

Valley of the Winds Wind Farm (SSD-10641)

Response to request for information

April 2024

Valley of the Winds Response to request for additional information (2024)

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V4					
V5					

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1. Introduction

State Significant Development application (SSD-10461) and accompanying Environmental Impact Statement (EIS) for ACEN Australia's (the Proponent) Valley of the Winds Wind Farm (the Project) were lodged in March 2022. The SSD application and EIS were placed on public exhibition from 23 May 2022 to 20 June 2022.

In response to the submissions received during the public exhibition of the EIS, the Project was amended to address issues raised. An Amendment Report and a separate Response to Submissions Report were submitted to DPPI on 27 October 2023.

Following submission of these reports, the following agencies provided requests for additional information:

- The Department of Planning and Environment (DPE) (now Department of Planning, Housing and Infrastructure [DPPI])
- Biodiversity Conservation and Science Directorate (BCS) (now NSW Department of Climate Change, Energy, the Environment and Water [NSW DCCEEW])
- Warrumbungle Shire Council (WSC)
- Mid-Western Regional Council (MWRC)
- DPPI - Water
- Transport for NSW (TfNSW)
- DPPI - Hazards
- DPPI - Crown Lands
- Heritage NSW
- Civil Aviation Safety Authority (CASA)
- NSW Rural Fire Service (RFS).

This report summarises the agency comments and provides further information and proposed actions to address any matters raised.

2. Project diversions from Amendment Report

2.1 Project definitions clarifications

2.1.1 Wind farm site

The boundary of the wind farm site corresponds with the outer boundary of properties, including public roads, upon which the works associated with the Project are located. The wind farm site boundary includes the three clusters of wind turbine generators and supporting infrastructure as well as public and private road upgrade sections and the construction workforce accommodation area.

Following submission of the Amendment Report and in consultation with DPHI and landholders, minor changes were made to the wind farm site boundary to incorporate Project access roads and to exclude specific unutilised parcels of land. Changes to the wind farm site boundary are presented in **Figure 2-1**.

The wind farm site for the amended Project is shown in **Figure 2-2**.

2.1.2 Development corridor

A survey boundary that provided an approximate 200 metre wide corridor (100 metres either side) around access tracks and radius from turbines was included in the EIS. This corridor was to ensure that the EIS adequately identifies potential disturbance impacts, and also provides flexibility for micrositing during detailed design and construction. The survey boundary was omitted from the amendment report Figures A-1 to A-4.

The survey boundary for the amended Project has been redefined as the development corridor and is shown in **Figure 2-3** to **Figure 2-5**.

2.1.3 Indicative construction footprint

Within the development corridor, there is an indicative construction footprint. The indicative construction footprint represents the expected maximum extent of ground disturbing work and vegetation clearing associated with construction and operation of the Project. The indicative construction footprint was omitted from the amendment report Figures A-1 to A-4.

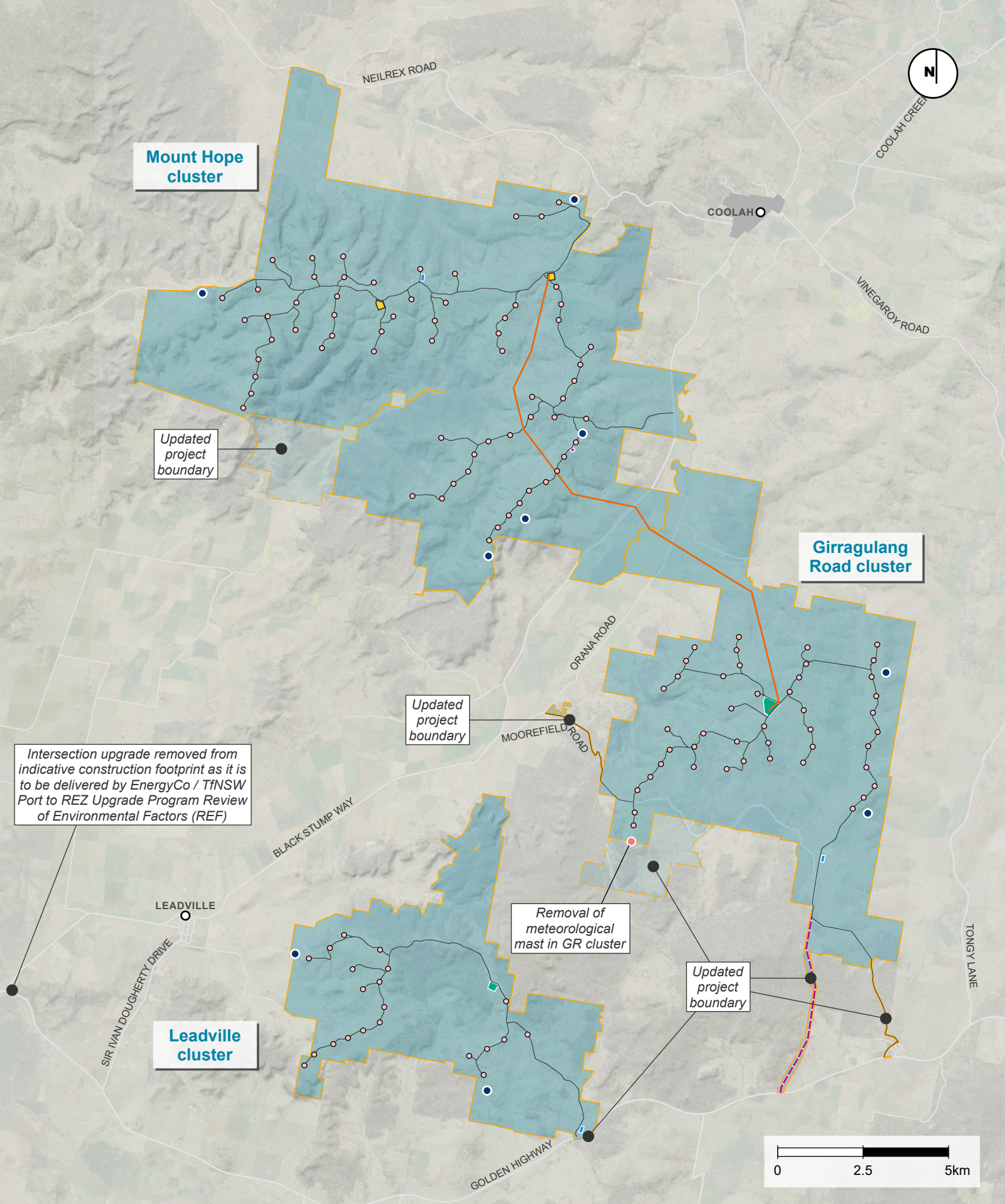
Based on the indicative layout presented in the Amendment Report, the Project would require an impact footprint of approximately 695 hectares.

The indicative construction footprint determines a realistic potential quantum of ground disturbing works to facilitate assessment of biodiversity impacts and biodiversity offset calculations. The actual construction footprint would be microsited within the development corridor during detailed design and would not increase the assessed biodiversity or heritage impacts. Further micrositing within the development corridor may occur during construction to minimise environmental impacts or address specific on the ground conditions.

The indicative construction footprint for the amended Project is shown in **Figure 2-3** to **Figure 2-5**.

2.2 Turbine model

ACEN is conducting a turbine selection process to determine the most suitable turbine for installation at the Valley of the Winds Project. ACEN currently has a preferred turbine model under consideration which has a blade length of 90m, rotor diameter of 182m, and a maximum tip height of 250 metres. ACEN with the support of Ramboll has considered the potential implications to biodiversity, noise, traffic, visual, aviation and blade throw and conclude that this turbine model is able to operate within the parameters assessed within the EIS and Amendment Report, resulting in no material change to impacts.

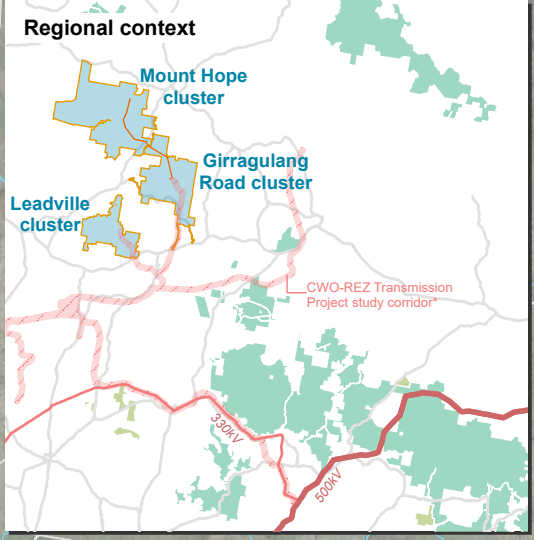
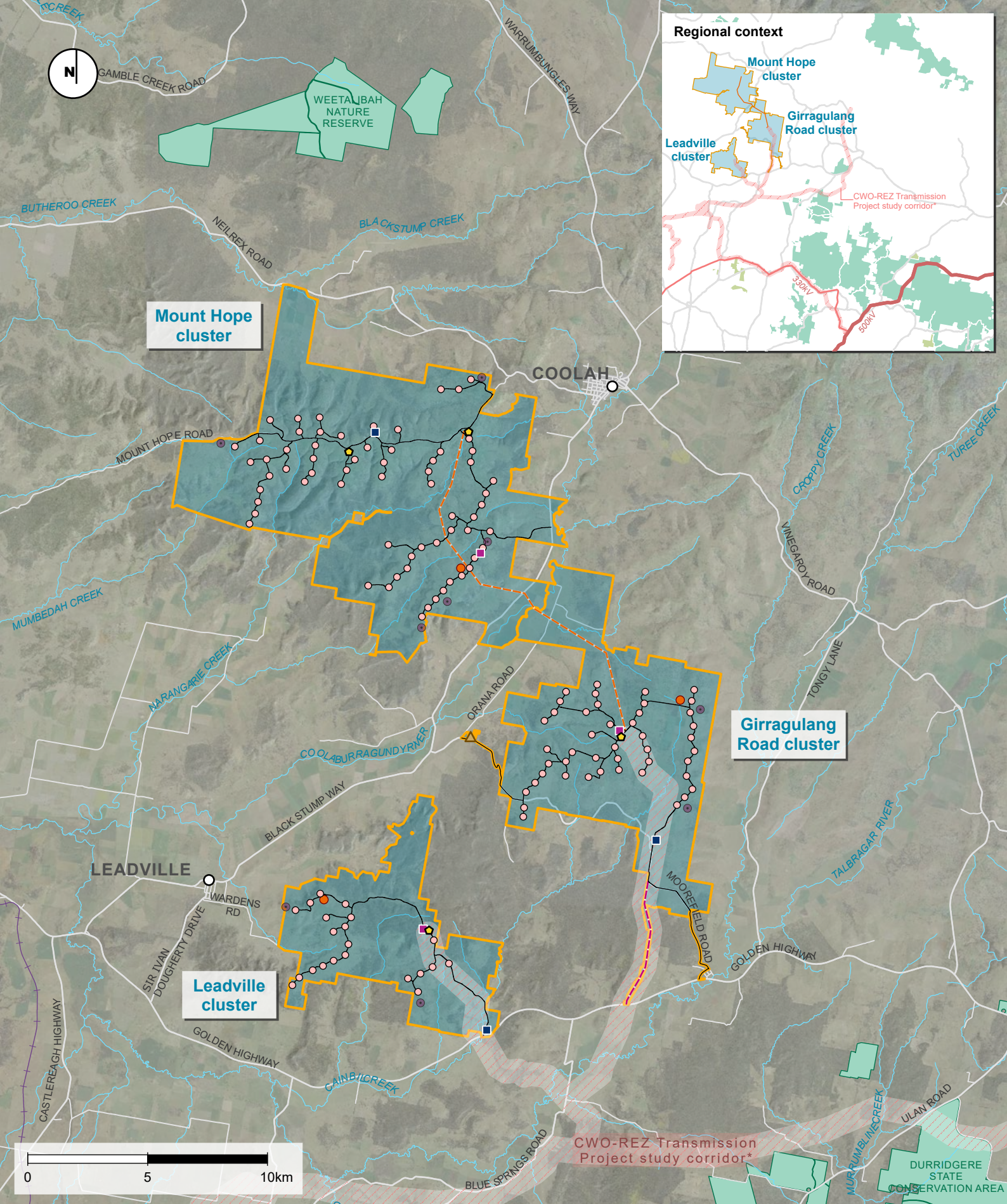


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 Aerial photography from NSW Government Spatial Services

KEY

- | | | |
|--|---|--|
| Wind farm site | Substation, BESS and construction and permanent operation and maintenance compound area | Wind farm site presented in Amendment Report |
| Turbine location | Substation area | Permanent meteorological mast location removed |
| Access track | Construction and permanent operation and maintenance compound area | Alternative access to GR cluster |
| Overhead transmission line | Temporary construction compound area | |
| Permanent meteorological mast location | | |

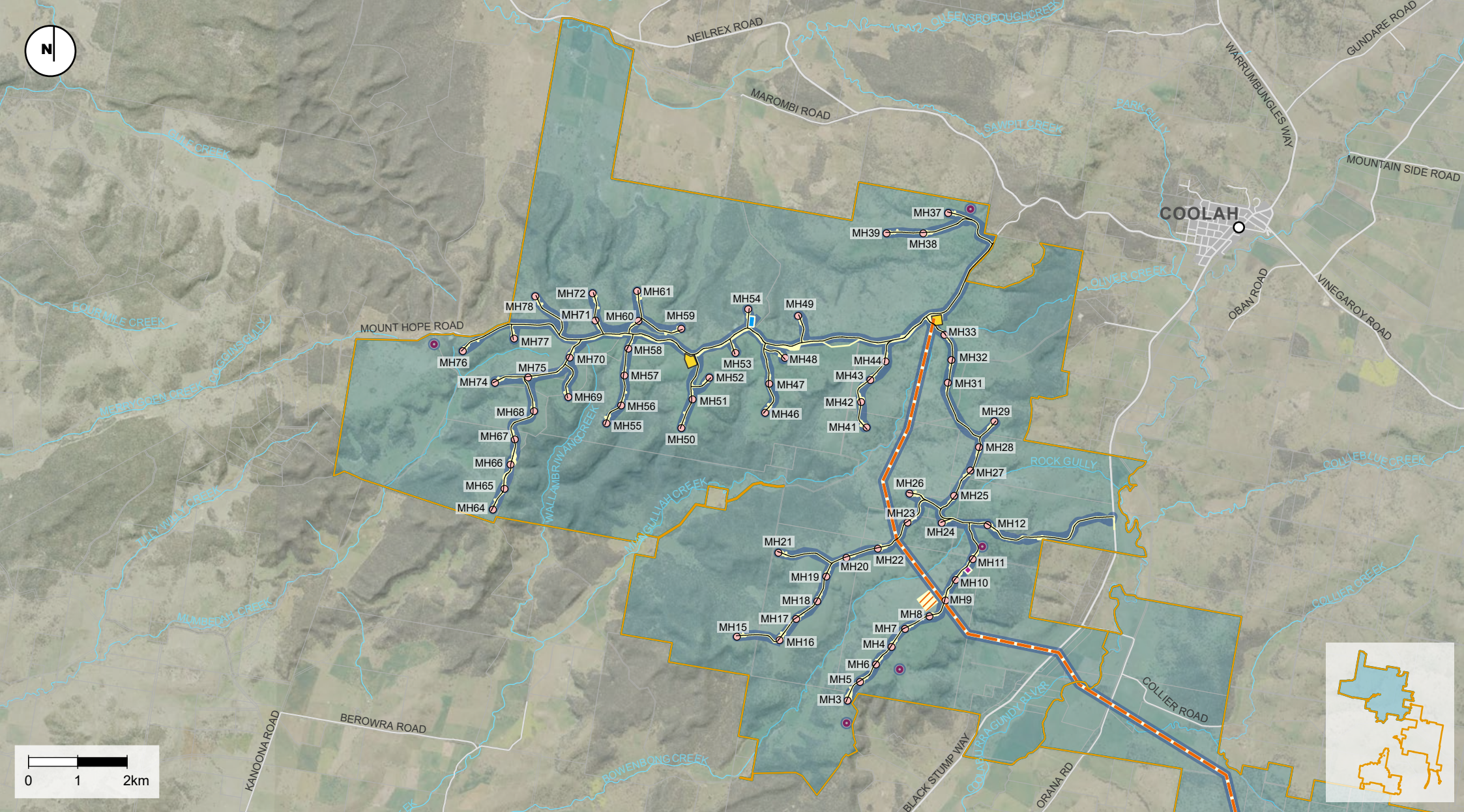
Figure 2-1 | Overview of project refinements since Amendment Report



- KEY**
- Wind farm site
 - Turbine location
 - Access track
 - Overhead transmission line
 - Alternative access to GR cluster
 - Permanent meteorological mast location
 - Potential construction workforce accommodation
 - Substation
 - Construction and permanent operation and maintenance compound
 - Temporary construction compound
 - Indicative quarry location
 - Railway
 - National Parks and Reserves
 - CWO-REZ Transmission Project study corridor*
- *Approximate only*

Figure 2-3 | Project overview

RAMBOLL AUSTRALIA - GIS MAP file : 318001172_GIS_P013_RFiresponse | F004_ProjectLayout_V03
Aerial photography from NSW Government Spatial Services

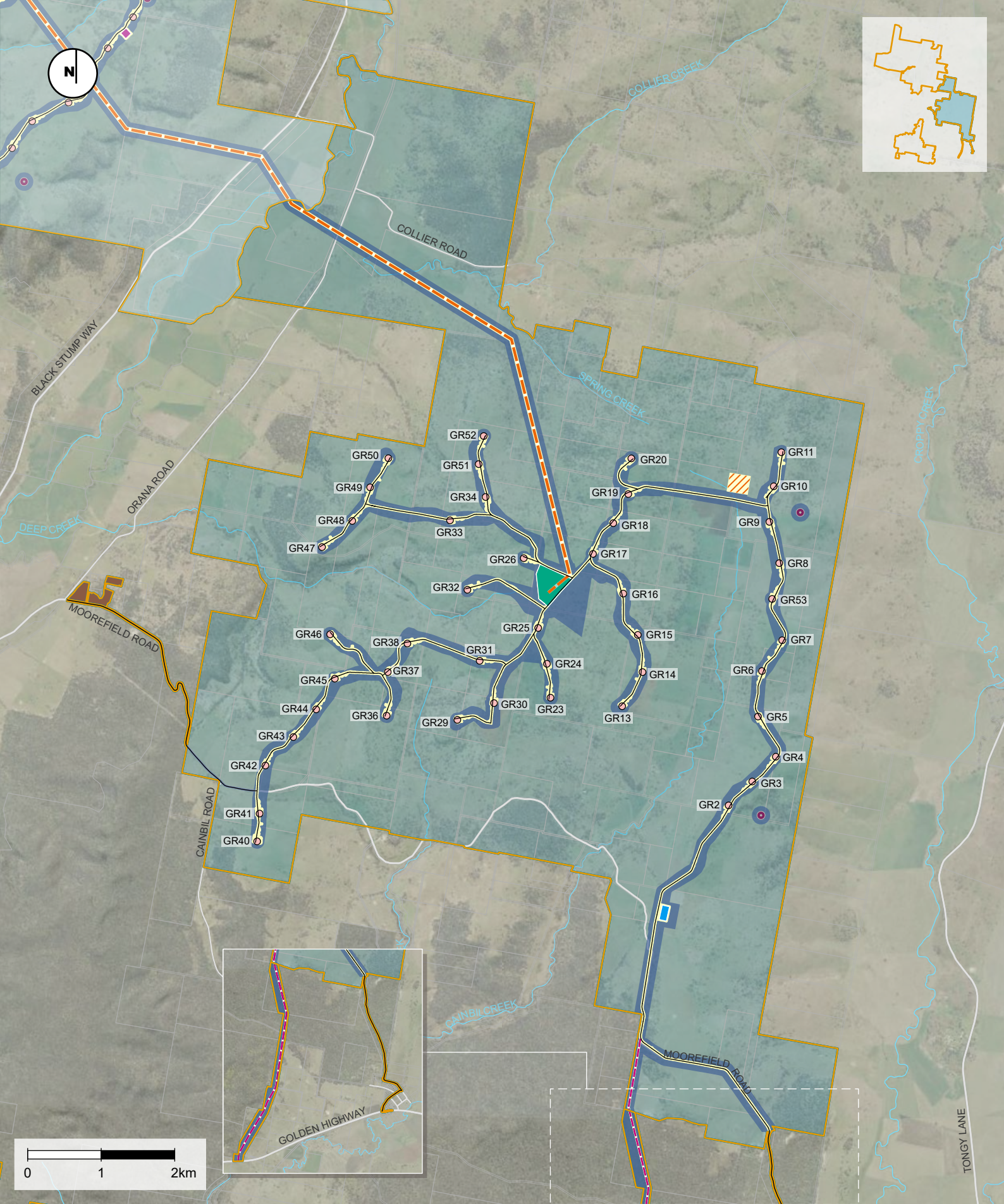


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 Aerial photography from NSW Government Spatial Services

KEY

- Wind farm site
- Indicative construction footprint
- Development corridor
- Cadastral boundary
- Turbine location
- Access track
- Permanent meteorological mast location
- Quarry location (approximate)
- Substation area
- Construction and permanent operation and maintenance compound area
- Temporary construction compound area

Figure 2-4 | Project layout at the Mount Hope cluster

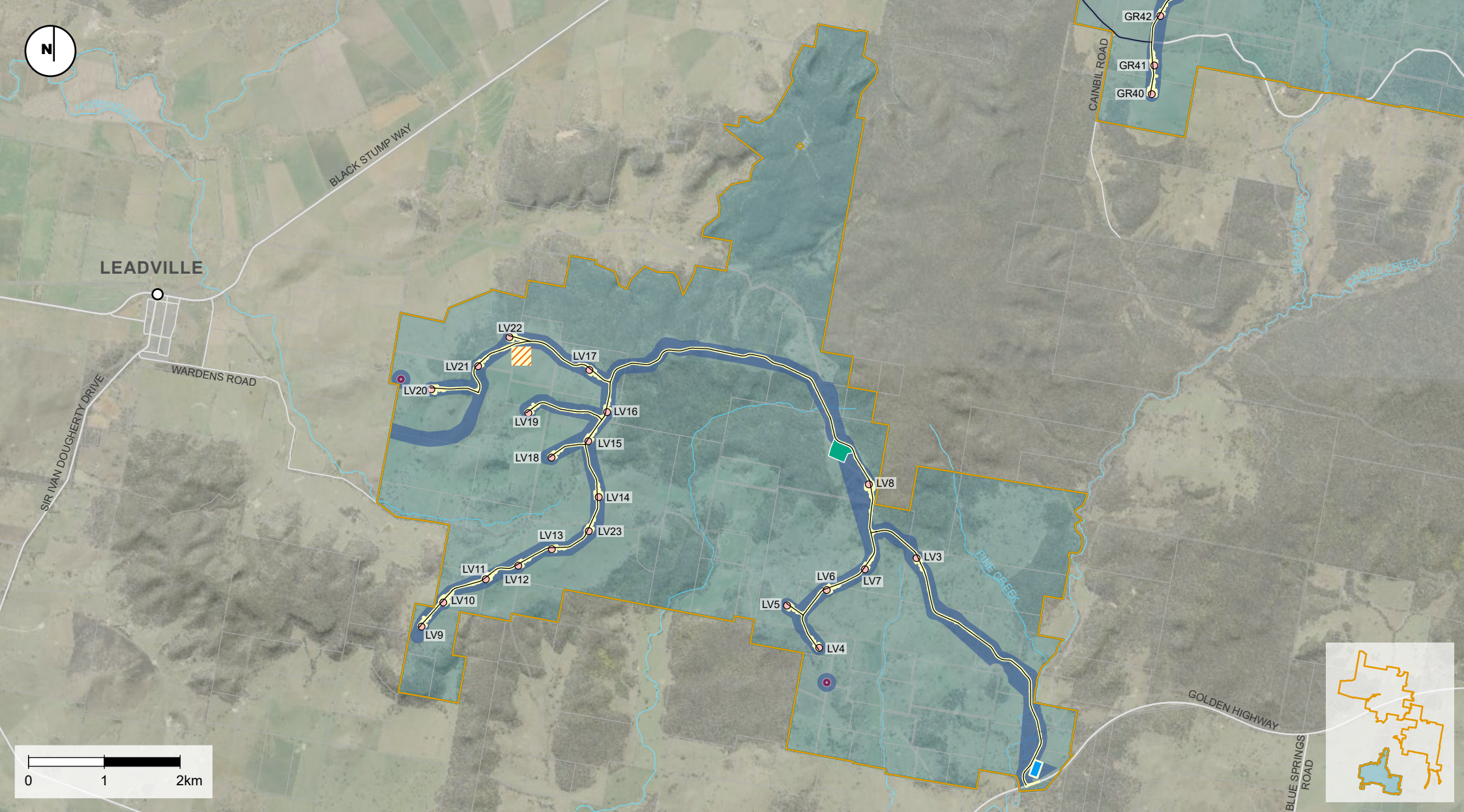


RAMBOLL AUSTRALIA - GIS MAP file : 318001172_GIS_P013_RFiresponse | F001b_ProjectMapSeries_GirragulangRd_V06
 Aerial photography from NSW Government Spatial Services

KEY

- | | | |
|--|--|---|
| Wind farm site | Turbine location | Quarry location (approximate) |
| Potential construction workforce accommodation | Access track | Substation, BESS and construction and permanent operation and maintenance compound area |
| Indicative construction footprint | Alternative access to GR cluster | Construction and permanent operation and maintenance compound area |
| Development corridor | Overhead transmission line | Temporary construction compound area |
| Cadastral boundary | Permanent meteorological mast location | |

Figure 2-5 | Project layout at the Girragulang Road cluster



RAMBOLL AUSTRALIA - GIS MAP file : 318001172_GIS_P013_RFResponse | F001c_ProjectMapSeries_Leadville_V06
 Aerial photography from NSW Government Spatial Services

KEY

- Wind farm site
- Indicative construction footprint
- Development corridor
- Cadastral boundary
- Turbine location
- Access track
- Permanent meteorological mast location
- Quarry location (approximate)
- Substation, BESS and construction and permanent operation and maintenance compound area
- Temporary construction compound area

Figure 2-6 | Project layout at the Leadville cluster

3. Department of Planning, Housing and Infrastructure

DPHI provided requests for additional information in letters dated 03 November 2023 and 21 December 2023. A summary of the requests and ACEN’s responses are provided in the following sections.

3.1 Transport

Provide the status of negotiations with the landowner of land in the alternative access option.

Negotiations regarding the alternative access option are ongoing and progressing positively. ACEN is confident agreements will be reached in the coming months.

Confirmation that the minimum safe intersection sight distance (SISD) requirements would be achieved, and that all potential safety impacts have been assessed, including a figure showing the location of the alternative access point.

SCT Consulting reviewed the safe intersection sight distance (SISD) for the five intersections, using the operating (85th percentile) speed of 110 kilometres per hour (ten percent greater than the posted speed limit of 100 kilometres per hour). The two existing intersections of Black Stump Way and Short Street do not meet the minimum SISD requirement, and the proposed GIRRAGULANG ROAD CLUSTER ALTERNATIVE ACCESS ROAD does not meet it at the west as the Golden Highway has a vertical crest where the highway has been cut into the terrain.

A second SISD was done using 100 kilometres per hour, being the posted speed limit. This assessment found that all intersections except the eastbound traffic at the proposed GIRRAGULANG ROAD CLUSTER ALTERNATIVE ACCESS ROAD achieved the SISD requirement. The Alternate Access Road achieves the SISD requirement when microsituated approximately 40-80m east of its current position. Therefore, ACEN propose to move the GIRRAGULANG ROAD CLUSTER ALTERNATIVE ACCESS ROAD to provide safe ingress and egress. There is an approximate 90 metre microsite allowance available to the east of the existing alignment within the surveyed development corridor to accommodate this.

Results of the SISD assessments are provided in the SCT Consulting report in **Appendix 1** and have been reproduced in **Table 3-1** and **Table 3-2** below.

Table 3-1: Summary of SISD analysis using 110 kilometres per hour as operation (85th percentile) speed

Intersection	Minimum SISD (m)	SISD for eastbound traffic (m)	Satisfies SISD?	SISD for westbound traffic (m)	Satisfies SISD?
Golden Highway / Black Stump Way (existing intersection)	332	290	No	320	No
Golden Highway / Leadville Cluster (proposed intersection)	332	330+	Yes	330+	Yes
Golden Highway / GIRRAGULANG ROAD CLUSTER ALTERNATIVE ACCESS ROAD (proposed intersection)	332	250	No	550+	Yes

Intersection	Minimum SISD (m)	SISD for eastbound traffic (m)	Satisfies SISD?	SISD for westbound traffic (m)	Satisfies SISD?
Golden Highway / Short Street (existing intersection)	332	300	No	290	No
Golden Highway / Ulan Road (existing intersection)	332	400+	Yes	400+	Yes

Table 3-2: Summary of SISD analysis using 100 kilometres per hour as operation (85th percentile) speed

Intersection	Minimum SISD (m)	SISD for eastbound traffic (m)	Satisfies SISD?	SISD for westbound traffic (m)	Satisfies SISD?
Golden Highway / Black Stump Way (existing intersection)	332	290	Yes	320	Yes
Golden Highway / Leadville Cluster (proposed intersection)	332	330+	Yes	330+	Yes
Golden Highway / Girragulang Cluster Alternative Access Road (proposed intersection)	332	250	No	550+	Yes
Golden Highway / Short Street (existing intersection)	332	300	Yes	290	Yes
Golden Highway / Ulan Road (existing intersection)	332	400+	Yes	400+	Yes

Provide information on the expected traffic volumes for both construction and operation clearly differentiating between light vehicles, heavy vehicles and heavy vehicles requiring escort.

A basic traffic survey of light and heavy vehicles was undertaken on 9 June 2021, during the COVID-19 pandemic. These dates are outside the Sydney lockdown period which occurred March – April 2020 and July – October 2021. A review of traffic volumes from a permanent count station along the Golden Highway (ID 6163) showed that these volumes were comparable or higher than pre-COVID. Therefore, no adjustments were necessary. The results from the traffic assessment are provided in section 3.1 of **Appendix 1** and reproduced in **Table 3-3**.

Table 3-3: Comparison of permanent count station data from the June 2021 and pre-COVID traffic volumes (2019)

Direction	Date	Daily light vehicles	Daily heavy vehicles	Daily total vehicles
Eastbound	June 2019	796	233	1,009
	June 2021	897	312	1,190
Westbound	June 2019	733	247	963
	June 2021	911	343	1,241

Provide a schedule of road upgrades agreed to with the relevant road authority.

A schedule of road upgrades was prepared as part of the Amendment Report with the current details reproduced in **Table 3-4** below and shown in **Figure 3-1**. Consultation is ongoing with both WSC and TfNSW.

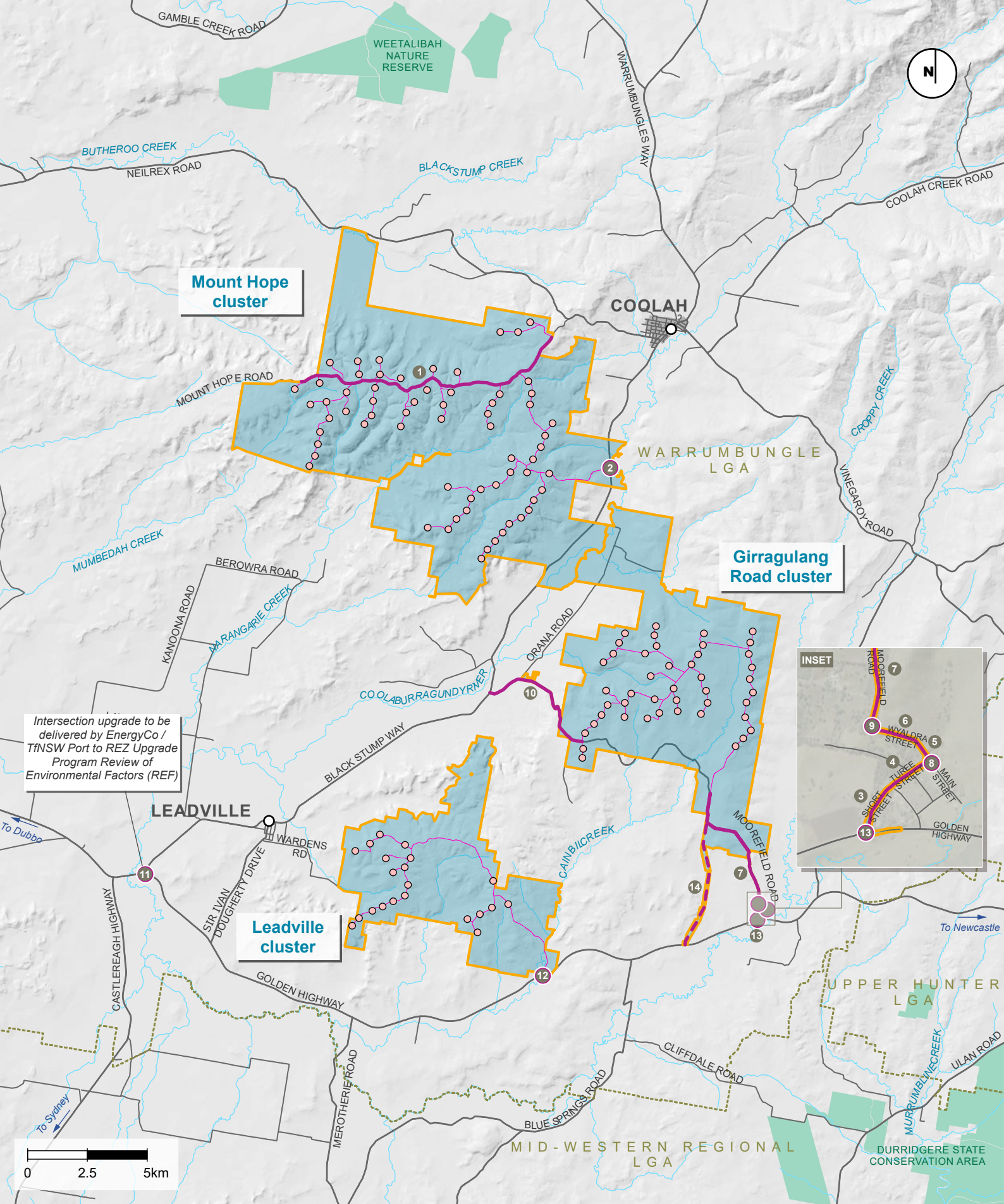
Table 3-4: Road upgrades and timing

Intersection / Road	Proposed upgrade	Length (km)	Timing	
Road authority: Warrumbungle Shire Council				
1	Mount Hope Road	Within the Mount Hope cluster boundary, upgrade to the standard and satisfaction of Council for general construction traffic and OSOM vehicles.	12	Prior to commencing construction of the Mount Hope cluster
2	Black Stump Way / Mount Hope Cluster site access road intersection	Extent of required works to allow access for OSOM vehicles.	N/A	Prior to commencing construction of the Mount Hope cluster
3*	Short Street	From the Golden Highway to Church Street, upgrade to the standard and satisfaction of Council for general construction traffic and OSOM vehicles. ACEN is committed to paving this section of road in response to feedback from the local community.	0.3	Prior to commencing construction of the Girragulung Road cluster
4*	Turee Street	From Short Street to Main Street, upgrade to the standard and satisfaction of Council for general construction traffic and OSOM vehicles. ACEN is committed to paving this section of road in response to feedback from the local community.	0.3	Prior to commencing construction of the Girragulung Road cluster
5*	Main Street	From Turee Street to Wyaldra Street, upgrade to the standard and satisfaction of Council for general construction traffic and OSOM vehicles.	0.1	Prior to commencing construction of the Girragulung Road cluster
6*	Wyaldra Street	From Main Street to Moorefield Road, upgrade to the standard and satisfaction of Council for general construction traffic and OSOM vehicles.	0.3	Prior to commencing construction of the Girragulung Road cluster
7*	Moorefield Road (east)	From Wyaldra Street to internal access road in Girragulung Road cluster, upgrade to the standard and satisfaction of Council for general	5.8	Prior to commencing construction of the Girragulung Road cluster

Intersection / Road		Proposed upgrade	Length (km)	Timing
		construction traffic and OSOM vehicles.		
8*	Turee Street / Main Street intersection	Extent of required works to allow access for OSOM vehicles.	N/A	Prior to commencing construction of the Girragulang Road cluster
9*	Wyaldra Street / Moorefield Road intersection	Extent of required works to allow access for OSOM vehicles.	N/A	Prior to commencing construction of the Girragulang Road cluster
10	Moorefield Road (west)	From Black Stump Way to internal access road in Girragulang Road cluster, upgrade to the standard and satisfaction of Council for general construction traffic.	5.8	Prior to commencing construction of the Girragulang Road cluster
Road authority: Transport for NSW				
11**	Golden Highway / Black Stump Way intersection	Extent of required works to allow access for OSOM vehicles.	N/A	Prior to commencing construction of the Mount Hope cluster
12	Golden Highway / Leadville Access Road intersection	Extent of required works to allow access for OSOM vehicles.	N/A	Prior to commencing construction of the Leadville cluster
13	Golden Highway / Short Street intersection	Extent of required works to allow access for OSOM vehicles.	N/A	Prior to commencing construction of the Girragulang Road cluster
14	Golden Highway / Girragulang Road cluster (alternative access) intersection and construction of private road	Extent of required works to allow access for OSOM vehicles. Construction of the road will be to the standard and satisfaction of Council for general construction traffic and OSOM vehicles.	5.4	Prior to commencing construction of the Girragulang Road cluster

* Noting that only one access to the Girragulang Road cluster would be constructed, should the proposed access via Uarbry not proceed, these upgrades would not be required and a new intersection on the Golden Highway would be required.

** Intersection upgrade to be delivered by EnergyCo / TfNSW Port to REZ Upgrade Program Review of Environmental Factors (REF)



Intersection upgrade to be delivered by EnergyCo / TfNSW Port to REZ Upgrade Program Review of Environmental Factors (REF)



- KEY**
- Wind farm site
 - Turbine location
 - Access track
 - Alternative access to GR cluster (reference 14)
 - Proposed road upgrade*
 - Proposed intersection upgrade*
 - LGA boundaries
 - National Parks and Reserves
- *Refer to table

RAMBOLL AUSTRALIA - GIS MAP file : 318001172_GIS_P013_RFresponse | F002_TRAFFIC_RdUpgrades_V07
Aerial photography from NSW Government Spatial Services

Figure 3-1 | Road length upgrades

Provide a response to matters raised by Transport for NSW (TfNSW) in their advice dated 15 November 2023 on the Submissions and Amendment Report

SCT Consulting has prepared a response report titled *Valley of the Winds: Response to TfNSW Amendment Report request for additional information* (March 2024). A summary is provided in **Section 5**. The full report is attached as **Appendix 1** and has also been provided to TfNSW for review.

3.2 Visual

Provide:

- *photomontages for R282 and R90*
- *wireframe with representation of the vegetation present for R84*
- *photomontage (view from dwelling) or wireframe with representation of the vegetation present for R278 and R181*

An updated visual package has been prepared by Moir Landscape and Architecture which includes these montages and wireframes. This package is included in **Appendix 2**.

Dwelling R84 is now an associated dwelling and therefore has not been included in the package.

3.3 Aboriginal cultural heritage

Clarify and assess the potential impacts on the Kensington OS-1 potential archaeological deposit (PAD), noting potential impacts to this site associated with the alternative access to the Girragulang Road cluster.

The Aboriginal Cultural Heritage Assessment Report (ACHAR) undertaken as part of the EIS and was updated for the Amendment Report. The ACHAR includes a description of the potential impact to the site should the Alternative Access track be developed, recommends salvage of the potential impact area, and demarcation to avoid additional impacts. The specific management measure included in section 9.2.5 of the ACHAR is reproduced below. Should the Alternate Access track proceed the following would be included in the Aboriginal Cultural Heritage Management Plan (ACHMP).

Kensington OS-1:

- xv. The part of the site that will be impacted by the proposed access track (if selected) should have all surface artefacts recorded and collected as outlined in section 9.2.3.1. The western boundary of the construction impact area should be temporarily fenced during the construction of the access track.*
- xvi. If the alternate access track is not selected, then no management is required as the site will not be harmed.*

Heritage NSW concurs with the proposed methodology and shall provide comment on the ACHMP when prepared prior to commencement of construction activities.

3.4 Quarries

3.4.1 Quantities

Provide the following quantities of material that would be extracted from each quarry site:

- tonnes in total; and
- tonnes per year;

Provide details on the nature of the voids created including approximate depth of extraction.

icubed consulting completed a desktop assessment titled *Infrastructure & Resource Assessment: 21-261-Valley of the Winds Wind Farm* for the three proposed onsite quarries which is included in **Appendix 3**. The total material required for the Project would be approximately 685,000 tonnes. The approximate total tonnage required to construct each cluster is presented in **Table 3-5**.

Table 3-5: Valley of the Winds cluster quarried material requirements

Cluster	Total (tonnes)
Leadville Cluster	127,000
Girragulang Road Cluster	260,000
Mount Hope Cluster	298,000
TOTAL	685,000

If all materials were required to be obtained from onsite quarries in the first two years of the anticipated three year construction phase, then approximately 342,500 tonnes of material would be required per annum.

To facilitate commencement of construction and access to the quarry locations it is expected that approximately 20 per cent of the total quantity of material would be required to be brought to site from external commercial quarries. **Table 3-6** provides estimated remaining quantities of materials required to be obtained from within the wind farm site to meet the quarried material requirements for each cluster in total and per annum over the two year extraction period.

Table 3-6: Valley of the Winds cluster approximate quarried material requirements and per annum

Cluster	Total (tonnes)	Tonnes per annum
Leadville Cluster	101,600	50,800
Girragulang Road Cluster	208,000	104,000
Mount Hope Cluster	238,400	119,200
TOTAL	548,000	274,000

icubed has indicated that an assumption of 30 per cent is generally utilised to anticipate the volume of material won onsite through the construction of access tracks, turbine foundations, hardstands and other infrastructure areas. This assumption of 30 per cent site won volume may differ following detailed design and the results of geotechnical investigations. As such the total volumes presented in **Table 3-6** are expected to be a maximum case.

Subject to geotechnical investigations and construction scheduling, excavated material requirements for each cluster may be required to be met from quarries across the three clusters, in accordance with a future Construction Traffic Management Plan.

According to icubed it is expected that the maximum depth of quarry in Mount Hope would be 20 metres based on an assumption of all material required to construct the cluster is extracted from the onsite quarry. The depth of the Leadville and Girragulang quarries are less than 20m to extract all the materials for the respective clusters (refer to **Table 3-5**). Quarry rehabilitation drawings are provided in **Appendix 3**.

3.4.2 Further assessment

Provide further information or assessments on the associated air, noise, vibration and blasting impacts and impacts to quality and quantity of existing surface water and groundwater considering the relevant guidelines and cumulative impacts with the wind farm.

3.4.2.1 Noise and vibration

Noise and vibration impacts from the proposed quarries were assessed during the development of the EIS. With the proposed changes to quarrying activities, a review of the initial assessment was undertaken by Marshall Day Acoustics (2024) to establish whether updates or additions are required to align with the updated quarry activities. This assessment is provided in **Appendix 4**.

The primary change is a proposed reduction in extraction tonnages due to a refinement of the indicative construction footprint and a decrease in the number of proposed wind turbines for the Project (down from 148 turbines to 131 turbines). There are no proposed changes to quarry locations. Therefore, equipment, plant items and other quarry related assumptions identified in the EIS Noise Assessment remain valid and predicted noise levels associated with quarrying activities would remain below noise management levels at all receivers.

Blast modelling is highly variable as ground and rock conditions limit the accuracy of predictions. Using generic assumptions, an indication of blasting, airblast overpressure levels and ground vibration levels effects were estimated using the method detailed in *AS 2187-2:2006 Explosives-Storage, transport and use, Part 2: Use of explosives* (AS 2187-2). Based on estimated distances, airblast overpressure and ground vibration levels, the assessment found:

- estimated airblast overpressure at all non-associated receivers are below the criteria for all blasts
- estimated airblast pressure at any receiver within 1,100 metres (receivers 250, 297, 258, 303 and 310) may be above the criteria
- estimated ground vibration levels at all non-associated and associated receivers are below the criteria for all blasts.

The Noise and Vibration Assessment (Marshall Day Acoustics, 2024) is included in **Appendix 4**.

3.4.2.2 Air quality

The Project includes the establishment and operation of three onsite quarries that would supply excavated material for the Project. The three turbine clusters (Mount Hope, Girragulang Road, and Leadville) are each proposed to have a site quarry located within each of cluster. Potential impacts to air quality from the proposed quarries were assessed at the EIS stage of the Project. The Air Quality Impact Assessment (AQIA) formed Appendix R of the *Valley of the Winds: Environmental Impact Statement* (Ramboll 2022).

The AQIA (Ramboll, 2022) included estimates of civil material quantities (e.g., aggregates, concrete, and sand) required for the construction of the Project (approximately 815,340 tonnes of material) and applied these material quantity estimates to the proposed construction activities such as quarrying,

processing, concrete batching, cable trenching and operation of disturbed areas (i.e., quarries and stockpiles) to derive emission estimates. The AQIA used AERSCREEN modelling to quantify particulate impacts using a Level 1 approach comprising screening-level dispersion modelling techniques using worst-case input data. The assessment applied the maximum result from the AERSCREEN model to the nearest sensitive receiver for a conservative assessment of all sensitive receivers. The results determined no exceedance to air quality criteria under both scenarios modelled including Project-only contribution and cumulative impact contributions.

More recently, icubed consulting was engaged to undertake a detailed desktop assessment of the availability of local resources, the viability of proposed quarry sites and detailed estimates of construction material quantity estimates for use in the Valley of Winds Wind Farm Project in report titled *Infrastructure & Resource Assessment: 21-261-Valley of the Winds Wind Farm* (icubed consulting, 2024). The icubed assessment concluded that the three proposed quarry sites are considered to be viable for the extraction of construction material relating to pavement materials, and that materials required for turbine footings and cable trench bedding sands would likely be sourced from existing commercial quarry operators. icubed consulting (2024) estimates approximately 685,026 tonnes of gravel mass could be sourced from onsite quarrying for the construction of pavement materials. The reduction in the volume of materials required is largely due to a refinement of the indicative construction footprint and a decrease in the number of proposed wind turbines for the Project (down from 148 turbines to 131 turbines). As such, the material quantity estimates adopted in Ramboll's (2022) AQIA were less than those estimated by icubed consulting (2024) and therefore the results of the 2022 AQIA are conservative. No further modelling has therefore been undertaken.

3.4.2.3 Traffic

Following a review of the icubed consulting *Infrastructure & Resource Assessment: 21-261-Valley of the Winds Wind Farm* report, SCT Consulting reassessed projected truck movements of crushed rock, gravel, aggregate and sand was won from onsite quarries at each of the turbine clusters. The icubed consulting report (2024) noted that the initial 20 per cent of pavement materials would be imported from external sources. The remaining 80 per cent could be won during construction or sourced from the onsite quarries.

Using material quantities presented in the *Infrastructure & Resource Assessment: 21-261-Valley of the Winds Wind Farm* (**Appendix 3**) report, SCT Consulting re-calculated truck movements using the assumption that 80 per cent of material would come from construction activities or the onsite quarries. This is detailed in section 2.1 of the *Technical Advisory Note* (SCT Consulting, 2024) attached as **Appendix 5**. and summarised in **Table 3-7**.

Table 3-7: Summary of potential material that could be sourced from onsite quarries

Description	Crushed rock (m ³)	Gravel mass (t)	Aggregate (t)	Sand (t)	Bedding sand (m ³)
Total pavement material required	326,203	685,026	142,803	120,258	44,619
80 per cent that could be won from construction or sourced from onsite quarries	260,962	548,021	114,242	96,206	35,695
Truck and dog capacity	30	42	42	42	30
Total trucks	8,699	13,049	2,721	2,291	1,190

Given these assumptions, approximately 27,950 trucks could be removed from the surrounding road network over the construction period if material is won during construction or sourced from the onsite quarries.

3.4.2.4 Water

Based on advice from icubed, crushing operations would demand five per cent water volume by crushing material volume. **Table 3-8** provides a maximum estimate of water required for quarrying operations if all material is sourced from the onsite quarries.

Table 3-8: Total and per annum water requirements for quarrying activities

Cluster	Total (tonnes)	Water requirement (ML)	Water requirement per annum (ML)
Leadville Cluster	127,000	6,350	3,175
Girragulang Road Cluster	260,000	13,000	6,500
Mount Hope Cluster	298,000	14,900	7,450
TOTAL	685,000	34,250	17,125

As indicated by icubed, approximately 20 per cent of excavated materials would be brought to site from external commercial quarries and therefore this total water volume is considered conservative for quarries and quarry operations.

Section 3.6 further discusses the availability of water to facilitate the construction of the Project including the operation of the quarries.

Impacts to water quality will be minimised as controls to mitigate potential sediment runoff and erosion during earthworks and construction activities will be documented in an Erosion and Sediment Control Plan (ESCP) and implemented in accordance with Managing Urban Stormwater: Soils and Construction (Landcom 2004). All earthworks will be undertaken in compliance with the CEMP, prepared and approved prior to construction.

Section 13.2.4 of the EIS describes the existing groundwater conditions within and surrounding the wind farm site. Information for registered groundwater bores within five kilometres of the wind farm site was sourced from the Bureau of Meteorology Australian Groundwater Explorer (accessed in 2021). This included location, drilled depth, drilled date, purpose, lithology, bore construction, and salinity, where available. Standing water level observations were generally not available for bores adjacent to the indicative quarry sites.

Prior to development of any quarry sites, detailed geotechnical investigations will be required to confirm the resource and material suitability for the project. A maximum pit depth of 20 metres is anticipated, based on an assumption of all material required to construct each of the clusters being extracted from the onsite quarries. As part of the detailed geotechnical assessments, site specific groundwater observations will inform the requirement for further groundwater investigations and impact assessment. If interaction with groundwater would occur to access the resource, this would trigger the requirement for a site specific groundwater impact assessment and aquifer interference approval if determined to be required.

3.4.3 Rehabilitation

Proposed strategy for rehabilitation at each quarry site.

As the quarries fulfil the development objectives, a rehabilitation plan shall be prepared in accordance with the relevant guidelines. This plan would outline the rehabilitation objectives and strategies used to establish the final landform. All quarried areas disturbed during the construction phase would be rehabilitated.

The proposed final landforms are provided in **Appendix 3** and would consist of a free-draining, safe, stable and non-polluting landform that is commensurate with the surrounding environment. This may require filling and compacting excavated areas with topsoil or materials and contouring the area to be consistent with the surrounding landscape.

3.5 Workforce accommodation

Provide further detail on the proposed workforce accommodation camp, with consideration given to:

- *waste disposal*
- *water supply*
- *social impacts*
- *noise*

3.5.1 Overview

ACEN proposes developing a 400-bed temporary workforce accommodation facility for workers during the construction phase. This is an alternative to the regionally distributed workforce option. The provision of a worker accommodation facility would avoid impacting the supply of local housing and tourist accommodation. Onsite accommodation would also reduce traffic impacts of workers commuting from regional communities.

3.5.2 Location

The proposed construction workforce accommodation would be located near the Girragulang Road Cluster on Moorefield Road as shown in **Figure 2-1**.

3.5.3 Design

The temporary workforce accommodation indicative layout and design is detailed in section 1.1.6 of the Amendment Report. In summary, the area would consist of a 5-hectare hardstand area with supporting facilities located within the nominated parcel of land. Buildings would consist of prefabricated demountable bedroom and ensuite bathroom units delivered and installed following site establishment. Amenities such as a commercial kitchen and dining hall, gymnasium, licensed social area, medical centre with registered nurse, laundries, car parking, site security, fencing and other recreational activities would be provided.

Figure A-10 in the Amendment Report provides an example workforce accommodation layout.

3.5.4 Accommodation management

The temporary workforce accommodation would be managed by an experienced operator engaged by the principal construction contractor. Services such as maintenance, laundry, cleaning, catering, security and waste management, would be outsourced to the local businesses where possible.

3.5.5 Services

3.5.5.1 Waste disposal

ACEN has consulted with Dubbo Regional Council regarding solid waste streams who have indicated it will receive the construction waste streams from the Project. Solid waste would therefore be moved offsite and transported to Dubbo Regional Council's waste management and recycling facilities for disposal. Sewage waste will either be treated onsite or removed offsite. In the event that sewage waste cannot be treated onsite, consideration has been given to upgrading a sewage treatment plant (STP) in a surrounding council area (such as the Mudgee STP or other opportunities in the region) to handle the increased volume of wastewater and sewage waste if necessary.

3.5.5.2 Water supply

Several options have been considered to ensure that there is sufficient potable water available for construction and operation of the workforce accommodation facility. A conservative estimate provided in the **Appendix 3** indicates a potable water requirement of 40 litres per person per day for operation of the temporary workforce accommodation facility. At an average of 200 personnel per day for the three and a half year operation for six days per week equates to a total volume of 8,736 kilolitres (1,092 days at 6 days per week).

ACEN will investigate opportunities to source and treat water onsite. In instances where water quality is not suitable, potable water would be sourced as near to the site as possible and imported by truck from an external supplier. Water requirements are discussed further in **section 3.6**.

3.5.5.3 Health and human services

The EIS Social Impact Assessment (SIA) (AAP Consulting, 2022) assessed the concern of what implications the Project would have on health and welfare services as the existing services may not be able to support the construction workforce. It is noted that the SIA did not specifically address this social impact as it related directly to a temporary workforce accommodation camp. This assessment is provided in **Appendix 6**.

ACEN will provide a medical centre and first aid station with an onsite registered nurse at the temporary workforce accommodation facility to reduce pressure on local health services. Any doctor's appointments would be arranged by Telehealth. The onsite nurse should not be sourced from the regional workforce due to existing issues with recruitment for rural positions.

24-hour onsite security personnel would be provided to ensure site safety and security and to respond to any incidents. Workers would be required to have a zero blood alcohol level when entering the construction site and shall be subject to daily testing, prior to entering the construction site for work.

In addition, ACEN would seek to support existing community services through:

- engaging in regular communication with services and health care providers across the regional area
- prioritising local employment and early investment in partnerships that provide job readiness, training and education outcomes that benefit different sectors of the community and the regional area
- advocating with industry bodies such as EnergyCo for a strategic approach to understanding and managing cumulative impacts from REZ development
- engaging with other renewable energy proponents in the regional area about a coordinated response to manage potential workforce impacts on services and facilities across the regional area.

Once the accommodation facility has been decommissioned, it may also be possible to repurpose the buildings for community infrastructure purposes. ACEN will continue to engage with WSC to explore these options to benefit local businesses and communities.

3.5.6 Access

SCT Consulting undertook a traffic assessment for a centralised temporary workforce accommodation versus a regionally distributed accommodation model. The assessment found that a centralised temporary workforce accommodation would reduce the traffic impact on the Golden Highway intersections. The Leadville Cluster would be the only site requiring construction worker access via the Golden Highway, with construction workforce traffic using the Leadville Cluster Access Road via Black Stump Way and the Golden Highway.

Construction traffic routes to and from the Mount Hope Cluster would be via Black Stump Way, and construction traffic to and from the Girragulang Cluster would be via Moorefield Road West and the internal access road. Neither of these traffic routes require the use of the Golden Highway.

Sections 1.2 and 5.2 of **Appendix 1** provide a detailed analysis of construction workforce traffic.

3.5.7 Consideration of social impacts

The Social Impact Assessment conducted by AAP Consulting for the Valley of the Winds Wind Farm Project (February 2022) highlighted community concerns regarding the potential impacts of the construction workforce on local housing and tourist accommodation supply. Community members expressed concerns that the influx of workers would exacerbate the scarcity of short-term accommodation options and lead to increased rental prices, adversely affecting both tourists and low-income residents.

In direct response to these concerns, ACEN proposes the establishment of a temporary workers camp, as an alternative to the regionally distributed accommodation scenario. To gauge community sentiment on a proposed workers camp, feedback was sought from the community via a random survey and targeted interviews throughout 2022.

Results from a randomised survey indicated that 62% of respondents were in favour of the workers camp, with slightly stronger support observed in Dunedoo compared to Coolah. A recurrent theme in the survey and targeted interviews was the potential for the workers camp to contribute positively to the local economy.

Since the time of authorship of the SIA, additional investigations and research have been undertaken regarding the proposed temporary accommodation facility, specifically regarding noise, access and services. A risk assessment was carried out to determine the overall significance rating of the potential social impact with and without mitigation. The impacts are evaluated according to the SIA Guidelines.

Please note the potential lack of economic benefit to local businesses and services due to the drive-in drive-out nature of workers camps and the decline in community character due to the potential for antisocial behaviour has previously been assessed (refer Table 8.4 Id. S25) (AAP Consulting, February 2022).

3.5.8 Noise

Construction noise of the temporary workforce accommodation facility was calculated using the same method detailed in the EIS Noise Assessment at the two closest receivers (502 and 307). Receiver 502 is an abandoned derelict dwelling and unlikely to be inhabited during the operation of the workers accommodation facility. Receiver 307 is associated with the Project. Associated receiver 307 could potentially receive noise levels above the highly noise affected management level of 75 dB L_{Aeq} on occasion during the site establishment phase of the worker accommodation facility. The predicted noise levels represent a worst case scenario assuming all plant and equipment concurrently operating at 100% at the closest possible location to the subject receiver.

Noise levels at receiver 307 was typical for construction works and could be reduced through specific noise control measures which should be developed when a contractor has been appointed. Construction noise would not have any adverse impacts at receiver 502 as it is an abandoned derelict dwelling and unlikely to be inhabited during the operation of the workers accommodation facility.

As part of the Construction Noise Management Plan, ACEN and the construction contractor will consider staging and plant / equipment items for the construction of the temporary workers accommodation facility. Effort will be made to reduce noise levels and potential noise impacts at Receiver 307 in consultation with the landowner.

Specific noise control measures will be developed as part of the plan which may include:

- breaking the proposed two stages of construction into smaller stages comprising less plant / equipment
- reducing the number of equipment items operating concurrently within specific stages through scheduling
- providing respite periods
- utilising quieter work methods, plant, or equipment.

With appropriately designed Project specific construction methods, construction noise levels can be significantly reduced.

Noise sources associated with the workforce accommodation facility are likely to include vehicle movements within the facility site, mechanical services, and general habitation noise. Due to the nature of the operation of the facility it is expected that noise emissions would need to comply with the NSW

EPA Noise Policy for Industry 2017 (NPF1) including applicable Project noise trigger levels, similar to other ancillary infrastructure considered as part of the EIS Noise Assessment.

Due to the variation in site design that could occur, assumptions with respect to operational noise are not practical or feasible, however widespread noise control of typical noise sources can be achieved through simple site design considerations and management controls.

On this basis, it is expected that the workforce accommodation facility can be operated in such a manner that compliance with the NPF1 is achievable, provided appropriate site design and noise control measures are included in the formalised facility design.

Specific noise control requirements, and the potential extent of these requirements should be defined based on a qualitative or quantitative assessment of compliance with the applicable noise limits once a main contractor is appointed and the design of the facility is formalised.

As a matter of course the following should be considered:

- locating workforce accommodation facility infrastructure as far from the dwellings as feasible
- positioning of building infrastructure to provide shielding to other noise sources
- mandating appropriate noise limiting management controls
- selection and design of mechanical services equipment considering noise emissions
- provision of physical noise control measures such as barriers.

Further information on the construction and operation of the workforce accommodation camp is provided in **Appendix 4**.

3.5.9 Commitments

ACEN will endeavour to address social impacts through actions such as:

- the development and implementation of management plans
- the development of a Local Participation Plan, Aboriginal Participation Plan and continue the implementation of community benefit sharing (not limited to: Planning Agreement; Neighbouring Property Benefit Scheme, Community Grants; EnergyCO REZ benefit sharing)
- continuous engagement with the community and stakeholders
- maintaining a Project complaints register
- ensuring non-compliances are reported and resolved
- maximising the natural topography and vegetation screening to reduce visual impacts
- ensuring solid waste and sewage are properly treated and disposed of
- implementing water management processes so the Project does not detract water sources from the nearby communities
- providing onsite medical care to reduce pressure on local health services
- investing in partnerships that build local business development and capacity
- implementing onsite security and crime prevention strategies to address concerns regarding potential for crime and antisocial behaviour.

3.6 Water Requirements and Treatment

Confirm that the development would have adequate water supply.

Potable and non-potable water requirements for workforce accommodation and construction of the Project are detailed in **Appendix 3**.

Water source options potentially available for the Project include a combination of:

1. Purchasing water from landowners with groundwater bores who have surplus water available
2. Establishment of new groundwater bores, subject to obtaining relevant approvals
3. Purchasing water from catchments and private dams located on the Project site and in the region
4. Purchasing recycled water from local councils in surrounding LGAs, where available
5. Purchasing water from regulated water sources such as WaterNSW's Burrendong Dam, which has a capacity of 1,678,000 ML (or three times the size of Sydney Harbour)
6. Transporting water from surrounding unregulated water sources.
7. Water treatment facility on site of temporary workforce accommodation (for dust suppression)

ACEN has been in discussions with landowners regarding the potential supply of water for the Project's construction phase. The following table details five sites where landowners have confirmed their interest in temporarily transferring water allocation to ACEN for commercial use during the construction period, subject to obtaining the relevant Water Access Licence approvals from WaterNSW.

Table 3-9: Landowners water licence capacity

Entity	Proximity to Project site	Water licence capacity (p.a.)
Landowner A	Within Project boundary	100ML
Landowner B	Within Project boundary	60ML
Landowner C	15km from nearest cluster	200ML
Landowner D	20km from nearest cluster	400ML
Landowner E	5km from nearest cluster	25ML
licensed volumes per annum		785ML (p.a.)

The above table indicates that the licensed volumes per annum (785 megalitres per annum) sufficiently exceeds the projected annual water requirements (400 megalitres per annum.). ACEN confirms that there is sufficient water available within proximity of the Project during the construction stage. Additionally, there are many more surrounding landowners with existing groundwater bore licences that could also be engaged, if required.

The above estimate excludes the option of a water treatment facility. ACEN has reviewed wastewater and sewage treatment options which would restore water to a quality approved for dust suppression activities. Sewage waste will either be treated onsite or removed offsite. In the event that sewage waste cannot be treated onsite, consideration has been given to upgrading a sewage treatment plant (STP) in a surrounding council area (such as the Mudgee STP or other opportunities in consultation with local Councils the region) to handle the increased volume of wastewater and sewage waste if necessary.

ACEN confirms that there is sufficient water available for the construction of the Project.

Confirm that the proposed quarry sites do not require water entitlements.

A water use approval under section 89 of the WM Act, a water management work approval under section 90, or a controlled activity approval (other than aquifer interference approval) under section 91 of the WM Act is not required by virtue of section 4.41 of the EP&A Act.

As described in Section 3.4.2.4, no significant interactions with groundwater are expected during quarrying activities. ACEN has included a commitment (management and mitigation measure ID SW14) to undertake a hydrogeological assessment against the NSW Aquifer Interference Policy should the Project be identified to include aquifer interfering activities. An aquifer interference approval would be obtained, if required, as an outcome of this assessment.

Clarify whether the traffic assessment accounted for water trucks in the assessment of vehicle movements.

The traffic assessment completed for the EIS determined traffic generation based on forecasted employee, workforce and construction vehicles for the construction, operation and decommissioning phases. Traffic generation numbers included transporting construction materials and water trucks.

The full Traffic Assessment prepared by SCT Consulting is attached as Appendix H in the EIS with additional details provided in **Appendix 1**.

3.7 Aviation

Aviation Projects undertook an aviation impact assessment of the Valley of the Winds project as part of the EIS, *Aviation Impact Assessment* (Aviation Projects, 2022). Additional information was provided in the Amendment Report in relation to the potential impacts the Project may have on the Tongy (OZTON) Aerodome, Coolah Aerodome and the Turee Aerodrome.

Aviation Projects have provided a more detailed assessment of potential impacts to small airstrips in proximity to the project (including Turee Airstrip) and a detailed analysis of potential impacts to Coolah and Tongy Aircraft Landing Areas (ALA).

The full aviation assessment is provided in **Appendix 7**.

Assess impacts to small airstrips in proximity to the project, including the 'Turee' Airstrip

While the operation of wind turbines creates a degree of turbulence, studies show that the highest turbulence exists closest to the wind turbine and quickly dissipates due to convection and other natural sources, such as trees and terrain. The aviation impact assessment used a conservative measurement area of 10 turbine rotor diameters (RD) to assess impacts the Project may have on the airstrips/ALAs, with studies indicating that turbulence would likely dissipate closer to 7 RD.

The Turee Airstrip has a single flight strip containing a northeast to southwest runway. Using a conservative measurement of 10 RD, there would be a small overlap of potential turbulence from wind turbines GR08, GR09, GR10 and GR11 that may be felt by aircrafts operating in a left hand circuit landing to the northeast. There is the potential to limit circuits to a right hand pattern for the northeast facing runway to alleviate potential wind turbine turbulence impacts.

Provide a detailed analysis of impacts to Coolah ALA and Ozton Tongy ALA as per recommendations of the Aviation Impact Assessment

The Coolah ALA is located approximately 6.18 kilometres (3.34 nm) from the nearest wind turbine. The project would have no flight impacts at the Coolah ALA as the wind turbines are outside the area of interest for aviation activity (5.6 kilometres / 3 nm).

The Tongy (OZTON) ALA is located approximately 3.20 kilometres (1.73 nm) from the nearest wind turbine generator to the outside of Runway 09. Using a conservative measurement of 10 RD, there would be a slight overlap of turbulence created by wind turbines GR03 and GR04 which aircrafts may feel when operating on the western edge of the standard circuit area. There is the potential to limit circuits to a right hand pattern for Runway 27 to alleviate potential wind turbine induced turbulence. Priority may also be given to the use of Runway 18/36 with a circuit direction contained to the east of the runway without causing significant impacts to flight operations.

Summary

Using normal control inputs, normal category aircraft, and a conservative measurement of 10 RD, the results of the aviation assessment determined that turbulence produced by the wind turbine generators would have minimal flight impacts at the three airstrips/ALAs and a pilot would still be able to control the aircraft where potential turbulence is experienced.

Turbulence within the standard circuit area at the Tongy ALA will not exceed the pilot's ability to control the aircraft. Aerobatics conducted to the east of Tongy Road would not be impacted by wind turbine generators at any altitude.

Wind turbine generators to the southwest of the Turee Airstrip is likely to create turbulence in the outer edges of the standard circuit for the northeast facing runway. This will not exceed the pilot's ability to control the aircraft.

This additional analysis addresses the recommendations of the AIA.

3.8 Hazards

Consult with the relevant fuel and gas pipeline licensees and / or operators including identification of easements and addressing concerns comments raised by pipeline licensees and / or operators on the proposed development.

The Australian Pipeline Association (APA) Central Ranges Pipeline traverses the wind farm site. APA has provided an advice letter noting that it does not raise any objection to the Project and that any proposed works within the gas pipeline easement must be approved by APA prior to commencement. This process is to ensure all works are undertaken in a safe manner that does not physically impact the pipeline. APA's letter is included in **Appendix 8**.

Appendix 8 includes recommendation that the following notes be included in any issuing of consent:

- a) If you are planning on undertaking any physical works on property containing or proximate to a pipeline, or are seeking details on the physical location of a pipeline, please contact Before you Dig Australia on 1100 or <https://www.byda.com.au/>, or APA directly on APAprotection@apa.com.au.

- b) An early works agreement from APA is required for any assessments/approvals that require greater than 3 days assessment or supervision. Lead in times for agreements can be up to 12 weeks. Please contact APA at APAprotection@apa.com.au or 1800 103 452.
- c) Any improvements within the transmission gas pipeline easement undertaken by third parties is at the risk of the proponent who will remain liable. APA will not be liable for any costs associated with the reinstatement of any vegetation and/or infrastructure constructed on the easement.
- d) Where access to the pipeline will not be readily available because of the proposed development e.g. significantly obstructed by pavement etc an assessment of the condition of the pipeline coating will be required prior to development commencing. Any re-coating works required because of this assessment, due to future inaccessibility or as an outcome of an SMS will be at the developer's expense and to the satisfaction of the pipeline licensee/operator.
- e) APA has a suite of standard engineering drawings to assist with detailed design. These are available upon request. Please contact APA at APAprotection@apa.com.au or 1800 103 452.

ACEN agrees with these recommended conditions.

3.9 Spatial data

Provide a table showing the distance of each turbine from each residential receiver.

Spatial data and a table showing the distance of each turbine from each non-associated residential receiver were provided to DPFI on 8th March 2024

Update project figures to show the development corridor and disturbance footprint and provide spatial files for the amended project as per the Department's State Significant Development Guidelines 2022.

Updated figures including the development corridor and the indicative construction footprint are included in **Figure 2-2** to **Figure 2-5**.

3.10 Voluntary Planning Agreement

Confirm the terms of the Voluntary Planning Agreement with Warrumbungle Shire Council and provide evidence of agreement of the terms.

On 15 February 2024, WSC resolved to endorse the Key terms of the Planning Agreement. Correspondence from WSC is included in **Appendix 9**.

3.11 Landowners consent

Obtain landowner's consent for Crown Land.

Crown Land landowner's consent for all Crown lands within the Project site is provided in **Appendix 10**.

3.12 Subdivision

Provide information on the parcels of land that would require subdivision, including a proposed subdivision plan.

ACEN does not propose to subdivide any property associated with the Project. ACEN will construct, own, and operate substations and other electrical infrastructure on leased land or easements. Subdivision of substation lands that are required by EnergyCo now form part of SSI- 48323210 for the Central-West Orana REZ Transmission Project being proposed by EnergyCo.

4. Biodiversity, Conservation and Science Directorate (now NSW DCCEEW)

NSW DCCEEW reviewed the previous Response to Submission report and the revised Biodiversity Development Assessment Report (BDAR) against the recommendations made following the submission of the EIS. A request for additional information was provided in a letter dated 21 December 2023.

NSW DCCEEW has provided comments on the revised BDAR, and identified the following key residual matters to be addressed:

- the use and duplication of certain BAM plots collected for the Project
- the provision of spatial data to inform our review of assessment outcomes
- the bilateral assessment criteria detailed in our previous response have not been addressed
- the turbine risk assessment for bird and bat strike
- the need to provide further details regarding the package of additional and appropriate measures proposed for Box Gum Woodland
- uncertainty regarding impacted microbat species.

ACEN engaged biodiversity specialists, Eco Logical Australia (ELA), to assist with the BCS information requests. The responses to BCS's comments are provided in **Appendix 11**.

5. Transport for New South Wales

TfNSW reviewed the Response to Submissions Report and the Amendment Report and requested additional information be provided in a letter dated 15 November 2023.

ACEN engaged SCT Consulting to address the comments with the responses provided in **Appendix 1**.

SCT assessed the five Golden Highway intersections or access routes that would provide access to the three turbine clusters for light, heavy and over size over mass (OSOM) vehicles. These intersections are the:

- Golden Highway / Black Stump Way (existing intersection)
- Golden Highway / Leadville Cluster Access Road (proposed intersection)
- Golden Highway / Girragulang Road Cluster alternative access road (proposed intersection)
- Golden Highway / Short Street (existing intersection)
- Golden Highway / Ulan Road (existing intersection).

The report assessed the requirement for intersection and road upgrades based on expected traffic volumes, taking into consideration cumulative impacts from other projects within the Central-West Orana Renewable Energy Zone (CWO-REZ) that would be using the same construction route at the same time. Updated assessments included a safe intersection sight distance review (SISD), an intersection turn warrant review and a SIDRA analysis. Further information on traffic assessments is provided in **section 3.1**.

Appendix 1 also noted that the development of the proposed centralised temporary workforce accommodation would reduce the impact on the Golden Highway intersections. Only the Leadville Cluster would require the use of the Golden Highway, with construction workforce traffic using the Leadville Cluster Access Road via Black Stump Way and the Golden Highway. Further information on workforce accommodation traffic is provided in **section 3.5**.

6. Warrumbungle Shire Council (WSC)

WSC provided comments and requested additional information in letter dated 20 November 2023. A summary of the comments and ACEN's responses are provided in the following sections.

6.1 Cumulative impacts

Provide further details of the cumulative impacts from the project, other large-scale mines and infrastructure projects within the area.

Cumulative impacts with surrounding projects and large-scale mines were considered during the development of the EIS and are discussed in sections 2.5 and 18 of that report. When the Department adopted the *Cumulative Impact Assessment Guidelines for State Significant Projects* (DPIE, 2022), another assessment was undertaken with consideration given to relevant future projects. The outcomes are detailed in section 6 of the Amendment Report.

In summary, several planned and existing mines and infrastructure projects were considered when assessing cumulative impacts of the Project within the area. Relevant projects were considered based type of development, size of workforce, proximity, and project timing.

Numerous assessments, such as noise, air quality, traffic, visual and social, were undertaken to quantify potential impacts. As a result of these assessments, aspects of the Project were refined. This included the removal of some wind turbines to reduce visual impacts, and the proposed development of a temporary workforce accommodation to reduce social and traffic impacts.

Residual impacts will be mitigated through the development of management plans, engagement strategies, and continuous consultation with relevant stakeholders.

6.2 Roads

Review and consider Council's proposed conditions of consent to manage impacts on roads (see Attachment 1).

ACEN has conducted a review of WSC's proposed conditions of consent and provided to WSC for discussion. A copy of ACEN's comments on the proposed conditions of consent are provided in **Appendix 12**.

6.3 Voluntary Planning Agreement

Respond to Key Terms document provided on 12 July by WSC and secure a Planning Agreement.

On 15 February 2024, WSC resolved to endorse the Key terms of the Planning Agreement. Correspondence from WSC is included in **Appendix 9**.

6.4 Employment of locals

Council does not support deferring local employment percentage commitments until the Detailed Design Phase and suggests requested consultation on the matter is undertaken now.

ACEN support the engagement of locals and local contractors which will be addressed in the Local Participation Plan (to be developed and agreed with WSC) prior to commencing construction. During the construction phase of the Project a peak workforce of approximately 400 construction positions would be required. During the operational phase of the Project, up to 50 full-time positions will be required to be filled by a combination of existing local residents or new local residents who have moved to the surrounding district to become a part of those communities.

A Local Participation Plan and Aboriginal Participation Plan will be developed that prioritises participation and commits to procurement, employment and job readiness investment targets for ACEN and its contracting partners. The plans would be supported through procurement and employment systems that are embedded into construction contracts, management and assurance to ensure:

- tenders are reviewed prior to release to extract smaller packages of work where there is known local and Indigenous business capability
- there are provisions in larger contracts, awarded to bigger business that encourage subcontracting opportunities for smaller local businesses
- tender evaluation criteria and weightings are built into procurement processes
- identification of priority roles to be filled by local and Indigenous candidates
- candidate assessment criteria and weightings
- initiatives to enhance the retention of local and Indigenous employees
- initiatives to promote the transition from training to long term employment.

The plan will be strategic in terms of labour hire and relevant contractual conditions to ensure that issues around career path progression for youth and the equitable distribution of job opportunities are considered. ACEN will provide assistance and mentorship to smaller regional businesses to support the start-up of management contracts.

Until a construction contractor has been engaged and a detailed schedule has been developed giving consideration to the context of other development schedules across the CWO REZ, the availability of local workforce to meet a committed percentage is not able to be fully determined. ACEN will continue to consult with WSC to address this throughout the development of the Local Participation Plan.

6.5 Workforce accommodation

Provide full details of the temporary worker accommodation including:

- *site layout*
- *proposed traffic generation and impacts*
- *water and waste management*

Details on the construction and operation of the temporary workforce accommodation camp are provided in **section 3.5**.

The temporary workforce accommodation layout and design is detailed in section 1.1.6 of the Amendment Report. A site-specific Project layout will be developed by the appointed EPC contractor following prior to construction and in consultation with WSC.

6.6 Waste quantities

No waste is to be disposed of at WSC facilities.

ACEN notes that WSC has no spare capacity at present to receive waste streams from the Project. ACEN has consulted with Dubbo Regional Council regarding solid waste streams who has indicated it will receive the construction waste streams from the Project (refer to **section 3.5.5.1**). ACEN would remain open to partnering with the WSC if an opportunity to increase capacity and utilise facilities within the WSC LGA became available in the future.

6.7 Sewage waste

Provide details of sewage waste treatment and disposal.

Sewage waste will either be treated onsite or removed offsite. Consideration has been given to upgrading a sewage treatment plant in a surrounding council area (such as the Mudgee STP or other opportunities in consultation with local Councils in the region) to handle the increased volume of wastewater and sewage waste if necessary (refer to **section 3.5.5.1**).

6.8 Potable and non-potable water

Provide further details on likely water yields from existing bores and confirmation it won't impact the community's water needs. Confirm if potential water sources are linked to Council infrastructure or services.

Refer to **section 3.6**.

If water will be trucked in, haulage impacts need to be assessed.

The traffic assessment completed for the EIS determined traffic generation based on forecasted employee, workforce and construction vehicles for the construction phase, operation phase and decommissioning phase. Traffic generation numbers included transporting construction materials and water trucks.

The full Traffic Assessment prepared by SCT Consulting is attached as Appendix H in the EIS with additional information included in **Appendix 1**.

6.9 Social costs and benefits

Define the specific and tangible social benefits of the project on the community and actions that will be implemented prior to and during construction and operational phases. This includes funding commitments, timeframes and management.

The construction and operation of the Project is expected to increase the local economy through the influx of occupants utilising local businesses and facilities.

As described in the Amendment Report, a Local Participation Plan and an Aboriginal Participation Plan would be developed prior to construction which would aim to maximise local employment and the use of local resources where possible.

A Community Benefit Scheme Framework for the project would be developed to consolidate various community initiatives to ensure the benefits of the Project are felt more widely across the local region. The framework would include:

- the community benefit funds under the Planning Agreement with WSC
- the existing neighbouring property benefits scheme
- local community grants.

ACEN will continue to work with the community to facilitate the best possible outcomes as a result of the Project. Social impact mitigation and management measures are included in **Appendix 6**.

7. Mid-Western Regional Council (MWRC)

MWRC has requested that additional information be provided in letter dated 20 November 2023. ACEN's response to the MWRC comments is provided in the following sections.

7.1 Workforce Accommodation

Workforce Accommodation Plan needs to be approved by Council prior to consent if ACEN intends to house workers within the LGA.

A temporary workforce accommodation camp is proposed as part of the Project in the WSC LGA, therefore there would be no adverse impact upon MWRC LGA.

7.2 Transport

Transport plan (for workers accommodation) needs to be approved by MWRC should minibuses be running to and from the MWRC LGA.

As noted in **section 3.5**, a temporary workforce accommodation camp is proposed as part of the Project. As a result, there would be minimal, if any, workforce located in the MWRC LGA, removing the need to provide workforce transportation in or through this LGA.

7.3 Water

Identify suitable water sources and water use estimates for construction and operational phases. Allow for drinking and sanitation water use, operational activities (e.g. dust suppression), and droughts. Consider if a Water Access Licence will be required.

Refer to **section 3.6**.

7.4 Sewage waste

If ACEN intend to use the Mudgee STP, they must take into consideration the potential to upgrade the STP to handle the increased facilitation of sewage disposal.

Sewage waste would either be treated onsite or would be transferred to a STP. ACEN would consider contributing to upgrading the Mudgee STP to handle the increased amount of wastewater resulting from the Project, in consultation with other developers (e.g. EnergyCo) in the CWO-REZ. ACEN would also investigate opportunities to utilise/upgrade facilities within the local government area should it be requested by WSC.

7.5 Construction Hours

Council does not support extended construction hours.

The Project is not located within the Mid-Western Region LGA. ACEN seeks flexibility to cater for exceptions to construction hours and variation of construction hours (with prior written approval of the Planning Secretary) consistent with contemporary wind farm approvals.

8. DPHI – Water

DPHI-Water reviewed the Response to Submission and Amendment reports and requested additional information be provided in a letter dated 22 November 2023. ACEN's response to DPHI-Water is provided in the following sections.

8.1 Groundwater availability

Confirm the ability to obtain a secure and appropriately authorised water supply for the Project. This should include relevant agreements where required and to demonstrate water entitlements can be acquired if necessary.

Refer to **section 3.6**.

8.2 Groundwater extraction

If ground water extraction is proposed, this needs to be included and assessed in the EIS otherwise a subsequent water supply work approval under Water Management Act 2000 will be required.

ACEN notes this and will obtain the required approvals if groundwater extraction occurs.

9. DPHI – Hazards

9.1 Consultation with licensees and operators

The Department is requesting that you provide additional information on consultation with the relevant fuel and gas pipeline licensees and / or operators including identification of easements and addressing concerns comments raised by pipeline licensees and / or operators on the proposed development.

The APA has prepared an advice letter raising standard concerns with a new HV powerline crossing over their high-pressure gas pipeline and has drafted recommended conditions for DPHI to impose on any consent. APA's letter is included in **Appendix 8**.

10. Crown Lands

DPHI-Crown Lands reviewed the Amendment report and provided additional comments in a letter dated 15 November 2023.

10.1 Authorisation

The Project needs authorisation under the Crown Land Management Act 2016 and/or the Roads Act 1993. It is recommended to contact Crown Lands early to initiate the necessary processes for authorisation before starting any work.

ACEN are currently in the process of initiating the necessary authorisations through Crown Lands. These authorisations will be in place prior to commencement of construction. Crown Lands landowner's consent is provided in **Appendix 10**.

11. Heritage NSW

Heritage NSW reviewed the Response to Submission and Amendment reports and provided a response in a letter dated 14 November 2023. Following a review of the reports and the Revised Aboriginal Cultural Heritage Assessment Report (ACHAR), Heritage NSW believed ACEN had satisfactorily addressed their comments.

In addition to the proposed mitigation measures provided in section 2 of the Response to Submissions Report and ACHAR, Heritage NSW provided draft Conditions of Approval (CoAs) to be included in the Aboriginal Cultural Heritage Management Plan (ACHMP). These draft conditions are provided in Attachment A of the Heritage NSW letter.

12. Civil Aviation Safety Authority

The Civil Aviation Safety Authority (CASA) reviewed the Response to Submission and Amendment reports for the Project and requested additional information in a letter dated 7 November 2023. A summary of the comments and proposed actions are provided in the following sections.

12.1 Lighting

CASA maintains its recommendations regarding consultation with owners of small airstrips, obstacle lighting and notifications.

ACEN has developed a turbine lighting plan in consultation with CASA. If required, wind turbine lighting would be installed in accordance with relevant requirements.

12.2 Route modification

CASA has not yet received the application to address the lowest safe altitude (LSALT) impact of air route W627.

ACEN will apply to modify the air route for W627 following Project approval. Aviation Projects provided their advice in a letter dated 12 February 2024 and agreed that this approach was acceptable.

13. NSW Rural Fire Service

The NSW Rural Fire Service (RFS) provided a request for further information in a letter dated 21 November 2023 following the review of the Response to Submission and Amendment reports. The comments provided by the NSW RFS are addressed below.

13.1 Landscaping

Landscaping within 50m of dwellings are to comply with Planning for Bushfire Protection, 2019.

ACEN will ensure that the relevant Asset Protection Zones are maintained around any relevant project infrastructure in accordance with Appendix 4 of the *Planning for Bushfire Protection*.

ACEN is not responsible for the management of vegetation surrounding any private dwellings. However, where landscaping is proposed as part of a visual mitigation strategy, ACEN will ensure any landscaping within 50m of any dwelling is in accordance with Appendix 4 of the *Planning for Bushfire Protection*.

13.2 Environmental Operations Plan

The Environmental Operations Plan shall incorporate:

- *wind turbines shall have aviation lighting fitted and operational when aerial firefighting is occurring in the locality.*
- *blade rotation shall cease when aerial firefighting is occurring in the locality.*

Aviation lighting is not proposed for all turbines. If ACEN is required to install aviation lighting on selected turbines in accordance with any CASA requirements, the aviation lighting can be made operational during any aerial firefighting in the locality.

ACEN will develop a *Bushfire Emergency Management and Operations Plan (BEOMP)* which will include commitments and actions to be implemented during aerial firefighting activities including the ceasing of blade rotation when aerial firefighting occurs.