposed powerline:
- Underground (medium to low voltage)

COMPANY				
UUNGULA WIND FARM PTY LTD				
TITLE				
Project Layout showing Modification 1 Detail – Zoom #2				
DATE	SCALE	DWG NO	REV	VER
08/02/22	1:8700	UWF-145	A	1
DRAWN BY	CHECKED BY	SHEET	JOB NO	SIZE
B KRONENBERG	M FLOWER	3 OF 4	110247	A3



LEGEND

- Development Corridor
- Project Site
- Access tracks
- Waterway Crossing
- Removed
- Wind Turbine Generator (WTG)
- Site Compound
- Proposed powerlines:
  - Overhead (high voltage)
  - Overhead (medium to low voltage)
  - Underground (medium to low voltage)

Subject of Modification 1

Removed

- WTG
- Access Track
- Development Corridor
- Proposed powerline:
  - Underground (medium to low voltage)
- Waterway Crossing

Added

- Access Track
- Development Corridor
- Proposed powerline:
  - Underground (medium to low voltage)

COMPANY				
UUNGULA WIND FARM PTY LTD				
TITLE				
Project Layout showing Modification 1 Detail – Zoom #3				
DATE	SCALE	DWG NO	REV	VER
08/02/22	1:10000	UWF-145	A	1
DRAWN BY	CHECKED BY	SHEET	JOB NO	SIZE
B KRONENBERG	M FLOWER	4 OF 4	110247	A3

Appendix C Biodiversity Assessment

Suite 1, Lvl 1
79 Market Street
Mudgee NSW 2850
t: (02) 4302 1234

1 March 2022

Our ref: 600-22MUD1451

Uungula Wind Farm Pty Ltd
via email: matthew.flower@cwprenewables.com.au

Attention: Matthew Flower

Dear Matthew,

RE: Uungula Wind Farm – Proposed modification

INTRODUCTION

Eco Logical Australia (ELA) was engaged by CWP Renewables Pty Ltd, on behalf of Uungula Wind Farm (UWF) Pty Ltd to assess the biodiversity impacts from the proposed minor Modification to the UWF Development Footprint.

The proposed Modification will result in net decrease in the area of impact of 11.14 ha through the following changes to the UWF approved layout:

- Northern Area:
  - Addition of three freehold land lots in an updated Schedule of Land (Crown Roads that have been closed and transferred since Development Consent 6687 was granted).
  - Exclusion of Wind Turbine Generators (WTG) 1, 2, 3 and 4 (8.19 ha subtracted).
  - Addition of an access track and underground cable to link WTGs 11, 12 and 13 in the north of the UWF (1.86 ha added).
  - Exclusion of tracks and underground electrical infrastructure to the south of Uungula Road, avoiding a waterway crossing (0.81 ha subtracted).
  - Exclusion of the link between Uungula Road and WTG 17, avoiding a waterway crossing (4.74 ha subtracted).
- Southern Area:
  - Realignment of the access track and underground cable link between WTGs 86 and 87 to WTGs 83, 84 and 85, to keep the disturbance to the southern side of Ilgingery Creek, avoiding two creek crossings (net addition of 0.73 ha).

The biodiversity assessment prepared for the UWF Environmental Impact Statement (EIS) (as defined in the Development Consent) assessed a larger study area including a Development Corridor, which extends 100 m either side of the Development Footprint. In redesigning the tracks to avoid the creek crossings and reducing the length of tracks and cables, two small sections extend outside of the approved layout, necessitating the Modification to the Development Consent SSD 6687 issued for the Project. This short report provides an assessment of the two additions and considers the overall change in impacts as a result of the proposed Modification.

METHODS

A desktop review was undertaken of the two proposed additional areas to determine the vegetation types and the presence, or the likelihood of threatened species to be present based on habitat features. The desktop review considered the following:

- The vegetation mapping completed for the UWF EIS
- Threatened species records
- The locations of flora and fauna surveys undertaken for the EIS, and their proximity to the additional areas
- Further information from subsequent surveys completed at the UWF including weed mapping.

Following the desktop review, ELA concluded that adequate information was available to complete the assessment.

RESULTS AND DISCUSSION

1. Construction of an access track and underground cable to link WTGs 11, 12 and 13 (1.9 ha) – Northern Area

The addition of an access track and underground cable to the approved layout will link WTGs 11, 12 and 13 (1.86 ha) in the north of the Development Footprint, shown below in Figure 1. The additional area has been subject to previous survey, including vegetation mapping, bird surveys and targeted threatened flora surveys for the biodiversity assessment for the UWF EIS (ELA 2020). The vegetation is mapped as:

- 1.53 ha of Biometric Vegetation Type (BVT) CW177 - *Red Stringybark woodland of the dry slopes of the NSW South Western Slopes Bioregion* (equivalent to PCT 1095) in both moderate to good and poorer, weedy condition
- 0.33 ha of CW212 - *White Box - Tumbledown Gum woodland on fine-grained sediments on the NSW central western slopes* (equivalent to PCT270) Derived Native Grassland (DNG).

The vegetation does not conform to either NSW or Commonwealth Threatened Ecological Communities as described in the UWF EIS (as defined in the Development Consent).

One threatened species record, *Daphoenositta chrysoptera* (Varied sitella) is located within the proposed addition. Habitat features are consistent with good quality woodland including hollow-bearing trees and stags, and grassland foraging habitat, providing potential habitat for a range of threatened species.

The addition of the link between WTGs 11, 12 and 13 will enable the exclusion of tracks and underground electrical infrastructure to the south of Uungula Road (0.81 ha) and the removal of the link between Uungula Road and WTG 17 (4.74 ha) from the approved layout (Figure 2). Further, WTGs 1, 2, 3 and 4 (8.19 ha) will be excluded (Figure 3). The areas to be removed from the Development Footprint contain a number of vegetation communities, including 2.39 ha of CW177 (PCT1095) in moderate to good condition, as well as 5.7 ha of CW212 (PCT270) DNG. Two waterway crossings will also be avoided by excluding these areas. The difference in area of impact to vegetation communities is summarised below in Table 1.

Table 1: Summary of impacts to vegetation in the northern area

Modification aspect	Vegetation Zone Area (ha)				
	VZ3: CW177 Mod/Good Medium	VZ5: CW177 Mod/Good Other-Weedy	VZ8: CW211 Mod/Good Medium	VZ9: CW211 Mod/Good Poor	VZ11: CW212 Mod/Good Poor
Removal of WTGs 1, 2, 3, 4	- 2.39				- 5.79
Addition of an access track and underground cable to link WTGs 11, 12 and 13	+ 1	+ 0.53			+ 0.33
Exclusion of tracks and underground electrical infrastructure to the south of Uungula Road			- 0.27	- 0.52	- 0.02
Exclusion of the link between Uungula Road and WTG 17, avoiding a waterway crossing				- 2.02	- 2.72
Net increase/decrease in area of impact (ha)	**- 1.39**	**+ 0.53**	**- 0.27**	**- 2.54**	**- 8.20**
	Total net decrease in area of impact (Northern Area) (ha)				**- 11.87**

Therefore, whilst the Modification will result in the disturbance of 1.86 ha to link WTGs 11, 12 and 13, the exclusion of the areas described above, particularly the like-for-like BVTs as detailed, will provide adequate compensation and result in an overall reduction in impacts to native vegetation and threatened species habitat through the reduction of surface area disturbance.

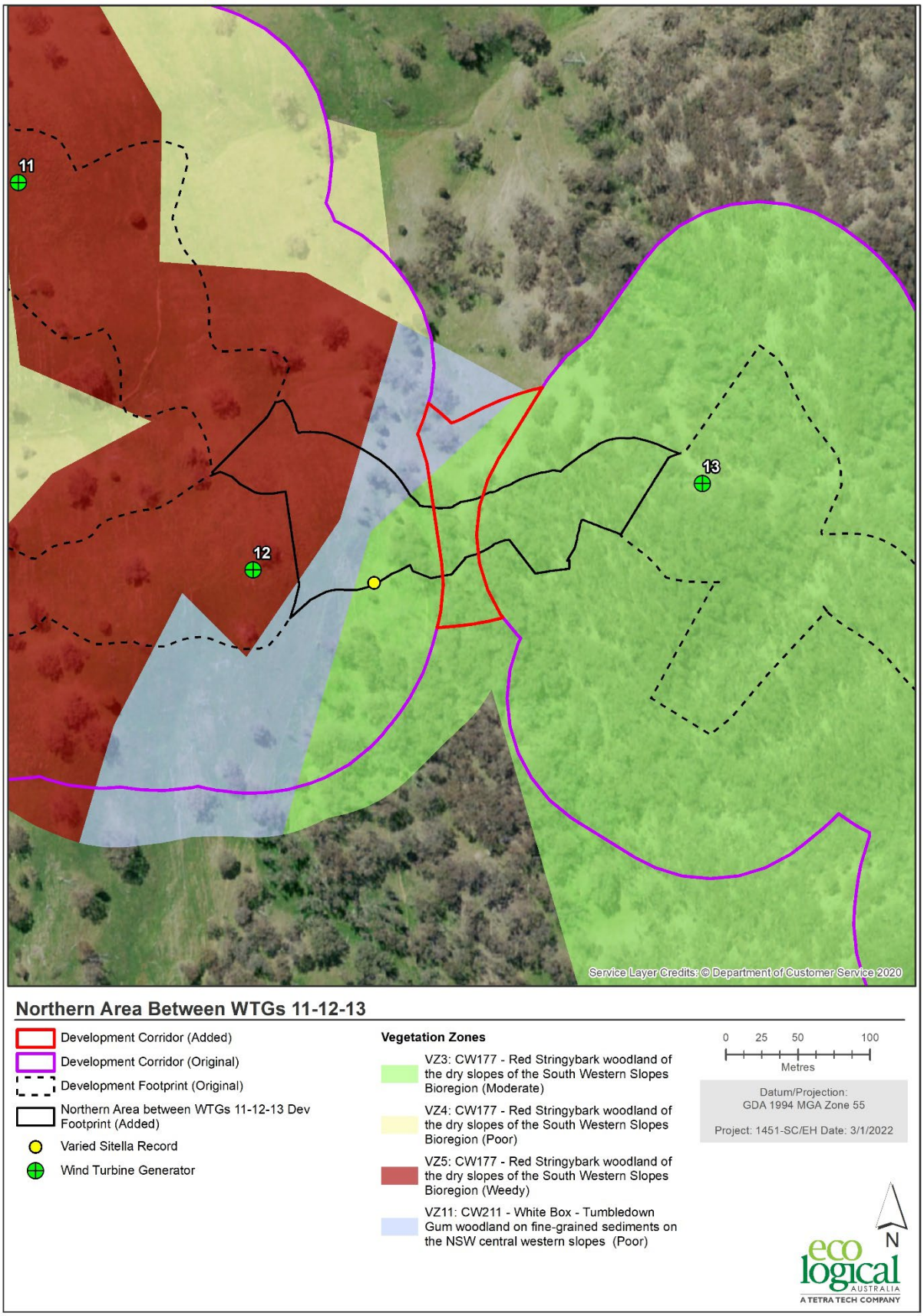


Figure 1: Addition of an access track and underground cable to link WTGs 11, 12 and 13 (1.9 ha)

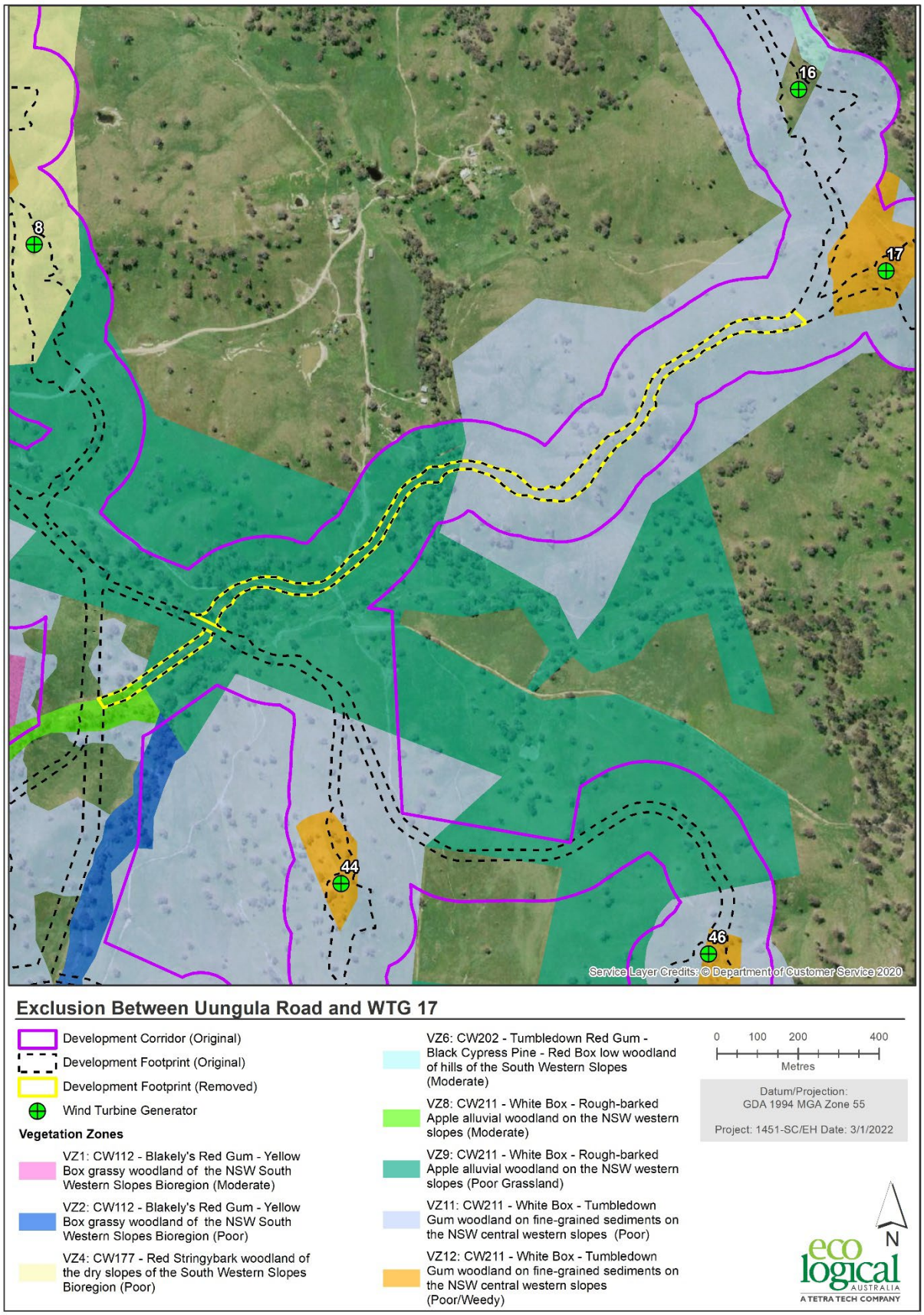


Figure 2: Tracks and underground electrical infrastructure to the south of Uungula Road, and the link between Uungula Road and WTG 17, to be removed from the Development Footprint

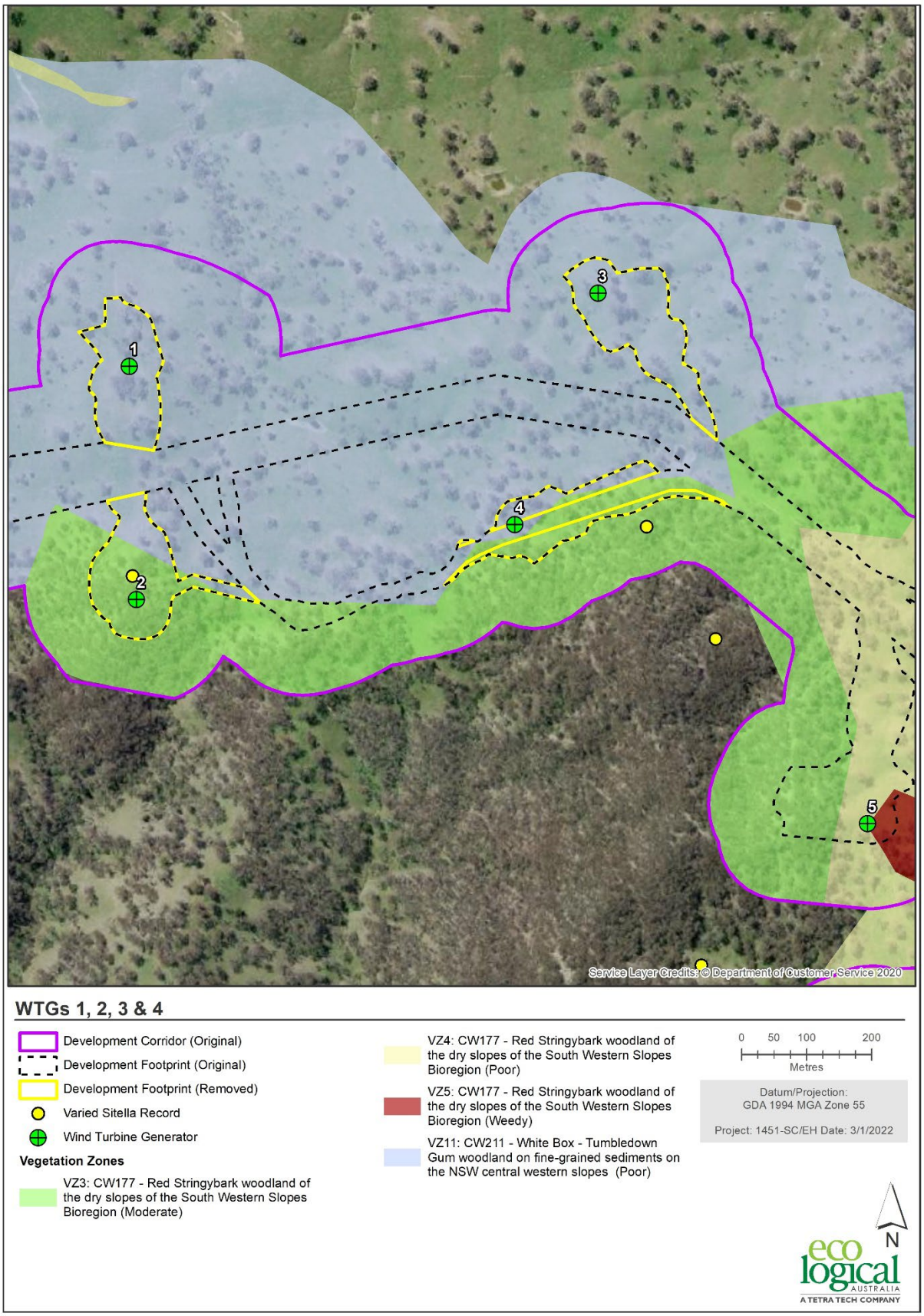


Figure 3: WTGs 1, 2, 3 and 4 to be removed from the Development Footprint

2. **Construction of an access track and underground cable to realign the link between WTGs 86 and 87 to WTGs 83, 84 and 85, to keep the disturbance to the southern side of Ilgingery Creek (1.2 ha added) – Southern Area**

The realignment of the access track and underground cable linking WTGs 86 and 87 to WTGs 83, 84 and 85, is shown below in Figure 2.

The new proposed alignment comprises 3.19 ha, of which approximately 2 ha has not been subject to previous survey, and falls outside of the Development Corridor assessed as the Study Area for the EIS. A review of aerial imagery, surrounding vegetation mapping and ELA's knowledge of the Project Site was undertaken, which indicates that the vegetation is consistent with the surrounding area, mapped as BVT CW211 - *White Box - Rough-barked Apple alluvial woodland on the NSW western slopes* (equivalent to PCT 274) DNG. This vegetation community does not conform to either NSW or Commonwealth Threatened Ecological Communities as described in the UWF EIS (and additions, including the Response to Submissions). The general area surrounding the proposed realignment has been subject to extensive previous disturbance for agricultural production, evidenced by the presence of poor quality, degraded grassland vegetation (Figure 2).

No threatened species records are located within the area, however, the area would provide potential grassland foraging habitat for a range of species.

The realignment of the link between WTGs 86 and 87 to WTGs 83, 84 and 85 will avoid the requirement for of two waterway crossings to be constructed over Ilgingery Creek. A third waterway crossing in that area will be shifted south to facilitate the new alignment, crossing a drainage line instead of the main creek line.

The original alignment from the approved layout tracks to the north of Ilgingery Creek would impact 2.46 ha of CW211 (PCT274) DNG. The proposed Modification to realign the link to the south will impact 3.19 ha of the same vegetation type, resulting in a net increase in of 0.73 ha. However, the tracks and underground electrical infrastructure to the south of Uungula Road (0.81 ha) and the link between Uungula Road and WTG 17 (4.74 ha) which will be removed from the approved layout, will exclude a further 2.74 ha of CW211 (PCT274) DNG, resulting in an overall decrease to impacts to this vegetation community of 1.81 ha. The net decrease in the overall area of impact to vegetation from the Modification (both North and South Areas) is summarised below in Table 2.

Table 2: Summary of overall impacts to vegetation from the Modification

Modification aspect		Vegetation Zone Area (ha)				
		VZ3: CW177 Mod/Good Medium	VZ5: CW177 Mod/Good Other-Weedy	VZ8: CW211 Mod/Good Medium	VZ9: CW211 Mod/Good Poor	VZ11: CW212 Mod/Good Poor
Removal of WTGs 1, 2, 3, 4		- 2.39				- 5.79
Addition of an access track and underground cable to link WTGs 11, 12 and 13		+ 1	+ 0.53			+ 0.33
Exclusion of tracks and underground electrical infrastructure to the south of Uungula Road				- 0.27	- 0.52	- 0.02
Exclusion of the link between Uungula Road and WTG 17, avoiding a waterway crossing					- 2.02	- 2.72
Realignment of the access track and underground cable link between WTGs 86 and 87 to WTGs 83, 84 and 85, to keep the disturbance to the southern side of Ilgingery Creek, avoiding two creek crossings	Old				- 2.46	
	New				+ 3.19	
Net increase/decrease (ha)		**- 1.39**	**+ 0.53**	**- 0.27**	**- 1.81**	**- 8.20**
					Total overall net decrease in area of impact (ha)	**- 11.14**

Therefore, the realignment of the access track and undergrounds cables linking WTGs 86 and 87 to WTGs 83, 84 and 85 will be adequately compensated for with like-for-like vegetation, and result in an overall reduction in impacts to native vegetation and threatened species habitat through the reduction in the area of surface disturbance. In addition, a reduction in impacts to landscape stability (erosion and sedimentation) and aquatic ecology could be expected from the avoidance of two waterway crossings.

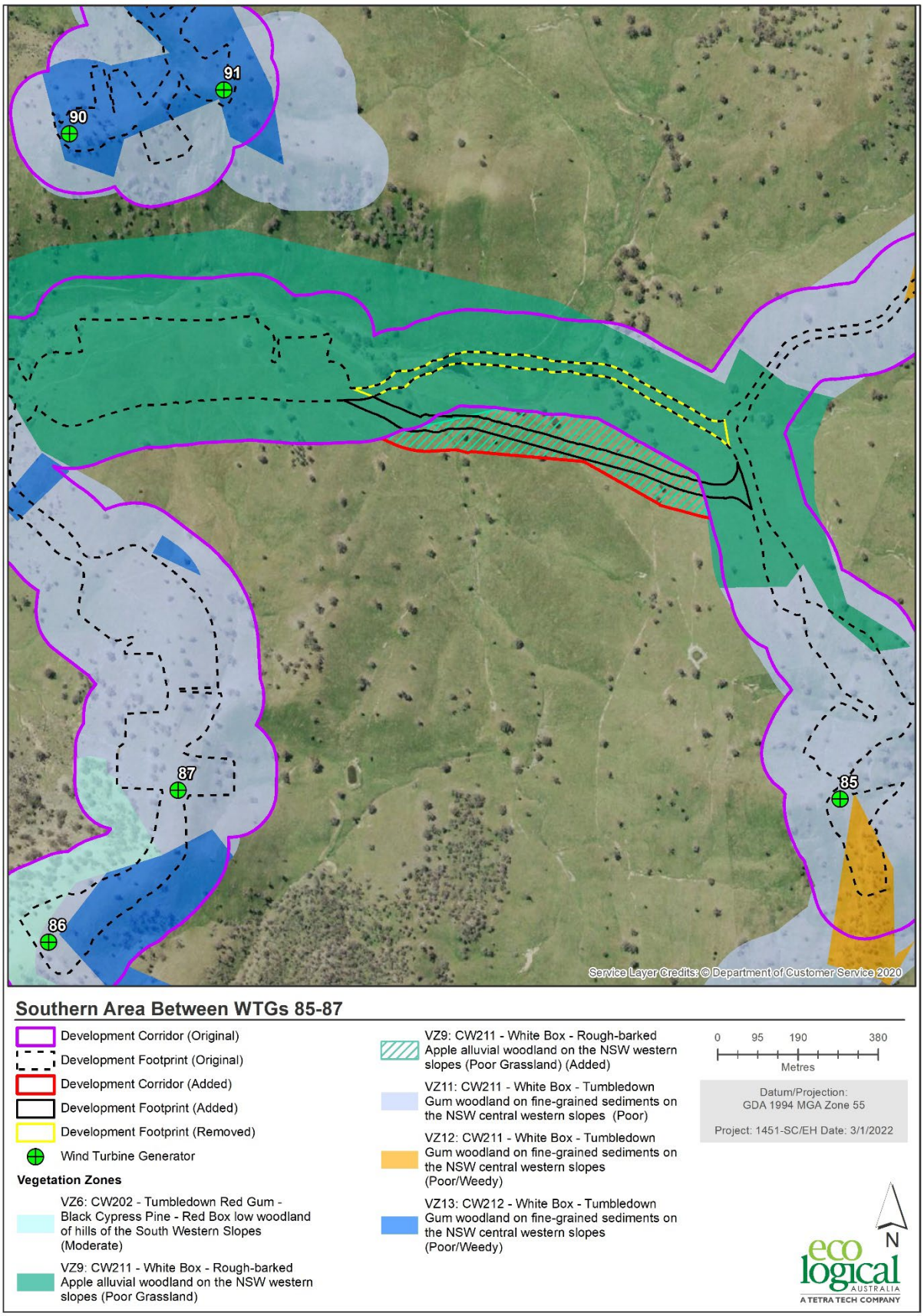


Figure 4: Addition of an access track and underground cable to realign the link between WTGs 86 and 87 to WTGs 83, 84 and 85, to keep the disturbance to the southern side of Ilgingery Creek (1.2 ha added)

CONCLUSION

The proposed Modification will reduce the approved area of surface disturbance and clearing of native vegetation by 11.14 ha. Whilst two new areas are proposed to be added to the Development Footprint as described above, these will be adequately compensated for by the exclusion of larger areas of the same vegetation types and habitat potential.

Four waterway crossings will be entirely avoided as a result of the Modification (two in the northern section either side of Uungula Road; two in the south over Ilgingery Creek). Subsequently, impacts to both terrestrial and aquatic biodiversity as assessed in the UWF EIS will be reduced as a result of the Modification.

Regards,

Kalya Abbey
Senior Environmental Consultant/ Mudgee Office Manager

REFERENCES

Eco Logical Australia 2020. *Uungula Wind Farm Biodiversity Assessment Report and Biodiversity Offset Strategy*. Prepared for CWP Renewables Pty Ltd.'

Appendix D Heritage Assessment

ABN 53106044366

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Central Tilba NSW 2546
Mob. 0427074901
www.nswarchaeology.com.au

Matthew Flower
CWP Renewables Pty Ltd
Level 2 2 Market Street
Newcastle NSW 2300

9 February 2022

Re. Uungula Wind Farm Modification 1 - Heritage Assessment

Dear Matthew

The following heritage information is provided in respect of the proposed application to modify the Development Corridor for the Uungula Wind Farm.

Introduction

CWP Renewables Pty Ltd, on behalf of Uungula Wind Farm Pty Ltd (the Proponent), has prepared an application to modify the Development Consent under section 4.55 (1A) of the *Environmental Planning and Assessment Act 1979* (EP&A Act) (the Modification).

This Modification (Mod 1) is sought to alter the approved layout and Development Corridor to enable reduced environmental and non-associated residence impacts through:

- Removal of four WTGs contingent on agreement by a non-associated resident.
- Avoided creek crossings.
- Reduction in track length and clearing required.

Modification description

Two areas in the approved layout and Development Corridor are subject to the Mod 1 application described as follows:

The Northern Area: Remove WTGs 1, 2, 3 and 4 but retain track through that area; create a new track and underground cable between WTGs 11, 12 and 13; and remove track from near Uungula Road up to WTG 17.

The Southern Area: Create a new track and underground cable south of (and replacing) the current approved area; and remove a track which crosses the creek in two places.

The modifications would result in a net reduction in ground disturbance as well as reducing the number of creek crossings. In total, the modification will result in a decreased disturbance area measuring 2,479 metres in linear length and 11.14 hectares in area.

Heritage Assessment

The following information describes the impact of the proposed modification in regard to heritage.

The Northern Area:

No previously identified heritage exists in the areas where infrastructure (WTGs 1, 2, 3 and 4) would be removed in the northern area.

The proposed new track and underground cable between WTGs 11, 12 and 13 would traverse a section of Aboriginal Heritage Survey Unit (SU) 102 (see New South Wales Archaeology Pty Ltd 2019). This survey unit has been assessed previously at which time no Aboriginal heritage was identified and furthermore the area was assessed to be of negligible archaeological potential.

It is concluded that the proposed new track and underground cable between WTGs 11, 12 and 13 would not entail adverse impacts to Aboriginal heritage.

The Southern Area:

The proposed new track and underground cable has been previously assessed and is within sections of Aboriginal Heritage SU95 and SU96 (New South Wales Archaeology Pty Ltd 2019). During the original survey no Aboriginal heritage was identified in the area of the proposed new works and furthermore the Survey Units were assessed to be of very low/negligible archaeological potential.

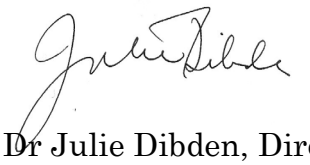
The proposed modification in this area would result in the conservation of Aboriginal object locale SU96/L6 which is now outside the proposed new road and underground cable.

It is concluded that the proposed new track and underground cable would not entail adverse impacts to Aboriginal heritage.

References

New South Wales Archaeology Pty Ltd 2019 *Uungula Wind Farm Aboriginal Cultural Heritage Assessment Report Final Revised Report*.

Yours faithfully



Dr Julie Dibden, Director
New South Wales Archaeology Pty Limited

Appendix E Updated Statement of Commitments

Impact	Objective	Mitigation Measure	Responsibility	Stage*				Code
				PC	C	OM	RD	
Management Plans								
Detailed Design	Minimise Impact	• The project will be designed and constructed with the key objective to reduce environmental impacts. This will include avoiding and minimising impacts where practicable.	Proponent and Construction Contractor	✓				EM001
General	Minimise Impact	• An Environmental Management System (EMS) will be developed which outlines practices and procedures to be followed during construction and operation of the Project.	Proponent	✓	✓	✓		EM002
	Minimise Impact	• An Environmental Management Plan (EMP) will be developed by the construction contractor to outline environmental management measures and procedures to be implemented during construction. This will include sub-plans to address: – Water quality; – Air quality; – Heritage; – Biodiversity; – Noise and vibration; – Environmental Incident response and notification; – Traffic; – Waste; – Contamination (including unexpected finds); – Storage of chemicals, oils and fuels; – High risk activities; and – Training and induction.	Construction Contractor	✓				EM003
	Minimise Impact	• All employees and contractors will attend a project induction including details of environmental approvals, site management requirements and an overview of sub-plans contained in the EMP.	Proponent and Construction Contractor		✓	✓		EM004
Landscape and Visual								
Visual Amenity	Minimise Impact	• Visual impact mitigation measures will be offered to owners of non-involved neighbouring residences where there is opportunity to significantly reduce potential visual impacts from the proposal.	Proponent	✓	✓			LV001

Impact	Objective	Mitigation Measure	Responsibility	Stage*				Code
				PC	C	OM	RD	
		Visual impact mitigation measures may include landscaping, screen plantings, provision of awnings/blinds, which can be located on the owner's land to minimise visual impacts of the WTG at the residence and its curtilage. Mitigation measures will be determined through consultation with the owner, be reasonable and feasible, and directed towards reducing the visual impacts of WTG on the residences, commensurate with the level of visual impact. • However, this mitigation measure will not apply where the Proponent has an agreement with the relevant owner/s of these residences with regard to visual impact.						
	Minimise Impact	• Design and siting of the ESF and Ancillary Infrastructure will be considered to minimise visual impact. This will include for example, retention of existing vegetation and selecting building materials and finishes to reduce reflectivity and be sympathetic to existing landscape.	Proponent	✓	✓			LV002
Impact to Receivers	Minimise Impact	• To minimise impact from external lighting, lighting will be low intensity lighting (except where required for safety or emergency purposes), erected to not shine above the horizontal and comply with Australian Standard AS 4282 (INT) 1997 — Control of Obtrusive Effects of Outdoor Lighting, or its latest version. • If aviation hazard lighting is required, an aviation hazard lighting plan will be prepared in consultation with CASA and installed to comply with CASA's requirements.	Proponent	✓	✓			LV003
		Noise and Vibration						
Construction Noise Exceedance	Minimisation	• Construction work will be restricted to the following hours: – Monday to Friday – 7 am to 6 pm; – Saturday – 8 am to 1 pm; and – No construction work on Sundays or public holidays. • Notwithstanding works undertaken outside these hours may occur where the activity is inaudible, for emergency works, delivery of certain materials, in accordance with Environmental Planning and Assessment (COVID-19 Development – Construction Work Days)	Proponent and Construction Contractor	✓	✓			NV001

Impact	Objective	Mitigation Measure	Responsibility	Stage*				Code
				PC	C	OM	RD	
		Order 2020 or where agreement from the Secretary has been provided.						
	Compliance	• Construction and decommissioning activities will be managed to minimise noise impact in accordance with the Interim Construction Noise Guidelines 2009 and outlined in the EMP. This may include maximising separation distances, use of acoustic barriers, acoustic enclosures, scheduling work and / or modifying work practices.	Proponent and Construction Contractor		✓			NV002
WTG Operational Noise Exceedance	Compliance	• Noise generated by the operation of the WTG will not exceed the relevant noise criteria (refer Figure 8-7 – Figure 8-12 of the EIS) at any non-associated resident. • Where noise generated by the operation of WTG exceeds relevant noise criteria, landowner agreements will be offered to the relevant landowners and / or a noise curtailment regime will be established.	Proponent in consultation with EPA			✓		NV003
WTG Noise compliance Operational Noise	Compliance	• The Proponent will prepare a Noise Compliance Management Plan post-Development Consent, prior to construction commencement, based on the Development Consent conditions and the selected WTG model. This will include a method and requirement to measure background noise at locations consistent with the performance objectives.	Proponent in consultation with EPA	✓				NV004
		Biodiversity						
Detailed Design	Minimisation	• Micro-siting of WTGs and Ancillary Infrastructure will be undertaken to avoid, and if not reasonable and feasible, minimise impacts to habitat trees and previously unrecorded threatened flora species	Proponent	✓				BM001
Biodiversity Impacts during Construction	Minimise Impact	• Prior to the commencement of construction, a BMP will be developed in consultation with BCD. • Pest and feral animal management strategies will be implemented to control vertebrate pest populations within the Project Site and minimise their spread to and from the Project Site. • Weed management strategies will be implemented aiming at preventing and minimising the spread of priority weeds to and from, and within the Project Site. These include controlling any	Proponent and Construction Contractor	✓	✓			BM002

Impact	Objective	Mitigation Measure	Responsibility	Stage*				Code
				PC	C	OM	RD	
		existing priority weed infestations prior to construction activities and implementing weed hygiene protocols. • Pre-clearing surveys will be undertaken by a qualified ecologist to determine if roosts, nests or dens are present in any trees proposed for clearing. • An ecologist/wildlife handler will be present to supervise during clearing of identified fauna roosting or nesting habitat. • Impacts due to bird and bat strike from the Project will be monitored through the implementation of a BBAMP prepared in consultation with BCD.						
Biodiversity Offsets	Compliance	• A BOS will be prepared prior to commencement of construction to demonstrate the Proponent's capability to provide the required biodiversity offsets in accordance with the NSW Biodiversity Offset Policy for Major Projects. • Following construction contract award and subsequent detailed design of the Project (or stages as appropriate) the actual biodiversity offset liability will be calculated and will be secured within two years from commencement of construction.	Proponent	✓	✓			BM004
		Traffic and Transport						
Traffic and Transport Impacts during Construction	Minimise Impact	• Prior to the commencement of construction, a TMP will be prepared for the Project in consultation with Transport for NSW and the relevant Councils.	Proponent and Construction Contractor	✓				TM001
	Minimise Impact	• Prior to transport, the OSOM transport route and Port of entry will be confirmed by the construction contractor. Following which, the TMP will be updated and accompanied with a route survey for approval from the DPIE.	Construction Contractor	✓				TM002
	Minimise Impact	• Road dilapidation surveys will be undertaken in accordance with guidelines and standards established by Austroads of the designated vehicle route prior to construction and decommissioning works and post construction and decommissioning. Following completion of construction and decommissioning works, any development related damage identified in post dilapidation survey will be rehabilitated / repaired.	Construction Contractor	✓				TM003

Impact	Objective	Mitigation Measure	Responsibility	Stage*				Code
				PC	C	OM	RD	
OSOM Loads	Minimise Impact	• Road infrastructure upgrade works will be undertaken to allow heavy vehicle and OSOM movements along the transport routes, subject to final Port selection and transport route identification. Road upgrades would be undertaken in consultation with relevant road authorities and permits / approvals obtained under the *Roads Act 1993*.	Construction Contractor	✓				TM004
	Minimise Impact	• During peak traffic generation activities and movement of OSOM vehicles, escort vehicles and appropriate traffic management would be adopted to ensure safe passage from the public road network onto the Project Site. Relevant permits under the Heavy Vehicle National Law (NSW) for the use of over-dimensional vehicles will be sought by the construction contractor.	Construction Contractor		✓			TM005
Road upgrades	Minimise Impact	• The Twelve Mile Road intersection with Goolma Road will be upgraded prior to the commencement of construction generally in accordance with the drawing set entitled 'TMR/Goolma Road Intersection Preliminary Upgrade Design - Version 2'.	Proponent and Construction Contractor	✓				TM006
	Minimise Impact	• Twelve Mile Road will be upgraded prior to the commencement of construction generally in accordance with the drawing included in the EIS as Appendix N (which are subject to detailed investigations and design).	Proponent and Construction Contractor	✓				TM007
	Minimise Impact	• The parts of Ilgingery and Uungula Roads within the Development Corridor will be upgraded and maintained generally in accordance with Table 1 of the DRC submission "Uungula Wind Farm – Dubbo Regional Council Road Upgrades/Rectification Works": "*Construct intersections for safe exit and entry movements and to provide adequate wind farm component access*."	Proponent and Construction Contractor	✓	✓			TM008
Traffic and Transport Impacts during Construction	Minimise Impact	• Access to the Project Site by all OSOM, Heavy and Light Vehicles travelling from Goolma Road will only be via the western end of Twelve Mile Road.	Construction Contractor		✓			TM009
		Hazards / Risk						
Aviation	Minimise	• Prior to the construction of any wind monitoring mast or WTG, details including the coordinates, ground level, height, OLS and	Proponent	✓				HR001

Impact	Objective	Mitigation Measure	Responsibility	Stage*				Code
				PC	C	OM	RD	
		proposed hazard lighting of each will be provided to the CASA, Air Services Australia and the RAAF.						
	Minimise	• The Proponent will complete the Vertical Obstacle Notification Form for tall structures and submit the completed form to VOD@airservicesaustralia.com at three fixed times: – 1) upon the grant of Development Consent; – 2) one month prior to the construction of any WTG or meteorological mast; and – 3) on completion of the construction of the Project. • Notifications will also be submitted if changes occur to the locations of the WTGs or Meteorological Masts at other times.	Proponent	✓		✓		HR012
	Minimise	• The Proponent will prepare a night lighting plan in consultation with CASA and other relevant agencies prior to the commencement of construction. It will include the recommended locations of lights across the Project, type, intensity, light wavelength, and other operating conditions.	Proponent	✓				HR013
	Minimise	• The Proponent will paint the top one third of Meteorological Masts in alternating contrasting bands of colour in accordance with the Manual of Standards for Part 139 of the Civil Aviation Safety Regulations 1998.	Proponent		✓			HR014
	Minimise	• To the extent permitted by the Transmission Network Service Provider or powerline owner, and considerate of operational and functional requirements, powerline marker balls (or similar physical demarcation) will be installed on the overhead transmission line which connects the Project to the grid connection point. For the absence of doubt this will not include the short lengths of overhead transmission lines connecting the Substation to the existing 330kV powerline.	Proponent in consultation with TransGrid		✓			HR015
Telecommunications	Minimise	• Micrositing of WTG 105 and 106 will be undertaken to minimise adverse impact to the microwave link (7 GHz range) and (UHF link in the 400 MHz range).	Proponent	✓	✓			HR002

Impact	Objective	Mitigation Measure	Responsibility	Stage*				Code
				PC	C	OM	RD	
		• If the Project causes a disruption to any radio communication services in the area, the disruption to the service will be repaired as soon as possible following the event.						
Electromagnetic Fields	Minimise	• Engineering and administrative controls will be used to reduce the potential for EMF emissions in accordance with *Interim guidelines on limits of exposure to 50/60 Hertz electric and magnetic fields* ARPANSA/National Health and Medical Research Council and Overhead Line Design AS/NZS 7000. .	Proponent		✓	✓		HR003
Low Frequency Noise and Infrastructure	Minimise	• To mitigate and negate any perceived health-related impacts from low-frequency noise and infrasound, the following is recommended: – Noise levels to comply with the applicable noise guidelines, unless an agreement is in place with the affected landowners; and – The proposed WTGs are to be constructed with blades upwind of the tower resulting in significantly decreased infrasound noise levels that are well below the level of perception and acceptable noise levels for wind farm developments in rural areas in Australia.	Proponent	✓	✓			HR004
Shadow Flicker and Blade Glint	Minimise	• Shadow flicker associated with WTG will not exceed 30 hours per year at any non-associated resident.	Proponent		✓	✓		HR005
Bushfire and Electrical Fire	Minimise Risk	• A minimum 10 m APZ will be established around each WTG, the compound for the operation and maintenance facilities, the ESF and Substations. The APZs will be established and maintained in accordance with the Rural Fire Services *Planning for Bushfire Protection 2019* (PBP).	Proponent and Construction Contractor	✓	✓	✓		HR006
	Minimise Risk	• In consultation with the RFS, procedures will be developed to manage potential fires on site during construction and operation. This will include high risk tasks, seasonal constraints, fuel load management, mitigation strategies and emergency response procedures.	Proponent and Construction Contractor		✓	✓		HR007
	Minimise Risk	• During construction and operation, the site will be suitably equipped to respond to fires on site. This may include for example a firefighting trailer, temporary and permanent water storage units,	Construction Contractor		✓	✓		HR008

Impact	Objective	Mitigation Measure	Responsibility	Stage*				Code
				PC	C	OM	RD	
		filling points for fire tanker units, emergency information cabinets, etc						
	Minimise Risk	• Prior to the commencement of construction of the ESF, a fire Safety Study (FSS) will be undertaken following the requirements of Hazardous Industry Planning Advisory Paper No.2 – Fire Safety Study Guidelines 2011 to address the risk of external fire impacting on the ESF and a fire initiated in the ESF spreading off the site. The ESF will have a suitable fire detection and suppression system based on the most appropriate for the technology (e.g., Novec 1230 or equivalent for lithium-based batteries). • Restrictions imposed during declared Total Fire Bans will be observed and consultation carried out with the RFS where required.	Construction Contractor		✓	✓	✓	HR009
	Minimise Risk	• A fire Safety Study (FSS) will be undertaken following the requirements of Hazardous Industry Planning Advisory Paper No.2 – Fire Safety Study Guidelines 2011 to address the risk of external fire impacting on the ESF and a fire initiated in the ESF spreading off the site.	Proponent	✓				HR010
Blade Throw	Minimise Risk	• WTG components will be manufactured and certified to current best practice Australian and international (IEC 61400-23) safety standards and are equipped with sensors that can react to any imbalance in the rotor blades and shut down the WTG if necessary. • WTGs will be subject to stringent safety and security measures including regular maintenance and servicing (within an ISO90001 Quality Assurance system. • Contactors certified in the manufacture, delivery, build, inspection, maintenance and repair of WTG components will be employed.	Proponent and Construction Contractor	✓	✓	✓		HR011
Emergency Management	Minimise Risk	• An Emergency Response Plan will be prepared prior to construction commencement in consultation with relevant agencies which includes emergency response measures for (among other things) bushfires and HAZMAT incidents, site hazards relevant to emergency responders. The plan will be stored in a prominent place adjacent the main entry point(s) to the Project. The plan will be maintained and updated as the Project development status	Proponent and relevant agencies	✓	✓	✓	✓	HR016

Impact	Objective	Mitigation Measure	Responsibility	Stage*				Code
				PC	C	OM	RD	
		changes (e.g., construction->operations). The LEMC will be briefed on the contents of the ERP prior to commencement of construction, during construction, and during operations. The local RFS Brigade and other relevant emergency response agencies will be provided with a site tour at various stages of the Project.						
Detailed Design	Minimise Risk	• Detailed design will consider property access requirements detailed in the Bushfire Appendix (as adapted from Table 5.3b of PBP).	Proponent and Construction contractors	✓				HR017
Bushfire Management	Minimise Risk	• A Bushfire Emergency Management and Operations Plan will be prepared prior to commencement of construction which identifies all relevant risks and mitigation measures associated with the construction and operation of the Project.	Proponent	✓				HR018
		Aboriginal Heritage						
Aboriginal Heritage Items	Avoid	• A CHMP will be prepared in consultation with DPIE and Aboriginal stakeholders which will include a description of the objectives, methods, and outcomes of any proposed mitigation methods including artefact salvage and community collections. The CHMP will include an unexpected finds procedure. • Where impact cannot be avoided to artefact scatters and PADs within survey units 6, 11 and 24 subsurface testing and surface collection would be undertaken in accordance with *Code of Practice for the Archaeological Investigation of Aboriginal Objects in NSW (DECCW, 2010).* • Additional archaeological assessment will be carried out if any new impacts are to occur outside the Development Corridor. • Design and ground disturbance will be undertaken to minimise impact to heritage items. • If cultural heritage material is located during works that work will cease immediately and a suitably qualified archaeologist engaged to ascertain whether the material is of cultural origins and if so, they will advise how to proceed. • If human remains are found, works should immediately cease, and the NSW Police should be contacted. If the remains are suspected	Proponent and Construction Contractor	✓	✓			AH001

Impact	Objective	Mitigation Measure	Responsibility	Stage*				Code
				PC	C	OM	RD	
		to be Aboriginal, the BCD may be contacted to assist in determining appropriate management.						
		Historic Heritage						
Historic Heritage Items	Avoid	• Record and assess historical significance of well located within Survey Area 19 before works proceed within a 10 m radius of the well. • If potential historic heritage is identified all work within a 10 m radius of the site will cease and advice sought from an historic archaeologist. If required, notification under Section 146 of the Heritage Act would be undertaken and works would not recommence in the area until permitted.	Proponent and Construction Contractor	✓	✓			HH001
		Water and Soils						
Water Use	Minimise	• Water licences for the Project will be obtained in accordance with the *Water Management Act 2000*.	Construction Contractor	✓				WS002
Water Resources (Including Groundwater, Aquatic and Riparian Environments)	Minimise	• A water quality monitoring program will be developed by the construction contractor as part of the water quality management plan. The monitoring program with devise suitable measures to monitor and record on water quality at those watercourses directly impacted from the construction activities. • Where required, VRZs will be established in considerate of the Guidelines for controlled activities on waterfront land Riparian corridors, NSW Department of Industry Guidelines 2018 and Table 8-39 of the EIS. • Watercourse crossings will be designed and constructed in accordance with DPI Water's *Controlled activities on waterfront land – Guidelines for watercourse crossings on waterfront land* (DPI Water, 2012), Why Do Fish Need to Cross the Road? Fish Passage Requirements for Waterway Crossings (2004) and *Controlled Activities: Guidelines for laying pipes and cables in watercourses on waterfront land* (DPI Water, 2012). • To manage downstream flows and erosion, consideration will be given to appropriate stormwater devises including culverts, rock armouring, scour protection and / or detention basins. Road design and mitigation structures will be appropriately placed during	Construction Contractor	✓	✓			WS003

Impact	Objective	Mitigation Measure	Responsibility	Stage*				Code
				PC	C	OM	RD	
		detailed design to ensure that flows will not differ significantly from the current situation. • For each transformer provision will be made in the design for primary and secondary containment of any oil that may leak or spill from the transformers or associated components.						
Geology	Minimise	• Further geotechnical investigation will be undertaken to better understand the constraints of any part of the Development Corridor intersecting with Karst areas identified in the Wellington LEP (mapped as the Cuga Burga Volcanics / Gregra Group).	Proponent	✓	✓			WS004
Geology	Minimise	• The Proponent will undertake a geotechnical survey prior to construction commencement which will identify soil types with the results to inform an Erosion and Sediment Control Plan (ESCP). • The Proponent will include the principles of a closure strategy in the EMS prepared during post-consent with results of the geotechnical survey (and soil type investigation) informing the plan content.	Proponent	✓				WS007
Erosion	Minimise	• As part of the EMP the contractor will prepare an erosion and sedimentation control sub plan. The plan will be prepared in accordance with the Blue Book *Managing Urban Stormwater: Soils and Construction* (Landcom, 2004) and include: – Site constraints and receiving waters; – Stockpile management; – Temporary site stabilisation and progressive revegetation; – Management measures for disturbance of sodic soils; – Separation of clean and dirty water; – Progressive erosion and sediment controls drawings prepared by a Certified Professional in Erosion and Sediment Control; and – An inspection, monitoring and maintenance schedule. • Areas used for temporary construction compound and laydown areas during construction and those areas subject to temporary construction impacts will be restored to original condition and	Proponent and Construction Contractor	✓	✓			WS005

Impact	Objective	Mitigation Measure	Responsibility	Stage*				Code
				PC	C	OM	RD	
		revegetated to achieve the ground cover and erosion minimisation goals.						
Erosion and revegetation	Minimise	• Areas used for temporary construction compound and laydown areas during construction and those areas subject to temporary construction impacts will be restored to original condition and revegetated to achieve the ground cover and erosion minimisation goals (unless the landholder requests some temporary construction areas be left in place).	Proponent		✓			WS008
Erosion	Minimise	• Prior to the commencement of construction, the Proponent will prepare an Erosion and Sediment Control Plan and Water Quality Management Plan in consultation with DPIE Water.	Proponent	✓				WS009
Contamination	Avoid	• Onsite refuelling shall occur in a dedicated area that is located greater than 100m from the nearest drainage line, on an impervious, flat and bunded surface (such as an appropriate drip tray). • Dangerous and hazardous materials will be stored on site in accordance with AS1940-2004: The storage and handling of flammable and combustible liquids. • The concrete batching plants and Substation are suitably bunded. • As the site is located in the catchment area for the Burrendong Dam, fire water containment will be addressed as part of any fire mitigation strategy.	Proponent and Construction Contractor		✓			WS006
Resource Requirements and Waste								
Resource Requirements and Waste	Minimise and Avoid	• Wastes will be classified in accordance with the NSW EPA Waste Classification Guidelines – Part 1: classifying waste (EPA 2014) and addendum (EPA 2016). • All waste will be handled and stored on site in accordance with its classification and disposed of at appropriately licensed waste facilities. • Provisions as per the ADG Code for the packaging, transportation of spent lithium-ion batteries to collection and/or recycling facilities. An export permit under section 40 of the *Hazardous Waste Act* will be obtained prior to spent batteries being exported.	Proponent		✓	✓		RRW001

Impact	Objective	Mitigation Measure	Responsibility	Stage*				Code
				PC	C	OM	RD	
		Socio-Economic Factors						
Socio-Economic Factors	Minimise	• Recruitment of construction staff, contractors and suppliers from the local areas and purchase of local products will be encouraged during all phases of the Project. • The Proponent will liaise with local industry and local councils if there is a conflict arising from demand for accommodation and related services.	Proponent	✓	✓	✓		SE001

Appendix F Updated Schedule of Land

Table F.1 Land to be Developed (the Project Site)

Lot	DP
1	DP131417
2	DP211380
3	DP211380
4	DP211380
2	DP233293
2	DP233294
1	DP406094
2	DP586633
1	DP622508
11	DP622801
34	DP750753
36	DP750753
40	DP750753
78	DP750753
83	DP750753
76	DP750760
81	DP750760
89	DP750760
94	DP750760
121	DP750760
122	DP750760

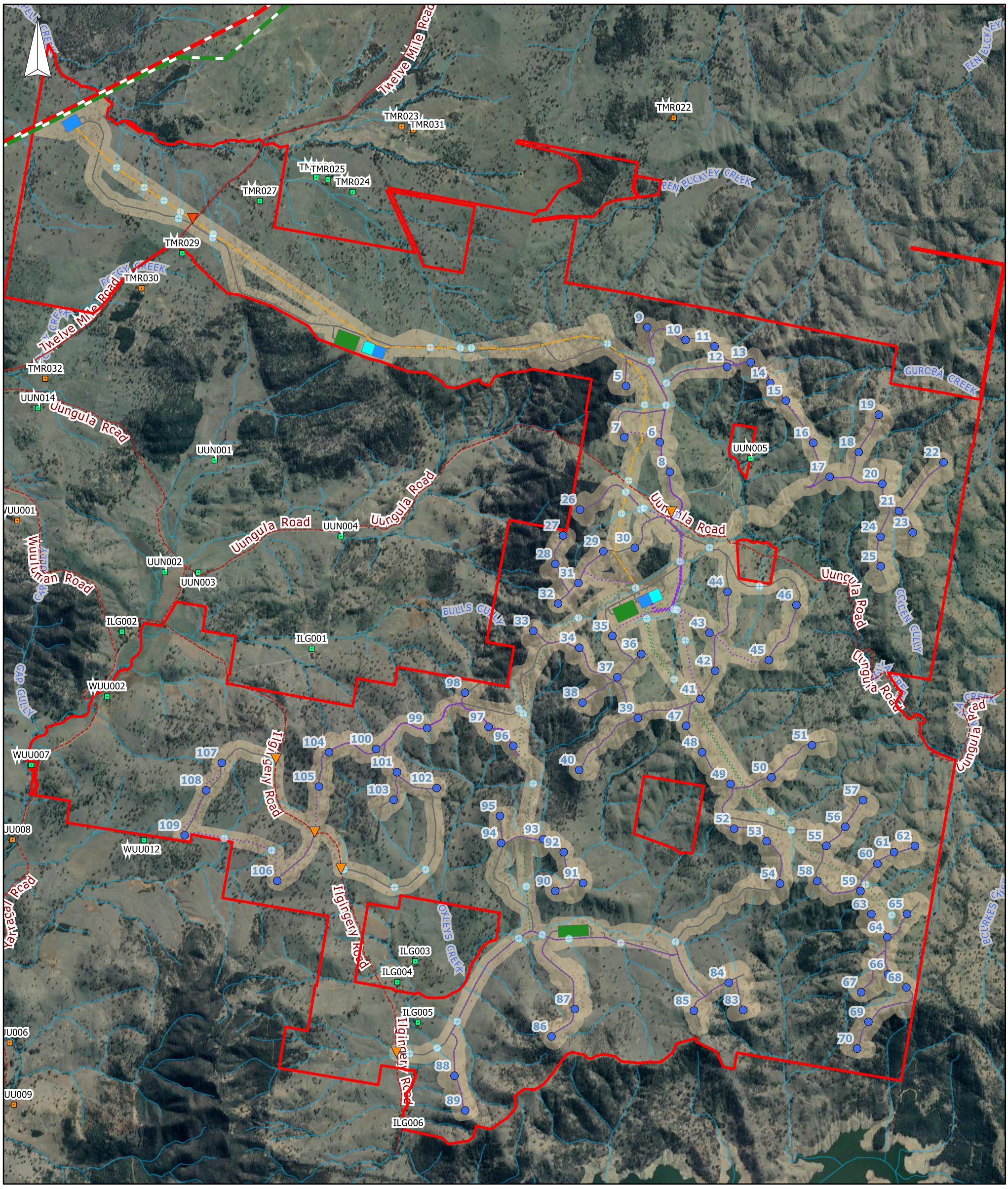
Lot	DP
20	DP750778
21	DP750778
24	DP750778
25	DP750778
26	DP750778
27	DP750778
30	DP750778
32	DP750778
33	DP750778
34	DP750778
66	DP750778
76	DP750778
80	DP750778
81	DP750778
82	DP750778
91	DP750778
92	DP750778
110	DP750778
121	DP750778
122	DP750778
123	DP750778

Lot	DP
124	DP750778
133	DP750778
134	DP750778
69	DP750779
70	DP750779
83	DP750779
120	DP754290
175	DP754290
1	DP1110777
2	DP1110777
1	DP1141897
2	DP1141897
421	DP1206509
422	DP1206509
1	DP1207200
2	DP1207200
1	DP1207626
1	DP1239686
*2	DP1267507
*3	DP1267507
*4	DP1267507

The Project Site will also be taken to include any Crown land, any Crown waterways or any road reserves, contained within the Project Site.

**Additional Lots now included being former Crown roads within the Project Site that have been closed and transferred since the date the Development Consent was granted*

Appendix G Updated Project Layout



LEGEND			
Residences:		Wind Turbine Generator (WTG)	
Involved		Site Compound	
Non-involved		Substation	
Existing Unsealed Road		Energy Storage Facility	
Existing Sealed Road		Existing Powerlines:	
Development Corridor		132kV	
Project Site		330kV	
Access tracks		Proposed powerlines:	
Primary Project Site entry		Overhead (high voltage)	
Secondary intersections		Underground (medium to low voltage)	
Waterway Crossing		Overhead (medium to low voltage)	

SCALE BAR

0 — 5 km

COMPANY

UUNGULA WIND FARM PTY LTD

cwp renewables

TITLE

Project Layout

DATE	SCALE	DWG NO	REV	VER
23/02/22	1:49000	UWF-127	B	1

DRAWN BY	CHECKED BY	SHEET	JOB NO	SIZE
B KRONENBERG	M FLOWER	1 OF 1	110247	A3

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