APPENDIX L SEPP 33 SCREENING ASSESSMENT

Wind Energy Partners Pty LTD

Developed by Clean Energy Partners Pty Limited

Hills of Gold Wind Farm

SEPP 33 Screening Assessment

15 October 2020

Project No.: 0550690

The business of sustainability

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15 October 2020

Hills of Gold Wind Farm

SEPP 33 Screening Assessment

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1. INTRODUCTION

1.1 Project Overview

Wind Energy Partners Pty Ltd (WEP or the Proponent) is seeking to develop the Hills of Gold Wind Farm (the 'Project') located on the ridgeline between Hanging Rock and Crawney Pass in the Northern Tablelands region of New South Wales (NSW) (the Project). A locality plan is provided in Figure 1-1.

Environmental Resources Management Australia Pty Ltd (ERM) has been engaged to address the 'Hazards and Risks' component of the Secretary's Environmental Assessment Requirements (SEARs) which included a preliminary screening assessment to identify risks and hazards associated with the Project. This is in accordance with the *State Environmental Planning Policy No.33 – Hazardous and Offensive Development* (SEPP33). Hazards and risks associated with aviation, bushfire, telecommunications, electric and magnetic fields and blade throw are addressed in separate assessments within the EIS.

SEARs for the State Significant Development 9679 (SSD 9679) were issued for the Project on 22 November 2018, and supplemental SEARS were issued on 18 February 2020 in relation to the declaration of the Project as a Controlled Action under the EPBC Act and the bilateral approval process that will follow.

1.2 Project Description

1.2.1 Overview

The Project involves the construction, operation and decommissioning of a wind farm with up to 70 wind turbine generators (WTG), together with associated and ancillary infrastructure.

The Project consists of the following key components:

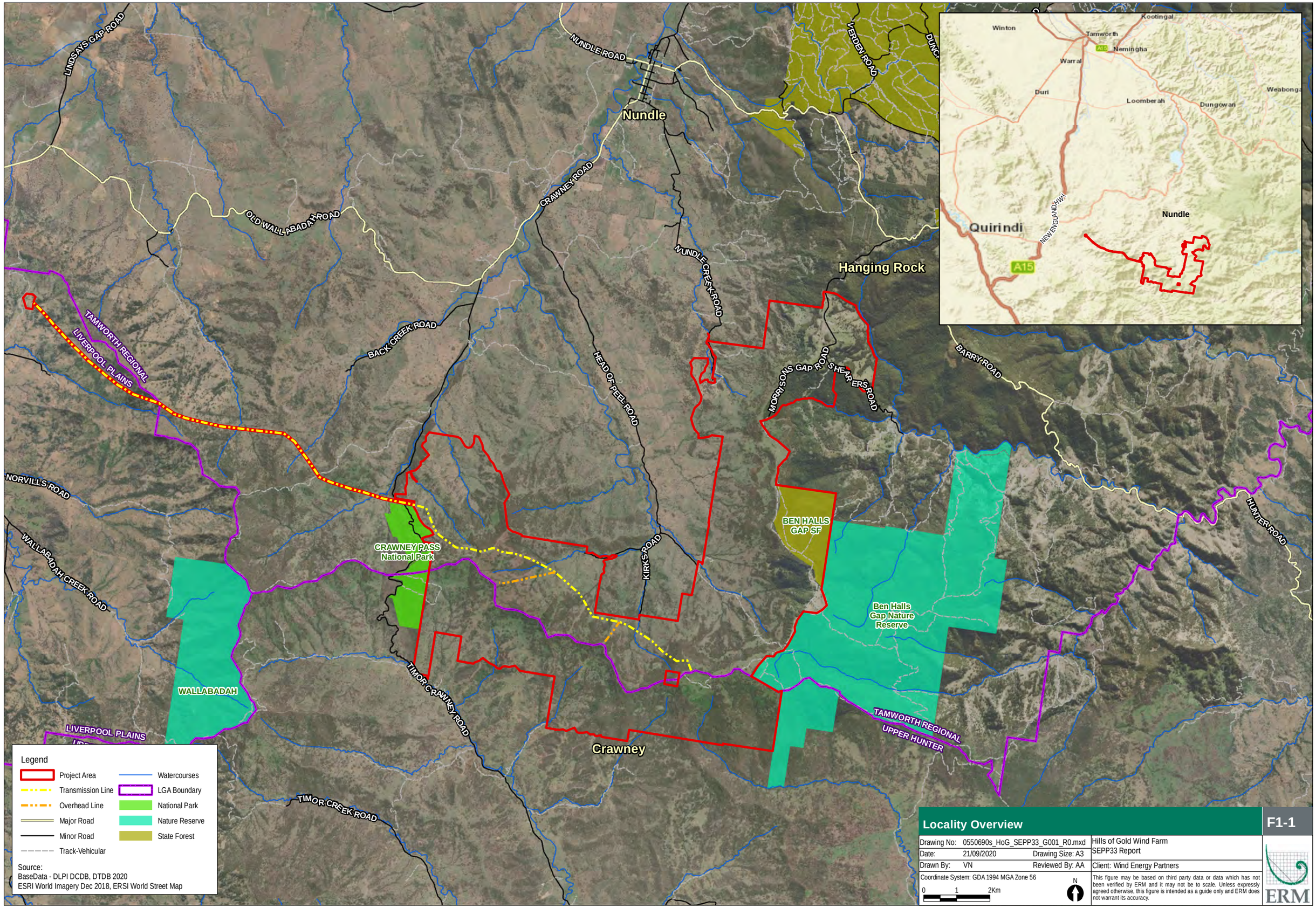
- up to 70 WTGs, each with:
  - a maximum height of 230 m AGL (to the blade tip) with a generating capacity of approximately 6MW;
  - a 4-7 part tubular steel tower holding the nacelle;
  - three blades mounted to a rotor hub and the gearbox and generator assembly housed in the nacelle; and
  - adjacent hardstands for use as crane pads and assembly / laydown areas;
- decommissioning of three current monitoring masts and installation of up to five additional monitoring masts for power testing. The five monitoring masts will be located close to a WTG location and will have same WTG hub height. The exact number and location will be defined at the detailed design stage;
- a central electrical substation, including transformers, insulators, switchyard and other ancillary equipment;
- an operations and maintenance facility;
- a battery energy storage system (BESS) of 100/400 MWh;
- an internal private access road network (up to a combined total length of approximately 48 km) connecting the WTGs and other Project infrastructure to the public road network;
- aboveground and underground 33 kV electrical reticulation and fibre optic cabling connecting the WTGs to the onsite substation (following site access tracks where possible);

- a 330 kV overhead transmission line to connect the onsite substation to the existing 330kV TransGrid Liddell to Tamworth overhead transmission line network, located approximately 13.5 km west of the WTG Project Area. A switching station will be constructed to connect the Project to the 330 kV TransGrid Liddell to Tamworth line; and
- upgrades to local roads and waterway crossings, as required for the delivery, installation and maintenance of WTG components and other associated materials and structures.

The following temporary elements will be required during construction of the Project:

- temporary site buildings and facilities for construction contractors / equipment, including site offices, car parking and amenities for the construction workforce;
- two temporary concrete batching plants to supply concrete for WTG footings and substation construction works;
- earthworks for access roads, WTG platforms and foundations, including blasting;
- potentially rock crushing facilities for the generation of suitable aggregates for concrete batching or sized rock for access road and hardstand construction;
- up to seven hardstand laydown areas for the temporary storage of construction materials, plant, and equipment construction;
- external water supply and aggregates / materials for concrete batching and construction activities; and
- the transport, storage and handling of fuels, oils and other hazardous materials for construction and operation of wind farm infrastructure.

The proposed Project layout including the WTGs, access roads and supporting infrastructure are shown in Figure 1-2.



Locality Overview

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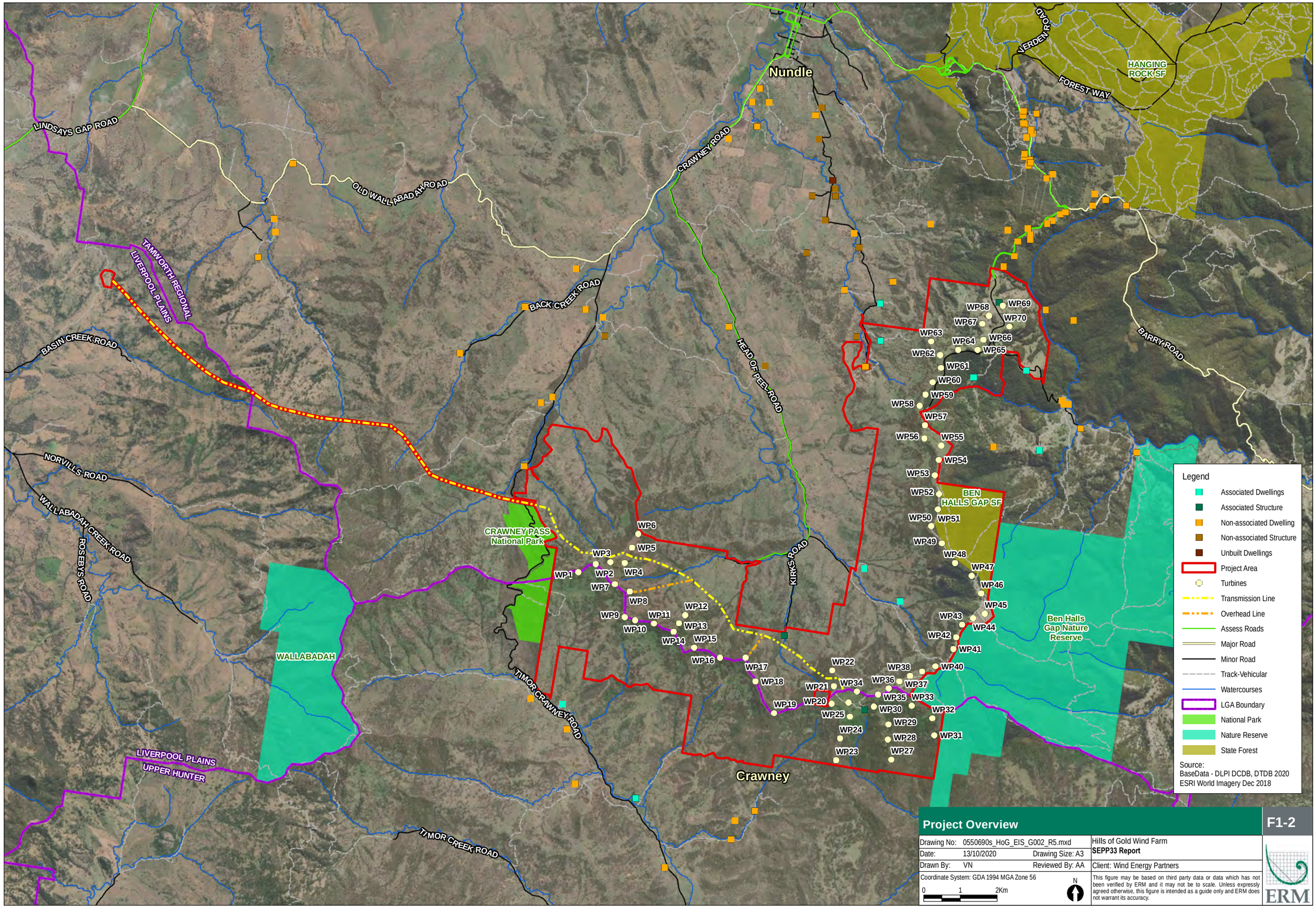
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LINDSAYS GAP ROAD
OLD WALLABADAH ROAD
CRAWNEY ROAD
FOREST WAY
VERDEN ROAD
HANGING ROCK SF
TAMWORTH REGIONAL
LIVERPOOL PLAINS
BACK CREEK ROAD
BASIN CREEK ROAD
HEAD OF REEL ROAD
BARRY ROAD
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Ben Halls Gap Nature Reserve
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NORVILLS ROAD
WALLABADAH CREEK ROAD
ROSEBYS ROAD
CRAWNEY PASS National Park
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KIRKS ROAD
WALLABADAH
TIMOR CRAWNEY ROAD
LIVERPOOL PLAINS
UPPER HUNTER
TIMOR CREEK ROAD
Crawney
Legend
Associated Dwellings
Associated Structure
Non-associated Dwelling
Non-associated Structure
Unbuilt Dwellings
Project Area
Turbines
Transmission Line
Overhead Line
Assess Roads
Major Road
Minor Road
Track-Vehicular
Watercourses
LGA Boundary
National Park
Nature Reserve
State Forest
Source:
BaseData - DLPI DCDB, DTDB 2020
ESRI World Imagery Dec 2018
Project Overview
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SEPP33 Report
Client: Wind Energy Partners
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1.2.2 Battery and Energy Storage System

The Project includes the installation of a lithium-ion battery energy storage system (BESS). A 4.5 ha footprint area has been set aside for the installation of the BESS (refer to Figure 1-2). Given the substantive advances in storage technologies over time, the exact storage capacity cannot be confirmed at this time, however it is anticipated that a 100/400 MWh facility would allow the optimisation of the Hills of Gold Wind Farm in the National Electricity Market (NEM).

The major components for each BESS include batteries, inverters and kiosk transformers. The specific design details for the BESS will not be finalised until the completion of the detailed design stage of the Project. The general description of the options for the BESS are as follows:

- multiple individual cubicles each with up to 0.65 MWh of energy, arranged in strings of between 2 and 5 MW; or
- a 20 – 40 foot containerised system with up to 10 MWh of energy per container.

The BESS facility includes a series of concrete pads, suitably spaced for optimum operations and maintenance and separated by gravel/road-base to assist in fire management. The final decision on the preferred technology provider and detailed technology specification would be confirmed during the detailed design phase of the Project, and would comply with applicable Australian standards, licences and codes.

Indicative battery modules would be of the order of 2.5 – 3.5 m in height. An example battery storage is shown in Figure 1-3

Figure 1-3 Indicative Battery Storage

1.3 Proximity to Neighbours

The screening assessment recognises the relative proximity of neighbouring properties to key Project infrastructure containing potentially hazardous materials (i.e. BESS, Substation, O&M Workshop) in order to assess the likely significance of impacts upon neighbours of the Project. Given the rural setting of the area, neighbouring landowner dwellings are scattered over a vast area, with the closest as detailed in Table 1-1 and shown in Figure 1-4. Associated structures AS 1 and AS 2 are located 730 m south east and 2.3 km north west of the key infrastructure respectively.

Table 1-1 Proximity of Closest Associated and Non Associated Dwellings to Key Project Components

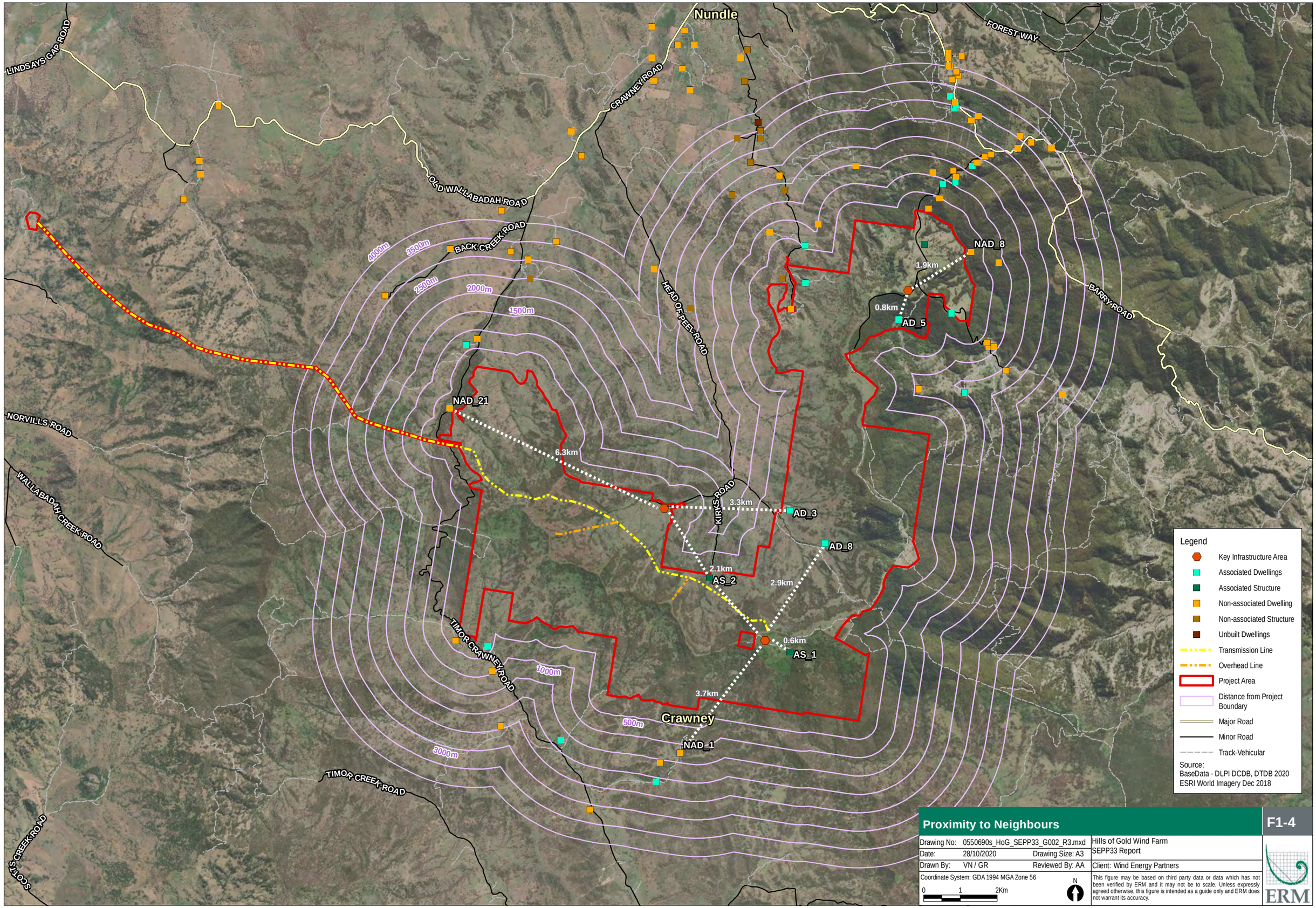
Key Infrastructure (BESS, Substation, O&M)			Key Infrastructure (Batching / Laydown Area South)			Key Infrastructure (Batching / Laydown Area North)		
Closest Dwelling	Direction	Approximate Distance	Closest Dwelling	Direction	Approximate Distance	Closest Dwelling	Direction	Approximate Distance
AD_8	North east	3.1 km	AD_3	East	3.3 km	AD_5	South west	0.8 km
NAD_1	South west	3.9 km	NAD_21	North west	6.3 km	NAD_8	North east	1.9 km

The distance to dwellings in regard to proximity to the key infrastructure areas provides a sufficient buffer, rendering the potential for impacts (for example visual impacts, impacts associated with fire from the BESS / substation or loss of containment of chemicals) not significant.

1.4 Surrounding Land Uses

Applying SEPP 33 also requires consideration of the immediate neighbouring land uses, or activities, as part of the risk screening process.

The Project Area is zoned ‘RU1 – Primary Production’ for agricultural purposes, which reflects the primary use of the land for agricultural grazing of cattle. The surrounding land is predominately zoned as ‘RU1 – Primary Production’. Directly east of the Project Area there is land zoned ‘RU3 – Forestry’ and ‘E1- National Parks and Nature Reserves’, aligning to Ben Halls Gap State Forest and Ben Halls Gap National Park, respectively (refer to Figure 1-5).



Proximity to Neighbours

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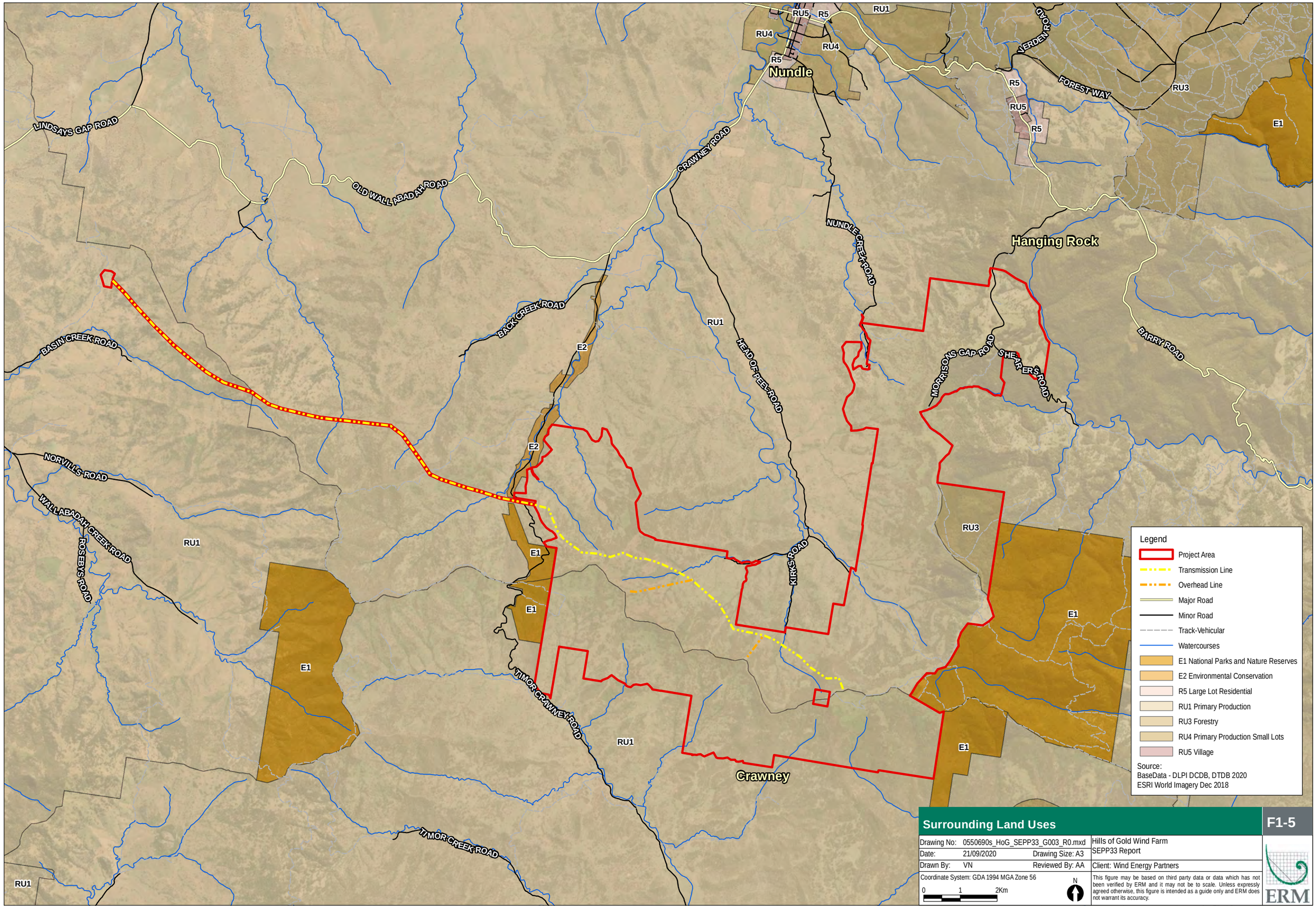

Surrounding Land Uses

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1.5 Assessment Requirements

The Secretary's Environmental Assessment Requirements (SEARs) for the Hills of Gold Wind Farm (SSD 9679) require hazards / risks to be considered, including:

'*Battery Storage – including a preliminary risk screening in accordance with State Environmental Planning Policy No. 33 – Hazardous and Offensive Development and Applying SEPP 33 (DoP, 2011), and if the preliminary risk screening indicates the development is 'potentially hazardous', a Preliminary Hazard Analysis (PHA) must be prepared in accordance with Hazard Industry Planning Advisory Paper No. 6 – Guidelines for Hazard Analysis (DoP, 2011) and Multiple –Level Risk Assessment (DoP, 2011).'*

1.6 Scope

The scope of this assessment includes the following Project infrastructure:

- collector network (aboveground and underground transmission lines), substation and switching station;
- Battery Energy Storage System (BESS);
- supporting infrastructure, including:
  - operational buildings;
  - access roads and internal roads onsite, as well as emergency access points;
  - temporary construction activities such as concrete batching; and
- fencing and landscaping surrounding the substation, switching station and BESS.

1.7 Limitations

The scope of work is limited to the requirements of SEPP 33 that address the hazards and risks component of the SEARs. The limitations listed below are addressed separately within the relevant technical assessment within the EIS, as noted, which also includes detailed descriptions and management strategies for the Project. Reference is provided below to where these technical assessments address risks and hazards. The study limitations are:

- Bushfire hazard assessment: Risks and hazards associated with bushfire are detailed in the Bushfire Assessment produced as a requirement of the SEARs, addressed in Section 13.4 and Appendix J of the EIS). Where applicable, identified controls have been referenced in this study (such as a bushfire management plan).
- Electric and Magnetic Fields (EMF) risks are detailed in the EMF assessment within Chapter 13.3 of the EIS.
- Telecommunications and Electromagnetic Interference risks are detailed in the Telecommunications and EMI assessment within Chapter 13.2 and Appendix I of the EIS.
- Hazards and risks associated with traffic and traffic management. A Traffic Impact Assessment (TIA) has been produced as a requirement of site access and construction under the Project EIS process. This is addressed in Chapter 12 and Appendix G of the EIS. Where relevant, identified controls will be referenced in this study.
- Hazards and risks associated with construction. Construction associated hazards and risk will be addressed in the Environmental Management Strategy (EMS) for the Project's construction phase, as well as a site Work Health and Safety Plan (WHS).

Hazards and Risks associated with Soil and Water are detailed in the Soil and Water assessment within Chapter 16 and Appendix O of the EIS. An overarching hazard identification summary has been provided in Section 3.2.3 of this report.

2. ASSESSMENT METHODOLOGY

2.1 Methodology

A desktop assessment was carried out to identify environmental hazards and risks that could arise during the construction and operation of key infrastructure components of the Project (i.e. BESS, Substation and O&M Workshop), as well as mitigation measures to address such issues.

The assessment focused on those hazards and risks with the potential to adversely affect the quality of the surrounding environment, land uses and communities, with consideration of the following relevant policies and guidelines:

- *State Environmental Planning Policy 33 – Hazardous and Offensive Development* (SEPP 33);
- *Hazardous and Offensive Development Application Guidelines: Applying SEPP 33* (Department of Planning, 2011a) (Applying SEPP 33);
- *Hazardous Industry Planning Advisory Paper No 6: Hazard Analyses* (Department of Planning, 2011b);
- *Multi-level Risk Assessment* (Department of Planning, 2011c);
- *Australian Standard 1940: The storage and handling of flammable and combustible liquids* (AS 1940:2017);
- *Australian Standard 4332: The storage and handling of gases in cylinders and welding gases* (AS 4332:2004);
- *Australian Standard 4839: The safe use of portable and mobile oxy-fuel gas systems for welding, cutting, heating and allied processes* (AS 4839:2001);
- *International Standard (ISO / IEC 31010) Risk Management – Risk Assessment Technique*;
- *Australian Code for the Transport of Dangerous Goods by Road and Rail (7.5th edition)* (National Transport Commission, 2007) (ADG Code); and
- *Storage and Handling of Dangerous Goods Code of Practice* (WorkCover, 2005).

There may be additional health and safety hazards that are not specifically considered in this assessment and would be addressed by the construction contractor.

The screening assessment focuses on specific dangerous goods classes that have the potential for significant offsite effects. Where there is potential for onsite environmental impacts, these are addressed in respective technical assessments (for example the Soils and Water Assessment associated with spills etc). The assessment involves the identification of classes and quantities of all dangerous goods to be used, stored or produced onsite. Details of the methodology of the screening assessment is outlined in SEPP 33 with particular reference to Figure 2-1.

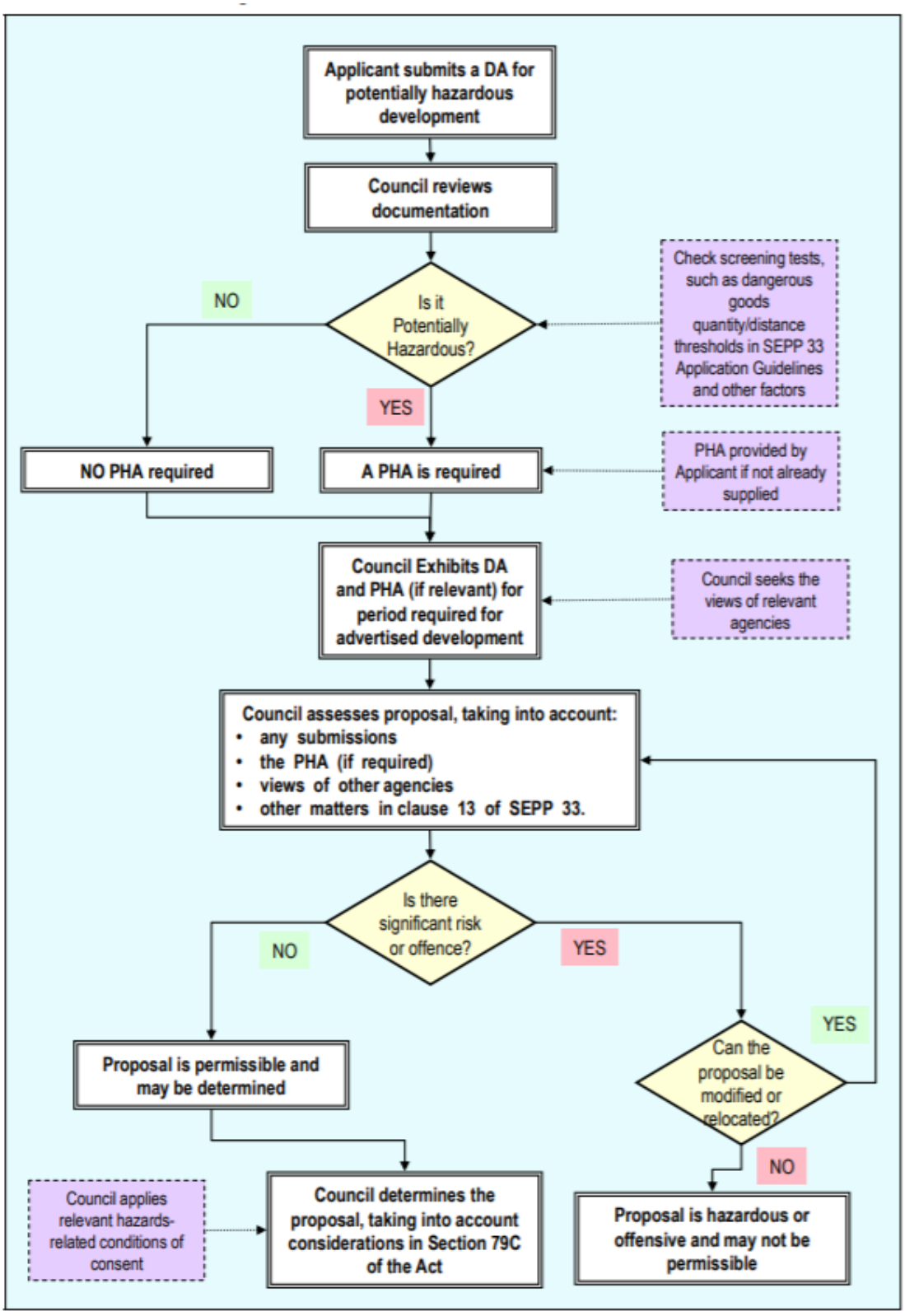

Figure 2-1 SEPP 33 Risk Screening Process (Department of Planning, 2011)

3. PRELIMINARY RISK ASSESSMENT AND SCREENING

3.1 Definitions

Industries or projects determined by the risk screening process to be hazardous or potentially hazardous require the preparation of a Preliminary Hazard Analysis (PHA) in accordance with Clause 12 of SEPP 33.

Definitions of 'potentially hazardous industry' and 'potentially offensive industry' are provided in SEPP 33:

'*potentially hazardous industry'* means a development for the purposes of any industry which, if the development were to operate without employing any measures (including, for example, isolation from existing or likely future development on other land) to reduce or minimise its impact in the locality or on the existing or likely future development on other land, would pose a significant risk in relation to the locality:

a. To human health, life or property, or

b. To the biophysical environment, and includes a hazardous industry and a hazardous storage establishment.

'*potentially offensive industry'* means a development for the purposes of an industry which, if the development were to operate without employing any measures (including, for example, isolation from existing or likely future development on other land) to reduce or minimise its impact in the locality or on the existing or likely future development on other land, would emit a polluting discharge (including for example, noise) in a manner which would have a significant adverse impact in the locality or on the existing or likely future development on other land, and includes an offensive industry and an offensive storage establishment.

3.2 Assessment

3.2.1 Risk Screening

In assessing the proposed Project, the emphasis is on preventing hazardous incidents onsite or offsite, such as spontaneous combustion and fire, or the contamination of land by the use of significant quantities of toxic or biologically harmful materials that could result in substantial effects.

3.2.2 Potential Hazards and Risks

Potential hazards and risks during construction and operation include (but are not limited to):

- the onsite storage, use and transport of dangerous goods and hazardous substances; and
- risk of damage to existing infrastructure due to ground movement and geotechnical instability.

An indicative list of the types of potentially hazardous materials anticipated to be used, stored and transported during construction and operation of the Project is provided in Table 3-1 along with the relevant storage and transport thresholds established under *Applying SEPP 33*.

Table 3-1 Proposed Hazardous Materials at Hills of Gold Wind Farm (Construction and Operation) – Storage and Transport

Material	Australian Dangerous Goods Class	Storage Location	Storage Method	Quantity (T)	Applying SEPP 33 threshold		
					Min Quantity	Min. storage distance from sensitive receptors	Transport
Chemicals	Various	Batching / laydown areas, O&M Compound	Domestic Storage	Domestic Quantities	N/A	N/A	N/A
Welding Cylinders	Class 2.1, 2.2	Batching / laydown areas, O&M Compound	Cylinders (AS 4332, AS 4839)	5 Welding Sets (<0.1 T)	0.5 T	N/A	N/A
Lithium Batteries	Class 9	Battery Energy Storage System	Container	2,200 T	N/A	N/A	N/A
Diesel	Combustible	Batching / laydown areas O	Self bunded tank AST (AS 1940)	100 T	5000 T	3 m (AS 1940)	N/A
Oils	Combustible	Batching / laydown areas, O&M Compound	Domestic Storage (AS 1940)	<10 T	N/A	N/A	N/A

The thresholds in *Applying SEPP 33* represent the maximum quantities of hazardous materials that can be stored or transported without causing a significant offsite risk. In most instances, low volumes of potentially hazardous materials would be stored onsite. The volume required to be stored onsite would largely depend on the anticipated rates of consumption, with deliveries of dangerous goods coordinated to match consumption rates.

Construction site planning would ensure hazardous materials are stored appropriately and at the required distance from sensitive receptors, in accordance with the thresholds established under *Applying SEPP 33* and relevant Australian Standards (specifically AS1940, AS4332 and AS4839). Environmental hazards and risks associated with the onsite storage, use and transport of chemicals, fuels and materials would be managed through standard mitigation measures to be developed as part of the construction environmental management plan documentation. These measures would include the storage and management of all hazardous substances in accordance with the *Work Health and Safety Act 2011*, the Storage and Handling of Dangerous Goods Code of Practice (WorkCover NSW, 2005) and *Applying SEPP 33*.

Appendix 3 of *Applying SEPP 33* provides a list of industries that may be potentially hazardous. Wind farms / electricity generating facilities are not identified.

The risk screening process for the storage of hazardous materials at the Project Area and the transportation of hazardous materials to/from the site demonstrates that in all cases, types and quantities would be below the *Applying SEPP 33* thresholds (refer to Table 3-1). For storage, this demonstrates that operational inventories would not pose a significant risk of harm beyond the Project boundary. For transportation, this also demonstrates that risks are unlikely to be significant.

It can be concluded that the risks associated with storage and transportation of hazardous materials are unlikely to be significant or pose a risk to public safety. Given that *Applying SEPP 33* thresholds are not exceeded, the Project is not considered to be a hazardous or potentially hazardous industry under SEPP 33 chemical screening. Therefore a PHA is not required to be undertaken for the Hills of Gold Wind Farm under the screening thresholds.

3.2.3 Hazard Identification

Hazard identification aims to identify all reasonably foreseeable hazards and associated events that may arise due to the operation of the Project. Safeguards have also been identified and are required to ensure the risk scenarios that were identified are controlled, contained and minimised to an acceptable level. Table 3-2 below details the hazards identified and recommended safeguards to manage hazards.

For each identifiable hazard, the following was considered:

- Event – the mechanism or scenario by which the hazard potential is realised.
- Causes – the potential ways in which the event could arise.
- Consequences – the outcome or impact of the event.
- Likelihood – the probability for the event to occur.
- Safeguards – any measures which prevent and/or mitigate against the event and resulting consequences.

The assumptions that have been made during the hazard identification include:

- All plant and equipment is installed and operated in accordance with appropriate Australian Standards, codes and guidelines.
- Dangerous goods are transported in accordance with the ADG Code and storage as per the relevant standards and guidelines even if not a licensable quantity.
- All equipment and systems are designed to be inherently safe.

Table 3-2 Hazard Identification

Hazard Scenario	Causes	Consequence	Likelihood	Potential for Off Site Impact	Identified / Recommended Safeguards
Vehicle interaction	Vehicle movements in vicinity of personnel, Vehicle impact to infrastructure	Personal injury	Unlikely	No	■ Preparation of a construction management plan that includes standard traffic rules and signage. ■ Preparation of a Traffic Impact Assessment (TIA). ■ Implement site speed limits. ■ Ensure driver competency. ■ Fencing / bollards and positioning of batteries to minimise incidental vehicle interaction. ■ Transport of dangerous goods will comply with the requirements of the Australian Code for the Transport of Dangerous Goods by Road and Rail (the ADG Code).
EMF	EMF related infrastructure (such as BESS, Power lines, Grid infrastructure etc.)	Personal injury	Extremely Unlikely	No	■ All designs will be in accordance with the Guidelines for limiting exposure to Time varying Electric, Magnetic and Electromagnetic Fields (ICNIRP, 1998; ICNIRP, 2010b) and relevant codes and industry best practice standards in Australia. ■ All relevant procedures in relation to a high voltage installation will be adhered to throughout the life of the Project. ■ The security system for the site, including safety fencing and closure of gates, will be maintained throughout the construction and operation, to provide safe exposure distances to the public. ■ Public access to the site will be restricted throughout the life of the Project. ■ Contractor management – such as work method statements, permits to work, etc. Refer to Section 13.3 of the EIS for the EMF assessment.
Natural hazards	Earthquake	Personal injury, Wind Farm shut down	Very Unlikely	Yes– typically a large scale external event	■ Project infrastructure will be built to relevant construction codes.
	Lightning	Personal injury, Wind Farm shut down	Very unlikely	Yes - typically a large scale external event	■ Project infrastructure to be constructed in accordance with electrical standards.

Hazard Scenario	Causes	Consequence	Likelihood	Potential for Off Site Impact	Identified / Recommended Safeguards
	Bushfires	Personal injury, Wind Farm shut down, Possible fire	Unlikely	Yes – typically a large scale external event	A Bushfire Emergency Management and Operations Plan will be prepared in consultation with the RFS. This plan will include but is not limited to the following aspects: ■ Management of activities with a risk of fire ignition. ■ Management of fuel loads onsite. ■ Storage and maintenance of firefighting equipment, including siting and provision of adequate water supplies. ■ Respond to the requirements of the '*Planning for Bush Fire Projection 2018*' regulation, including: • Implementing APZ setbacks to mitigate external fire hazards, as well as mitigation of propagation of external fires to outside the Project boundary. • Implementing increased APZs for the BESS system, substation and switching station, and positioning outside of the flame throw distance, as detailed in the bushfire assessment (refer Appendix J). • Providing adequate egress/access to site, including multiple entrances and exits to site. • Emergency evacuation measures - ensuring that site staff and contractors are aware of evacuation measures and emergency procedures. ■ Operational procedures relating to mitigation and suppression of bush fire relevant to the operation of the Project. ■ Installation as per AS/NZS 5139:2019. ■ Ensuring that there are external fire protection systems. ■ Ensuring that the BESS system is operated in accordance with the relevant appropriate standards (Global and local). ■ Design buildings and structures to appropriate codes and standards. ■ Manage fuel for vehicles and machinery on site to appropriate standards. Refer to Section 13.4 and Appendix J of the EIS for the bushfire assessment.
External fire (adjacent to site)	Fire or explosion from adjacent land users	Asset damage, Wind Farm shut down, Personal injury	Unlikely	No	

Hazard Scenario	Causes	Consequence	Likelihood	Potential for Off Site Impact	Identified / Recommended Safeguards
Loss of containment of chemicals, including dangerous goods	Damage to storage containers, e.g. from external impact, wear and tear, overheating	Environmental damage, Personal injury	Very Unlikely	No	■ A Construction Environmental Management Plan and Operation Environmental Management Plan will be prepared that will include spill containment and management. ■ Store chemical in line with appropriate standards. ■ Implement a regular inspection and maintenance schedule for chemical storage areas. ■ Implement standard transfer and handling procedures. ■ Provide a Safe Work Method Statement detailing methods for handling chemicals. ■ Provide spill kits to be used in the event of an incident involving release of chemicals. ■ Safety Data Sheets (SDS's) available on site and referred to in handing processes. ■ Provide correct PPE to all staff (as per SDS).
Decanting and transfer of chemicals i.e. with fork lift or hoses	Damage to storage containers during handling Not adhering to relevant handling standards	Environmental damage Personal Injury	Very Unlikely	No	■ A Construction Environmental Management Plan and Operation Environmental Management Plan will be prepared that will include spill containment and management. ■ Store chemical in line with appropriate standards. ■ Implement a regular inspection and maintenance schedule for chemical storage areas. ■ Implement standard transfer and handling procedures. ■ Provide a Safe Work Method Statement detailing methods for handling chemicals. ■ Provide spill kits to be used in the event of an incident involving release of chemicals. ■ SDS's available on site and referred to in handing processes. ■ Provide correct PPE to all staff (as per SDS). ■ Implement working at heights procedures. ■ Ensure all staff working at heights have completed the necessary training. ■ Use fall prevention equipment. ■ Contractor management, including: • Sign on/off registers. • Ensuring familiarity with site WHS procedures. • Appropriate permit to work procedures.
Contact with chemicals, including dangerous goods	Maintenance of batteries	Personal injury	Very Unlikely	No	
Fall from heights	Working at height	Personal injury / fatality	Very Unlikely	No	

Hazard Scenario	Causes	Consequence	Likelihood	Potential for Off Site Impact	Identified / Recommended Safeguards
Contact with electricity	Contact with live electrical sources; Cranes impacting overhead lines; Hitting underground services; Overhead services damaged during natural hazards; and Security issues with trespassers in contact with electrical lines.	Personal injury / fatality	Very Unlikely – Unlikely (trespassers)	No	■ Implement Isolation procedures. ■ Install fit for purpose electrical systems. ■ Ensure that installation is carried out by a suitably qualified electrical personnel. ■ Adherence to AS 3000. ■ Follow underground utility identification protocols, including Dial Before You Dig. ■ Contractor management, including: • Sign on/off registers. • Ensuring familiarity with site WHS procedures. • Appropriate permit to work procedures. • Crane height limitations where works are undertaken in the vicinity of overhead power lines – overhead work height limits.
Mechanical or chemical damage of lithium-ion Battery assemblies	Overheating of individual cells (e.g. lack of venting, thermal runaway reactions) Vehicle impact into batteries	Release of fluorinated hydrocarbons, Personal injury / fatality, Asset damage	Extremely Unlikely	Yes	■ Ensure Batteries are Quality Assured. ■ Install bollards/protective barriers around key battery areas and infrastructure. ■ Ensure battery units are appropriately vented. ■ Batteries to be stored as per suppliers specifications. ■ Implement a regular inspection and maintenance regime for the battery assemblies.
Overheating of lithium-ion batteries	Thermal runaway reactions	Release of fluorinated hydrocarbons, Personal injury / fatality, Asset damage	Extremely Unlikely	Yes	■ Provide ventilation system within BESS. ■ Batteries to be stored as per suppliers specifications. ■ Quality Assurance checks to be carried out routinely by qualified personnel. ■ Provide insulation around batteries. ■ Regular maintenance inspections of battery units to check for overheating. ■ Installation as per AS/NZS 5139:2019. ■ Ensuring that there are external fire protection systems for the BESS where relevant. ■ Ensuring that the BESS system is relevant to the appropriate standards (Global and local).

Hazard Scenario	Causes	Consequence	Likelihood	Potential for Off Site Impact	Identified / Recommended Safeguards
Security breach	Persons seeking theft of property/battery components	Theft of equipment Personal injury	Unlikely	No	■ Installation of fencing around facility and battery facility separately. ■ CCTV where practical on critical infrastructure/battery units. ■ Alarms/locks on battery doors. ■ Inspections to monitor for potential security concerns.
Construction risks	General miscellaneous construction risks	Personal injury / fatality	Very Unlikely	No	■ Implement a Workplace Health and Safety (WHS) plan. ■ Conduct a detailed Safety in Design processes during project execution.
Transport and delivery (manual handling)	Personnel injury though manual handling of equipment during operations	Personal injury	Very Unlikely	No	■ Adhere to requirement of a WHS plan and the ADG code. ■ Ensure batteries have specific equipment handling advice where appropriate for staff.

3.2.4 Potentially Offensive Assessment

The assessment of the suitability of the Project Area to accommodate existing or proposed development of a potentially offensive nature is based on consideration of the:

- nature and quantities of materials stored and processed on the site;
- type of plant and equipment in use;
- adequacy of proposed technical, operational and organisational safeguards;
- surrounding land uses or likely future land uses; and
- interactions of these factors.

The potential polluting discharges a development of this type could generate that would be deemed offensive and cause adverse impacts if unmitigated are outlined in Table 3-3. Discussion of where these issues are addressed in the Environmental Impact Statement (EIS) (ERM, 2020) and hence why they are considered to be mitigated is also outlined.

Table 3-3 Potentially Offensive Assessment

Potential Impacts	Discussion
Noise	Based on the Noise and Vibration Assessment (NVA) prepared for the Project, compliance with relevant policies and guidelines will be achieved (including the *NSW Wind Energy: Noise Assessment Bulletin*, the *NSW Noise Policy for Industry* and the *Interim Construction Noise Guideline*) at all dwellings where the Project is constructed and operated in accordance with the recommendations outlined in the NVA. The Project will require an Environment Protection Licence under the *Protection of the Environment Operations Act 1997*, which will include the regulation of noise. Refer Chapter 10 and Appendix E of the EIS.
Odour	Given the nature of the Wind Farm, any odour is unlikely to arise and is therefore not required to be assessed as a requirements of the SEARs. Refer Chapter 17 of the EIS.
Air emissions	Given the nature of the Wind Farm, any air emissions are predominately associated with construction activities. The construction environmental management plan will managed and mitigate construction related air quality issues. Refer Chapter 17 of the EIS.
Water discharge/runoff	No issues identified. Refer Chapter 16 of the EIS.
Ground contamination	No issues identified. Refer Chapter 16 of the EIS.

4. MANAGEMENT MEASURES

A range of mitigation and management measures will be implemented as discussed in Table 3-2 and summarised below.

4.1 Battery and Key Infrastructure Protection and Management

It is recommended the following controls and safeguard are implemented associated with the BESS and other key infrastructure, ie substation:

- locating the BESS system in the most appropriate location on the site that considers both the bushfire hazards surrounding the Project and the logistical needs of the Project;
- install bollards/protective barriers around key battery areas and infrastructure;
- batteries to be stored as per suppliers specifications;
- implement a regular inspection and maintenance regime;
- provide ventilation system within BESS;
- minimising build-up of combustible materials onsite;
- quality assurance checks to be carried out routinely by qualified personnel;
- provide insulation around batteries;
- installation as per AS/NZS 5139:2019 or other relevant standards;
- ensuring that there are external fire protection systems where relevant; and
- ensuring that the BESS system is relevant to the appropriate standards (Global and local).

4.2 Chemical and Spill Management

A Construction Environmental Management Plan and Operation Environmental Management Plan will be prepared that will include spill containment and management measures. Appropriate safe work procedures will be implemented for the handling of all chemicals, including transfer, storage and spill prevention and clean up requirements.

Chemicals brought onsite should be stored in accordance with the relevant Australian Standards which dictate requirements for handling, use, storage and disposal of chemicals. Safety Data Sheets (SDS) will be kept onsite for the purpose of reference and use, and in the event that emergency services require access to the register of chemicals onsite. A regular inspection and maintenance schedule will be developed and implemented for chemical store areas.

4.3 Fire Risk Management

A Bushfire Emergency Management and Operations Plan will be prepared in consultation with the RFS. This plan will include but is not limited to the following aspects:

- management of activities with a risk of fire ignition;
- management of fuel loads onsite;
- storage and maintenance of firefighting equipment, including siting and provision of adequate water supplies;
- respond to the requirements of the ‘Planning for Bush Fire Projection 2018’ regulation, including establishment and maintenance of APZs; and
- operational procedures relating to mitigation and suppression of bush fire relevant to the operation of the Project.

4.4 Security System

All relevant procedures in relation to a high voltage installation will be adhered to throughout the life of the Project, including work statements, approving permits to work, maintenance schedules, WHS adherence etc.

The security system for the Project will include:

- safety fencing
- alarm systems;
- surveillance cameras.

These will be maintained throughout the construction and operation, to provide safe exposure distances to the public.

Public access to the Project Area is not available without crossing private land and security will be maintained to restrict access throughout the construction and life of the Project.

4.5 Transport

Transport of dangerous goods will comply with the requirements of the Australian Code for the Transport of Dangerous Goods by Road and Rail (the ADG Code).

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5. CONCLUSION

This screening assessment has taken into account the relevant materials, quantities and details as provided by WEP for the Hills of Gold Wind Farm. Compliance to the SEPP 33 by WEP is dependent upon adhering to storage methods and procedures outlined in this assessment, and the relevant supporting Australian Standards aforementioned.

It has been recognised that the Project is to include small quantities of hazardous materials which do not trigger the threshold. With consideration of the insignificant quantity of materials stored onsite, along with the significant distance to neighbouring properties, it can be concluded that the risks associated with storage and transportation of hazardous materials are unlikely to be significant or pose a risk to public safety. Given that Applying SEPP 33 thresholds are not exceeded, the Project is not considered to be a hazardous or potentially hazardous industry under SEPP 33. Therefore a PHA is not required to be undertaken for the Hills of Gold Wind Farm.

With the nature of the material stored, proposed mitigation measures for the Project to be implemented, proximity to neighbouring properties considered, and the impacts that are assessed in the EIS, it can be concluded that the potentially offensive impacts associated with the Project are unlikely to be significant either to neighbouring properties or on the existing or likely future development. The Project will also be subject to an Environment Protection Licence under the *Protection of the Environment Operations Act 1997*.

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