UUNGULA WIND FARM

EMERGENCY PLAN

10/04/26

Disclaimer: This Emergency Plan has been developed to meet the requirements of Condition B42 of Development Consent SSD-6687, specifically to identify fire risks, fire hazards, and detailed measures for the development to prevent or mitigate fire emergency situations. Consequently, this plan does not address the full requirements of AS 3745 *Planning for Emergencies in Facilities.*

This report takes into account the particular instructions and requirements of our client.

It is not intended for and should not be relied upon by any third party and no responsibility is undertaken to any third party.

Job number 284329-00

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Document Verification

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Appendices

1 Introduction

1.1 Background

Arup has been engaged by Squadron Energy (SQE) to prepare an Emergency Plan (EP) for Uungula Wind Farm Pty Ltd to support the construction and development of Uungula Wind Farm (UWF).

1.2 Purpose of this Emergency Plan

This Emergency Plan is designed to provide guidance on how to manage the occurrence of fire emergencies that may occur at the Uungula Wind Farm site.

Specifically, purpose of this Emergency Plan is to:

- Identify the fire hazards, risks that apply to the Development
- Provide measures to prevent or mitigate fires igniting
- Provide procedures that would be implemented if there is a fire on-site or in the vicinity of the site.
- Provide details of bushfire emergency planning
- Provide emergency contact details

An emergency is defined as an event, actual or imminent, which endangers, or threatens to endanger life, property, or the environment, and which is beyond the resources of the UWF personnel to manage, or which requires coordination of several significant emergency management activities. For fire emergencies within the site, the Chief Warden will be ultimately responsible for defining the level of the emergency, and the emergency actions required.

This Emergency Plan has been prepared to fulfil the responsibilities as stated by SQE as per the following standards:

- Condition B42 of the UWF Project The

EP core objectives are to:

- Preserve life and ensure the safety of people
- Minimise damage to property
- Minimise the impact to the environment
- Minimise the impact on business continuity and reputation
- Minimise the impact on neighbouring areas and the community

This plan is to be stored and distributed onsite to relevant personnel, with two copies stored in an ‘Emergency Information Cabinet’ at a prominent position adjacent to the main site entry point so that it is accessible to any emergency services that may need to attend the site in the event of an emergency.

1.3 Scope

This plan has been prepared to address the requirements of Condition B42 of the Development Consent. The specific requirements of Condition B42 are summarised in Table 1 below.

Additionally, Condition B41 sets out Operational Requirements in relation to fire management. The requirements of Condition 41 are also included in Table 1 below.

This plan applies to UWF and SQE employees, contractors and consultants engaged through SQE for the duration of the construction of the Uungula Wind Farm.

It is intended that the Engineering, Procurement and Construction Contractor will prepare their own Emergency Response Plan (ERP) which must be prepared in alignment with, and complimentary to this Emergency Plan. The Contractor ERP must address all hazards, risks and measures detailed within this Emergency Plan.

Table 1 Emergency Plan - Condition B41 & B42 of SSD-6687

Requirement	Where addressed
Emergency Plan – Condition B42	
Prior to commencing construction, the Applicant must develop and implement a comprehensive Emergency Plan and detailed emergency procedures for the development, and provide a copy of the plan to the local Fire Control Centre. The Applicant must keep two copies of the plan on-site in a prominent position adjacent to the site entry point at all times. The plan must: a. be consistent with the Department's Hazardous Industry Planning Advisory Paper No. 1, 'Emergency Planning' and RFS's Planning for Bushfire Protection 2019 (or equivalent);	This plan
b. identify the fire risks and hazards and detailed measures for the development to prevent or mitigate fires igniting;	Section 3
c. include procedures that would be implemented if there is a fire on-site or in the vicinity of the site;	Section 4
d. list works that should not be carried out during a total fire ban;	Section 5
e. include availability of fire suppression equipment, access and water;	Section 6
f. include procedures for the storage and maintenance of any flammable materials;	Section 7
g. detail access provisions for emergency vehicles and contact details for both a primary and alternative site contact who may be reached 24/7 in the event of an emergency;	Section 8
h. include a figure showing site infrastructure, any Asset Protection Zones and the on-site water supply tank;	Figure 2

Requirement	Where addressed
i. include location of hazards (physical, chemical and electrical) that may impact on fire fighting operations and procedures to manage identified hazards during fire fighting operations;	Section 9
j. include details of the location, management and maintenance of any Asset Protection Zone and who is responsible for the maintenance and management of the Asset Protection Zone;	Section 10
k. include bushfire emergency management planning;	Section 11
l. include details of the how RFS would be notified, and procedures that would be implemented, in the event that: • there is a fire on-site or in the vicinity of the site; • there are any activities on site that would have the potential to ignite surrounding vegetation; or • there are any proposed activities to be carried out during a bushfire danger period; and	Section 12
m. include details on how the battery storage facility and sub-systems can be safely isolated in an emergency;	Section 13
Following approval, the Applicant must implement the Emergency Plan.	
Operating Conditions - Condition B41	
The Applicant must: a. minimise the fire risks of the development, including managing vegetation fuel loads on-site;	Section 3
b. ensure that the development: – complies with the relevant asset protection requirements in the RFS's Planning for Bushfire Protection 2019 (or equivalent) and Standards for Asset Protection Zones; – is suitably equipped to respond to any fires on site including provision of a 40,000 litre water supply tank fitted with a 65 mm Storz fitting and a FRNSW compatible suction connection located adjacent to an internal access road;	Sections 3, 4 & 6
c. develop procedures to manage potential fires on site, in consultation with the RFS;	Section 1.4 Section 4
d. assist the RFS and emergency services as much as practicable if there is a fire in the vicinity of the site; and	Section 4 & 12
e. notify the relevant local emergency management committee following construction of the development, and prior to commencing operations.	Section 11

1.4 Stakeholder Consultation

This Emergency Plan has been prepared in consultation with the NSW Rural Fire Service (RFS) Orana Team. The Draft Plan was provided to the RFS Orana Team for review.

Once approved, a copy of this Emergency Plan will be provided to RFS Orana Team.

1.5 Key Terms and Definitions

Table 2 Key Terms & Definitions

Term	Definition
Critical Incident	A critical incident is defined as a traumatic event, or threat of an event, which causes extreme stress, fear, or injury. Critical incidents may include, but are not limited to: • Death or permanent injury to a person; • Incident requiring an emergency medical response; • Significant property damage occurring; • Could result in legal proceedings against CWP, or; • Is a near miss with the potential to cause any of the above. • An environmental incident resulting in medium to long term harm to the environment; • An environmental incident resulting in damage or excessive cleanup costs.
Minor Incident	A minor or non-critical incident can be defined as requiring: • First Aid /medical treatment without hospitalisation; • Minor property damage, or; • A near miss with limited consequences. • An environmental incident resulting in short term possible harm to the environment with minimal clean-up costs.

Worker	The *Work Health and Safety Act 2011* (Cth) (WHS Act) states that a worker is a person who carries out work in any capacity for a person conducting a business or undertaking, including any of the following: • an employee; • a contractor or subcontractor; • an employee of a contractor or subcontractor; • an employee of a labour hire company who has been assigned to work in the person's business or undertaking • an outworker; • an apprentice or trainee; • a student gaining work experience; or • a volunteer – except a person volunteering with a wholly 'volunteer association' with no employees (whether incorporated or not).

Term	**Definition**
APZ	Asset Protection Zone
SQE	Squadron Energy
ECO	Emergency Control Organisation
EP	Emergency Plan
EPC	Emergency Planning Committee
ERP	Emergency Response Plan
IPA	Indigenous Protected Area
LEMC	Local Emergency Management Committee
LGA	Local Government Area
LOTO	Lockout/Tagout - the physical restraint of all hazardous energy sources that supply power to a piece of equipment, machinery or system. LOTO also includes applying a warning tag on the physical restraint device.
O&M	Operations and Management
PPE	Personal Protection Equipment
PEEP	Personal Emergency Evacuation Plans
RFS	NSW Rural Fire Service
SWMS	Safe Work Method Statement
UHF	Ultra-High Frequency Radio
UWF	Uungula Wind Farm
WTG	Wind Turbine Generator

2 Overview of Uungula Wind Farm

2.1 Location

The Uungula Wind Farm is proposed to include a total of 69 Wind Turbine Generators (WTGs) located approximately 14 kilometres east of Wellington and 25 kilometres west of Mudgee in New South Wales, in the Dubbo Regional Council LGA (within the Central-West Orana Renewable Energy Zone). Refer to Figure 1 for the location of the wind farm.

2.2 Site access points

The Uungula Wind Farm has one primary site access point, located off Twelve Mile Road (refer to Figure 2).

Additionally, in the event of an emergency, the Project site could be accessed via Uungula Road.

2.3 Wind farm infrastructure

The main infrastructure associated with the Development includes:

- Internal access roads and drainage
- Hardstands
- Temporary construction compounds
- Temporary laydown areas
- Rock crushing facilities
- Concrete batching plant(s)
- An operations and maintenance facility
- 69 Wind turbine generators
- Temporary meteorological masts
- Permanent meteorological masts
- Underground transmission lines
- Up to 12km of external overhead transmission lines
- Up to 15 km of internal overhead transmission lines
- A substation
- A switching station.

Figure 1 Uungula Wind Farm Location Context

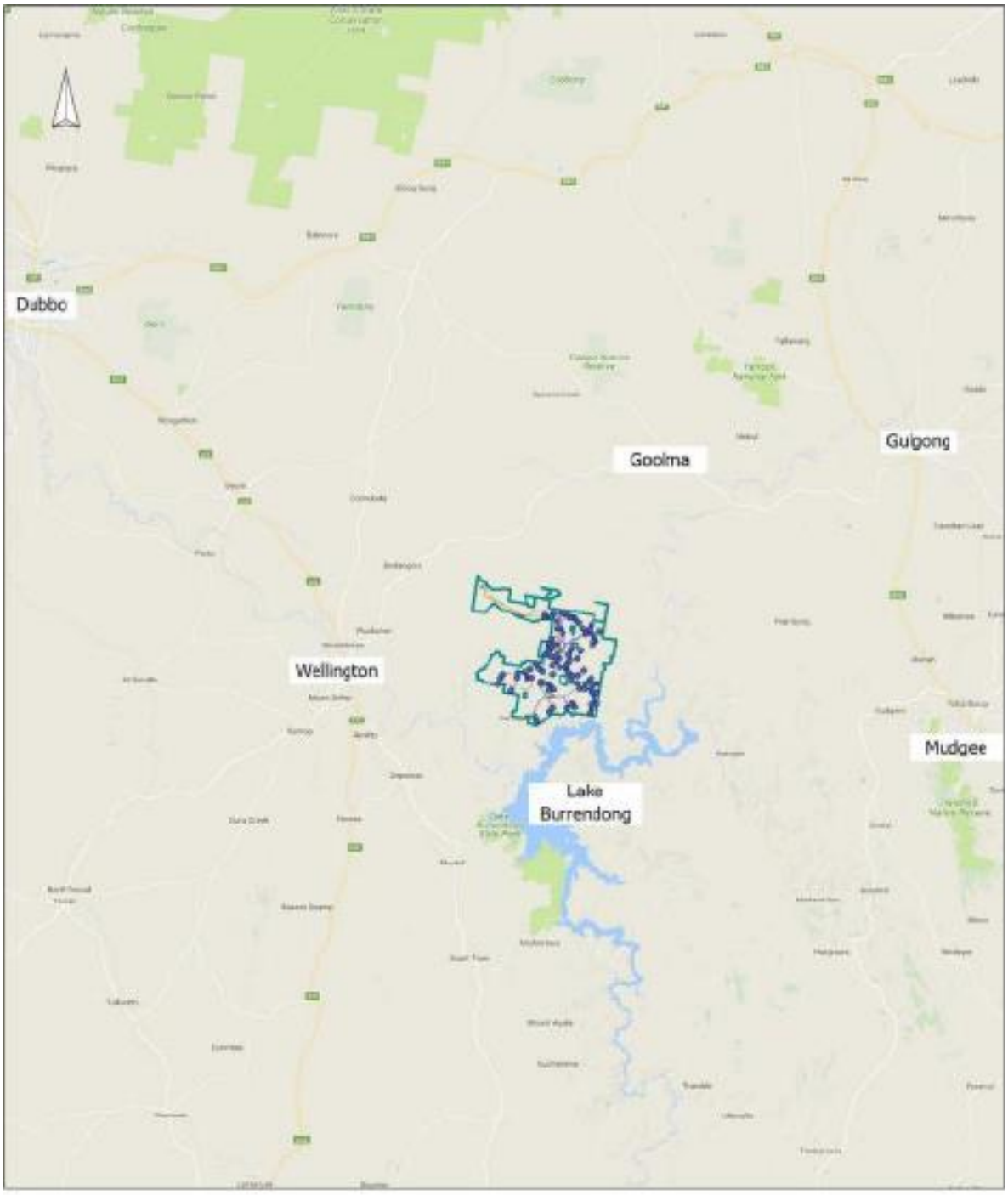
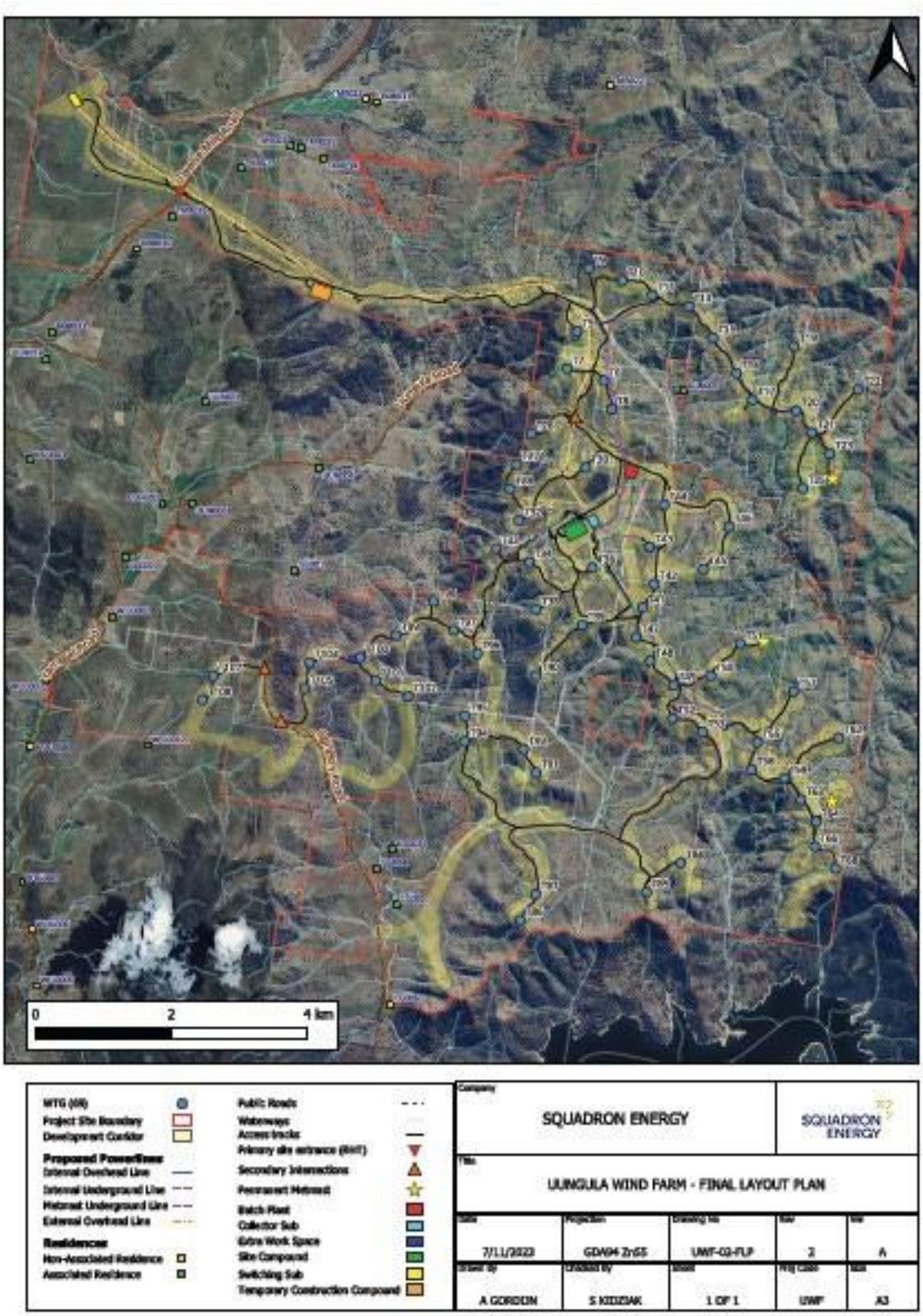


Figure 2 Uungula Wind Farm Project Layout



3 Fire risks, hazards, and detailed measures

3.1 Fire climate

The Orana Bushfire Risk Management Plan provides information on the fire climate in the Orana Bushfire Management Committee (BFMC) area.

The typical / average climate in the Orana BFMC area is:

- Warm to hot summers, ranging from 17°C to 34°C with some extremes exceeding 38oC for many days.
- Winter temperatures ranging from -4°C to 16°C with the regular early morning frosts in the southern area of the Dubbo Regional LGA.
- Mean average rainfall for the area is between 500-600mm per annum. Rainfall Is usually fairly evenly distributed throughout the year with a slightly greater average in the summer months. January is on average, the wettest month with 600mm.

3.2 Bushfire Danger Period (1 October – 31 March)

The Bushfire Danger Period generally commences on 1st October and concludes on 31st March.

Prevailing weather conditions associated with the bushfire season in the Orana BFMC area are north to westerly winds created by consecutive high-pressure systems causing the high daytime temperatures. Such hot winds are usually very dry with low relative humidity often going below 20%.

The wind directions associated with Very High or worse grassland or forest fire danger are predominantly west but significant fire weather from all other wind directions can occur.

Heavy storm activity can be experienced during the January/February period; these include electrical storms which can be either dry storms or wet storms. With wet storms some lightning strikes may not show signs of starting a fire for some days after the initial strike.

3.3 Existing fire hazards

3.3.1 Bushfire prone land

The UWF project site contains land classified as bushfire prone on Dubbo Regional Council's bushfire prone land map.

The area surrounding the UWF site is modified agricultural land utilised primarily for cattle, sheep and goat grazing, cropping for stock feed and sheep studs. The landscape is predominately modified grassland with scattered trees and woodland as well as more extensive forest areas in closer proximity to some proposed infrastructure.

It is intended that the vegetation fuel around the turbine hardstands, overhead transmission lines and access roads will be maintained in a low fuel state by mechanical, manual, and chemical clearing methods prior to construction activities commencing and as part of ongoing maintenance activities for the duration of the Project. A fire could still spread in this fuel under severe fire weather conditions.

3.3.2 Grassland areas

Crops and pasture surround the site on the north and east and make up the predominant fuel for bushfires along with Forest and Grassland vegetation throughout the site. There will be periods when these pasture lands will be non-flammable because they are either fallow, too green to burn or are recently planted. There will also be periods when some crops are cured and highly flammable.

High fire danger conditions or worse for grass fires occur in the months of December, January, February, and March and rarely, if at all, in the other months (Eco Logical Australia, 2020).

3.3.3 Woodland and forested areas

There are patches of woodland and forest vegetation on the site (Figure 3) that will influence fire behaviour in those parts of the site.

The forest vegetation type for the site is classified as Upper Riverina Dry Sclerophyll Forest & Western Slopes Dry Sclerophyll Forests (Keith, 2004). These classes of vegetation form an open eucalypt forest or woodland up to 20 m tall with open sclerophyllous shrub stratum and a patchy groundcover of grasses and open eucalypt forest or woodland 10-25 m tall, dominated by ironbark eucalypts and cypress pines with an open sclerophyllous shrub stratum and sparse to moderate grassy groundcover respectively.

The woodland vegetation predominately on the site boundaries is Western Slopes Grassy Woodland (Keith, 2004). The tree canopy is typically up to 20 m tall with well-spaced crowns. Tussock grasses dominate the understory. Fuel loads contributing to rate of spread for grassy woodlands are typically 10 t/ha, and total fuel loads that contribute to intensity are 15t/ha (PBP Table A2.1, RFS, 2006).

For forest fire danger, high fire danger days have been recorded in all months of the year, with October – April having the highest amount (Eco Logical Australia, 2020).

3.3.4 Agricultural activities

The area surrounding the site is modified agricultural land utilised primarily for cattle, sheep and goat grazing, cropping for stock feed and sheep studs.

3.3.5 Overhead transmission lines

Existing overhead transmission lines are located at the far northern end of the wind farm project site, north west of Twelve Mile Road (refer to Figure 2).

A new overhead transmission line will be constructed connecting the wind farm to a new substation and the existing overhead transmission lines.

3.4 Fire History

Mapped fire records of the Rural Fire Service from 2001 to 2019 indicate that there were 7 grass or bush fires within 30 km of the site over this period, ranging in size from 0.3 to 2,742 ha. Two of these occurred within the windfarm footprint, one in 2009 (218 ha) and one in 2017 (2,742 ha).

3.5 Fire ignition risks and preventative controls

3.5.1 Operating plant and machinery on land containing combustible materials

Use of machinery over combustible materials such as dry grass could ignite a fire, particularly during periods of severe, extreme, or catastrophic fire danger ratings. When motor vehicle exhaust systems make contact with vegetation. If the catalytic converter (exhaust) contacts dry vegetation, a fire may be ignited.

Control measures include:

- Consideration is given to separating combustible material (i.e. dry grass, bushland) from operating plant through the creation of fire breaks or pre-stripping work areas during favourable weather conditions; where permissible and practicable.
- Minimising work on “Total Fire Ban Days” or those with catastrophic fire danger ratings
- For construction activities occurring between from December to March, the operation of earth moving equipment, vehicles, slashers should be suspended on land containing combustible materials when the Grass Fire Danger Index >=35.

3.5.2 Hot works

Hot works such as grinding, cutting, arc welding, gas welding or any activity that produces a spark or an open flame.

Control measures include:

- A SWMS must be obtained for all hot works conducted outside that may result in the ignition of a fire.
- A SWMS will not be issued on days that are a total fire ban, where the fire danger rating is very high or above, and on days with high wind present.
- Appropriate equipment such as fire blankets and fire extinguishers are to be made available and detailed on the SWMS.

3.5.3 Smoking and disposal of cigarette butts

Cigarette embers or butts are a potential fire ignition source.

Control measures include:

- Smoking is only permitted in the designated smoking areas.
- Smoking is not permitted anywhere else including within WTGs, on roads, hard stands or in vehicles unless it is in designated smoking areas.

3.5.4 Electrical faults or storm damage during operation of the transmission line

Vegetation fuel management around the overhead transmission lines will be undertaken to reduce the risk of fire ignition. It is noted that for the internal high voltage overhead line connecting the substation to the switching station, this easement will be maintained in accordance with TransGrid's requirements.

3.5.5 Ignition from lightning strike

The WTG and substation will have lightning protection installed in them. Inspections of WTGs and lightning protection systems will be undertaken in accordance with the WTG specification for the project.

3.6 Preparing for Bushfire Danger Period (1 October to 31 March)

Before and at commencement of the Bushfire Danger Period (1 October to 31 March):

- Ensure that the site personnel are prepared in accordance with the Bushfire Emergency Management and Evacuation Plans
- Ensure that all persons are informed of the evacuation/shelter-in-place procedures
- Ensure buildings and areas around buildings are prepared and maintained (minimise fuel)
- Ensure any firefighting equipment (hoses etc.) is serviceable and available
- Update contact details of staff and occupants
- Contact and update emergency services with the premises' contact details
- Contact refuges for potential use during a bushfire emergency
- Contact transport suppliers for potential use during a bushfire emergency

Prior to the commencement of the Bushfire Danger Period, the EPC Contractor will undertake consultation with the local RFS/ LEMC to provide details of the:

- Progress of work on site.
- Works that will be undertaken during the upcoming Bushfire Danger Period.
- Fire hazards and risks that exist at the wind farm site.
- Measures that are in place to prevent and mitigate fire ignition on site.
- Site access arrangements and locations of water supply on site.

Additionally, prior to commencement of the Bushfire Danger Period, the RFS command/ local brigades will be invited to the wind farm site for site familiarisation and to inspect the fire preparedness measures together with the EPC Contractor and SQE representatives.

During fire season, the daily fire rating will be obtained from local fire service and communicated via the daily pre-start meetings. The fire rating will be displayed in a prominent location in the site office compound to allow all personnel to be aware of the fire risk rating each day.

3.7 General Fire Prevention

All site personnel should be acutely aware of the need to avoid dangerous practices that can cause danger to life and property. Site personnel should bring to the attention of the Chief Warden any poor safety practices such as:

a. Unnecessary accumulation of rubbish and ground fuel

b. Unsafe storage of flammable liquids

c. Placement of site equipment which obstruct clear passage to firefighting equipment, emergency exits, and other paths onsite

d. Fire doors in site buildings should be kept shut except during use, and not wedged or similarly fixed in an open position

e. Accidental discharge or faulty extinguishers should be reported immediately to the building manager or Chief Warden

The keeping of flammable liquids in general areas is not permitted except under special circumstances, in which case only minimal quantities are to be held in approved containers.

All personnel need to be encouraged to observe the greatest care in the use of matches, portable heaters, electrical appliances, and other possible causes of ignition. Their immediate surrounding area should be kept neat and tidy.

4 Procedures for fire on site or near site

Bushfire is a threat at UWF due to the location context of the site in peak fire season. The following recommendations are in line with the RFS's Planning for Bushfire Protection 2019 and Condition B42 of the UWF plan state the following courses of action in the event of a bushfire at the UWF site.

Reference: UWF-NACAP-CIV-PLN-0019

Uungula Wind Farm Emergency Response Plan

This Emergency Plan will be updated as works progress into the Wind Farm.

4.1 Procedure: Fire on Site

Upon discovery of a fire, occupants and employees should:

1. Communicate to personnel in the near vicinity by shouting "Fire, Fire, Fire". This may include an emergency call over the UHF Radio.
2. Break a red break glass alarm if one is nearby (within a building)
3. Contact the Fire Brigade by dialling 000 (Fire)
4. Remove people from immediate danger if safe to do so
5. Close doors if possible, to slow the progress of the fire and contain smoke
6. Shut off any involved electrical items
7. Commence evacuation of the immediate area, leaving via the nearest, safest exit, and proceeding to the Assembly Area
8. Mobility impaired and special needs persons should be assisted and reported to the Chief Warden.

Further procedures for first response fire-fighting are provided below in Section 4.2.

4.2 Procedure: First response fire fighting

Only attempt to fight a fire if you have been trained, the fire is small, you will not put yourself in danger, and you have the correct Fire Extinguisher available.

4.2.1 Initial Response (if deciding to fight the fire)

Raise the alarm

- Ensure personnel are aware of the emergency.
- Ensure Wardens have been notified.
- Ensure that the RFS has been called via 000.

Decide on action

- Support – Do not attempt to fight the fire alone.
- Size – A fire greater than one square metre should be left to experienced fire fighters.
- Surroundings – Check for danger such as gas cylinders or chemicals etc.

- Smoke, Fumes, Heat – Fires producing rancid fumes should be left.

Equipment

- Correct equipment for the class of fire.
- If the appropriate extinguisher is not available, the fire should be left.

Safety

- Test the equipment prior to approaching the fire.
- Keep low – stay below the smoke level.
- Safe escape route – keep between the fire and the exit.
- Contain – If the fire cannot be controlled, close the doors if safe before leaving.

4.2.2 After the Fire is Extinguished

If the fire is extinguished prior to the arrival of the Emergency Services:

- Do not disturb the fire area, protect and preserve the incident scene.
- Keep occupants away from the fire and smoke affected areas.
- Ensure the Chief Warden is notified of the equipment used for replacement.
- Complete an incident report with the Chief Warden.

4.3 Procedure: Fire in the surrounding area

When aware of the bushfire in the local area:

1. Consult the NSW RFS website, 1800 NSW RFS, smart phone applications ('Fires Near Me') and local firefighting resources for fire situation and updates
2. Inform site personnel of the fire situation
3. Ensure that the Chief Warden has a mobile phone and is contactable.
4. Advise the local emergency services that the site is operating, and that it will need to be advised early in the event of an evacuation being necessary.
5. Plan transportation for evacuation.

4.4 Procedure: Approaching Bushfire Threat

The primary action is to evacuate/shelter in place. Staff and occupants of the premises shall follow the procedure:

1. The Chief Warden will take control of the situation.
2. Remain calm and explain to the occupants what is happening.
3. Staff to ensure all doors and windows closed within buildings.
4. Sheltering.
5. Move all persons to the designated refuge.
6. Ensure all persons are accounted for (use listing of occupants and visitors register).
7. The Chief Warden to advise local emergency services that the site is sheltering in-place (include how many people and which building on site).

8. After all the occupants have been relocated to refuge, nominated staff will commence contacting relevant families affected.
9. Maintain situational awareness through radio, NSW RFS website, 1800 NSW RFS, smart phone applications and local firefighting resources.
10. Two persons to make regular exterior visual inspection (wearing appropriate protection from bushfire) of the refuge for embers and extinguish where possible or call 000 for assistance.

4.5 Procedure: Site Evacuation

1. The Chief Warden is to advise local emergency services (include phone number) that the centre is being evacuated (include how many people and where they are going).
2. Arrange for vehicles to meet at designated assembly point for pick-up of persons.
3. Move all persons to the assembly point for evacuation.
4. Ensure all persons are accounted for prior to departure (use listing of occupants).
5. Ensure all site buildings have all doors and windows closed prior to leaving site.
6. At refuge, move all persons inside and ensure all persons are accounted for and safe.
7. The Chief Warden is to advise local emergency services (include phone number) that all persons have been evacuated and are accounted for and safe at the designated refuge.
8. After all the occupants are accounted for and safe at the designated refuge nominated staff will commence contacting families affected.
9. Maintain situational awareness through radio, NSW RFS website, 1800 NSW RFS, smart phone applications and local firefighting resources.

4.6 Procedure: Forced Evacuation

As a result of bushfire in the surrounding area and due to its severity, fire authorities require occupants to be evacuated to a refuge.

1. The Chief Warden is to liaise with emergency services giving evacuation orders and provide them with the number of persons and any support needs that are to be considered for transportation (if no on-site transportation is available).
2. Arrange for vehicles to meet at designated assembly point for pick-up of persons.
3. The Chief Warden is to advise local emergency services (include phone number) that the centre is evacuating due to safety direction (include how many people and where they are going).

4. Move all persons to the assembly point for evacuation.
5. Ensure all persons are accounted for prior to departure (use listing of occupants).
6. At refuge, move all persons inside and ensure all persons are accounted for and safe.
7. The Chief Warden is to advise local emergency services (include phone number) that all persons have been evacuated and are accounted for and safe at the refuge.
8. After all the occupants are accounted for and safe at the refuge, nominated staff will commence contacting relevant families affected.
9. Maintain situational awareness through radio, NSW RFS website, 1800 NSW RFS, smart phone applications and local firefighting resources.

4.7 When the Bushfire Threat has Passed

Once the area is deemed safe by emergency services:

- No person should re-enter any evacuated building or affected site until advised emergency services.
- The Chief Warden is to arrange the movement of occupants back to the site and/or their separate accommodation.
- All occupants are to be accounted for on their return.
- Inform emergency services of the return of persons to the premises.

5 Total Fire Ban Days – prohibited activities

It is important to be aware of operations that may be carried out on days of Total Fire Ban and any prohibited activities or exemptions that are notified by the Commissioner of the NSW RFS under the RF Act s.99.

On days declared total fire ban you cannot light, maintain, or use a fire in the open, or carry out any activity in the open that has the potential for a fire to develop.

Fire permits are suspended on days of total fire ban. The NSW RFS Commissioner is responsible for the exemptions to Total Fire Bans. These exemptions are detailed in the NSW Government Gazette each time a Total Fire Ban is declared under the Rural Fires Act 1997 Section 99.

The local NSW RFS Fire Control Centre (Cudgegong Rural District) should be notified of any works that have the potential to ignite surrounding vegetation, proposed to be carried out during a bush-fire fire danger period (1 October to 31 March) to ensure weather conditions are appropriate (Eco Logical Australia, 2020).

6 Fire suppression equipment, access and water

6.1 Fire Fighting Equipment

The following list of firefighting equipment will be maintained in the Main Project Office, and Emergency Vehicles to be used in the event of a fire emergency at the UWF Project:

- Dry Powder Extinguisher
- CO2 Fire Extinguisher
- Vehicle Safety Fire Extinguishers
- Personal Fire Blankets
- Signage

6.2 Water supply

Water supply should be designed to provide filling points for fire tanker units near the wind farm entrance and at the O&M compounds (see **Figure 2**). A combined storage of 50,000 litres will be made available at the site, based on refilling an approximate of six tanker units (4,000) twice each (Eco Logical Australia, 2020).

Consistent with Condition B41 of the Development Consent and PBP 2019:

- The water supply tank(s) will be fitted with a 65mm Storz fitting and a FRNSW compatible suction connection;
- The above ground tank(s) are manufactured from concrete or metal;
- Ball valve and pipes are adequate for water flow and are metal;
- Supply pipes from tank to ball valve have the same bore size to ensure flow volume;
- A hardened ground surface for truck access is supplied within 4 metres of the tank(s); and
- Unobstructed access can be provided to the tank(s) at all times.

Additionally, a rapid response unit (slip-on or fire trailer) with a minimum 1,000 litre water capacity be maintained on site with appropriately trained (i.e. basic fire-fighting level) and equipped (PPE) staff able to operated.

7 Storage and maintenance of flammable materials

Flammable liquids are a common source of fuel for fires and explosions because they produce flammable vapour and ignite at low temperatures. Many fires start when flammable liquids are spilt or their containers are left open, and their vapours reach an ignition source such as an open flame.

During construction, there will flammable materials stored on the site, including:

- Diesel fuel – required for operation of plant and equipment, and will be temporarily stored on-site within self-bunded fuel containers and fuel trucks.
- Other hydrocarbons - oils, lubricants, and coolants – required for operation of construction plant and materials – these will be stored at the compound(s) in suitably bunded containers/cabinets.
- Chemicals – small quantities of cleaning chemicals stored at the compound(s) in suitably bunded containers/ cabinets.

During operations, the types of flammable materials stored on site will include:

- Hydrocarbons - oils, lubricants, and coolants – required for operation of WTGs – these will be stored at the compound(s) in suitably bunded containers/cabinets.
- Cleaning chemicals – small quantities of cleaning chemicals stored at the compound(s) in suitably bunded containers/ cabinets.
- Herbicides – for weed control.

Once construction/ operation storage areas have been designated, the map at Figure 2/ Appendix A will be updated to identify the locations of the flammable hazards.

Flammable liquids and/ or hazardous materials shall be appropriately stored on site to the specifications of the manufacturer's requirements, and a hazardous chemical register maintained. Safety Data Sheets (SDS) will be made readily available for each product which will detail the storage requirements.

Storage of flammable liquids will be in accordance with AS1940: Flammable Liquids Storage and Handling.

The following measures will be implemented to limit the storage of flammable liquids/ combustible materials on the site:

- Limiting the volume of hazardous chemicals stored on site to the minimum required.
- Promptly dispose of any unnecessary flammable liquid wastes. Ensure that flammable liquids are disposed of in accordance with local waste disposal requirements.
- Dispose of combustible materials. Excess combustible material, like wood or paper, can act as fuel for a fire.

The following measures will be implemented to physically separate flammable liquids from people, ignition sources and other hazards to minimise the risk of a fire:

- Choose a chemical storage location that is away from any ignition sources that cannot easily be removed (such as pilot lights).
- Eliminate any ignition sources near the chemical storage (for example, install non-sparking lights)
- Do not allow ignition sources to be introduced to the flammable liquid storage area
- Do not allow hot work (grinding, heating, welding etc.) near the flammable liquid storage areas, and
- Store flammable liquids in a flammable liquids cabinet where practicable.

Incompatible chemicals will be stored separately. This can be done by separating chemicals within the same storage area (segregation) or by storing incompatible chemicals in separate storage areas. Information about incompatibilities can be found on the safety data sheets for chemicals/materials.

As a general guide, the following separation distances are recommended between flammable liquids and other hazardous chemicals:

Table 3 Separation distances for flammable liquids and hazardous chemicals

Types of chemicals	Separation distance
Other hazardous chemicals such as gases under pressure and corrosive chemicals	Minimum three metres
Other fire risk chemicals such as flammable gases, pyrophoric chemicals, self-heating chemicals and oxidisers	Minimum five metres
Highly reactive chemicals such as self-reactive chemicals, organic peroxides and explosives should be in completely separate storage areas.	Isolate completely

8 Access provisions for emergency vehicles

8.1 Access provisions

Refer to Figure 2 for site access points for emergency vehicles. Access will be available via the primary site Access Point off Twelve Mile Road. Alternatively, in the event of an emergency the site may also be accessed via the 'secondary intersections' and cross overs located on Uungula Road, and Ilgingery Road.

Once constructed, the internal access track network will provide safe, all-weather access for firefighting vehicles to access key infrastructure. Emergency firefighting vehicles will be able to use the wind farm access track network to assist with firefighting.

Access within the site will be provided and maintained to meet the following specifications (PBP 2019):

- Minimum 4 metre carriageway width (internal roads will be approximately 6m wide);
- A minimum vertical clearance of 4 metres to any overhanging obstructions, including tree branches;
- Multiple suitable turning areas will be available on the site at intersections and turbine hardstand areas;
- Minimum distance between inner and outer curved is 6 metres; and
- Crossfall is not more than 10 degrees.

Security measures for the site will ensure local Emergency Services are able to always access the site. Local emergency services, including the Wellington Local Emergency Management Committee (LEMC) and the local RFS command, will be consulted to establish the best method of ensuring access.

8.2 Contact details for primary and alternative site contacts

Primary and alternative site contact details are contained within Appendix A.

9 Hazards that may impact on fire-fighting operations

9.1 Location of hazards

Existing fire hazards are described in Section 3.3 of this Emergency Plan.

Additionally as noted in Section 7, there will be flammable materials stored on the site during construction and operation of the wind farm.

9.2 Procedures to manage hazards during fire-fighting operations

Reference: Reference: UWF-NACAP-CIV-PLN-0019

Uungula Wind Farm Emergency Response Plan

This Emergency Plan will be updated as works progress into the Wind Farm.

10 Asset Protection Zones

An Asset Protection Zone (APZ) is typically designed to separate a vulnerable asset from the bushfire hazard (vegetation/fuel). An APZ is either a lower fuel hazard such as mown or heavily grazed grass or a fire break of ploughed or fallow ground. APZs do not eliminate the fire risk but may lower it to an extent where fire control is more feasible or damage to the asset is reduced or eliminated.

Understanding the value and limitations of APZ is important, as is the understanding that bushfires attack built assets by either flame contact, radiant heat or burning debris. An APZ can be used to lower or eliminate the bushfire attack from flame contact and radiant heat around the perimeter of the WTG and operational and maintenance facilities, but under winds of >25 kph burning debris can result in a fire breaching an APZ to ignite grassy fuel within other parts of the site. A fire emanating from the WTG may also jump an APZ by burning debris under similar conditions (Eco Logical Australia, 2020).

Despite the limitations of any APZ, as specified in PBP 2019 a minimum 10 m APZ is to be established around key infrastructure, including:

- WTGs
- Wind monitoring masts
- Substations
- Compound for the operations and maintenance facilities

Temporary construction facilities shall also incorporate the provision of a temporary APZ, which includes:

- Temporary construction compounds
- Concrete batching plant

An APZ will significantly reduce the likelihood of a bushfire spreading into the facility. In accordance with PBP 2019, APZ are to be established and maintained as Inner Protection Areas (IPA) for the life of the development.

10.1 APZ management and maintenance

When establishing and maintaining an IPA the following requirements apply (PBP, 2019):

Trees:

- Canopy cover should be less than 15% (at maturity);
- Trees (at maturity) should not touch or overhang the any infrastructure buildings;
- Lower limbs should be removed up to a height of 2m above ground;
- Canopies should be separated by 2 to 5m; and
- Preference should be given to smooth barked and evergreen trees.

Shrubs:

- Create large discontinuities or gaps in the vegetation to slow down or break the progress of fire;
- Towards buildings;

- Shrubs should not be located under trees;
- Shrubs should not form more than 10% ground cover; and
- Clumps of shrubs should be separated from exposed windows and doors by a distance of at least twice the height of the vegetation.

Grass:

- Should be kept mown (as a guide grass should be kept to no more than 100 mm in height) leaves and vegetation debris should be removed.

10.2 Responsibility for maintenance and management of APZs

During the construction phase of the development, maintenance and management of the APZs will be the responsibility of the Contractor(s) undertaking the relevant construction works.

During operational phase of the development, the maintenance and management of the APZs will be the responsibility of the wind farm operator (UWF).

11 Bushfire Emergency Management Planning

Fire emergency preparedness

Section 3.6 details the types of planning and preparations that should be undertaken prior to commencement of the bushfire season (1 October to 31 March).

In accordance with Condition B41 of the Development Consent, UWF will notify the Wellington Local Emergency Management Committee (LEMC) following construction of the development, and prior to commencing operations.

Fire emergency management/ response

Section 4 provides procedures to be implemented in the event that a fire or bushfire is occurring in the areas surround the project site.

Appendix A contains a list of Emergency contact numbers – both for emergency services, and for site contacts.

12 RFS Notification

12.1 Fire on site or in vicinity of site

The procedures provided in Section 4 of this Emergency Plan detail when and how the RFS should be notified in the case of a fire on site or in the vicinity of site.

In accordance with Condition B41 of the Development Consent, UWF will assist the RFS and emergency services as much as practicable if there is a fire in the vicinity of the site.

12.2 Proposed activities to be carried out during bushfire danger period

Section 3.5 of this Emergency Plan identifies the activities that would be carried out before and at commencement of the Bushfire Danger Period.

As outlined in Section 3.5, prior to the commencement of the Bushfire Danger Period, the EPC Contractor will undertake consultation with the local RFS/ LEMC to provide details of the:

- Progress of work on site.
- Fire hazards and risks that exist at the wind farm site.
- Works that will be undertaken during the upcoming Bushfire Danger Period with potential to ignite vegetation.
- Measures that are in place to prevent and mitigate fire ignition on site.
- Site access arrangements and locations of water supply on site.

Additionally, prior to commencement of the Bushfire Danger Period, the RFS command/ local brigades will be invited to the wind farm site for site familiarisation and to inspect the fire preparedness measures together with the EPC Contractor and CWP Renewables representatives.

13 Battery storage facility and sub-systems

There is no battery storage facility or sub-system proposed.

This section would be updated if when the battery storage facility and sub-systems are being planned for construction.

14 Roles and Responsibilities

The Proponent (Uungula Wind Farm Pty Ltd) is responsible for the preparation, maintenance and implementation of this Emergency Plan in accordance with the requirements of Condition B42 of SSD-6687. This Emergency Plan will be updated by Uungula Wind Farm Pty Ltd prior to the commencement of the Operational phase of the wind farm.

For the Construction phase of the wind farm, the Engineering, Procurement and Construction (EPC) Contractor will be responsible for preparing their own Emergency Management Plan, which must be consistent with the requirement of this Emergency Plan. The EPC Contractor Emergency Management Plan will detail the following key roles and responsibilities relevant to Emergency Management on the wind farm site:

- Emergency Reponse Coordinator (ERC)
- Emergency Response Team
- Construction Manager
- Project OHS Manager
- Supervisors
- Emergency Control Organisation
- Emergency Services
- All staff and Sub-Contractors
- First Aid Personnel

15 Emergency Plan audit, review, and update

15.1 Audits

Audits, both internal and external, will be undertaken to assess the effectiveness of environmental controls, compliance with this Emergency Plan and other relevant approvals, licenses, and guidelines.

Condition C15 of the Development Consent requires:

- Independent Audits of the development must be conducted and carried out at the frequency described and in accordance with the Independent Audit Post Approval Requirements (2020), unless otherwise agreed or directed by the Planning Secretary.

The requirements for internal and independent audits will be included within the Environmental Management Strategy.

15.2 Review and update

This Emergency Plan will be reviewed within three months of the following events occurring:

- Submission of an incident report under Condition C10 of Schedule 2 of the Development Consent;
- Submission of an audit report under Condition C15 of Schedule 2 of the Development Consent; or
- Any modification to the conditions of the Development Consent.

If the Emergency Plan is updated, the plan will be submitted to the Planning Secretary for approval in accordance with the requirements of Development Consent Condition C3(c).

Appendix A Emergency Contact Numbers

In the event of an emergency, the following numbers apply:

POLICE, FIRE, AMBULANCE - 000

Emergency Services	Comments	Phone #
NSW Ambulance	Medical Emergencies	000
NSW Fire and Rescue	Urban Fire and Rescue	000
Rural Fire Service	Bushfire	000
NSW State Emergency Service	Flood/Storm	13 25 00
NSW Volunteer Rescue Association	Vertical Rescue, Road Accident Rescue	000
NSW Police (Wellington)	Wellington	02 6840 2099
NSW Police (Mudgee)	Mudgee	02 6372 8599
NSW Environment Protection Authority (EPA)	Environmental Information and Investigation	13 15 55

NACAP Site Emergency Contacts	Role	Name	Phone #
Emergency Response Coordinator(Chief Warden)	Construction Manager	Andrew Fam	0409 525 305
Project Alternate ERC 1	Civils Superintendent	Mathew Thompson	0432 694 196
Project Alternate ERC 2	Project Safety Manager	Tim Hill	0408 876 708
Emergency Response Team Lead (Deputy Warden)	Construction Supervisor	Daniel Riddell	0427 575 443
Project Alternate ERT OSC	Health and Safety Advisor	Tina Brookman	0498 267 476
Project Alternate ERT OSC	Project Engineer	Damien Soans Ireland	0450 209 726

Appendix B Project Site Layout Diagram (A3)


0
2
4 km
MTG (48)
Project Site Boundary
Development Corridor
Proposed Powerlines
External Overhead Line
External Underground Line
Metmast Underground Line
External Overhead Line
Residences
Non-Associated Residence
Associated Residence
Public Roads
Waterways
Access tracks
Primary site entrance (Exit)
Secondary Intersections
Permanent Metmast
Batch Plant
Collector Sub
Extra Work Space
Site Compound
Switching Sub
Temporary Construction Compound
SQUADRON ENERGY
UUNGULA WIND FARM - FINAL LAYOUT PLAN
7/11/2023
GDA94 Zn55
UWF-03-FLP
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1 OF 1
UWF
A3

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We develop, operate and own renewable energy assets in Australia, with 1.1 gigawatts (GW) of renewable energy in operation and a development pipeline of 20GW.

With proven experience and expertise across the project lifecycle, we work with local communities and our customers to lead the transition to Australia's clean energy future.

Squadron Energy acknowledges the Traditional Owners of Country throughout Australia. We pay our respects to Elders past, present, and emerging.

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