



Planning Report

Cattle Creek Wind Farm

PREPARED FOR
RWE Cattle Creek Onshore Wind
Pty Ltd

DATE
27 July 2026

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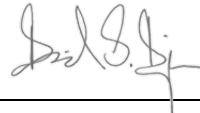
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ACRONYMS AND ABBREVIATIONS

Acronym	Description
BESS	Battery Energy Storage System
CEMP	Construction Environmental Management Plan
DA	Development Application
DNRMMRRD	Department of Natural Resources and Mines, Manufacturing, and Regional and Rural Development
DSDIP	Department of State Development, Infrastructure and Planning
ERM	Environmental Resources Management Australia Pty Ltd
FTE	Full-time equivalent
GW	Gigawatts
ha	Hectare
HV	High voltage
kV	Kilovolts
LC	Least Concern
LGA	Local Government Area
LV	Low voltage
LVIA	Landscape Visual Impact Assessment
MNES	Matters of National Environmental Significance
MSES	Matters of State Environmental Significance
MV	Medium Voltage
MW	Megawatts
OSOM	Oversized overmass
Planning Act	<i>Planning Act 2016</i>
Planning Regulation	<i>Planning Regulation 2017</i>
PO	Performance Outcome
Regional Plan	Darling Downs Regional Plan 2013
RPD	Relevant Purpose Determination
RWE	RWE Cattle Creek Onshore Wind Pty Ltd
SARA	State Assessment and Referral Agency
SDAP	State Development Assessment Provisions (version 3.6)
SPP	State Planning Policy
State Code 16	State Code 16: Native Vegetation Clearing (version 3.6)
State Code 23	State Code 23: Wind Farm Development (version 3.6)
State Code 27	State Code 27: Battery storage facility (version 3.6)
Toowoomba Regional Planning Scheme	Toowoomba Regional Planning Scheme Version 28, 2022

Acronym	Description
TRC	Toowoomba Regional Council
WDRC	Western Downs Regional Council
Western Downs Planning Scheme	Western Downs Planning Scheme 2017
WTG	Wind Turbine Generator

KEY DEFINITIONS

Key Term	Definition
The Proponent	RWE Cattle Creek Onshore Wind Pty Ltd
Proposed Development	Cattle Creek Wind Farm
Project Area	The wind farm and BESS project area comprising twelve separate lots, and adjacent road reserves with a total area of approximately 20,404.5 ha.
Disturbance Footprint	The area of maximum direct disturbance associated with the construction, operation and decommissioning of the Proposed Development in the Project Area, which is approximately 2,221.2 ha.

EXECUTIVE SUMMARY

RWE Cattle Creek Onshore Wind Pty Ltd (the Proponent) proposes to develop the Cattle Creek Wind Farm (Proposed Development), which comprises the construction, operation and decommissioning of up to 135 Wind Turbine Generators (WTGs) and ancillary infrastructure including Battery Energy Storage System (BESS).

The area in which the Proposed Development may occur (Project Area) is located in both the Toowoomba Regional Council and Western Downs Regional Council Local Government Areas (LGAs). The Proposed Development is located approximately 26 km east from Cecil Plains, and 48 km north-east from Millmerran. The closest major town is Dalby, located approximately 60 km north-east of the Project Area, with Queensland's capital, Brisbane, located 220 km east of the Project Area.

Pursuant to the *Planning Act 2016*, the Proposed Development is an assessable development and requires a Development Permit for a Material Change of Use (Wind Farm and ancillary infrastructure including BESS), and Operational Works (Clearing Native Vegetation). Consistent with recent changes to the *Planning Act 2016*, the Project is Impact Assessable.

This Planning Report has been prepared in response to the requirements of State Code 16: Native vegetation clearing (State Code 16) State Code 23: Wind farm development (State Code 23) and State Code 27: Battery storage facility development (State Code 27) as outlined within the State Development Assessment Provisions. More broadly, the Planning Report considers the requirements of the Toowoomba Regional Planning Scheme (version 28) (2022) (Toowoomba Regional Planning Scheme) and the Western Downs Planning Scheme 2017 (Western Downs Planning Scheme), as well as the Darling Downs Regional Plan and the Queensland State Planning Policy.

The Proposed Development design has been refined iteratively with consideration for environment and network constraints, wind resource availability, constructability, and landowner feedback. The design refinement process has focused on the avoidance and minimisation of environmental impacts through the various stages of layout planning, as seen in that the current layout was determined from the constraints identified during Preliminary assessments, including potential impacts relating to ecology, noise, and visual amenity from potential shadow flicker.

The land where the Proposed Development infrastructure will be located (the Disturbance Footprint) occupies 2,221.2 ha, which equated to 10.9% of the Project Area. Land not occupied by infrastructure following the construction and rehabilitation period will continue to be used for rural and agricultural purposes. If agreed with the landowners, it is anticipated that tracks established and upgraded as part of the construction of the Proposed Development will aid in continued agricultural activities.

This Planning Report provides a detailed description of the Proposed Development, the legislative framework for the Development Application (DA), and the various technical assessments and completed responses to State Code 16, State Code 23 and State Code 27. This is supported by technical impact assessments completed by suitably qualified and experienced technical consultants. Where the potential for impacts associated with the Proposed Development are identified, mitigation and management measures have been provided.

As required under the legislative framework, a Social Impact Assessment (SIA) was prepared to support the development of two separate Community Benefit Agreements (CBA) one with Toowoomba Regional Council (TRC) and another with Western Downs Regional Council (WDRC). The SIA identifies, assesses and proposes management strategies for 18 potential social impacts (positive and negative) across the construction and operation phases of the Proposed Development. Nine key positive impacts identified and included the increased economic activity and employment opportunities, increased community investment, diversification of income and increased resident population. No impacts were rated as having a 'Very High' (negative) residual impact. Three 'High' (negative) impacts were related to the increase in consultation fatigue, increased traffic disruption and loss in rural agricultural landscape. The SIA concluded the outcomes of more detailed management measures would further decrease these impacts.

As demonstrated by this Planning Report and associated impact assessments, the Proposed Development complies with the relevant assessment benchmarks associated with State Code 16, State Code 23 and State Code 27. The Proposed Development is therefore recommended for approval via a Development Permit, subject to the imposition of reasonable and relevant conditions by the State Assessment and Referral Agency (SARA).

1. INTRODUCTION

This Planning Report has been prepared by Environmental Resources Management Australia Pty Ltd (ERM) on behalf of RWE Cattle Creek Onshore Wind Pty Ltd (the Proponent), a wholly owned subsidiary of RWE Renewables Europe & Australia GmbH (RWE), in support of a combined Development Application (DA) for Material Change of Use (Wind Farm and ancillary infrastructure including BESS) and Operational Works (Clearing Native Vegetation) under the *Planning Act 2016* (Qld) (Planning Act).

A detailed Project overview is provided in Section 4.

This Planning Report evaluates the Proposed Development against the Planning Act associated State Development Assessment Provisions (SDAP) and outlines the background to the DA. It also addresses the key issues arising from the Proposed Development, with further detail on the applicable statutory framework provided in Section 5.

1.1 DEVELOPMENT APPLICATION DETAILS

The details of the DA are outlined in Table 1-1.

TABLE 1-1 APPLICATION DETAILS

Development Application Details			
Site Details			
Real Property Description	Lot and Plan	Tenure	Easement
	2DY452	Freehold	-
	27CP882781	Freehold	GSP112990
	2DY831	Freehold	HSP112991
	3RP174414	Freehold	JSP109190
	1RP174414	Freehold	-
	16SP201705	Freehold	-
	15SP201705	Freehold	-
	2RP174414	Freehold	-
	8DY247	Freehold	-
	9DY247	Freehold	-
	22DY800	Freehold	-
	21DY218	Freehold	-
	Unnamed road reserves	Road Reserve	-
	Cecil Plains Moonie Road	Road Reserve	-
	O'Connor Road	Road Reserve	-
Disturbance Footprint	2,221.2 hectares (ha)		
Project Area	20,404.5 ha		

Development Application Details	
Local Government	- Toowoomba Regional Council; and - Western Downs Regional Council
Planning Scheme	- Toowoomba Region Planning Scheme 2022, version 28; and - Western Downs Regional Council Planning Scheme 2017
Zone	Rural Zone (RZ)
Development Application Summary	
Application Type under the Planning Act	- Development Permit for a Material Change of Use (Wind Farm and ancillary infrastructure including BESS); and - Development Permit for Operational Work (Clearing Native Vegetation)
Description of Proposed Development	Material Change of Use (MCU) and Operational Works to facilitate the construction, operation, maintenance and decommissioning of a wind farm which consists of up to 135 wind turbine generators (WTGs), and ancillary infrastructure including, BESS, foundations and hardstands, temporary construction infrastructure, access tracks and electrical reticulation, switching stations and substations, meteorological masts, and operation and maintenance facilities. The Indicative Layout Plan is included as Appendix A
Assessment Manager	Department of State Development, Infrastructure and Planning (DSDIP)
Applicant	RWE Cattle Creek Onshore Wind Pty Ltd
Level of Assessment	Impact Assessable
Referral	Not Applicable
Advice Agencies	- Powerlink; - Department of Defence; - Civil Aviation Safety Authority; - Air Services Australia; - Department of Natural Resources and Mines, Manufacturing, and Regional and Rural Development (DNRMMRRD); - Department of Environment, Tourism, Science and Innovation; - Department of Transport and Main Roads; - Queensland Fire Department; - Toowoomba Regional Council; and - Western Downs Regional Council.
SDAP Codes	- State Code 16: Native vegetation clearing (State Code 16); - State Code 23: Wind farm development (State Code 23); and - State Code 27: Battery storage facility development (State Code 27).
Regional Plan	Darling Downs Regional Plan

1.2 ABOUT RWE

The Proponent is a wholly owned subsidiary of RWE Renewables Europe & Australia GmbH, part of the global RWE Group.

RWE is one of the world's leading renewable energy companies. Globally, it operates approximately 24 gigawatts (GW) of renewable generation capacity across wind, solar, and battery storage projects, with an additional 10.4 GW currently under construction worldwide.

RWE is actively developing and delivering onshore wind, solar, and battery storage projects across Australia. The Australian team of approximately 80 staff, primarily based in Victoria and Queensland, is supported by RWE's global workforce across Europe, North America, and the Asia Pacific region.

Australia has been a key market for RWE. In 2018, RWE began construction of one of Australia's largest solar farms—the 249 MW Limondale Solar Farm in New South Wales—which has been operating since 2021.

The Limondale Solar Farm includes 872,000 panels and is among Australia's largest solar installations. RWE is currently commissioning Australia's first eight hour battery at the Limondale site. This project was the first to receive a Long-Term Energy Service Agreement (LTESA) under the NSW Long Duration Storage tender and is expected to be fully commissioned in early 2026.

RWE's proposed Theodore Wind Farm in Queensland received State planning approval in June 2025. The project will include up to 170 wind turbines, incorporate battery storage, and is expected to generate approximately 1 GW. This investment highlights RWE's commitment to supporting Queensland's energy sector while creating local economic benefits, employment opportunities, and long-term partnerships with regional communities.

RWE places strong emphasis on building long-term relationships with landowners, host communities, and stakeholders. This is reflected in its business model of developing, owning, and operating renewable energy assets, ensuring alignment of interests throughout the full operational life of each project.

1.3 PROJECT DRIVERS

There are many factors that influence the planning decisions for development of a wind farm. The main driving forces behind the choice of the Project Area for the Proposed Development include:

- Good wind resource and diurnal generation profile;
- Proximity to transmission network available grid export capacity;
- Low population density in immediate vicinity of the Proposed Development as represented by its rural zoning;
- Landholders willing to host Proposed Development infrastructure;
- Good access from port to the Proposed Development; and
- Constructability of the landforms.

Considering the above factors, the Project Area location is highly suited to the Proposed Development.

The Proposed Development will result in the following environmental and community benefits:

- The generation of clean energy;
- Contributing to Queensland's Energy Road Map objectives of providing the delivery of affordable, reliable and sustainable energy and supporting economic development;
- Supporting the reliability of electricity generation by inclusion of an optional BESS to provide energy storage and grid stability;
- Supporting the land use of agriculture by providing diversified and complimentary revenue to the farmers involved in the Proposed Development as host landholders and neighbours while ensuring that agricultural uses can contain within the Area and surrounds;
- Community Benefits which will be distributed and managed in line with the Council's needs, as documented in the Community Benefit Agreements (CBA);
- Employment opportunities – both direct and indirect. Approximately 300-500 jobs during construction Approximately 10-50 full-time equivalent (FTE) jobs during operation;
- Local materials and skills utilised where practical; and
- Potential for training and business opportunities in the region.

2. CONSULTATION

2.1 STAKEHOLDER ENGAGEMENT APPROACH

The Proponent is committed to adhering to the principles within the Queensland Social Impact Assessment Guideline (July 2025) to support the development of a SIA and CBA agreements. This process guides engagement with potentially impacted communities and stakeholders.

Community and stakeholder engagement plays a vital overarching role in project development. Input from community members and stakeholders helps build a strong understanding of the local social context and is essential for assessing potential social impacts and developing appropriate management measures.

The Proponent has engaged with stakeholders regarding the Project since 2023. The Proponent has focused on building transparent and constructive relationships with landholders, near neighbours, the community, Traditional Owners, and other interested parties.

Engagement began with near neighbours in 2024. The Proponent sent personal letters to neighbours who have property within 5 km of the Project Area followed up with newsletters delivered to homes within 10 km of the Proposed Development. This approach ensured every household within 10 km was informed and has the opportunity to engage.

Engagement to date has included formal presentations to TRC and WDRC including councillors, and planning officers. The Proponent has discussed community benefits and workforce accommodation during construction, road upgrades, community opportunities and impacts, among other topics. The Proponent has engaged with Mr James Lister MP and Hon Ann Leahy MP and seeks to provide regular updates to all levels of government.

The Proponent's commitment to working closely with Bigambul Native Title Aboriginal Corporation (BNTAC), the Registered Native Title Body Corporate (RNTBC) representing the Bigambul People as Traditional Owners of the Project Area, has been demonstrated through regular meetings since May 2024. The Proponent has signed an early works agreement with BNTAC, and various site visits have been undertaken by Bigambul Elders, BNTAC board members and BNTAC cultural heritage officers. The Proponent has also agreed to undertake additional survey works in collaboration with the BNTAC on behalf of the Bigambul People and has executed Cultural Heritage Management Plan (CHMP) under Part 7 of the *Aboriginal Cultural Heritage Act 2003* (QLD).

2.2 IDENTIFICATION OF STAKEHOLDERS

A Community and Stakeholder Engagement Plan (CSEP) has been prepared to guide stakeholder engagement for the Proposed Development, and establishes the overarching guidelines, principles, objectives and approach to delivering stakeholder engagement during the pre-construction phase of the Proposed Development.

Stakeholder mapping was undertaken to identify potentially affected parties located near the Project Area who were most likely to directly benefit or be impacted by the Proposed Development.

Stakeholders identified in the Social Impact Assessment (Appendix B) are outlined in Table 2-1 below.

TABLE 2-1 IDENTIFICATION OF STAKEHOLDERS

Stakeholder Group	Stakeholders
Host and neighbouring landholders	• Host landowners; • Neighbouring landholders; and • Dunmore/Cattle Creek community.
Local government	• Toowoomba Regional Council; and • Western Downs Regional Council.
Local business and economic development	• Millmerran Commerce and Progress Inc; • Dalby Chamber of Commerce; • Toowoomba and Surat Basin Enterprise; • Queensland Cotton – Cecil Plains Gin; • Walker Cypress Mill; • Vic's Timber; • Mort & Co – Pinegrove and Grassdale feedlots; • Opal Creek feedlot; • Pursehouse Rural – Cecil Plains; and • McGregor Gourlay – Cecil Plains.
Accommodation providers	• Hotel Victory Cecil Plains; • The Cecil Plains Homestead; • Cecil Plains Rural Retreat Caravan Park; and • Stayover by Ausco – Dalby.
Education, employment and training providers	Cecil Plains State School
First Nations groups	• Bigambul Native Title Aboriginal Corporation (BNTAC) on behalf of the Bigambul People; • Goolburri Aboriginal Health Advancement Company Limited; • Goondir Health Services; and • Murrumba Aboriginal Housing Company Limited.
Health and emergency services	• Auxiliary Fire Brigade – Cecil Plains; • Millmerran Hospital; • Queensland Ambulance Service (QAS) – Dalby, Darling Downs and South West; • Queensland Fire Department (QFD) – Toowoomba; and • State Emergency Service (SES) – Cecil Plains and South West region.
Social services and community groups	• Cecil Plains Progress Tourism Recreation Association Inc; • Lions Club of Cecil Plains; • Cecil Plains History Group; • Cecil Plains Tennis Club; • Cecil Plains Golf Club; • Little Country Kids Club; • Cecil Plains Amateur Swimming Club; • Cecil Plains Aquatic Centre; • Anglicare – Southern Qld; • Blue Care – Millmerran; and • Pittsworth Community Centre.

2.3 SUMMARY OF COMMUNITY ENGAGEMENT

2.3.1 TARGETED SIA ENGAGEMENT

The Proponent conducted targeted SIA engagement from July to October 2025. This included a total of 48 participants engaged across 22 individual and group meetings (including separate scoping meetings with WDRC and TRC). The following key issues were discussed:

- **Community and stakeholder engagement** – some stakeholders raised concerns that they were being excluded from SIA engagement and requested in-person engagement meetings. Stakeholders shared additional communication channels should be incorporated to share Proposed Development information (a suite of forums).
- **Workforce Management** – low unemployment and skills shortage in Cecil Plains, Millmerran and Dalby. Interest in employment and training opportunities for young people and entry-level positions. Some concern about construction workforce changing community dynamics.
- **Housing and accommodation** – concerns surrounding lack of long-term and short-term housing affordability and availability and how construction workforce may impact housing costs. Desire for the Proponent to support delivery of new housing stock for operational phase.
- **Local business and industry procurement** – stakeholders expect Proposed Development procurement to prioritise and support local businesses. Concerns around impacts on farming and commercial agriculture enterprises (contamination of construction materials, changes to road networks, ecosystem disruptions).
- **Health and Community Well-being** – opportunities for the Proposed Development to get involved with the community. Some concerns the Proposed Development may impact community cohesion and social character, health and emergency services, transport, natural hazards, the environment, cultural heritage, education and overall livelihoods.

The Proponent is committed to addressing and mitigating the above concerns. Social impacts are further discussed in the Social Impact Assessment (Appendix B).

2.3.2 HISTORY OF ENGAGEMENT

The Proponent began engagement with a variety of other stakeholders (i.e. other than host landholders) regarding the Proposed Development in 2024. This has included dozens of one-on-one meetings with neighbours, focus group consultations, multiple newsletters and poster booklets distributed to the community, community drop-in sessions held in the nearby township of Cecil Plains and Millmerran, and the hosting of booths at Toowoomba's Farmfest for three years.

A review of recent engagement activities undertaken by the Proponent is in Table 2-2.

TABLE 2-2 THE PROPONENT STAKEHOLDER ENGAGEMENT

Stakeholder	Date	Engagement activity
Community members and groups	• July 2025 to October 2025 • May 2026	• Online survey seeking input on SIA • Meeting with Community Liaison Groups established by

Stakeholder	Date	Engagement activity
		Toowoomba Regional Council in Cecil Plains and Millmerran
Community members	May 2024, March 2025, July 2025, November 2025, June 2026	Four newsletters distributed to the community
Near neighbours	May 2024 to present	Door-knocking of dwellings within 5 km of the Project Area to introduce the Proposed Development, ongoing in-person and telephone meetings, newsletter distribution
Dunmore/Cattle Creek Community	May 2024 to present	Numerous face-to-face and phone engagements
Agricultural industry and near neighbours	June 2024 to present	Booth at FarmFest, Toowoomba
Stakeholder and community members	7 April to 23 April 2025	Encouraged the community to share opinions on the EPBC Act referral during public notification period
Office of the Hon David Littleproud MP	April 2025	Project briefing
The Hon James Lister MP	October 2025 and April 2026	Project briefing
The Hon Ann Leahy MP	May 2026	Project briefing
Community members and near neighbours	6 and 7 June 2024, 26 and 27 March 2025, 10 and 20 November 2025	Three community drop-in sessions held in Cecil Plains and Millmerran. A poster booklet was provided to participants, which provided detailed information on the Proposed Development and the status of the workstreams.
Western Down Regional Council	May 2024 to present	Project meeting
Toowoomba Regional Council	May 2024 to present	Project meeting
Bigambul Native Title Aboriginal Corporation	May 2024 to present	Project meeting

2.4 SUMMARY OF REGULATORY ENGAGEMENT

A pre-lodgement meeting for the Proposed Development was held on 13 July 2026 with the State Assessment and Referral Agency (SARA). The purpose of the meeting was to provide an update on the Proposed Development, highlight current work completed (relevant purpose determination (RPD), DA summary) summarise engagement completed to date, confirm technical study requirements and confirm approval requirements. A record of the pre-lodgement meetings is provided in Appendix C.

Other regulator engagements activities included the following:

- **March 2024** – Engagement with the National Environmental Protection Agency (National EPA) in relation to understanding the referral process for the EPBC Act. The National EPA confirmed footprint and disturbance area finalisation would be required for detailed feedback. The Proponent has refined the footprint and disturbance since.
- **April 2024** – Pre-lodgement meeting with SARA to discuss pending State Code 23, BESS considerations, technical assessment considerations and community engagement. This meeting was attended by the representatives of the Department of Transport and Main Roads, DNRMMRRD and DSDIP.
- **December 2024** – Pre-lodgement meeting with DSDIP, DNRMMRRD, and the two local councils, TRC and WDRC to confirm the Proposed Development layout, compliance with the SDAP and the RPD request. SARA was confirmed to be the assessment manager for the Proposed Development.
- **March 2025** – EPBC Act Referral was submitted to The National EPA .
- **May 2025** – The National EPA confirmed that the Proposed Action is a 'controlled action' to be assessed via a Public Environment Report. Draft Public Environment Report Guidelines were also provided.
- **August 2025** – Final Public Environment Report Guidelines were provided by The National EPA.
- **September 2025** – Application for a RPD submitted to DNRMMRRD.
- **December 2025** – Pre-lodgement meeting with SARA to discuss State Code 23 v3.5 requirements and provide an update of the Proposed Development to SARA. This meeting was attended by the representatives of DNRMMRRD and DSDIP.
- **February 2026** – RPD approved by DNRMMRRD.
- **February 2026** – Draft Public Environment Report submitted to The National EPA for Adequacy Review.
- **March 2026** – Ongoing engagement with The National EPA to discuss the contents of the PER.
- **July 2026** – Pre-lodgement meeting with DSDIP to provide an update on the Proposed Development and to discuss State Code 23 and State Code 27.

3. PROPOSED DEVELOPMENT SETTING

3.1 PROJECT AREA AND LOCATION

The Project Area is located in both the TRC and WDRC LGAs. The Proposed Development is located approximately 26 km from Cecil Plains, and 48 km from Millmerran. The closest major town is Dalby, located approximately 60 km north-east of the Project Area, with Queensland's capital, Brisbane, located 220 km east of the Project Area.

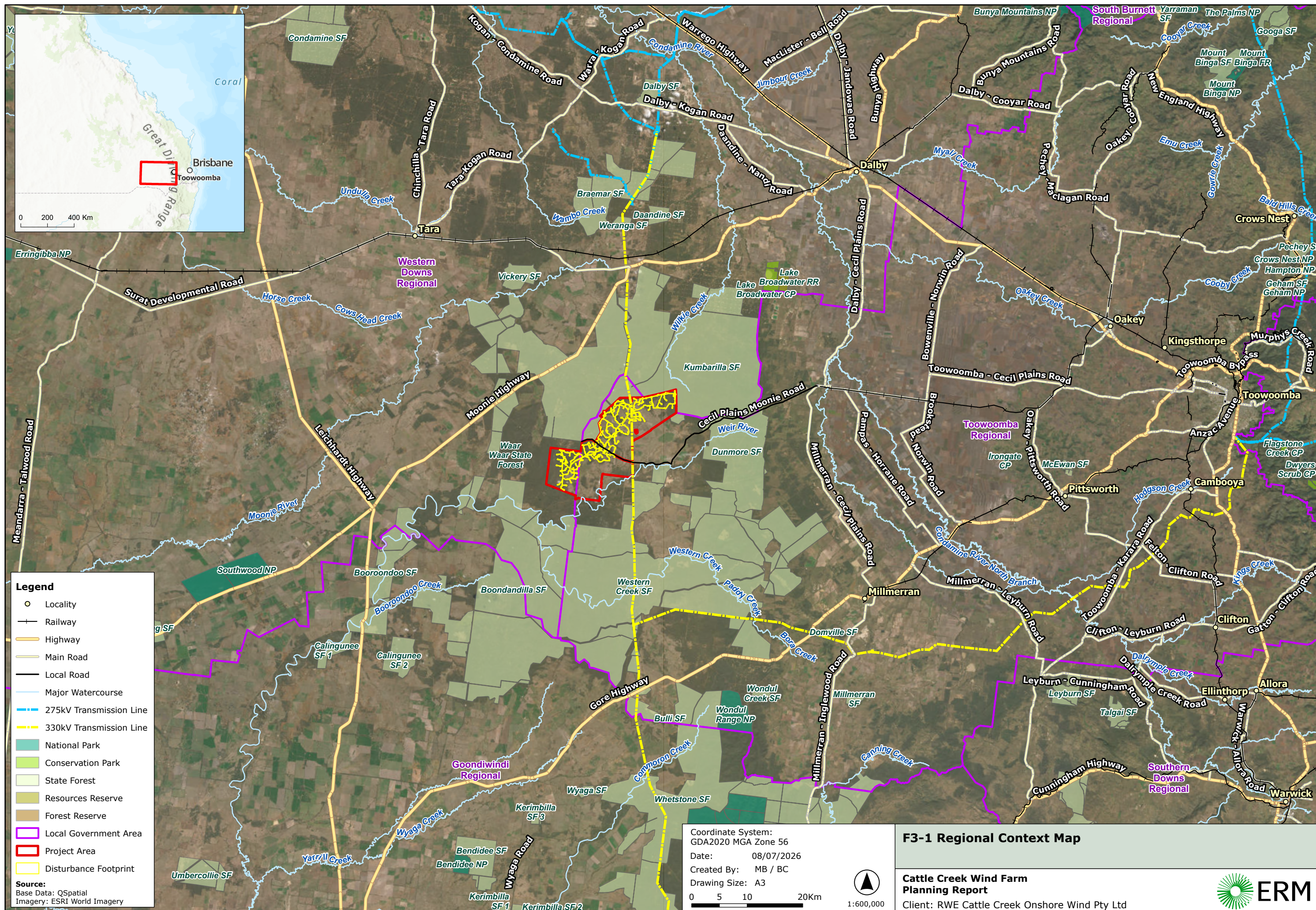
3.2 PROJECT AREA CHARACTERISTICS

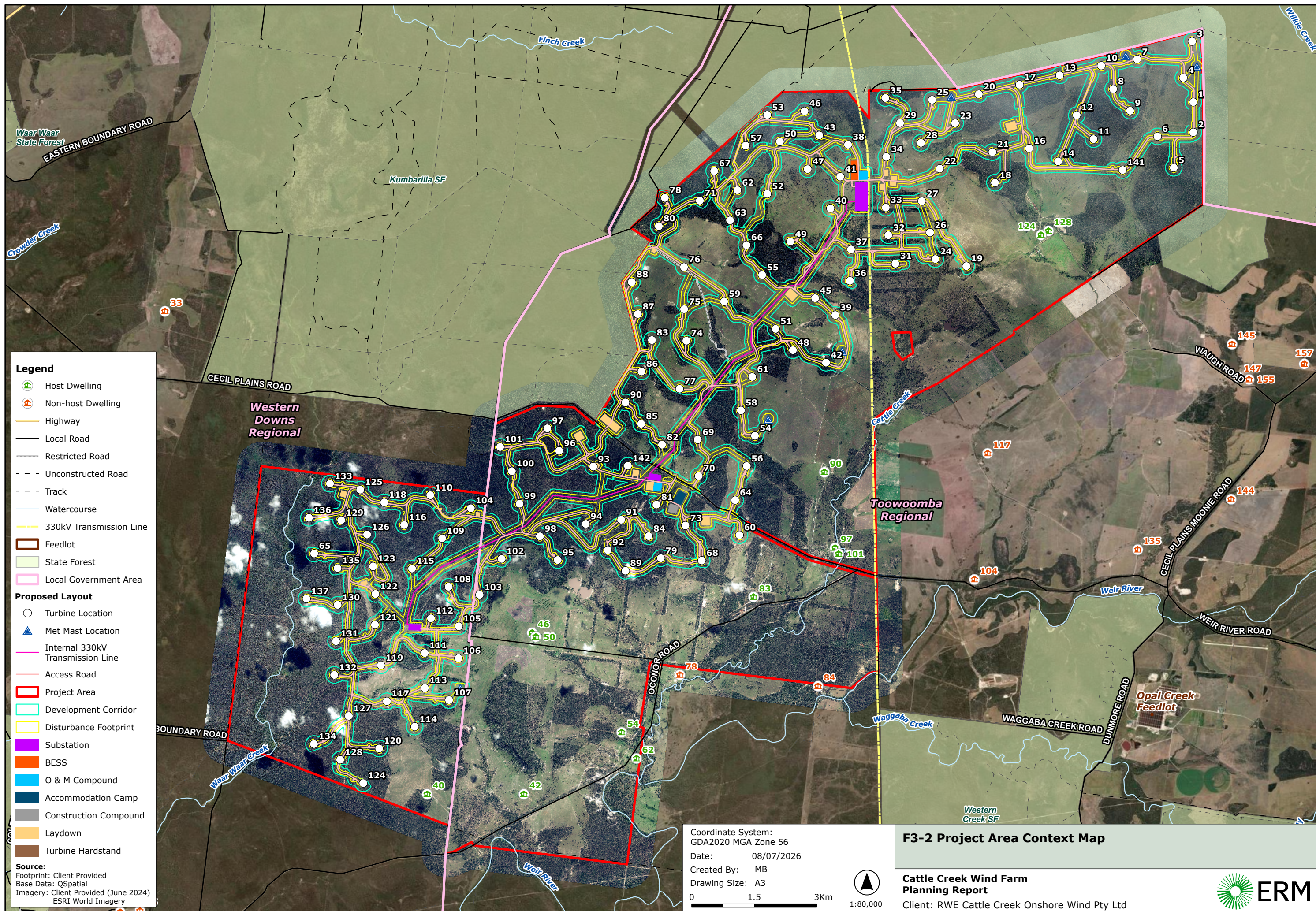
A description of the Project Area characteristics is outlined in Table 3-1, with Figure 3-1 providing context mapping.

TABLE 3-1 SITE CHARACTERISTICS

Site Characteristics	Description
Existing land use	The Project Area is located within the Rural Zone under both the Toowoomba Region Planning Scheme and Western Downs Regional Council Planning Scheme, with the land predominantly used for cattle grazing, animal husbandry and related rural activities.
Existing structures	There are 12 dwellings within the Project Area. These are identified in Table 3-3.
Access	All internal access to the Project Area is by a network of private roads. The Project Area interfaces with the broader road network via Cecil Plains-Moonie Road, O'Connor Road and a number of unnamed local roads. These roads are connected to the Moonie Highway via Cecil Plains Road to the north and Cecil Plains to the east.
Topography and views	The Proposed Development is located in the Queensland Brigalow Belt South Bioregion which comprises a mixed landscape, including flat alluvial plains and undulating to hilly areas with low ridges and deep valleys. The elevation throughout the Project Area ranges from approximately 380 m to 310 m.
Existing vegetation	The majority of the Disturbance Footprint (1,407.4 ha or 63%) has previously been cleared and is currently being utilized for either grazing or cropping activities and is associated with alluvial plains near watercourses. The remaining 38% of the Disturbance Footprint (813.4 ha) is mapped as remnant or regrowth native vegetation. Remnant vegetation is associated with upper slopes.
Existing waterways	There are multiple stream order 1, 2 and 3 waterways intersecting the Project Area, including Cattle Creek, Weir River and Waar Waar Creek. There are no High Ecological Value (HEV) waterways present in the Project Area, nor any High Ecological Significance (HES) wetlands that occur within the Project Area.

Site Characteristics	Description
Surrounding land uses	The Project Area lies adjacent, or within close proximity, to several State Forests: • The Kumbarilla State Forest is located on the northern boundary of the Project Area; • The Western Creek State Forest is located approximately 5 km south-east; • Dunmore State Forest is located approximately 10 km east; • Waar Waar State Forest is located approximately 9 km west; and • Boondandilla State Forest is located approximately 5 km south-west. Transmission lines intersect through the Project Area as part of three separate easements including GSP112990, HSP112991 and JSP109190. The nearest pipeline, Moonie to Brisbane Oil pipeline, is 340 m south of the Project Area. It should also be noted that there is a feedlot in close proximity to the Project Area along Saleyards Road.





3.3 LAND TENURE AND SENSITIVE LAND USES

The Proposed Development is located on Freehold Land, which is detailed in Table 3-2.

TABLE 3-2 PROJECT AREA PROPERTY LIST

Property	Lot on Plan	Tenure	Size (ha)
Landowner 1	2DY452	Freehold	4,698.8
Landowner 2	27CP882781	Freehold	2,406.6
	2DY831	Freehold	3,013.8
Landowner 3	1RP174414	Freehold	2,049.6
	16SP201705	Freehold	1,019.9
	15SP201705	Freehold	1,032.3
	3RP174414	Freehold	823.6
Landowner 4	2RP174414	Freehold	1,176.7
Landowner 5	8DY247	Freehold	964.9
	9DY247	Freehold	965.5
	22DY800	Freehold	1,028.3
	21DY218	Freehold	1,041.1
	Road Reserve		183.4
TOTAL			20,404.5

As part of the Proposed Development investigations and to inform potential impacts on noise, all sensitive receptors within 5 km of the nearest WTG were identified. 17 sensitive receptors were identified within 5 km of the nearest WTG as identified in Table 3-3 and shown in Figure 3-2.

TABLE 3-3 SENSITIVE LAND USES WITHIN LOCALITY

ID	Coordinates	Status	Approximate Distance to nearest WTG (Metres)
40	Easting: 276715 Northing: 6934332	Host Lot	1,558
42	Easting: 279035 Northing: 6934332	Host Lot	2,886
46	Easting: 279233 Northing: 6938205	Host Lot	1,556
50	Easting: 279321 Northing: 6938110	Host Lot	1,683
54	Easting: 281382 Northing: 6935816	Host Lot	3,881

ID	Coordinates	Status	Approximate Distance to nearest WTG (Metres)
62	Easting: 281740 Northing: 6935188	Host Lot	4,516
83	Easting: 284549 Northing: 6939066	Host Lot	1,520
90	Easting: 286249 Northing: 6942061	Host Lot	1,869
97	Easting: 286506 Northing: 6940243	Host Lot	2,317
101	Easting: 286590 Northing: 6940099	Host Lot	2,423
124	Easting: 291450 Northing: 6947755	Host Lot	1,673
128	Easting: 291628 Northing: 6947851	Host Lot	1,685
41	Easting: 278057 Northing: 6932649	Non-host Lot	3,474
78	Easting: 282781 Northing: 6937195	Non-host Lot	2,794
84	Easting: 286097 Northing: 6936923	Non-host Lot	4,089
117	Easting: 290167 Northing: 6942512	Non-host Lot	3,339
145	Easting: 296034 Northing: 6945133	Non-host Lot	4,461

4. PROPOSED DEVELOPMENT DETAILS

The Proposed Development consists of the construction, operation, maintenance, and decommissioning of up to 135 WTGs and ancillary infrastructure (supporting infrastructure) consisting of:

- WTG foundations, crane hardstands, crane boom laydown, blade laydown and rotor assembly area;
- BESS with a capacity of up to 450 MW
- Access tracks, including:
 - New and upgraded tracks within the Project Area, generally comprising of a nominal range of 5.5 m – 10 m wide permanent access, and a maximum 50-95 m wide cleared corridor for Oversize Overmass (OSOM) vehicles;
- Low voltage (LV) and medium voltage (MV) underground cabling, as well as MV and high voltage (HV) overhead transmission lines;
- Internal collector substations;
- A switching station adjacent to the existing 330 kV Powerlink transmission line. This has been accounted for within the Disturbance Footprint, thereby allowing the clearing of the site to be assessed as part of the impacts associated with the Proposed Development (noting, however, that the switching station infrastructure will be constructed, owned and operated by Powerlink);
- Permanent meteorological masts;
- Construction compounds and laydown areas; Washdown areas;
- Operational and maintenance facilities; and
- A construction workers accommodation facility.

Further, there is the potential for the inclusion of the below infrastructure:

- Concrete batching plants
- Borrow pits; and
- Communications tower.

An overview of the Proposed Development is provided in this Section 4.

The Project will accommodate up to 135 WTGs, with a blade tip of up to 260 m. These WTGs will be of the horizontal axis type, with a rotor consisting of three blades, and a maximum rotor diameter of up to 175 m. The WTG specifications have been summarised below in Table 4-1.

TABLE 4-1 KEY GENERATION AND TURBINE SPECIFICATIONS

Feature	Statistic
Estimated wind farm generation capacity*	Up to 972 MW
Turbine electrical output	Up to 7.2 MW
Number of WTGs	Up to 135 WTGs
Hub height**	Up to 169 m

Feature	Statistic
Tip height**	Up to 260 m
Rotor diameter**	Up to 175 m
Rotor Swept Area (RSA) height**	75 – 260 m
Number of blades	3
Chord width of blade	Up to 4.9 m
Average pitch angle of rotor	5-8°
Max rotation period of WTG	6.5 seconds

* The actual output of the wind farm will depend on the size and type of turbine chosen during the detailed design phase. Regardless of the size of the wind farm generation capacity, the Proposed Development will still need to comply with the State Code 23 and supporting Planning Guidelines, particularly in relation to acoustic amenity and setback criteria.

** The specifications contained within the table are based on current, projected turbine size. Whilst they are an estimated maximum, changes in technology and constructability may result in larger turbines being installed.

4.1 INFRASTRUCTURE DETAILS

4.1.1 WTG FOUNDATIONS AND HARDSTANDS

Each WTG foundation will consist of a mass concrete footing or rock anchor foundation, where suitable, with foundations varying in size depending on the selected WTG, imposed loadings, ground conditions, construction methodology, and the drainage design. The detailed design of the foundations will be undertaken prior to construction of the Proposed Development.

The final design will also consider the geotechnical conditions identified through detailed Project Area investigations. The area surrounding the WTGs, once erected, will be finished to a standard allowing for shared agricultural use, which may include mounding. At each WTG site, a hardstand area may be established for the laydown of key WTG equipment, including the crane boom laydown and assembly, nacelle, tower sections, blade, and other WTG components. In time and where suitable, delivery and tower cranes may be utilised, which may result in a smaller hardstand area. The smaller hardstand area is dependent on geotechnical studies and detailed engineering design, including a review of the construction methodology (refer to Figure 4-1).

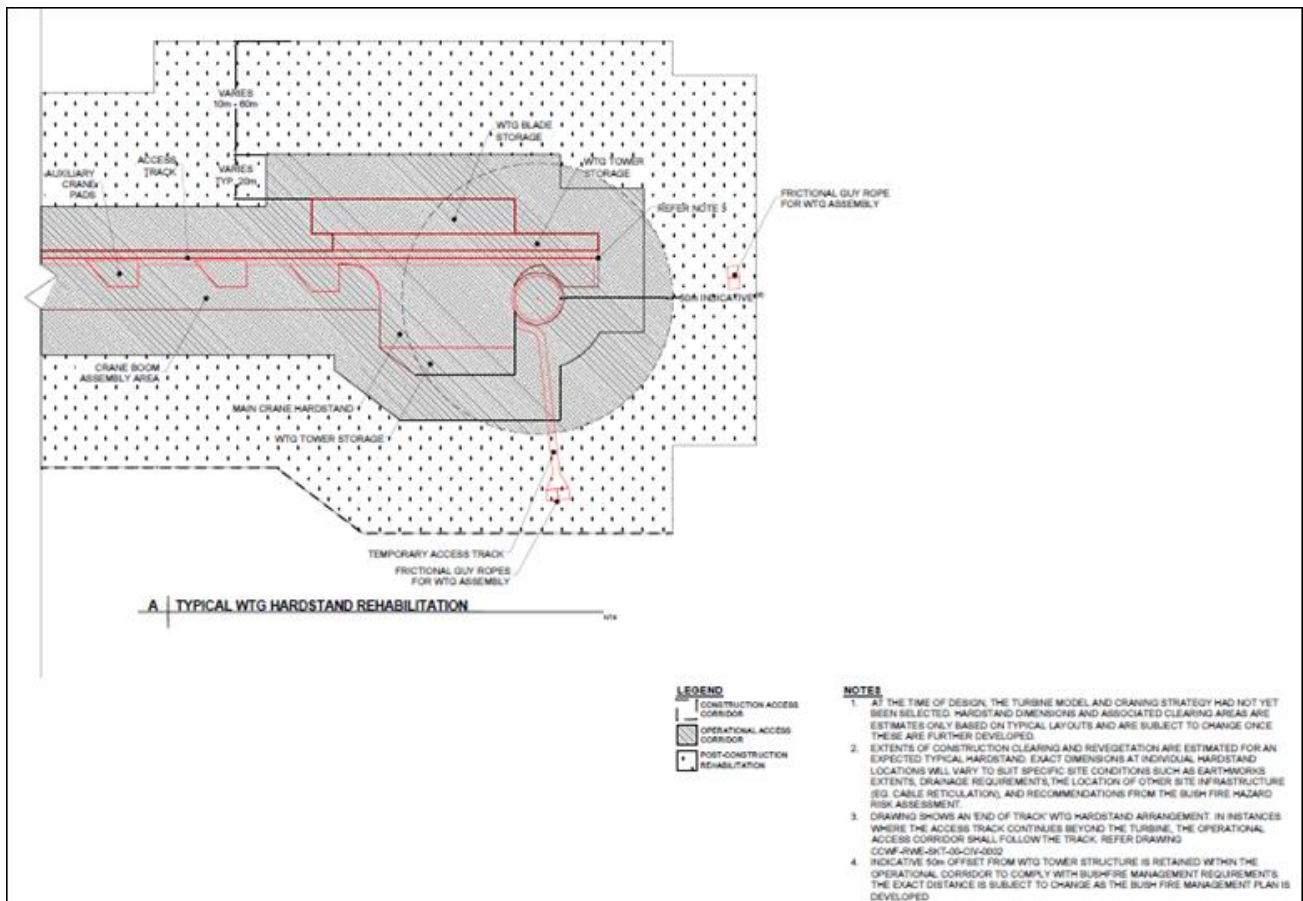


FIGURE 4-1 HARDSTAND REHABILITATION DETAIL

4.1.2 ACCESS

The onsite access track layout will be designed to utilise existing tracks where possible and consider the topography of the land, reducing the need for vegetation clearing and minimising the amount of land required for access. The Proposed Development will require permanent access tracks of 5.5-10 m width carriageway, with the cleared corridor of between 50 - 95 m to accommodate heavy vehicles, cranes, and delivery vehicle requirements during construction or where curves necessitate a wider access track. The cleared access corridor required to facilitate construction will be rehabilitated to the minimum required to support operations, maintenance and decommissioning. Figure 4-2 provides an example of an access track and the dimensions required for construction and the operational access corridor required.

Six locations along Cecil Plains Moonie Road will provide access to the Project Area.

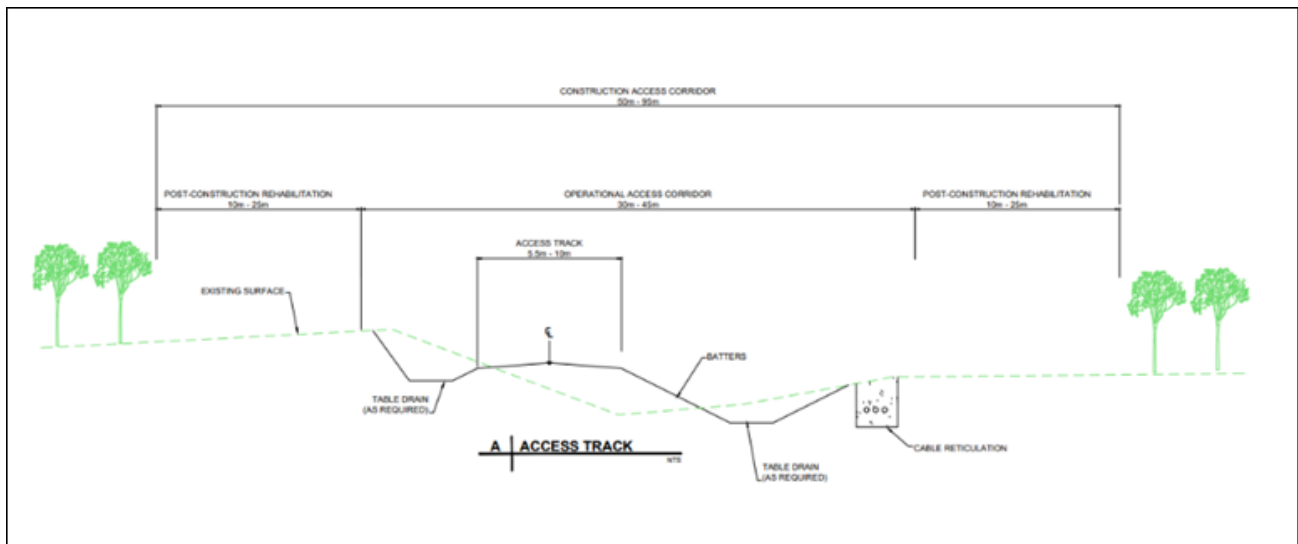


FIGURE 4-2 CONSTRUCTION ACCESS CORRIDOR

4.1.3 ELECTRICAL CONNECTIONS AND SUBSTATIONS

Each WTG will be connected via a MV (33 kV) electrical reticulation network to an on-site substation, whereby an internal overhead transmission line will interconnect the Proposed Development to the grid. The electrical cables will be installed in underground trenches at a typical depth of up to 1m below the ground surface, however, there is potential for it to be deeper in some locations to suit site conditions and design constraints. The cable trenches are expected to follow site access tracks where practicable. Through the detailed design process, cable depths will be further understood for the Proposed Development.

The internal collector substations will connect via an internal 330kV overhead monopole transmission line to the switching station adjacent to the existing 330 kV Powerlink transmission line. The transmission lines and substations have been accounted for within the Disturbance Footprint, thereby allowing the clearing of the site to be assessed as part of the impacts associated with the Proposed Development (noting, however, that the switching station infrastructure will be constructed, owned and operated by Powerlink). Figure 3-2 details the location of the Powerlink transmission line and the Proposed Development's internal overhead transmission line connecting into this.

4.1.4 BESS

The Proposed Development includes an ancillary BESS of up to 450 MW. The proposed battery storage technology will comprise of lithium-ion phosphate cells. Accepted industry practice will be observed for handling the respective battery components during installation, maintenance, replacement and recycling.

Figure 4-3 depicts the 50 MW Limondale BESS, demonstrating a typical BESS configuration.



FIGURE 4-3 LIMONDALE BATTERY STORAGE UNIT

4.1.5 METEOROLOGICAL MASTS

Permanent meteorological masts are proposed to be installed in order to monitor wind conditions during the operational phase of the Proposed Development. The height of the proposed meteorological masts is approximately 160 m, with a disturbance footprint that includes the meteorological mast base footing, power connection and guy anchor footings.

4.1.6 CENTRAL OPERATIONAL AND MAINTENANCE FACILITIES

The Proposed Development includes operations and maintenance facilities. The operational infrastructure for the Proposed Development will include management offices, parking areas, workshops, storage, equipment laydown and warehousing facilities. Water, sewage and electricity services will be provided on site.

4.1.7 CONSTRUCTION WORKFORCE ACCOMMODATION

A temporary construction workers' accommodation facility is provided within the Project Area.

During operation, maintenance crews will be accommodated in short-term accommodation in Dalby, Cecil Plains or Millmerran, or other nearby towns.

Social impacts relating to workforce accommodation are further described in Section 6.12.

4.1.8 TEMPORARY INFRASTRUCTURE

The Disturbance Footprint includes up to 15 temporary construction laydown areas. Temporary construction laydown areas are proposed for the storage of WTG components and construction items upon delivery, material stockpiling, and temporary site amenities.

Additionally, the following temporary infrastructure may be proposed for the construction phase of the Proposed Development:

- Concrete batching plants;
- Fencing and
- A construction site compound.

4.2 VEGETATION CLEARING

The Proposed Development will involve a clearing of vegetation to facilitate construction and operation of the WTGs and road reserve areas (16.5 ha). The Disturbance Footprint has a maximum area of up to 2,221.2 ha (10.9%) of the Project Area, with the majority of clearing occurring in Category X vegetation.

The Proposed Development involves the clearing of up to 813.4 ha of mapped Category B Regulated Vegetation. On 13 February 2026, the Proponent obtained a RPD under Section 22A of the *Vegetation Management Act 1999* with the Proposed Development considered to be relevant infrastructure activities.

The maximum clearing of Regulated Vegetation remains as detailed in Table 4-2.

TABLE 4-2 PROPOSED DISTURBANCE TO REGULATED VEGETATION

Regional Ecosystem Vegetation Management Act 1999 Status	Disturbance Footprint (ha)
Category B area that is a 'Least Concern' Regional Ecosystem	813.4
Total	813.4
Regulated Vegetation (Category B Least Concern) intersecting with a Watercourse	5.2
Matters of State Environmental Significance (MSES) Regulated Vegetation – Essential Habitat	0
MSES Wildlife Habitat – Endangered or Vulnerable wildlife	0
Road Reserve	16.5

The Proposed Development layout has been through a rigorous design review phase to minimise the extent of native vegetation disturbance. This process included the following steps:

1. Identification of environmental constraints from desk based and field investigations including MSES and Matters of National Environmental Significance (MNES) identification of environmental constraints of the site;
2. Consultation with affected landowners;
3. Review of Preliminary wind yield data to prepare concept design;
4. Undertake impact assessments in accordance with State Code 16, State Code 23, State Code 27; and

5. Optimisation of the layout to minimise the extent of native vegetation disturbance, particularly for higher value vegetation, to the extent practicable having regard to each of the above factors and overall constructability requirements.

The size and layout of the Proposed Development has been developed having regard to the key objective of optimising the renewable energy output of the Proposed Development while avoiding or minimising ecological and other impacts to the extent practicable including avoiding the clearing of the higher value vegetation. In particular, DNRMMRRD's avoid and minimise hierarchy has been implemented for the indicative layout and Disturbance Footprint and will continue to be applied during micro-siting to derive the final Disturbance Footprint for the Proposed Development.

In accordance with Performance Outcome 4 of State Code 16: Native Vegetation Clearing, clearing of regulated vegetation will be minimised where avoidance is not reasonably possible. In accordance with State Code 16, the adverse impacts of clearing include, but are not limited to, the following:

- The loss of vegetation and biodiversity;
- Land degradation;
- Loss of connectivity;
- Altered ecological processes; and
- Contributions to greenhouse gas emissions.

The Proposed Development has avoided, where possible, the clearing of regulated vegetation, with only 813.4 ha of regulated vegetation and 16.5 ha within road reserves proposed to be cleared, representing 38% of the Disturbance Footprint.

Where impacts are unavoidable, the Proposed Development has been designed to manage the residual impacts to minimise the extent of clearing of sensitive vegetation to the extent practicable. Vegetation clearing associated with the Project will largely involve mechanical clearing, with the exception of areas adjacent to watercourses, where manual clearing may be required to ensure bank stability is maintained. All clearing activities will be managed in accordance with the Vegetation Management Plan, which will be prepared for the Proposed Development, and is expected to be conditioned via the Development Approval.

All clearing activities will be managed in accordance with a Vegetation Fauna Management Plan and Construction Environmental Management Plan (CEMP) which will be prepared for the Proposed Development (and is expected to be conditioned via the Development Approval). For the purpose of the DA, a Preliminary Vegetation Fauna Management Plan and CEMP have been prepared and are provided in Appendix K and Appendix F, respectively.

4.3 TRANSPORT CORRIDOR

4.3.1 TRANSPORT ROUTE

A Preliminary Route Assessment Report (Appendix E) has been prepared to determine the most suitable route from the Port of Brisbane to the Project Area. The assessment includes a swept path analysis based on an 86.14m wind turbine blade.

Four OSOM routes have been identified to provide flexibility for delivery of wind turbine components. All four routes begin at the Port of Brisbane and terminate at the Project Area via Cecil Plains Moonie Road. Access to the Project Area and the four potential route options are illustrated in Figure 4-4.

It is noted that Toowoomba Cecil Plains Road provides the most direct and efficient access route from Toowoomba to the Project Area for general construction traffic. General heavy vehicle movements (non-OSOM) associated with construction materials, equipment, and supplies are expected to utilise the most direct routes from regional centres such as Toowoomba and Dalby to the Project Area, without restriction to the nominated OSOM corridors.

The selection of the preferred OSOM route will be subject to further consultation with relevant road authorities and consideration of network constraints. Overall, all four route options are considered technically feasible for OSOM transport. Further detail on the haulage route has been described in Section 6.10 and Appendix D.

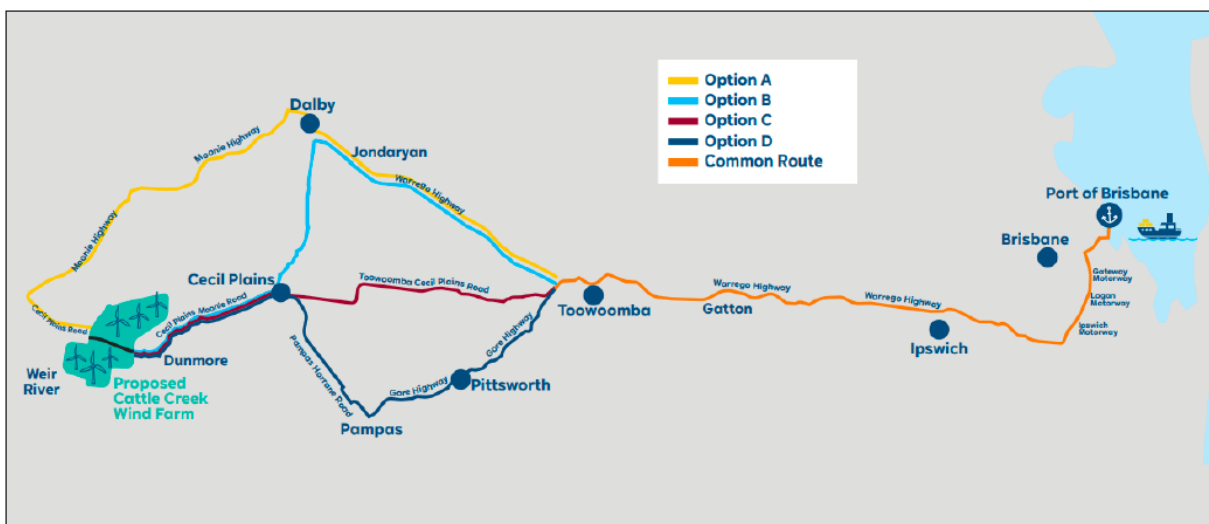


FIGURE 4-4 PROPOSED TRANSPORT ROUTE

4.3.2 SITE ACCESS

Site access will be via six entries along Cecil Plains Moonie Road, and is depicted in Appendix E. These access points will be used during construction and operation of the Proposed Development. The Preliminary access route to the Proposed Development Area is along Cecil Plains Moonie Road via either Pampas Horrane Road, Dalby Cecil Plains Road, Toowoomba Cecil Plains Road or Moonie Highway. The final access route will require upgrades to allow for OSOM vehicles transporting WTG and BESS components.

4.4 DESIGN PHASE DETAILS

The current Disturbance Footprint has been developed with consideration given to engineering issues, including maximum safe slope for workplace health and safety, operation requirements, landholder requirements, minimising environmental disturbance and ongoing site management requirements (bushfire setbacks).

Preliminary impact assessments for the Proposed Development were completed based on a Disturbance Footprint of 143 WTG. A design review was undertaken based on the outcomes of LiDAR data collection in the Project Area and feedback from regulatory departments which focussed on reducing environmental impacts. This resulted in the removal of 8 WTGs, 5 of which were located within Regulated Vegetation.

Furthermore, the Disturbance Footprint will undergo significant further design refinement through the micro-siting and detailed design process, with the current Disturbance Footprint representing the maximum area of up to 2,221.2 ha.

The key component of the detailed design of the Proposed Development will be to minimise ecological impacts by avoiding more sensitive areas wherever practicable through layout design. The detailed design and avoidance strategy will occur in two phases.

The first phase has already occurred as part of the development of the indicative Proposed Development layout to ensure that the layout avoids and/or minimises impact to vegetation and potential habitat wherever practicable having regard to the field investigations conducted, and subsequent constraints identified and constructability issues. To enable the flexibility required to microsite Proposed Development infrastructure to reflect ongoing detailed design and the outcomes of further assessments, a conservative Development Corridor has been considered which included a buffer of 75 m surrounding the Disturbance Footprint.

During the second stage, the Disturbance Footprint will be finalised, with micro-siting of Proposed Development infrastructure occurring within the assessed Development Corridor to derive the final Disturbance Footprint. This second stage will have regard to the findings of ongoing ecological assessments and technical assessments, including pre-clearance surveys including threatened species breeding habitat and protected plants, to ensure that impacts are minimised as much as practicable subject to constructability requirements being maintained. All infrastructure will remain within the assessed Development Corridors and WTGs will be micro-sited by a maximum of 75 m from the indicative locations shown in the plan contained in Appendix A. The balance of the Project Area outside the final Disturbance Footprint will not be directly impacted by the Proposed Development and will continue to be used for ongoing rural and agricultural purposes.

4.5 CONSTRUCTION PHASE DETAILS

4.5.1 CONSTRUCTION METHODS

The detailed construction methodology will be delivered by the WTG supply and install contractors and the balance of plant contractors, in alliance with the Proponent. A Preliminary CEMP has been prepared and provided as Appendix F. The final CEMP will include details of the construction program, construction methodology, mitigation measures to control construction impacts, contact details for site representatives, and a complaints and incident reporting procedure. Prior to construction the CEMP will be finalised with construction details. The CEMP will be implemented in accordance with best practice principles and respond to relevant conditions of approval.

4.5.2 EQUIPMENT AND MACHINERY

It is anticipated that the construction work (subject to geotechnical conditions) will include the following:

- Cut and fill earthworks (including excavating, hammering, ripping, crushing, material haulage, blasting (if required), compacting, moisture conditioning, testing etc.);
- Erection of turbines (including component delivery, craning, fitting of ancillary items);
- Cabling works (including trenching and laying of cables by various methods);
- Substation construction;
- Vegetation clearing (utilising appropriate methods);
- Construction of site compounds, camps and facilities; and
- Delivery of various Proposed Development components.

4.5.3 WATER SUPPLY

The provision of water is essential for the construction of the Proposed Development. The construction activities likely to require water are:

- Bulk earthworks and material conditioning;
- Concrete batching;
- Dust suppression; and
- Drinking water for personnel and water for ablution facilities.

Water demand will vary over time, depending on the stages of the work and required water quality standards for each activity. Potable water fit for human consumption will be required at the site offices and onsite worker's accommodation, while both medium (suitable for use in the concrete batching) and low-quality raw water (for earthworks and dust suppression) may be used for construction purposes. Water will be tested from various supply options and allocated to the most appropriate use.

A water sourcing strategy will be developed so that water used during the construction phase does not cause issues to adjacent landowners or other stakeholders. Where possible, potable water will be obtained from the local government water reticulation network from a nearby town or otherwise trucked to the Project Area.

Lower quality water (for earthworks and dust suppression) is likely to be locally sourced from:

- Groundwater – to include artesian and sub-artesian;
- Rainwater – to be sourced from dams or collection tanks; and
- Offsite – to be sourced offsite and trucked in.

Construction water supply options will be determined during the detailed design of the Proposed Development and confirmed with the Department of Local Government, Water and Volunteers and all required water licences and permits under the *Water Act 2000* will be applied for and obtained prior to construction.

4.6 OPERATIONS AND MAINTENANCE PHASE DETAILS

The power output from an operational wind farm at any given time largely depends on the strength of the wind velocity across the site. During the operation of the Proposed Development, the WTGs will automatically start, stop and alter their output as determined by wind speed and other environmental and electrical conditions.

It is anticipated that existing land management practices will be largely unaffected by the Proposed Development, with the host properties continuing to be used for grazing and animal husbandry activities. To monitor and maintain the wind farm facility, a permanent Operations and Maintenance Facility will be established on site. The Operations and Maintenance Facility will include a range of facilities such as an administrative area, parking areas, control building, workshop, parts storage, and ablution facilities.

4.7 REHABILITATION AND DECOMMISSIONING PHASE DETAILS

4.7.1 POST-CONSTRUCTION REHABILITATION

A Preliminary Post-Construction Rehabilitation Plan (Appendix G) has been prepared which identifies areas of disturbance associated with the construction of the Proposed Development which may be progressively restored or rehabilitated. It is anticipated, those areas not required for ongoing operational disturbance, will be allowed to undergo progressive restoration. Post-construction rehabilitation objectives have been developed with consideration for the existing condition, potential ongoing direct and indirect impacts, the need to maintain setbacks to reduce bushfire risk, and the need for disturbance for decommissioning.

The Disturbance Footprint to support construction is approximately 2,221.2 ha, or approximately 10.9% of the Project Area. Following construction, areas not required for ongoing operations will be rehabilitated. Post-construction rehabilitation will include up to 1,185.4 ha, including the following area:

- Rehabilitation of up to 443.3 ha defined as 'temporary use area' under State Code 16. Active rehabilitation of these areas includes returning these areas to a pre-development regional ecosystem present prior to clearing activities; and
- Natural regeneration of the Disturbance Footprint that is not required for operation (742.1 ha) will be rehabilitated with ground cover to promote the return of habitat and stability of ground disturbance, while recognising that these areas may be required for maintenance or decommissioning works and therefore will be fully rehabilitated as part of end-of-life decommissioning and rehabilitation.

Therefore, the permanent operation footprint required for the Proposed Development is 1,035.8 ha, or 46.6% of the total Disturbance Footprint required to facilitate construction.

4.7.2 END OF LIFE REHABILITATION

Following the completion of the construction phase of the Proposed Development, construction laydown areas and widened access tracks not required for operation will be rehabilitated in accordance with good practice at the time and where not required for ongoing grazing or agricultural practices.

At the end of life, the WTGs towers and other above ground infrastructure will be removed, and the area rehabilitated in accordance with good practice at the time and where not required for ongoing grazing or agricultural uses.

Rehabilitation activities will be undertaken at the post-construction phase as well as at end-of-life decommissioning phase. A Preliminary Decommissioning Management Plan is provided in Appendix U. A detailed Rehabilitation and Decommissioning Plan will be prepared during the early stages of operation, and will include overarching principles for the decommissioning phase, to be reviewed prior to decommissioning of the Proposed Development.

5. LEGISLATIVE FRAMEWORK

5.1 THE PLANNING ACT 2016

The Planning Act provides the overarching statutory framework planning and development system in Queensland. The purpose of the Planning Act is to establish an efficient, effective, transparent, integrated, coordinated, and accountable system of land use planning, development assessment and related matters that facilitates the achievement of ecological sustainability.

5.1.1 ASSESSMENT MANAGER

Pursuant to Part 4, Division 2 of the Planning Regulation, the Assessment Manager for a Material Change of Use (Wind Farm, Battery Storage Facility and ancillary infrastructure) is the Chief Executive. Schedule 10, Part 21, Division 2 of the Planning Regulation 2017 specifies that the assessment benchmark for Wind Farms and Battery storage facilities is the SDAP.

The Explanatory Note to the Planning (Wind Farms) Amendment Regulation 2025 confirms that SARA is responsible for delivering a coordinated, whole-of-government approach to the assessment of Wind Farms by providing a consolidated lodgement and assessment point where the State has jurisdiction.

5.1.2 LEVEL OF ASSESSMENT

The Planning (Wind Farms) Amendment Regulation 2025 amends the Planning Regulation to make all Wind Farms applications in Queensland subject to Impact Assessment. The Planning (Battery Storage Facilities) and Other Legislation Amendment Regulation 2025 amends the Planning Regulation to make all Battery storage facilities applications in Queensland subject to Impact Assessment. The Proposed Development is therefore subject to Impact Assessment.

5.1.3 PUBLIC NOTIFICATION

As per section 53 of the Planning Act, given that the application is Impact Assessable, public notification is required. The DA is required to be publicly notified for a minimum period of 15 business days as per the Planning Act.

Public Notification allows any person to make a submission for or against the application and creates an avenue for third-party appeal rights. A third-party appeal may only be made by a third-party that provided a properly-made submission in relation to the Proposed Development.

5.1.4 COMMUNITY BENEFIT AGREEMENT

Recent reforms to the Planning Act involve the introduction of a mandatory community benefit system to be administered by local government, and a mandatory Social Impact Assessment (SIA) to be referred to SARA. The SIA is to demonstrate the social impacts (positive and negative) that a project will have on a local community. The SIA has informed the preparation of a Community Benefit Agreement with the local governments which is required prior to lodgement of the DA. This means the Proponent has agreed with the local government on appropriate measures to ensure a benefit is provided (monetary or otherwise) to the community the relevant local governments deems is impacted by the Proposed Development.

The Proposed Development has developed a SIA (refer to Appendix B) and executed CBAs with TRC and WDRC (refer to Appendix T) in accordance with the requirements of the Planning Act.

5.2 DEFINITIONS

This DA adopts the definition of a wind farm in Schedule 24 of the Planning Regulation, as per Table 5-1.

TABLE 5-1 DEFINITION

Use	Definition
Wind Farm	(a) means the use of premises for generating electricity by wind force, other than electricity that is to be used mainly on the premises for a domestic or rural use; and (b) includes the use of premises for any of the following, if the use relates, or is ancillary, to the use stated in paragraph (a)— (i) a wind turbine, wind monitoring tower or anemometer; (ii) a building or structure, including, for example, a site office or temporary workers' accommodation; (iii) a storage area or maintenance facility, including, for example, a lay down area; (iv) infrastructure or works, including, for example, site access, foundations, electrical works, substations, facilities or devices for storing and releasing energy, or landscaping.

5.3 STATE DEVELOPMENT ASSESSMENT PROVISIONS

The State Development Assessment Provisions (SDAP) provides the assessment framework for matters of State interest that require referral to the State for assessment as part of the development assessment process under the Planning Act.

In accordance with Schedule 10 of the Planning Regulation, the Proposed Development requires assessment against the following codes:

- State Code 16: Native vegetation clearing;
- State Code 23: Wind farm development; and
- State Code 27: Battery storage facility development.

5.3.1 STATE CODE 16: NATIVE VEGETATION CLEARING

The Proposed Development includes the clearing of Regulated Vegetation for assessable development associated with a Material Change of Use and therefore, requires a Development Permit for Operational Works (Vegetation Clearing).

Furthermore, an application involving Operational Works for vegetation clearing may only be made where a RPD has been made by the State of Queensland through the DNRMMRRD as the administering authority for the *Vegetation Management Act 1999*. A RPD has been provided by the DNRMMRRD and is provided in Attachment C of the DA package.

The Proposed Development has been assessed against the assessment benchmarks provided within State Code 16. A copy of the assessment is provided in Appendix H. As demonstrated within the assessment, the Proposed Development is considered to achieve the overarching purpose associated State Code 16.

5.3.2 STATE CODE 23: WIND FARM DEVELOPMENT

A Development Permit for a Material Change of Use (Wind Farm, Battery Storage Facility and Ancillary Infrastructure) is required for the Proposed Development. Wind farms have the potential to create adverse impacts on individuals, communities and the natural environment as a result of their construction and operation.

The Proposed Development has been assessed against the assessment benchmarks provided within State Code 23 (version 3.6). The assessment benchmarks relevant to State Code 23 have been specifically designed to ensure these risks are adequately identified, assessed and where appropriate, mitigated and/or managed. The purpose of State Code 23 is to:

- Set out the minimum parameters of assessment necessary to demonstrate that a wind farm development can satisfactorily mitigate any unacceptable adverse impacts on individuals, communities and the environment;
- Ensure that the impacts arising from the design, siting (including proximity to sensitive land uses), construction, operation and decommissioning of wind farms do not result in unacceptable adverse impacts on individuals, communities and the environment; and
- Ensure development for a wind farm is decommissioned in a timely and efficient manner that reuses, recycles and/or repurposes materials to the greatest extent possible and rehabilitates the environment.

The Proposed Development has been assessed against the assessment benchmarks provided within State Code 23. A copy of the assessment is provided in Appendix H. As demonstrated within the assessment, the Proposed Development is considered to achieve the overarching purpose associated with State Code 23.

5.3.3 STATE CODE 27: BATTERY STORAGE FACILITY DEVELOPMENT

The Proposed Development involves the development of an ancillary which has the potential to create adverse impacts on individuals, communities and the natural environment during their construction and operation.

The Proposed Development has been assessed against the assessment benchmarks provided within State Code 27: Battery storage facility development (State Code 27). The assessment benchmarks relevant to State Code 27 have been specifically designed to ensure these risks are adequately assessed and where appropriate, mitigated or managed. The purpose of State Code 27 is to ensure that development of a battery storage facility:

- Avoids and/or appropriately integrates risk mitigation strategies and responsive design measures to address potential fire hazards, and other environmental risks, ensuring long-term safety and resilience for people, surrounding land uses and the environment;
- Minimises the loss or fragmentation of high quality agricultural land;
- Does not result in unacceptable adverse impacts on individuals, communities, the environment, adjacent sensitive land uses and sensitive receptors, landscape values and infrastructure and services; and
- Is decommissioned in a timely and efficient manner that reuses, recycles, and/or repurposes materials to the greatest extent possible and rehabilitates the environment.

The Proposed Development has been assessed against the assessment benchmarks provided within State Code 27. A copy of the assessment is provided in Appendix H. As demonstrated within the assessment, the Proposed Development is considered to achieve the overarching purpose associated with State Code 27.

5.3.4 TECHNICAL AND ADVICE AGENCIES

Schedule 10 of the Planning Regulation outlines the following triggers that are applicable for the Proposed Development and are addressed as part of this Planning Report:

- Schedule 10, Part 3, Division 1, Item 4(1) – Clearing native vegetation on prescribed land
- Schedule 10, Part 9, Division 2, Table 2 – Development subject to an electrical easement

5.4 STATE PLANNING POLICIES AND INTERESTS

The State Planning Policy (SPP) outlines the guiding principles and State interests that underpin the delivery of local and regional plans, and development that will advance the social, economic and environmental needs of Queensland.

The purpose of the SPP and the state interest policies is to secure a liveable, sustainable and prosperous Queensland. It requires that State interests are integrated in local planning instruments, regional plans and development decisions to strengthen the Queensland economy, promote strong communities, protect the environment, wisely manage resources and inform and respond to investment in infrastructure.

The SPP recognises that mitigating and adapting to climate change is also an important consideration for planning at all levels. It ensures that State interests are applied and considered in the context of a changing climate to support Queensland's people, economy and the environment.

In accordance with the Planning Regulation, the SPP applies to the extent where relevant, as the assessment manager is SARA.

Where the SPP Mapping has identified a state interest within the Project Area (refer to Appendix I), the Proposed Development has been assessed against the applicable State Interests with regard to Part C Purpose and Guiding Principles and Part D The State Interest Statements of the SPP. An assessment of how the Proposed Development complies with each applicable State Interest Statement is provided in Table 5-2 below.

TABLE 5-2 ASSESSMENT OF SPP MAPPING

State Interest	State Interest Statement	State Policy Mapping Triggers	ERM Response
Economic Growth			
Agriculture	The resources that agriculture depends on are protected to support the long-term viability and growth of the agricultural sector.	- Stock route network - Agricultural land classification – class A and B	An Agricultural Land Assessment (refer to Appendix J) was prepared for the Proposed Development and confirms the presence of Agricultural Land Class A1/B (53% of the Disturbance Footprint). Additionally, there are stock routes which border land parcels within the Project Area. The current land use within the Project Area is agricultural, with cattle grazing (93%) and dryland cropping (7%) being the predominant activities. The Proposed Development is effectively co-located with the existing agricultural practices. Grazing will continue to occur throughout the Project Area.
Environment and Heritage			
Biodiversity	Matters of environmental significance are valued and protected, and the health and resilience of biodiversity is maintained or enhanced to support ecological processes.	- MSES – Regulated vegetation (intersecting a watercourse) - MSES – Regulated vegetation (category B)	The Disturbance Footprint has been designed using environmental principles with the overarching intent to avoid and/or minimise, as well as manage impacts on known environmental values. MSES are identified and assessed in the MSES Impact Assessment Report (refer to Appendix K). The Project Area contains 7,935.7 ha (38.9% of the Project Area) of remnant regulated vegetation, and 12,464.9 (61.1% of the Project Area) of non-remnant vegetation. A number of watercourses have been identified within the Project Area, with the majority being Stream Order 1 – 2.

State Interest	State Interest Statement	State Policy Mapping Triggers	ERM Response
Cultural Heritage	The cultural heritage significance of heritage places and heritage areas, including places of Aboriginal and Torres Strait Islander cultural heritage, is conserved for the benefit of the community and future generations.	N/A	The Proposed Development has two Native Title holders associated with the Project Area (pursuant to Native Title Determination Bigambul People Part A (QCD2016/012 DET) and Bigambul People Part B (QCD2017/003 DET)). The Proponent is committed to respecting cultural heritage values and to co-creation of benefits that support cultural heritage. The Proponent will continue ongoing engagement with the relevant Aboriginal Parties, and is working to develop a CHMP for the Proposed Development.
Water Quality	The environmental values and quality of Queensland waters are protected and enhanced.	N/A	The Disturbance Footprint contains unmapped waterways and avoids interaction with mapped waterways and drainage lines. There are no major waterways within the Disturbance Footprint. Potential impacts to water quality have been assessed within the Stormwater Assessment (refer to Appendix L). The report concluded that risks to unmapped waterways are expected to be manageable through the implementation of best practice measures. These measures will be outlined in the CEMP, site-specific Erosion and Sediment Control Plan, Rehabilitation Management Plan, Stormwater Management Plan and Site Stabilisation Plan.
Safety and Resilience to Hazards			
Emissions and hazardous activities	Community health and safety, and the natural and built environment, are protected from potential adverse impacts of emissions and hazardous activities. The operation of appropriately established industrial development, major infrastructure, and sport and recreation activities is ensured.	N/A	A Noise Impact Assessment (refer to Appendix N) has been prepared for the Proposed Development. The Report concludes the Proposed Development has been designed to achieve the baseline criteria from State Code 23 and State Code 27, and satisfies the provisions of the Toowoomba Regional and Western Downs Planning Schemes.

State Interest	State Interest Statement	State Policy Mapping Triggers	ERM Response
Natural hazards, risk and resilience	The risks associated with natural hazards, including the projected impacts of climate change, are avoided or mitigated to protect people and property and enhance the community's resilience to natural hazards.	- Flood hazard area – local government flood mapping area - Bushfire prone area - Flood hazard area – Level 1 – Queensland floodplain assessment overlay	A Natural Hazard Risk Assessment (Bushfire) (refer to Appendix M) has been prepared for the Proposed Development as the Project Area includes areas mapped as Bushfire Prone Area. A potential bushfire impact analysis was undertaken, and the findings identified that while bushfires are likely to occur through the life of the Proposed Development, the Proposed Development does not increase the vulnerability to potential bushfire impacts. A detailed Bushfire Management Plan will be developed to manage the risk of fire during the construction, operation, and decommissioning phases of the Proposed Development. A Stormwater Assessment Report (refer to Appendix L) has been completed for the Proposed Development. 1% AEP was provided and used as part of the Stormwater Assessment, and it was noted that interactions of the Disturbance Footprint with the 1% AEP flood extent primarily occur along tributaries of these waterways, predominantly along the access network Flood impacts are further discussed in Section 6.6.
Infrastructure			
Energy and Water Supply	The timely, safe, affordable and reliable provision and operation of electricity and water supply infrastructure is supported and renewable energy development is enabled.	Major electricity infrastructure (Powerlink)	Potential impacts on existing energy supply infrastructure will be managed during construction, operation and decommissioning through the CEMP (refer to Appendix F) prepared for the Proposed Development. The Proposed Development involves the development of a wind farm and ancillary BESS which will contribute to the energy needs of southwest Queensland.
Transport Infrastructure	The safe and efficient movement of people and goods is enabled, and land use patterns that encourage sustainable transport are supported.	N/A	A Preliminary Route Assessment (refer to Appendix E) and Traffic Impact Assessment (refer to Appendix D) have been prepared for the Proposed Development. Both reports identified roads which allowed for the safe, efficient movement of construction and infrastructure components, which will not impact on the movement and safety to people. The proposed haulage route will be provided to the Department of Transport and Main Roads for further assessment.

5.5 DARLING DOWNS REGIONAL PLAN

The Darling Downs Regional Plan is a mechanism for managing change and shaping the future prospects of the communities in the Darling Downs Region.

Specifically, the Regional Plan aims to achieve this by:

- Identifying regional outcomes for the region;
- Establishing regional policies for achieving the regional outcomes; and
- Outlining the future spatial structure of the region, including Priority Agricultural Areas, Priority Living Areas, and priority outcomes for infrastructure.

These are supported by the two desired regional outcomes contained within the Regional Plan. The regional outcomes applicable to the Proposed Development are:

- Agriculture and resources industries within the Darling Downs region continue to grow with certainty and investor confidence; and
- The growth potential of towns with the Darling Downs region is enabled through the establishment of Priority Living Areas. Compatible resource activities within these areas which are in the communities' interest can be supported by local governments.

The Proposed Development is consistent with the above desired regional outcomes and policies as demonstrated in Table 5-3 below:

TABLE 5-3 COMPLIANCE WITH DARLING DOWNS REGIONAL PLAN

Regional Policy		ERM's Response
(1)	Protect Priority Agricultural Land Uses within Priority Agricultural Areas.	Complies with (1) and (2) The Proposed Development is not located within a Priority Agricultural Area.
(2)	Maximise opportunities for co-existence of resource and agricultural land uses within Priority Agricultural Areas.	
(3)	Safeguard the areas required for the growth of towns through the establishment of Priority Living Areas.	Complies with (3) and (4) The Proposed Development is not located within a Priority Living Area.
(4)	Provide for resource activities to locate within a Priority Living Area where it meets the communities' expectations as determined by the relevant local government.	

5.6 LOCAL PLANNING INSTRUMENTS

The Proposed Development spans across two local government areas, TRC and WDRC. The applicable planning instruments for the two local government areas are:

- The Toowoomba Regional Planning Scheme 2022 (Version 28) which provides the framework for managing development in a way that advances the purpose of the Planning Act and to meet the needs of the Toowoomba Region.
- The Western Downs Planning Scheme 2017 provides the framework for managing development in a way that advances the purpose of the Planning Act and to meet the needs of the Western Downs Region.

5.6.1 STRATEGIC OUTCOMES

The Strategic Framework within the Toowoomba Regional Planning Scheme 22 (Version 28) and Western Downs Planning Scheme 2017 sets the policy direction for the scheme and forms the basis for ensuring appropriate development occurs in the local government area. An assessment of how the Proposed Development complies with the relevant sections of the Strategic Framework for both local planning instruments is provided in Table 5-4.

TABLE 5-4 APPLICABLE STRATEGIC OUTCOMES

Strategic Outcomes	ERM's Response
Toowoomba Regional Planning Scheme (Version 28)	
Natural Environment	
3.4.1(2) The condition, extent, diversity and connectivity of the Region's natural assets are respected, protected, managed and enhanced. The ecological integrity and processes necessary for biodiversity to be resilient to climate change and other threats is maintained.	The Proposed Development has been developed with consideration of the natural environment within the Project Area. Micro-siting of the Disturbance Footprint provides the smallest possible footprint whilst maintaining flexibility for the Proposed Development. The micro-siting reflects consideration of the natural features, ecological processes and biodiversity values conserved.
3.4.1(3) Ecosystem function and resulting ecosystem services are maintained and valued.	Although proposing to clear 813.4 ha of Regulated Vegetation, the Proposed Development has been designed to avoid impacts to 'Of Concern' and 'Endangered' Regional Ecosystems. A MSES Impact Assessment was undertaken for the Proposed Development. The report proposes various mitigation and management measures which will be integrated into the following management plans: • Vegetation and Fauna Management Plan; • Bird and Bat Management Plan; • Weed and Pest Species Management Plan; • CEMP and • Preliminary Post-Construction Rehabilitation Plan. The above plans will be developed and implemented for the Proposed Development, including construction, operation and decommissioning.
Natural Resources and Landscape	
3.6.1(1) Scenic landscapes are valued and protected and natural resources are well managed.	A Landscape and Visual Impact Assessment (refer to Appendix O) was prepared for the Proposed Development. It was concluded that due to the modified nature of the surrounding area, the existing landscape has the ability to incorporate the Proposed Development with a relatively low degree of visual impact.

Strategic Outcomes	ERM's Response
3.6.1(5) Land and energy resources are sustainably managed to allow communities to meet present and future needs while not compromising the ability of future generations to meet their needs. 3.6.1(7) Use of the land and its natural resources is undertaken in a way that does not cause an adverse impact on the environment.	The purpose of the Proposed Development is to provide clean, renewable energy and will contribute towards the future energy security within the southeast Queensland region. This will be achieved while maintaining the current land uses (grazing and dryland cropping) within the Project Area. The Proposed Development is designed to be co-located with the existing agricultural practices. Grazing will continue to occur throughout the Project Area throughout the construction, operation and decommissioning phases of the Proposed Development, noting that there may be temporary disruptions during the construction and decommissioning phases. Furthermore, the Proposed Development has been developed with consideration of the natural environment within the Project Area. Micro-siting of the Disturbance Footprint provides the smallest possible footprint whilst maintaining flexibility for the Proposed Development. The micro-siting reflects consideration of the natural features, ecological processes and biodiversity values conserved.
3.6.4.1(1) The integrity, viability and productivity of agricultural land and the rural landscape is protected and maintained for agricultural purposes.	The current land use within the Project Area is agricultural, with cattle grazing and dryland cropping being the predominant activities. The Proposed Development is designed to be co-located with the existing agricultural practices. Grazing will continue to occur throughout the Project Area throughout the construction, operation and decommissioning phases of the Proposed Development. As such, the integrity, viability and productivity of agricultural land will be protected and maintained for the current use.
3.6.4.1(2) Agricultural land (refer to Strategic Framework Map SF2 – Natural Resources and Landscape): - that is outside of areas designated for urban development is conserved for current and future agricultural purposes (<i>refer Strategic Framework Map SF4 – Natural Resources and Landscape</i>); - is not degraded, alienated, fragmented, compromised or inhibited through the encroachment of inappropriate uses or practices that will result in the loss or permanent reduction of its long term productivity; - potential for conflict between farming activities and residential development is avoided; and is protected to provide for its long-term and sustainable agricultural use consistent with the state planning policy.	
Infrastructure and Services	
3.8.1(7) Energy infrastructure has sufficient capacity and is located in areas able to support the needs of the Region and considers low emission energy generation.	The Proposed Development supports the strategic outcome for Infrastructure and Services by providing a renewable energy facility consistent with the low carbon economy targets of Toowoomba Regional Council. Environmental impacts due to the generation of waste will be mitigated through construction and

Strategic Outcomes	ERM's Response
	operation plans. The Proposed Development will have minimal impact on the existing road, rail and air transport networks.
Economic Development	
3.9.1(1) The Toowoomba Region has a strong, prosperous and progressive economy that contributes to the health and wellbeing of both rural and urban communities and contributes to the character and liveability of the Region.	The Proposed Development is designed to be co-located with the existing rural uses (predominately grazing and dryland cropping). The Proposed Development will not restrict the movement of livestock throughout the Disturbance Footprint during the construction, operation and decommissioning phases. The Proposed Development is anticipated to have a 2-year construction timeframe and at its peak is expected to create 300-500 Full Time Equivalent Jobs during construction and 10-50 Full Time Equivalent Jobs during operation.
3.9.1(6) Energy and allied industries provide a significant opportunity to maximise economic outcomes for the Region. The on-going development of the Region's energy resources will provide significant flow-on effects to supply chain businesses from mining services and other sectors including construction, infrastructure, transportation and accommodation.	The Proposed Development supports the strategic outcomes for Economic growth by providing an economic stimulus and social benefit to the Toowoomba region through the creation of up to 300-500 jobs (direct and indirect) during the construction phase, 10-50 FTE jobs during the operational phase and indirect benefits to local businesses, contractors and suppliers.
Western Downs Planning Scheme 2017	
Liveable communities and housing	
3.3.1(9) The unique identity of the urban centres and rural townships in the Western Downs is recognised and strengthened through complementary development that positively contributes to the regional identity of the Western Downs.	The purpose of the Proposed Development is to provide clean, renewable energy for southeast Queensland. The Proposed Development is considered consistent with the outcomes of the rural zone, and will allow grazing to continue throughout construction, operation and decommissioning within the Project Area. The unique rural identity of the Western Downs region will be maintained. The Proposed Development will provide economic support for the urban centres and rural townships through the creation of 300-500 full-time-equivalent jobs during the construction phase and 10-50 full-time-equivalent jobs during the operational phase. There will be indirect economic benefit to local businesses, contractors and suppliers within the region.
Environment and heritage	
3.4.1(1) The natural environment including its unique natural features, ecological processes and biodiversity values are conserved, enhanced and restored to maintain their biological capacity for the benefit of present and future generations.	The Proposed Development has been developed with consideration of the natural environment within the Project Area. Micro-siting of the Disturbance Footprint provides the smallest possible footprint whilst maintaining flexibility for the Proposed Development. The micro-siting reflects consideration of the natural features, ecological processes and biodiversity values conserved.

Strategic Outcomes	ERM's Response
3.4.1(3) The hydrological network of the Western Downs contributes to the scenic amenity and biodiversity of the region and downstream catchments including the Murray Darling. The health of the waterways, wetland and the water table of the region is protected from the negative impacts of development to maintain high standards of ecological health and water quality.	The Proposed Development has been strategically designed to maintain the health of waterways, wetlands and the water table of the region. All hard standing infrastructure will be located away from natural drainage lines, waterways and wetlands. Additionally, all surface water features within the Disturbance Footprint are unmapped waterways. Erosion and waterway controls will be outlined in the CEMP, site-specific Erosion and Sediment Control Plan, Rehabilitation Management Plan, Stormwater Management Plan and Site Stabilisation Plan. Additionally, surface water quality monitoring programs will be implemented to establish baseline conditions of waterways. The above controls will protect the region from the negative impacts of development and maintain the high standards of ecological health and water quality within the Project Area.
3.4.1(4) The Western Downs enjoys clean air and quiet ambience that contributes to the health and wellbeing of the community and this high level amenity is protected from the impacts of noise, particulate or odor emitting land use and development.	The nearest sensitive receptors are located approximately 1.5 km from the closest WTG, being the host landowners. A Noise Impact Assessment (refer to Appendix N) has been completed for the Proposed Development. The Report concludes the Proposed Development complies with the noise criteria identified in State Code 23 and State Code 27 and as such will not result in impacts from noise on sensitive receptors.
Economic growth	
3.5.1(1) The Western Downs supports a diversified and prosperous economy that builds on the existing economic strengths of the region including agriculture and forestry, energy and resource development, manufacturing, tourism and transport.	The Proposed Development will provide clean, renewable energy to the southeast Queensland region and support the Queensland Energy Roadmap 2025. Additionally, the Proposed Development will provide economic stimulus and social benefit to the Toowoomba Regional Council and Western Downs Regional Council through the creation of 300-500 full-time-equivalent jobs during construction as well and providing indirect socio-economic benefits to local businesses, contractors and suppliers.

5.6.2 ZONING

The Project Area is located within the Rural Zone across both local planning instruments, the purpose of the Rural Zone as per the Planning Scheme is as per Table 5-5.

TABLE 5-5 PURPOSE OF RURAL ZONE

TRC Rural Zone Purpose	WDRC Rural Zone Purpose
The purpose of the zone is to: 1. Provide for a wide range of rural uses including cropping, intensive horticulture, intensive animal industries, animal husbandry, animal keeping and other primary production activities;	The purpose of the Rural zone is to: 1. Provide for rural uses and activities; and 2. Provide for other uses and activities that are compatible with: (i) existing and future rural uses and activities; and

TRC Rural Zone Purpose	WDRC Rural Zone Purpose
2. Provide opportunities for non-rural uses that are compatible with agriculture, the environment, and the landscape character of the rural area where they do not compromise the long term use of the land for rural purposes; and 3. Protect or manage significant natural features, resources, and processes, including the capacity for primary production.	(ii) the character and environmental features of the zone; and 3. Maintain the capacity of land for rural uses and activities by protecting and managing significant natural resources and processes.

An assessment of the Proposed Development against applicable assessment benchmarks within the Rural Zone Code is provided in Table 5-6. The Proposed Development is considered to achieve the purpose and outcome of the Rural Zone, as the Proposed Development will have a minimal impact on the existing rural land uses.

Furthermore, the Proposed Development has been designed to be responsive to environmental constraints on the land and minimises the amount of clearing required to facilitate the WTGs and associated infrastructure including BESS.

TABLE 5-6 APPLICABLE OVERALL OUTCOMES

Rural Zone Overall Outcomes		ERM Response
Toowoomba Regional Planning Scheme (Version 28)		
(a)	Areas used or suitable for primary production are conserved and are not further fragmented	Complies with (a) The current land use within the Project Area is agricultural, with cattle grazing and dryland cropping being the predominant activities. The Proposed Development is designed to be co-located with the existing agricultural practices. Grazing will continue to occur throughout the Project Area. Given the above, the Proposed Development will not lead to the fragmentation or loss of areas used for primary production activities.
(b)	The establishment of a wide range of rural pursuits is facilitated, including cropping, intensive horticulture, intensive animal industries, animal husbandry and animal keeping and other compatible primary production uses	Complies with (b) The Proposed Development is designed and co-located with the existing cattle grazing and dryland cropping uses. Additionally, the Disturbance Footprint is 2,221.2 ha, which is a small portion of the total Project Area (20,404.5 ha). As such, the Proposed Development will not impede on the current rural pursuits of the Project Area.
(c)	Uses that require isolation from urban areas as a consequence of their impacts, such as noise or odour, may be appropriate where land use conflicts are minimised	Complies with (c) The nearest sensitive receptors are located approximately 1.5 km from the closest WTG, being the host landowners. A Noise Impact Assessment (refer to Appendix N) has been completed for the Proposed Development. The Report concludes the Proposed Development complies with the noise criteria identified in State Code 23 and State Code 27 and as such

Rural Zone Overall Outcomes		ERM Response
		will not result in impacts from noise on sensitive receptors.
(d)	Development incorporates sustainable land management and other sustainable practices that maximise energy efficiency, water conservation and encourages sustainable transport use	Complies with (d) The Proposed Development is for the construction and operation of a wind farm which will provide renewable energy for the energy market of southwest Queensland.
(e)	Development contributes to the amenity and landscape character of the area	Complies with (e) A Landscape Visual Impact Assessment (LVIA) was undertaken to assess the visual impact of the Proposed Development. The LVIA concludes that the existing landscape will be able to incorporate the Proposed Development with a relatively low degree of visual impact.
(f)	The establishment of non-rural activities that are directly associated with and subordinate to rural production, natural resources and landscape amenity is facilitated in a manner that minimises land use conflicts and is compatible with the character and environmental values of the locality. Suitable activities may include small-scale outdoor recreation, tourism facilities, short-term accommodation, home based businesses, and produce sales	Complies with (f) The Proposed Development is for wind farm and is designed to be co-located with the existing rural activities. Grazing will continue to occur throughout the Project Area.
(g)	Rural industries are facilitated where: (i) Associated with rural production in the immediate vicinity; (ii) Avoiding or minimising adverse impacts on the amenity of the locality; and (iii) Compatible with the infrastructure in the locality.	Complies with (g) The Proposed Development is designed to be co-located with the existing agricultural practices. Grazing will continue to occur throughout the Project Area. Given the above, the Proposed Development will maintain the rural industries in the Project Area.
(h)	Natural features such as creeks, gullies, waterways, wetlands and bushland are retained, managed, enhanced and provided with appropriate buffers from development	Complies with (h) The Proposed Development has been developed with consideration of natural features within the Project Area. Micro-siting of the Disturbance Footprint provides the smallest possible footprint whilst maintaining flexibility for the Proposed Development. The micro-siting reflects consideration of the creeks, gullies, waterways, wetlands and bushlands so they are retained, managed and enhanced.
(i)	Adverse impacts of land use, both on-site and on adjoining areas, are avoided and any unavoidable impacts are minimised through location, design, operation and management	Complies with (i) The Proposed Development will not have adverse impacts on land use. The Proposed Development is designed to be co-located with the existing agricultural practices. Grazing will continue to occur throughout the Project Area.

Rural Zone Overall Outcomes		ERM Response
(j)	Existing intensive animal industries are protected from the intrusion of non rural activities such as small-scale outdoor recreation and tourism facilities	Complies with (j) The Disturbance Footprint does not contain intensive animal industries.
(k)	The viability of both existing and future rural uses and activities are protected from the intrusion of incompatible uses	Complies with (k) The current land use within the Project Area is agricultural, with cattle grazing and dryland cropping being the predominant activities. The Proposed Development is designed to be co-located with the existing agricultural practices. Grazing will continue to occur throughout the Project Area. Given the above, the Proposed Development will not impact on the existing and future rural uses.
(l)	Development has access to development infrastructure including utility installations and essential services	Complies with (l) The Proposed Development has been strategically located to be in proximity to electricity infrastructure and essential services.
Western Downs Planning Scheme 2017		
(2)	All rural land is protected from alienation and fragmentation. A lack of viability for existing farming operations and small holdings does not provide suitable and sufficient planning justification for further subdivision or uses for non-rural purposes.	Complies with (2) The current land use within the Project Area is agricultural, with cattle grazing and dryland cropping being the predominant activities. The Proposed Development is designed to be co-located with the existing agricultural practices. Grazing will continue to occur throughout the Project Area. Given the above, the Proposed Development will not lead to the fragmentation or loss of areas used for primary production activities.
(11)	Ecologically significant features including waterways, wetlands and significant vegetation are retained and buffered from the impacts of development or where appropriate, vegetation is integrated within the development to ensure the long term protection of these features.	Complies with (11) The Proposed Development has been developed with consideration of natural features within the Project Area. Micro-siting of the Disturbance Footprint provides the smallest possible footprint whilst maintaining flexibility for the Proposed Development. The micro-siting considers buffering of ecologically significant features from the impact of development.
(14)	Development responds to land constraints such as topography, bushfire and does not impact on the flood capacity or impede the flood conveyance function of land. Development is not located where it will increase the number of people or structures at risk of natural hazards.	Complies with (14) The Project Area is located within mapped medium bushfire risk areas. A Natural Hazard Risk Assessment (Bushfire) has been completed for the Proposed Development (refer to Appendix M) and confirms that while bushfires are likely to occur through the operational life of the Proposed Development, the Proposed Development will not increase the vulnerability to potential bushfire impacts. A detailed Bushfire Management Plan will be developed to manage the risk of fire during

Rural Zone Overall Outcomes	ERM Response
	the construction, operation and decommissioning phase of the Proposed Development. A Stormwater Assessment Report (refer to Appendix L) was prepared for the Proposed Development. 1% AEP was provided for the Stormwater Assessment, and areas of greatest flood extent and depth within the Project Area primarily occur along the defined waterways of the Project Area. The report also concluded indirect impacts are expected to be minimal, and manageable with best practice drainage controls. Flooding impacts are further discussed in Section 6.6.
(15) Where development is not consistent with the purpose and intent of the Rural Zone, overriding community need will need to be demonstrated as well as valid planning justification provided as to why the proposed use cannot be reasonably established in a more appropriate zone.	Complies with (15) The Proposed Development is for the construction, operation and decommissioning of a wind farm, and is considered consistent with the purpose and intent of the Rural Zone.

5.6.3 OVERLAY MAPPING

An overview of the Toowoomba Regional Planning Scheme and Western Downs Planning Scheme was undertaken and it was identified that the following overlays are applicable:

- Bushfire hazard overlay;
- Agricultural land overlay;
- Environmental significance overlay;
- Flood hazard overlay;
- Stock route overlay;
- Scenic amenity overlay;
- Waterways corridor overlay; and
- Landslide hazard overlay.

SPP mapping depicting the overlays have been provided in Appendix I, with the relevance of the overlays for the Project presented in Table 5-7.

TABLE 5-7 APPLICABLE OVERLAYS

Overlay	Project Relevance
Bushfire Hazard Medium	The Project Area is located within mapped medium bushfire risk areas. A Natural Hazard Risk Assessment (Bushfire) has been completed for the Proposed Development (refer to Appendix M) and confirms that while bushfires are likely to occur through the operational life of the Proposed Development, it will not increase the vulnerability to potential bushfire impacts.

Overlay	Project Relevance
	The Natural Hazard Risk Assessment (Bushfire) provided bushfire setbacks required for infrastructure types to ensure no worsening of bushfire intensity. A detailed Bushfire Management Plan will be developed to manage the risk of fire during the construction, operation and decommissioning phase of the Proposed Development.
Agricultural Land Overlay	The Project Area contains strategic cropping areas and Agricultural Land Class A/B. An Agricultural Land Assessment (refer to Appendix J) has been completed for the Proposed Development. The assessment concluded that 53% of the Disturbance Footprint is mapped as A1/B agricultural land, and the remaining 47% is mapped as C1/C2/C3 agricultural land. Impacts to Agriculture are described in Section 6.3. The Proposed Development is designed to be co-located with the existing agricultural practices. The Proponent will work closely with the landholders to ensure that project activities are integrated with ongoing farm operations, minimising disruption and protecting the long-term viability of the agricultural enterprise.
Environmental Significance Overlay	The Project Area is intersected by waterways, areas of ecological significance and biodiversity corridors. The Proposed Development has been strategically designed to avoid areas of environmental significance. Micro-siting of the Disturbance Footprint allows for infrastructure to avoid environmental values where reasonably practicable. A MSES Impact Assessment was undertaken for the Proposed Development. The assessment proposes various mitigation and management measures which will be integrated into the following relevant plans: • Bird and Bat Management Plan; • Vegetation and Fauna Management Plan; • CEMP; and • Preliminary Post-Construction Rehabilitation Plan. The above plans will be developed and implemented for the Proposed Development, including construction, operation and decommissioning.
Flood Hazard Overlay	The Project Area is intersected by a network of overland flow (low) pathways. A Stormwater Assessment Report (refer to Appendix L) was prepared for the Proposed Development. 1% AEP flood data was incorporated into the Stormwater Assessment, and it shows of greatest flood extent and depth within the Project Area primarily occur along the defined waterways of the Project Area, namely Cattle Creek and Humpybong Creek in the central region, and along Waar Waar Creek in the Project Area's west. As such, direct impacts to flood zones are not likely to occur. The report also concluded indirect impacts are expected to be minimal, and manageable with best practice drainage controls. It is also noted that flood modelling has been undertaken for the Proposed Development, and as per the Stormwater Assessment, no impacts in relation to flooding are anticipated. Any impacts that may occur, can be managed via mitigation measures. Flooding impacts are further discussed in Section 6.6.3.

Overlay	Project Relevance
Landslide Hazard	The Project Area is intersected by small portions of steep land. Micro-siting of the Disturbance Footprint allows the Proposed Development to avoid the mapped steep land hazard areas.
Stock Routes	There are two Stock Routes (SR:809WEST and SR:798WEST) adjacent to the Project Area. The Proposed Development is designed to be co-located with the existing agricultural practices. Stock route use will not be impeded during the construction, operation and decommissioning of the Proposed Development.
Scenic Amenity	A small portion of the Project Area is mapped as a high landscape value area. A Landscape and Visual Impact Assessment was prepared for the Proposed Development (Appendix O). It was concluded that due to the modified nature of the surrounding area, the existing landscape has the ability to incorporate the Proposed Development with a relatively low degree of visual impact.
Waterway Corridors	The Project Area is intersected by a waterway corridor. The Proposed Development has been strategically designed to avoid areas of environmental significance. All hard standing infrastructure will be located away from natural drainage lines, waterways and wetlands. Additionally, all the surface water features within the Development Corridor are classed as unmapped waterways. Impacts to waterways will be outlined in the CEMP, site-specific Erosion and Sediment Control Plan, Rehabilitation Management Plan, Stormwater Management Plan and Site Stabilisation Plan. Additionally, surface water quality monitoring programs will be implemented to establish baseline conditions of waterways.

5.7 OTHER RELEVANT LEGISLATION

Table 5-8 below outlines the other relevant legislation that is applicable to the Proposed Development.

TABLE 5-8 RELEVANT LEGISLATION

Legislation	Description	Proposed Development Relevance
Commonwealth		
<i>Environment Protection and Biodiversity Conservation Act 1999</i>	The <i>Environment Protection and Biodiversity Conservation Act 1999</i> is the Australian Government's central piece of environmental legislation which protects MNES. The Act provides the framework to protect and manage nationally and internationally important flora, fauna, ecological communities and heritage places.	The Project Area is mapped to contain listed threatened species, ecological communities and migratory species which form MNES under the EPBC Act. The Proposed Development was referred to the Department of Climate Change, Energy, the Environment and Water (Reference 2025/10150). The Proposed Development was determined a 'Controlled Action' requiring assessment by Public Environment Report.
<i>Native Title Act 1993</i>	Native title recognises the traditional rights and interests to land and waters of Aboriginal and Torres Strait Islander people. Under the <i>Native Title Act 1993</i> (Cth), where native title has not been extinguished, native title claimants can make an application to the Federal Court to have their native title recognised by Australian law. Native title is generally extinguished in relation to all freehold land or any land dedicated for a public purpose, such as public road reserves.	The Proposed Development has two Native Title holders associated with the Project Area (pursuant to Native Title Determination Bigambul People Part A (QCD2016/012 DET) and Bigambul People Part B (QCD2017/003 DET)).
State		
<i>Nature Conservation Act 1992</i>	The <i>Nature Conservation Act 1992</i> (NC Act) provides the legislative basis for the conservation of nature through the protected plants framework and species management program requirements. Restrictions apply to impacts to native species and their breeding places (for animals).	The Project Area contains potential habitat for multiple Endangered, Vulnerable, or Near Threatened species under the Nature Conservation Act 1992 (NC Act). In total, six species protected under the NC Act are known to occur, or are considered likely to occur: • Koala (<i>Phascolarctos cinereus</i>); • Glossy black cockatoo (south-eastern) (<i>Calyptrorhynchus lathami lathami</i>); • Diamond firetail (<i>Stagonopleura guttata</i>); • White-throated needletail (<i>Hirundapus caudacutus</i>); • Short-beaked echidna (<i>Tachyglossus aculeatus</i>); and

Legislation	Description	Proposed Development Relevance
		Kogan waxflower (<i>Philotheca sporadica</i>). A Species Management Plan will be required should the Proposed Development tamper with the breeding place of a NC Act protected species. Additionally, a Protected Plant Clearing Permit will be required should the Proposed Development trigger the requirements of the NC Act.
<i>Environmental Offsets Act 2014</i>	Coordinates the delivery of environmental offsets in Queensland.	As per the MSES Impact Assessment (Appendix K), it was determined that the Proposed Development is likely, or has the potential to result in a significant residual impact on the following MSES: - Regulated vegetation: - Category B RE intersecting a watercourse; - Protected wildlife habitat: - Diamond firetail; - Glossy black cockatoo; and - Koala. Offsets for these SRIs will be provided in line with the Environmental Offsets Policy and Environmental Offsets Regulation 2014.
<i>Transport Infrastructure Act 1994</i>	Requires an interface agreement where intersection between state-controlled transport infrastructure is intersected by project operations. This is a separate construction approval process which is likely to form part of the approval conditions.	The Project will seek access approval and licenses on an as needed basis for any impacts associated with the use of local roads in and around the site, and State roads as part of the transport route. This will be sought at a later stage and will likely include the approvals and licenses surrounding the upgrades of intersections on State roads required for regional and site access.
<i>Aboriginal Cultural Heritage Act 2003</i>	The <i>Aboriginal Cultural Heritage Act 2003</i> requires anyone who carries out a land-use activity to exercise a duty of care. Section 23 of the Act provides that a person who carries out an activity must take all reasonable and practicable measures to ensure the activity does not harm Aboriginal cultural heritage (the cultural heritage duty of care).	The Proposed Development includes activities that may disturb land containing unrecorded Aboriginal cultural heritage. The Proponent is committed to ongoing engagement and consultation with Aboriginal Parties, including having executed a CHMP for the Proposed Development.
<i>Water Act 2000</i>	Limits the taking or interfering with water, clearing riparian vegetation, and excavating or placing fill in waterbodies.	Once the detailed design for the Proposed Development is completed, further consideration of the requirements under the <i>Water Act 2000</i> will be required.

Legislation	Description	Proposed Development Relevance
		A Riverine Protection Permit will be required for the access crossings of watercourses identified under the <i>Water Act 2000</i>. Should the Proposed Development require the use of water from local water sources within the Project Area, a permit for this activity will be sought. Depending on the amount of water to be taken, a water license may be required and an application may need to be lodged for the taking and inferring of water.
<i>Fisheries Act 1994</i>	The <i>Fisheries Act 1994</i> provides the principal legislative framework for the regulation of activities and areas that are within a mapped fish passage area. All waters are protected against degradation by direct or indirect impacts associated with development activities. Measures designed to protect fisheries resources include the declaration of fish habitat areas, protection of marine plants and designation of waterways for fish passage. A Waterway Barrier Works approval is required for the construction of access crossings for watercourses identified under the Act.	In accordance with Development Assessment Mapping System, there are some low, moderate and high order waterways with Fish Passages within the Project Area. Several watercourses relevant to the <i>Fisheries Act 1994</i> are present within the Project Area. The Disturbance Footprint is generally designed to avoid interaction with mapped watercourses for non-linear infrastructure. However, where linear infrastructure has does not avoid watercourses, the <i>Fisheries Act 1994</i> will need to be taken into consideration. Once the detailed design for the Project is completed, further consideration of the Waterway Barrier Work Approval requirements will be completed. Where the works are inconsistent with the Accepted Development Code, an application for Operational Works (Waterway Barrier Works), will be required.
<i>Vegetation Management Act 1999</i>	Clearing of native vegetation communities is regulated by this legislation, which is assessed as part of the DA.	The Proposed Development involves the clearing of native vegetation, as discussed in Section 4.2. As part of the DA process, a RPD was sought, which demonstrates that any clearing associated with this DA is for the purpose of installing infrastructure.
<i>Environmental Protection Act 1994</i>	The <i>Environmental Protection Act 1994</i> provides protection policies and is the principal environmental legislation in Queensland. The Act specifies the 'General Environmental Duty', outlining that a person must not carry out any activity that causes, or is likely to cause, environmental harm unless the person takes all reasonably practicable measures to prevent or minimise the harm.	The Proposed Development is required to comply with the General Environment Duty and will implement a CEMP. Depending on the thresholds for the concrete batching plant / quarry, this may trigger an Environmental Authority are concrete batching or the establishment of a quarry during the construction phase of the Proposed Development.

Legislation	Description	Proposed Development Relevance
Local		
<i>Toowoomba Regional Planning Scheme 2022</i>	The Toowoomba Regional Planning Scheme 2022 outlines the future land use development decisions in the Toowoomba Region Local Government Area.	This application seeks a development permit for a Material Change of Use (Wind Farm, Battery Storage Facility and ancillary infrastructure) and Operational Works (Clearing Native Vegetation). Once the detailed design for the Proposed Development is completed, further consideration of secondary approval requirements may also be required. Potential secondary approvals are likely to include, but not limited to, the following: • Development Permit for a Material Change of Use (medium or high impact industry) for the establishment of a concrete batching plant; • Development Permit for Operational Work (filling and excavation & waterway barrier works); and • Development Permit for Building Works.
<i>Western Downs Planning Scheme 2017</i>	The Western Downs Planning Scheme 2017 outlines the future land use development decisions within the Western Downs Local Government Area.	This application seeks a development permit for a Material Change of Use (Wind Farm, Battery Storage Facility and ancillary infrastructure) and Operational Works (Clearing Native Vegetation). Once the detailed design for the Proposed Development is completed, further consideration of secondary approval requirements may also be required. Potential secondary approvals are likely to include, but not limited to, the following: • Development Permit for a Material Change of Use (medium or high impact industry) for the establishment of a concrete batching plant; • Development Permit for Operational Work (filling and excavation & waterway barrier works); and • Development Permit for Building Works.

6. IMPACT ASSESSMENT

6.1 OVERVIEW

Detailed technical assessments have been undertaken for the Proposed Development to inform the design and to identify any impacts and associated management and mitigation measures that will be required in accordance with the Performance Outcomes of State Code 16, State Code 23 and State Code 27. The technical assessments were undertaken based on the Project Area (refer to Section 3.1).

Table 6-1 summarises the technical studies that have been completed to support the DA.

TABLE 6-1 SUMMARY OF TECHNICAL STUDIES

Technical Study	Consultant	Location Reference	State Code 16	State Code 23	State Code 27
MSES Impact Assessment Report	ERM	Appendix K	PO1 – PO4, PO7, PO9, PO12, PO14, PO80 – PO85, PO88 & PO89	PO1-PO4	PO1
Preliminary Vegetation and Fauna Management Plan		Appendix K		PO2	-
Preliminary Bird and Bat Management Plan		Appendix K		PO3	-
Preliminary Post-Construction Rehabilitation Plan		Appendix G		PO4	-
Agricultural Land Assessment	Landloch	Appendix J	-	PO5	PO9-PO12
Stormwater Assessment	ERM	Appendix L		PO6-PO9	PO16-PO19
Erosion Risk Assessment		Appendix P		PO6- PO9	N/A
Natural Hazard Risk Assessment (Bushfire)	Covey Associates	Appendix M	-	PO10 & PO11	PO13-PO15
Risk Management Assessment Report	GHD	Appendix Q	-	-	PO2-PO7
Noise Impact Assessment	Echo Acoustics	Appendix N	-	PO12 & PO13	PO20 & PO21
Electromagnetic Interference Assessment	Middleton Group	Appendix R	-	PO14	-
Landscape and Visual Impact Assessment	Moir Studios	Appendix O	-	PO15 & PO17	PO22 & PO23
Shadow Flicker Assessment		Appendix O	-	PO15	-
Preliminary Route Assessment	Rytenschild Traffic Engineering	Appendix E	-	PO18-PO21	PO24-PO28
Traffic Impact Assessment		Appendix D	-	PO18-PO21	PO24-PO28
Social Impact Assessment	Attexo Group	Appendix B	-	PO16	PO8
Community Benefit Agreement	RWE	Appendix T	-	PO16	PO8
Aviation Impact Assessment	Aviation Projects	Appendix S	-	PO22 & PO23	-
Decommissioning Management Plan	ERM	Appendix U	-	PO24	PO35
Preliminary Battery Recycling Strategy		Appendix U	-	-	PO34
Project Layout Plan	RWE	Appendix A			PO29-PO30

6.2 PROTECTED WILDLIFE

6.2.1 RATIONALE

The construction of a wind farm generally requires clearing of vegetation to allow for construction, operation and decommissioning. As such, the infrastructure is be designed and sited to not conflict with habitats of protected wildlife and areas of high ecological value. It is important to consider the potential loss or fragmentation, connectivity, movement patterns and impacts on waterways within areas of high ecological value.

As per State Code 23, high ecological value means matters of MSES as defined under Schedule 2 of the Queensland Environmental Offsets Regulation 2014.

A MSES Impact Assessment (Appendix K) has been prepared to address PO1 to PO4 of State Code 23, PO1 to PO4, PO7, PO9, PO12, PO14, PO80 to PO85, PO88 and PO89 of State Code 16 and PO1 of State Code 27. The report was informed by both desktop investigations and field surveys conducted since 2023 to describe the environmental values and MSES within the Project Area.

6.2.2 ASSESSMENT

The Proposed Development is located within the Brigalow Belt South bioregion which comprises a mixed landscape of flat alluvial plains and undulating to hilly areas with low ridges and deep valleys. More specifically, the Proposed Development is situated in the Inglewood sandstone sub-bioregion which is characterised by geological landscape dominated by sandstone.

Vegetation within the Project Area is predominately mixed eucalypt woodland, with areas of Brigalow scrubs and open Mitchell grasslands.

The Project Area has been classified into 14 Regional Ecosystems, which include:

- One Endangered Regional Ecosystem;
- One Of Concern Regional Ecosystem;
- 11 Least Concern Regional Ecosystem; and
- Non-remanent vegetation.

6.2.3 POTENTIAL IMPACTS

The Proposed Development has the potential to have both direct and indirect impacts on the ecological values within the Project Area during the construction, operation, and decommissioning phases.

In general, potential direct impacts from the construction phase relate to habitat loss and disturbance from disturbance to native vegetation. Potential direct impacts from the operations phase are largely limited to possible bird and bat collisions with WTGs. Potential decommissioning impacts correspond with those that might occur during the construction phase, however, are likely to be of a much lower magnitude as there is no additional vegetation clearing.

Indirect impacts will likely include impacts to species behaviour and movement through barrier creation, impacts to adjacent habitat areas as a result of noise, potential blasting, dust, runoff and erosion, introduction or spread of weed and pest species, and fragmentation of connectivity areas.

The Disturbance Footprint has been developed to consider the availability of the wind resource and with regard to known environmental values. The Development Corridor referenced within the MSES and MNES reporting for the Proposed Development is 75 m buffer of the Disturbance Footprint. The Disturbance Footprint is approximately 2,221.2 ha.

In total, the following MSES categories were identified as being impacted on by the Proposed Development:

- Regulated Vegetation (Intersecting a Watercourse)
- Protected Wildlife Habitat: The following species protected under the NC Act are likely to occur:
 - Koala (*Phascolarctos cinereus*);
 - Glossy black cockatoo (south-eastern) (*Calyptorhynchus lathami lathami*); and
 - Diamond firetail (*Stagonopleura guttata*);

Vegetation clearing for permanent and temporary construction infrastructure of the Project has the potential to impact flora and fauna. The consequences of this impact may include:

- Habitat loss;
- Mortality from vegetation clearing;
- Habitat fragmentation and patch isolation;
- Increased prevalence of invasive flora and fauna;
- Increased vehicle impacts on fauna and habitat;
- Altered fire regimes and bushfire risk;
- Altered hydrology, sedimentation and erosion;
- Noise, dust and light pollution;
- Hazardous material pollution;
- Mortality and injury from turbine collision and barotrauma; and
- Changes to bird and bat site utilisation.

Bird and Bat Collision

A Preliminary Bird and Bat Management Plan (refer to Appendix K) has been prepared for the Proposed Development. The report considers the likelihood of a bird or bat colliding with a WTG, and the consequence should this occur.

Through calculating the likelihood and the consequence, an overall risk rating is assigned to each species and the risk of potential impact to a species as a result of the Proposed Development. Potential impacts include direct collisions with WTGs, as well as indirect impacts such as the deterrence of migratory flightpaths.

The assessment determined the one threatened or migratory bird species as having a medium collision risk, which is the white-throated needletail (*Hirundapus caudacutus*).

All other listed threatened or migratory bird species were determined as having a low or negligible risk, a summary of the bird and bat assessment results have been provided in Table 6-2, noting that species that had the risk rating of negligible have not been included. A full assessment of the bird and bat collision is provided in Appendix K.

A bird and bat risk assessment and collision risk modelling found that there are not anticipated to be any impacts to protected bird or bat species during operation of the Proposed Development. However, the fork-tailed swift and white-throated needletail are considered to be at low and moderate risk, respectively.

TABLE 6-2 BIRD AND BAT RISK ASSESSMENT RESULTS

Species	EPBC Act, NC Act	Likelihood of Event	Consequence of Event	Risk Rating
Listed species				
Fork-tailed swift	Mi, SLC	Likely	Low	Low
Glossy black cockatoo (south-eastern)	V, V	Unlikely	Moderate	Low
White-throated needletail	V & Mi, VU	Likely	Moderate	Moderate
Raptors				
Black kite	-	Likely	Low	Low
Black-shouldered kite	-	Likely	Low	Low
Brown falcon	-	Likely	Low	Low
Wedge-tailed eagle	-	Almost certain	Low	Low
Bats Known to Occur in Project Area				
Large bent-wing bat	-, LC	Likely	Moderate	Moderate
Northern free-tailed bat	-, LC	Likely	Moderate	Moderate
White-striped free-tailed bat	-, LC	Likely	Low	Low
Yellow-bellied sheath-tailed bat	-, LC	Likely	Low	Low

Status listing per EPBC Act, NC Act: CE, CR = Critically Endangered; E, EN = Endangered; V, VU = Vulnerable; Mi = Migratory, - = no listing, SLC = Special Least Concern and LC = Least Concern
Historically relevant = records from ALA within 20 years
Broader locality = 150 km buffer applied to the Project Area boundary
RSA used = 75 m - 260 m

6.2.4 MITIGATION MEASURES

The following mitigation measures will be implemented to mitigate both direct and indirect impacts associated with the Proposed Development:

- Implementation of the following management plans:
 - Cleared Vegetation Management Plan;
 - Bird and Bat Management Plan;

- Vegetation and Fauna Management Plan;
- Preliminary CEMP; and
- Preliminary Post-Construction Rehabilitation Plan.

The abovementioned management plans will be implemented for the Proposed Development. These management plans contain a range of mitigation and management measures to address impacts associated with the Proposed Development, particularly as they relate to vegetation clearing and reduction of risks to ecological impacts.

Additionally, the operational footprint will reduce impacts through mitigation measures such as rehabilitation of vegetation and subsequently reduce impacts to MSES.

Further detail on mitigation measures specific to the identified ecological values are further described in Section 7 of Appendix K.

Where significant impacts to MSES cannot be avoided, the Proponent is committed to offsetting these impacts.

It is considered that the Proposed Development Complies with PO1 to PO4 of State Code 23, PO1 of State Code 27 and the applicable POs of State Code 16 as outlined in Table 6-1.

6.3 AGRICULTURAL LAND ASSESSMENT

6.3.1 RATIONALE

Wind farms and the associated infrastructure (including BESS) are typically located in rural areas, co-existing with agricultural land and other farming and related land uses. Ensuring the development of large-scale infrastructure does lead to the reduction or loss of high-quality agricultural land is important, particularly in these regional areas. As such any proposed development is required to demonstrate there is no significant loss of agricultural productivity and prosperity in the local government area and surrounding region.

As per State Code 23 and State Code 27, high quality agricultural land means strategic cropping land, and priority agricultural areas, or Agricultural Land Classification (ALC) Class A and Class B land.

An Agricultural Land Assessment (refer to Appendix J) has been prepared to assess potential impacts and demonstrate there will be no significant loss in high quality agricultural land values as per the requirements in PO5 of State Code 23 and PO9 to PO12 of State Code 27.

6.3.2 ASSESSMENT

Agricultural Land Classifications in Queensland align with a basic hierarchical scheme that is applicable across the State. The hierarchy follows the presentation of interpreted land evaluation data to indicate the location and extent of agricultural land that can be used for wide range of land uses with minimal land degradation.

- Class A – Crop Land.
 - A1 – Suitable for a wide range of current and potential broadacre and horticultural crops.
 - A2 – Suitable for a wide range of current and potential horticultural crops only.
- Class B – Limited Crop Land.

- Class C – Pasture Land.
 - C1 – Suitable for grazing sown pastures requiring ground disturbance for establishment; or native pastures on higher fertility soils.
 - C2 – Suitable for grazing native pastures, with or without the introduction of pasture species, and with lower fertility soils than C1.
 - C3 – Suitable for light grazing of native pastures in accessible areas and includes steep land more suited to forestry or catchment protection.
- Class D – Non-agricultural land.

The Agricultural Land Class implies a decreasing range of land use choice, and an increase in the severity of land use limitations and/or land degradation hazards. Class A land has the greatest potential for producing the widest array of crops whilst class D land is generally unsuitable for any agricultural land use.

A desktop Agricultural Land Assessment (refer to Appendix J) for the Proposed Development was completed for the Proposed Development using publicly available land resource data and in consideration of the Guidelines for Agricultural Land Evaluation in Queensland. The assessment concluded that:

- Approximately 43% of the Project Area is suited for mixed or limited crop use (Class A1/B);
- Less than 1% is considered suitable for horticultural land use (Class A2);
- Approximately 8% is classed as a mix of pasture and cropping land (Class C2/A1); and
- The remaining 48% of the Project Area is considered suitable for grazing only (Class C2/C3).

Strategic cropping land is land that is, or is likely to be, highly suitable for cropping because of a combination of the land's soil, climate and landscape features. Approximately 41% of the Project Area, and 52% of the Disturbance Footprint is mapped as strategic cropping land.

6.3.3 POTENTIAL IMPACTS

The Proposed Development will introduce a largely linear disturbance pattern across the Project Area, through the introduction of accesses roads, WTG pads, underground cabling and other associated infrastructure. More specifically, the Disturbance Footprint includes underground cabling with an allowance of clearing for the installation of the cabling. This is likely to limit cropping uses within the area, but it will not prohibit grazing activities from occurring within the cable route corridor.

More specifically, the assessment concluded that the Disturbance Footprint will impact:

- Approximately 1,189 ha (54%) is considered suitable for cropping land uses (Class A1/B);
- Approximately 214 ha (10%) is considered suitable for a mix of grazing and cropping land uses (Class C2/A1); and
- Approximately 818 ha (36%) is considered suitable for grazing land uses only (Class C1/C2/C3).

The Proposed Development has the potential to create localised impacts on cropping and grazing operations, including loss of productive land within the Disturbance Footprint, altered trafficability for farm machinery, changes to paddock access, and minor disruptions requiring adjustments to sowing direction or stock movement. Soil disturbance within the Disturbance Footprint also presents elevated erosion risks if not managed appropriately.

The Disturbance Footprint intersections 1,192 ha of mapped strategic cropping land, however desktop assessment undertaken as part of Appendix J indicates that a significant portion of these soil types do not meet the strategic cropping land criteria due to constraints such as poor drainage, salinity, sodality or shallow profiles.

The design of the Proposed Development has had regard to agricultural land values, and for the following reasons, no significant impacts associated with the loss of high-value agricultural land are anticipated:

- Landowner negotiations
 - WTG infrastructure placement has been refined in consultation with landowners to avoid areas of agricultural use where practicable; and
 - Landholder agreements include measures to maintain access, manage construction impacts, and ensure ongoing farming operations continue with minimal disruption.
- Siting of infrastructure
 - WTGs and access tracks have been positioned in way to reduce the loss of cropping area and maintaining efficient machinery operation; and
 - Linear infrastructure results in narrow disturbance corridors, preserving the majority of subject land for continuous agricultural use.
- Access tracks
 - New internal roads often enhance landholder access, enabling all-weather movement of machinery and stock and enhancing paddock connectivity; and
 - These roads represent long-term farm assets, replacing inefficient or degraded existing tracks with safer and more reliable access routes.

It is considered that the Proposed Development complies with PO5 of State Code 23 and PO9-PO12 of State Code 27 as outlined in Table 6-1.

6.4 WATER QUALITY AND EROSION CONTROL

6.4.1 RATIONALE

Given the footprints of WTGs and BESS', there may be impacts on natural waterways and drainage lines within the landscape.

Waterways and crossing points can require extensive modification to accommodate vertical curves required for heavy and long construction haulage vehicles. Impacts on waterways and wetlands need to be considered from a catchment perspective.

Site layouts must have regard to sensitive waterway and crossing points and whether associated impacts can be appropriately managed. Relevant considerations include the presence of sensitive, threatened and important species and the the management of erosion and run off at waterway intervention points. Consideration must be given to the consequences from a failure of erosion management and sediment control devices associated with prominent waterways.

A Stormwater Management Plan and Erosion Risk Assessment (refer to Appendix L and Appendix P) has been undertaken to adequately assess the potential impacts of the Proposed Development upon erosion and stormwater quality and quantity.

These have been undertaken in accordance with PO6 to PO9 of State Code 23 and PO16 to PO19 of State Code 27.

6.4.2 ASSESSMENT

6.4.2.1 NATURAL DRAINAGE PATTERNS

A Stormwater Assessment has been undertaken for the Proposed Development (Appendix L), which describes the environmental setting, in particular in relation to natural drainage patterns. A summary has been provided in Table 6-3.

TABLE 6-3 NATURAL DRAINAGE PATTERNS SUMMARY

Natural Drainage Patterns	Description
Soils	State Code 27 defines “high risk soils” as areas with erosive, dispersive, sodic, saline and/or acid sulfate soils. Whilst no site-specific soil sampling has been undertaken for the Project Area, a desktop review has been undertaken to understand the characteristics, and potential risks, associated with the Project Area’s soil landscape. As per the Stormwater Assessment (Appendix L), desktop data, indicates a strong presence of sodosol (dominant entities Braemar, Knoll, Leyburn, and Weranga) kandosol (dominant entities Flinton and Minnabilla), and vertosol (dominant entity Calingunee) soils is observed throughout the Disturbance Footprint.
Drainage Basins	The Project Area is located across the Border Rivers Basin, the Balonne-Condamine Basin, and the Moonie Basin. The majority of the Project Area falling within the Border Rivers Basin, the northeastern is corner located within the Balonne-Condamine Basin. A very small portion in the north of the Project Area is in the Moonie Basin. All three basins are sub-catchments of the encompassing Murray-Darling Basin.
Waterways	Initial assessment shows that there are several instances where the Disturbance Footprint intersects with a surface water feature, primarily at locations where the access track network crosses these water features. All crossings occur at features classified as “unmapped” waterways. The BESS footprint does not intersect with any feature or buffer zone. The defining watercourse of the region is the Weir River. The Weir River flows east to west in close proximity to the southeastern boundary of the Project Area, intersecting the Project Area at several points, notably flowing through the southern portion of the Project Area. All other drainage features and unmapped waterways that flow through the Project Area are tributaries of the Weir River, the most notable of which being Waar Waar Creek and Back Creek in the west and Cattle Creek and Humpybong Creek in the central region.

Natural Drainage Patterns	Description
	It is anticipated that temporary and permanent watercourse crossings that are proposed as a result of the Proposed Development will require waterway barrier works (as defined by the <i>Fisheries Act 1994</i>). A review of the "QLD waterways for waterway barrier works" spatial data layer on Queensland Globe indicates that there is one instance where the Disturbance Footprint is proposed to intersect with a waterway defined as "High Risk". This occurs along the footprint of the 330 kV Transmission Line. Nine crossings occur at "Moderate Risk" waterways, with all other crossings occurring at waterways classified as "Low Risk", or at minor "unmapped" waterways not captured by the waterway barrier works mapping. Design considerations will be required to minimise impacts on fish passage at identified crossings, with risk management controls specified in the SWMP. Approval to undertake waterway barrier works may be required, however this will be determined during later phases of the Proposed Development.
Flood zones	Flood modelling was undertaken by the Proponent in 2024 as a means of understanding the extent and depth of the 1% Annual Exceedance Probability (AEP) flood event throughout the Project Area. The greatest flood extent and depth within the Project Area primarily occur along the defined waterways of the Project Area, namely Cattle Creek and Humpybong Creek in the central region, and along Waar Waar Creek in the Project Area's west. Disturbance Footprint interactions with the 1% AEP flood extent primarily occur along tributaries of these waterways, predominantly along the access track network. Flood modelling was undertaken in 2024 to understand the extent and depth of the 0.2% AEP flood event throughout the Project Area. In particular for the BESS and substation components of the Proposed Development, they will be developed outside of the 0.2% AEP flood event.

6.4.2.2 WATER QUALITY AND EROSION

An Erosion Risk Assessment (Appendix P) was undertaken and utilised the Revised Universal Soil Loss Equation (RUSLE) to identify areas that may be of high erosion risk. The outputs of the RUSLE assessment concluded that the Project Area is predominantly comprised of areas classified as very low erosion risk.

6.4.3 POTENTIAL IMPACTS

6.4.3.1 NATURAL DRAINAGE PATTERNS

The potential impacts associated with natural drainage patterns, can be separated into three categories:

- Watercourse crossings;
- Changes in catchment characteristics; and
- Flooding.

The impacts associated with these are summarised in Table 6-4.

TABLE 6-4 NATURAL DRAINAGE PATTERNS POTENTIAL IMPACTS

Natural Drainage Patterns	Potential Impacts
Watercourse crossings	In general, most waterway crossings will have some influence on the conditions surrounding the crossing site. However, suitably designed and constructed waterway crossings consider the long-term stream dynamics at the crossing site to minimise potential impacts. The potential impacts associated with waterway crossings are site-specific but, in general, may include: • Increased sediment and nutrient loads due to altered roadside drainage arrangements; • The disturbance and/or removal of riparian and in-stream vegetation; • Prevention of fish passage/aquatic fauna through the crossing structure; and • The alteration of the stream's natural flow pattern, both in-channel and floodplain flows. The Disturbance Footprint has been sited to avoid the crossing of significant water features wherever practicable. Where watercourse crossings occur, these are predominantly attributed to the intersection of the access track network with unmapped waterways. The access track network has been sited to utilise existing tracks where practicable to minimise such crossings. Eight crossings occur along the internal 330 kV Transmission Line. All hard standing infrastructure (including the 135 WTGs and the BESS area) are situated away from watercourse crossings.
Changes in catchment characteristics	The Disturbance Footprint is representative of approximately 10.9% of the encompassing Project Area. Impacts to drainage lines on a local scale may arise if changes to local catchment characteristics are left unmitigated. Review of the Proposed Development that impacts to local drainage lines may arise due to the following: • Reduced infiltration of stormwater flows resulting in increased waterway flows, particularly during lesser rainfall events; • Site grading activities resulting in changes to local flow regimes (sheet flow vs concentrated flows) and the diversion of mapped water features; and • Access tracks intercepting and diverting sheet flows.
Flooding	As per the assessment for flooding in Table 6-3, direct impacts to flood zones (such as floodwater afflux) are not likely to occur (final determination subject to detailed flood assessment, should this be required). Indirect impacts may arise where there is an increase in the extent of hard stand infrastructure throughout the upstream catchment of identified flood zones. Such impacts are also subject to determination in a detailed flood assessment.

6.4.3.2 WATER QUALITY AND EROSION

Construction and ground disturbance activities are expected to present to an elevated erosion risk, particularly in sloped areas, with erosion impacts associated with these activities amplified in the small portion of the Disturbance Footprint (~0.1%) defined by a moderate to high erosion risk. The construction of OSOM routes may also present an elevated erosion risk due to the more onerous cut and fill depths that are required along these wide routes.

Other potential impacts to stormwater quality from the Proposed Development include:

- Leakage or accidental spillage of oil, fuel or other liquids associated with the Project, with potential for drainage to local waterways if not appropriately managed;
- Release of contaminants to stormwater due to improper management and containment of washdown area water;
- If the water used for dust suppression is of a poorer quality compared with the background surface water quality, this can cause an impact to the quality of surface water and soils;
- Chemical leaks from batteries, such as accidental damage during installation has the potential to migrate off site if not managed; and
- Release of concrete based pollutants resulting in an increase in the pH of surface waters.

There are up to four proposed concrete batching plants across the Project Area, which will support the production of concrete for WTG foundations and other infrastructure footings.

6.4.4 MITIGATION MEASURES

The Proposed Development will implement the following measures to mitigate and manage impacts on water quality and erosion within the Disturbance Footprint:

- Implementation of a CEMP (refer to Appendix F);
- A site-specific Erosion and Sediment Control Plan in line with best practice management measures and will be developed by a suitably qualified professional;
- A Rehabilitation Management Plan;
- A Stormwater Management Plan will be developed;
- A Site Stabilisation Plan – Operations will be developed in accordance with best practice erosion guidelines and standards;
- Implementation of a surface water quality monitoring program to establish baseline conditions;
- Hard standing infrastructure to be located away from natural drainage lines, waterways and wetlands;
- Road assess designed to minimise crossings, and the appropriate secondary approvals will be obtained if necessary;
- Diversion channels or catch drains to be established around construction and material storage areas to divert flow from impervious surfaces; and
- Environmental control measures and permanent infrastructure to be located outside the 1% AEP flood zone.

The Proposed Development achieves the requirements associated with the relevant performance outcomes of State Code 23 and State Code 27 as outlined in Table 6-1.

6.5 RISK MITIGATION AND INCIDENT RESPONSE

6.5.1 RATIONALE

BESS have the potential to introduce specific safety concerns, such as thermal runaway, electrical faults, and fire hazards. Therefore, safety considerations are to be considered as part of the DA. Additionally, the BESS present risks that require appropriate detection and suppression systems and tailored incident response protocols.

A Risk Management Assessment Report (Appendix Q) has been prepared to consider the safety concerns related in a BESS outlined in PO2 to PO7 of State Code 27.

6.5.2 ASSESSMENT AND POTENTIAL IMPACTS

As part of the Risk Management Assessment Report, hazards with the potential to cause risk during the construction, operation and decommissioning of the BESS have been identified and assessed. The assessment methodology is aligned with AS/NZS ISO 31000:2018 and applies a staged approach, comprising of:

- A hazard screening;
- A desktop Hazard Identification; and
- The development of principal safeguards and controls.

The proposed BESS presents hazards typical of lithium-ion battery storage systems including electrical hazards, overheating/thermal runaway, fire potential explosion/deflagration and ancillary chemical and environmental hazards.

Based on all the hazards identified, the assessment demonstrates that credible escalation scenarios are prevented or mitigated through design-basis safeguards and proposed controls.

6.5.3 MITIGATION MEASURES

The Proposed Development will implement the following measures to mitigate and manage impacts on related to incident response:

- Preparation and implementation of a Fire Safety Study;
- Implementation of a Safety Emergency Management Plan;
- Implementation of a CEMP; and
- Preparation and implementation of a detailed Operational Environment Management Plan.

These management plans will ensure that construction and operational workforce, surrounding sensitive receptors and existing facilities exposure to the potential risks from the BESS is mitigated where it cannot be avoided.

The following safety features have been incorporated into the BESS design demonstrate effective mitigation of any hazards typical of lithium-ion battery storage systems:

- Integrated Battery Management System protective functions (monitoring, alarms, limiting and controlled isolation);
- Integrated Fire Suppression System (detection, ventilation/exhaust and staged suppression);
- Manufacturer-aligned separation/clearance requirements to reduce propagation potential and support safe access; and
- Provision of dedicated firewater infrastructure (Tanks, pump house and ring main) which provides a robust capability for exposure cooling of adjacent containers and helps prevent escalation beyond the initiation enclosure, supporting containment of thermal events within the BESS compound.

Additionally, the siting of the BESS mitigates risk outcomes as outlined below:

- Central location within the Project Area (increasing separation to boundaries and receptors); Flammable and combustible storage is not located adjacent to the compound; and
- Bushfire exposure is reduced as the BESS lies outside the mapped bushfire prone area with site-wide vegetation and separation measures proposed.

Furthermore, the BESS will include a 24 hour monitored detection and battery thermal management system. This system maintains the safe and efficient operation and prevents fire incidents or system failures. The Battery Management System will monitor down to the module level and ideally isolate individual cells or modules that are displaying unusual behaviour well in advance of the onset of thermal runaway. Under emergency conditions the battery management system will electrically disconnect battery enclosures and may also trigger emergency systems such as emergency ventilation.

The Proposed Development achieves the requirements associated with the relevant performance outcomes of State Code 27 as outlined in **Table 6-1**.

6.6 NATURAL HAZARD RISK ASSESSMENT

6.6.1 RATIONALE

Wind farms and BESS' are typically located in remote areas that can be exposed to natural hazards such as flooding and bushfires, and in some instances cyclones, heatwaves and droughts.

The construction of wind farms involves significant numbers of workers spread over large areas. Plans and strategies need to be in place to ensure the safety of on-site workers and the surrounding communities in the event of natural hazards or extreme weather events occurring.

The construction of BESS' normally involves a modular installation process. The period of installation can vary dependent on the scale of the proposal and can require additional vehicle trips and personnel on site to deliver BESS units and personnel on site. Further details are outlined in PO10 and PO11 of State Code 23 and PO13 to PO15 State Code 27 relating to natural hazard risks.

The potential hazards identified in the following sections have been assessed through a combination of desktop review and site-specific technical investigations.

Natural hazards were assessed for the construction, operation and decommissioning phases of the Project. Hazards considered relevant include bushfire, flooding and overland flow and extreme weather events. Other potential natural hazards have been reviewed and are deemed low or negligible risk to the Proposed Development.

Through the desktop review, bushfire are considered a higher risk to the Project as the Project Area is mapped to be located within the medium bushfire risk area, and as such a Natural Hazard Risk Assessment (Bushfire) has been prepared in Appendix M. Flooding and extreme weather events are detailed in the sections below with the erosion risks associated with the Proposed Development detailed in Section 6.4.

6.6.2 BUSHFIRE

6.6.2.1 ASSESSMENT

As per the SPP mapping (Appendix I), the Project Area is mapped within medium bushfire risk areas, reflecting its rural setting and surrounding remnant vegetation. Bushfire events are a known and recurring hazard in the region and may occur during the operational life of the Proposed Development. If unmanaged, bushfire could impact infrastructure, access and operational continuity during extreme fire weather conditions. There is potential for the ignition of flammable materials within WTG, including hydraulic oil and plastics within proximity to machinery and internal electrical wiring. Fire or explosion in collector substations may also pose a risk to surrounding vegetation if adequate mitigation measures are not in place.

6.6.2.2 POTENTIAL IMPACTS

As it is identified the Project Area is within medium bushfire risk area, a Natural Hazard Risk Assessment (Bushfire) has been prepared for the Proposed Development (refer to Appendix M)

Fuel load arrangements and their impact on bushfire behaviour have been assessed as part of the Natural Hazard and Risk Assessment. Vegetation within the Project Area was classified into three categories being Bushfire Prone, Grassfire Prone and Low-Hazard vegetation. Bushfire Prone vegetation was found to cover approximately 49.6% of the site, with Grassfire Prone and Low-Hazard vegetation dominating the site with an approximate coverage of 45.1%, with Low-Hazard vegetation covering 5.3%.

Per the Victorian Country Fire Authority guidelines (CFA 2023), wind turbines can only fall under two siting criteria: Low-Risk or High-Risk. Where the siting of a WTG does not conform with the conditions of a Low-Risk area, the WTG are then classified as High-Risk. The CFA guidelines discuss Low-Risk environments in terms of the overall facility itself, though it is inferred that all components of a renewable facility must meet the criteria to be considered to be placed within a Low-Risk area. The CFA guidelines do not provide absolute clarity of the definition of a High-Risk environment in regard to its placement 'within' a non-grassland vegetation type.

6.6.2.3 MITIGATION MEASURES

The CFA guidelines provides the minimum Asset Protection Zone width which is detailed below:

- Minimum of 10m for low risk areas;
- Minimum of 30m around the base of the WTG for transitional risk areas; and
- Distance to the extent of the swept blade envelope for high risk areas.

The following mitigation measures will be implemented to mitigate the direct and indirect impacts of natural hazards in the Project Area:

- Asset Protection Zones
- Safety and Emergency Management Plan;
- Bushfire Management Plan;
- Installation of one static bushfire water supply at the site entrance; and
- The WTGs will be equipped with automatic fire detection alarms.

6.6.3 FLOOD

6.6.3.1 ASSESSMENT

Flood modelling was undertaken by RWE in 2024 to understand the extent and depth of the 1% Annual Exceedance Probability (AEP) flood event throughout the Project Area and 0.2% AEP for the BESS and Substation locations. The outputs of this assessment was incorporated into the Stormwater Assessment (refer to Appendix L).

The 1% AEP flood extent presented in the Stormwater Assessment shows that the areas of greatest flood extent and depth within the Project Area primarily occur along the defined waterways of the Project Area, namely Cattle Creek and Humpybong Creek in the central region, and along Waar Waar Creek in the Project Area's west. Interactions of the Disturbance Footprint with the 1% AEP flood extent primarily occur along tributaries of these waterways, predominantly along the access network. The depth of the modelled flood zone along the access network is predominantly confined to depths of <0.5 m, with maximum modelled depths of >5.0 m observed in small areas such as the Back Creek crossing in the west of the Project Area. Modelled flood ingress along the footprint of hard standing infrastructure such as the WTGs, BESS, substations, and O&M compound is highly sporadic, and typically confined to depths of <0.5 m.

The 0.2% AEP flood extent presented in the Stormwater Assessment shows that the BESS and substation components of the Proposed Development will be located outside of the 0.2% AEP flood extent.

6.6.3.2 POTENTIAL IMPACTS

Direct impacts to flood zones (such as floodwater afflux) are not likely to occur. Indirect impacts may arise where there is an increase in the extent of hard standing infrastructure throughout the upstream catchment of identified flood zones. Such impacts are also subject to determination in a detailed flood assessment.

The access track network is proposed to intersect with the 1% AEP flood zone at several instances, primarily where watercourse crossings of waterways and tributaries is proposed to occur. Watercourse crossings have the potential to contribute to an alteration of downstream flood zones, due to the potential impedance of contributing drainage lines that may result in the ponding of floodwaters, increasing the flood depth and extent in the upstream environment. The extent of flooding at watercourse crossings is evidently greater at larger stream order drainage features (such as Back Creek) where depths have been modelled at >5 m. A majority of watercourse crossings occur at minor tributaries, where the modelled 1% AEP flood depth is confined to <0.5 m. Appropriately sized watercourse crossing infrastructure (i.e. culverts sized to the 1% AEP flood event) are expected to be sufficient to manage increased flows during flood events. This will ensure downstream drainage lines remain unimpeded and avoid the ponding of floodwaters in the upstream environment..

6.6.3.3 MITIGATION MEASURES

Flood and overland flow, can be mitigated via the following measures:

- Where practicable, locate all permanent infrastructure, construction compounds and other temporary facilities outside of the predicted 1% AEP flood zone;

- Environmental control measures (waste, chemical and hazardous storage, spill kits, vehicle and machinery washdown areas, laydown areas) to be located outside of the 1% AEP flood zone;
- Appropriate sizing of drainage channels and flood controls (i.e. culverts at waterway and drainage feature crossings); and
- During construction, avoid activities during high rainfall periods of the year that may induce a higher flooding risk. Rainfall data from Dunmore Exchange Tm Station near the Project Area indicates the wet season period falls between October to March.

6.6.3.4 EXTREME WEATHER EVENTS

The Darling Downs region is subject to rainfall variability, severe storms, heatwaves, high winds, low seismic risk, and residual ex-tropical cyclone influences typical of inland Queensland. Table 6-5 below outlines the likelihood of each extreme weather event and the potential of the hazard to impact the Proposed Development.

TABLE 6-5 LIKELIHOOD OF EXTREME WEATHER EVENTS

Hazard	Potential Impacts
Severe Storms	The Darling Downs Region has a well-documented history of frequent severe thunderstorm activity. Bureau of Meteorology records indicate that the region consistently experiences among the highest numbers of severe storm warning days in the state, with recent seasons recording around 40 warning days in a single storm season. This elevated frequency is attributed to the convergence of moist coastal air and hot continental air along the Great Dividing Range, creating conditions highly conducive to severe thunderstorm development. Historical events across the region have included large to giant hail, damaging wind gusts exceeding 100 km/h, and intense short-duration rainfall, demonstrating that severe storms are a regular and recurring hazard for the Darling Downs (BoM 2026). Low. This is not expected to pose unacceptable risks to long-term operation through implementation of effective drainage design within and surrounding Project infrastructure, as detailed in Section 6.6.1.2 and within Appendix L.
Drought	Drought is a long-established and recurring climatic feature of the Darling Downs. Historical climate records and Queensland Government regional drought resilience planning demonstrate repeated periods of prolonged drought with impacts on agriculture, water availability and land condition. The region's average potential evaporation exceeds annual rainfall, increasing vulnerability to extended dry periods. On this basis, drought is considered a high-likelihood long-term hazard (Queensland Government Climate Change Impact Summary – Darling Downs, 2024; Darling Downs Regional Drought Resilience Plan). Low. Drought mitigation will be managed through operational planning and water management measures. The project does not rely on surface water availability for operation, and construction water sourcing is subject to on-site storage and ongoing management under the <i>Water Act 2000 (QLD)</i>. Progressive rehabilitation and groundcover management reduce land degradation during extended dry periods, while ongoing agricultural use of surrounding land is maintained to support regional drought resilience.

Hazard	Potential Impacts
Cyclone	Data published from the Queensland Government notes that the Darling Downs Region is situated outside of typical tropical cyclone landfall areas. Historical evidence indicates the Darling Downs Region has been impacted by approximately 10 ex-tropical cyclones within the past 150 years (BoM, 2026). These have produced heavy rainfall, flooding and strong winds across the region, particularly in late summer and early autumn. While direct cyclone impacts do not occur, secondary impacts from decaying tropical systems are a rare but recognised hazard (BoM 2026). Negligible. Based on available climate records and historical reporting, the Darling Downs has experienced minimal impact by a limited number of ex-tropical cyclone events over the historical record. Mitigation measures such as stormwater and overland flow management (refer to Appendix L) will ensure ex-tropical cyclone impacts are mitigated.
Earthquake	Earthquake occurrence in the Darling Downs Region is rare and consistent with Queensland's intraplate tectonic setting. Historical earthquake databases compiled by the University of Queensland Seismological Centre show seismic events in southern Queensland are infrequent, generally low-magnitude and widely spaced in time. Accordingly, earthquakes are considered a low-likelihood hazard for the region (University of Queensland Seismological Observatory, Geoscience Australia). Negligible. Given the low likelihood of seismic activity, no specific earthquake mitigation measures are required beyond compliance with relevant Australian design and construction standards. Infrastructure design incorporates standard structural safety factors applicable to low seismic risk regions, and no additional operational controls are proposed or required.

The Proposed Development achieves the requirements associated with the relevant performance outcomes of State Code 23 and State Code 27 as outlined in **Table 6-1**.

6.7 ACOUSTIC AMENITY

6.7.1 RATIONALE

Wind farms and BESS' are commonly located in areas of low ambient noise which has the potential to affect nearby sensitive receptors. The Proposed Development is required to demonstrate noise emission will not adversely impact sensitive receptors.

A Noise Impact Assessment (refer to Appendix N) has been prepared for the Proposed Development to assess impacts on the acoustic amenity of sensitive receptors in proximity to the Project Area. The report assumes a worst-case scenario with predicted noise levels at each identified sensitive receptor assessed against the acoustic criteria defined in State Code 23 (PO12 and PO13) and State Code 27 (PO20 and PO21).

6.7.2 ASSESSMENT

The Noise Impact Assessment has taken a conservative approach by utilising maximum dB(A) requirements. The assessment includes a three-dimensional model of the cumulative operation of the WTGs that utilises the noise prediction algorithm provided by *ISO 9613-2:1996 Acoustics – Attenuation of sound during propagation outdoors – Part 2: General method of calculation* (ISO 9613-2 1996).

The assessment has been based on the Nordex N175-6.8MW WTG with the sound power levels based on the original equipment manufacturer noise data. The assessment has been based on one-third octave band data between 10 Hz and 10 kHz referenced to 10m above ground level, which are subject to commercial in confidence provisions imposed by the original equipment manufacturer.

This assessment compares predicted noise levels against the applicable baseline criteria. The baseline criteria remain constant for all hub height integer wind speeds. Accordingly, where compliance with the baseline criteria is demonstrated at the highest total sound power level (integer hub height wind speeds of 9 m/s and above), compliance is achieved for all other integer hub height wind speeds.

The Proposed Development includes a BESS with a capacity of up to 450MW. Potential BESS equipment has been reviewed and whilst commercial sensitivities preclude identification of the specific models or data, this assessment has been based on a BESS selection representing a conservative noise outcome (highest likely noise level). BESS operation varies in load depending on time and day and associated network demand. An assumed cumulative sound power level of 120 dB(A) is used for the BESS, representing continuous full load operation of all BESS components with cooling fans at 100% capacity. This is considered a conservative assumption, particularly with respect to the night-time period.

6.7.3 POTENTIAL IMPACTS

The predictions indicate that the noise level for the most conservative potential equipment selection operating at 100% capacity will still achieve:

- 45 dB(A) at all host lots for all integer hub height wind speeds; and
- 35 dB(A) at all non-host lots for all integer hub height wind speeds.

Based on the proposed layout, the BESS is expected to easily achieve the criterion of 35dB(A) within a significant margin.

The Proposed Development is expected to achieve the project criteria in terms of noise accordingly no mitigation measures have been proposed.

However, prior to the commencement of the Proposed Development, the following actions will be undertaken:

- An updated Noise Impact Assessment prior to commencement of construction using the final selected WTGs and BESS technology; and
- Preparation of a Noise Monitoring Plan.

The Proposed Development achieves the requirements associated with the relevant performance outcomes of State Code 23 and State Code 27 as outlined in **Table 6-1**.

6.8 ELECTROMAGNETIC INTERFERENCE

6.8.1 RATIONALE

Wind turbines can block, reflect or refract electromagnetic waves affecting microwave, television, radar or radio transmissions and reception through Electromagnetic Interference, as such to demonstrate that there are no impacts, PO 4 of State Code 23 relates to electromagnetic interference.

An Electromagnetic Interference (EMI) Assessment (Appendix R) has been prepared for the Proposed Development and considered the following:

- Point-to-point (fixed) radiocommunication links;
- Meteorological data;
- Mobile voice-based communications;
- Wireless and satellite internet services for dwellings;
- Broadcast and digital radio signals;
- Trigonometry stations; and
- Global Positioning System (GPS).

6.8.2 ASSESSMENT

A summary of the assessment of the Electromagnetic Interference (EMI) Assessment (Appendix R) has been provided in Table 6-6.

TABLE 6-6 SUMMARY OF ELECTROMAGNETIC INTERFERENCE ASSESSMENT

Assessment	Description
Point-to-point Radiocommunication Links	The Project Area contains no Australian Communication and Media Authority (ACMA) sites and one ACMA link. WTGs have the potential to impact on ACMA sites and links through near field effects, diffraction and reflection or scattering effects. WTGs associated with the Proposed Development are not located within close proximity to an ACMA site and as such will not result in near-field effects or reflection/scattering effects. Diffraction effects are associated with ACMA links, due to the presence of an ACMA link in the north of the Project Area an assessment to determine the Fresnel zones. Fresnel zones define an envelope of influence along the length of an ACMA link, whereby a WTG could impact signal. This assessment determined that WTG associated with the Proposed Development have been setback an adequate distance to ensure no diffraction effects.
Meteorological Radar	The World Meteorological Organisation recommends WTG are sited, at a minimum, beyond 5 km from meteorological radars, and preferably beyond 20 km. A review of meteorological radars within 250 km of the Project Area, identified the Marbug Radar to the closest at approximately 161 km from the Project Area. Additionally, the presence of 5 other radars within 250 km of the Project Area, gives good visibility of weather events in the region.

Assessment	Description
	As such, the presence of the Proposed Development is unlikely to cause adverse performance of meteorological radar.
Mobile Voice-Based Communications	There are no mobile phone base stations within 2 km of a WTG associated with the Proposed Development. The closest mobile phone base station is 9.9 km from the nearest WTG. Typically, the signal will not be significantly impacted where towers are located more than 2 km from WTG. In regard to mobile coverage, in the immediate vicinity of WTGs, some reduction in signal may occur, however, beyond the Project Area there will be no impact on mobile coverage.
Wireless and Satellite Services	Satellite services will only be impacted where receivers are sited in close proximity to WTG, impeding their view of the sky. The Proposed Development may cause some degradation in satellite signal quality for dwellings within the Project Area.
Trigonometrical Stations and GPS	Trigonometrical stations and survey marks are observation markers used for surveying or distance measuring purposes. GPS antennas and Electronic Distance Measuring devices may be installed at some trigonometrical stations. There are no WTG that share the same location as a survey mark. The closest distance to a survey mark is approximately 420 m.
Broadcast, Digital Radio and Television	Amplitude Modulation (AM) broadcast-band signals are medium wave signals. WTG can influence the radiating patterns, with the potential to result in reduced signal quality and strength, as well as causing interference at neighbouring frequencies. A 2 km radius consultation zone exists around AM transmitters. The field of influence from the receiver's perspective is in the order of tens of meters. Frequency Modulated (FM) broadcast-band signals are more robust around obstructions. At the edge of the transmission range, where the signal to noise ratio is already low, WTG can have an adverse impact on signal. A 1 km consultation zone exists around FM radio transmitters. Digital signals tend to be more robust than analogue signals, though WTG rotor pass can cause signal frequency variation. A 2 km radius is generally desirable around transmitters – for both digital radio and digital television. No broadcast, radio, and television services transmitters are located within 5 km of a WTG associated with the Proposed Development. As such, it is highly unlikely the Proposed Development will impact on any broadcast, radio, and television service transmitters.

6.8.3 POTENTIAL IMPACTS

The Proponent consulted the following key stakeholders, and a summary of their response is provided below:

- Telstra – The Proponent discussed mobile service operation due to the ACMA link and site. A response was received and confirmed there would be no impact.
- BoM – Impacts to the Toowoomba meteorological radar have been identified as having the potential to occur. Appropriate mitigation will be developed in consultation with the BoM.
- Geoscience Australia – Impacts to GNSS Towers and Trigonometrical infrastructure were identified. A response was received and confirmed there would be no impact.

The Proposed Development has been designed and positioned to prevent or mitigate impacts associated with EMI. Stakeholder engagement has been conducted to confirm the finding

6.8.4 MITIGATION MEASURES

The Proponent is undertaking further engagement with relevant stakeholders to identify further define potential impacts and mitigation measures. A Final EMI Assessment will be undertaken prior to construction.

The Proposed Development achieves the requirements associated with PO14 of State Code 23 as outlined in Table 6-1.

6.9 LANDSCAPE AND VISUAL IMPACTS

6.9.1 RATIONALE

Wind farms and BESS' may potentially result in impacts to landscape amenity and views on sensitive receptors, in particular in landscapes identified on Council online mapping, that have high scenic amenity to the region. Preserving the scenic amenity of regions valued for their landscape quality is essential for protecting cultural and social connections to place, tourism appeal, and broader community expectations.

Furthermore, in terms of wind turbines, they have the potential to cast intermittent shadows that appear to flicker to an observer at a fixed ground position. Given the height of wind turbines, shadow flicker can be observed at considerable distances. Shadow flicker may occur in certain geographical positions at a particular time of day.

PO23 of State Code 27 also requires consideration of night time lighting, especially for safety to ensure visibility for personnel accessing the site at night, security to deter unauthorised access or vandalism, operational efficiency to aid in navigation around high-voltage areas and equipment, and during an emergency response to facilitate safe evacuation or intervention by emergency services during incidents.

To address the above, a Landscape and Visual Impact Assessment (refer to Appendix O) has been prepared in accordance with PO15 and PO17 of State Code 23 and PO22 and PO23 of State Code 27.

6.9.2 ASSESSMENT AND POTENTIAL IMPACTS

6.9.2.1 LANDSCAPE CHARACTER

The Landscape and Visual Impact Assessment (refer to Appendix O) identifies three landscape character units that reflect the combination of landform, vegetation, land use and visible landscape patterns. These include:

- Watercourses;
- State Forests and Vegetated Flats; and
- Agricultural Pastures.

Each landscape character unit was assessed using a scenic quality frame of reference, with all units returning Low to Moderate–Low Scenic Quality Ratings due to flat landforms, modified vegetation, lack of prominent natural features, and the prevalence of agricultural or production forestry land uses. While a portion of State Forest and Vegetated Flats overlaps a mapped High Landscape Value area under the Western Downs Planning Scheme, field inspection confirmed a degraded and intermittently logged forest landscape that aligns with its Moderate–Low rating. Overall, the Proposed Development sits within a highly modified rural landscape capable of accommodating new infrastructure without a significant change to its visual character.

6.9.2.2 SHADOW FLICKER

State Code 23 (PO15) states that the Proponent must undertake shadow flicker assessment that identifies the potential impacts and how these may be mitigated or managed. This assessment should consider the potential impacts on existing or approved sensitive land uses and ensure that any modelled blade shadow flicker impacts affecting sensitive land use do not exceed 30 hours per annum and 30 minutes per day. The extent of shadows from WTGs based on a distance of 265 m x maximum blade chord (in this case, 4.9 metres) is determined to be 1,299 m.

No associated or non-associated dwellings, including a 50 m buffer from centre of dwelling, were identified within 1,299 m of the proposed WTGs (the maximum extent of shadows from the WTGs). This means no further assessment is required. As all dwellings are outside 1,299 m, no further assessment or mitigation is required.

Exposure to shadow flicker while travelling has the potential to be noticeable and intermittently cause annoyance to some road users. The shadow flicker assessment illustrates that shadow flicker might occur along 5.9 km of Cecil Plains Moonie Road within the Project Area for 0 to 150 minutes per day to 0 to 400 hours per year. Existing vegetation along this road offers some screening.

6.9.2.3 LIGHTING

The assessment considered both Aviation Hazard Lighting and operational lighting associated with ancillary infrastructure. As WTGs exceed 160 m, CASA may require medium-intensity red obstacle lights on selected turbines to define the wind farm extent. Although aviation lighting can be visible over long distances, the Project Area's flat topography, sparse settlement, and extensive State Forest vegetation substantially limit the number of receptors with potential visibility of these lights. Where visible, lighting appears as discrete, low-intensity points within the broader night landscape.

6.9.2.4 BESS

The proposed BESS is located more than 8 km from both Cecil Plains Moonie Road and Waugh Road, and is 7.4 km from the nearest non-host dwelling. The assessment concluded as the BESS is no more than 4 m in height it will likely be visually insignificant past 2 km. Given the above, the assessment concluded that the BESS is likely to have a negligible visual impact due to large distance from sensitive receptors and the presence of intervening vegetation.

6.9.2.5 VIEWPOINT ANALYSIS

14 publicly accessible viewpoints were assessed to understand how the Project would be experienced throughout the Study Area. Results show that:

- Six viewpoints have a negligible visual impact;
- Four viewpoints have a low impact;
- Two viewpoints have a moderate–low impact; and
- Two viewpoints—both close-range locations (VP06 and VP08)—have a moderate impact.

Moderate visual impacts are limited to locations immediately adjoining the Project Area where WTGs become visually prominent, without interrupting key landscape features or scenic vistas.. Across most of the Project Area, intervening vegetation, particularly within the surrounding State Forests, fragments or obscures views, and turbine scale diminishes significantly beyond 6 km.

6.9.2.6 PHOTOMONTAGES

Five photomontages were prepared to illustrate the Proposed Development from viewpoints representing the highest magnitude of change. The photomontages confirm that existing vegetation provides substantial visual filtering, particularly along road corridors and within State Forests. Even where WTGs are visible, they typically appear as intermittent elements framed by vegetation or set back within a wide, modified landscape. Modelling indicates that turbine visual prominence diminishes rapidly with distance. When combined with mitigation measures such as vegetation retention and supplementary planting, the Proposed Development can be accommodated with low overall visual impact..

The Proposed Development achieves the requirements associated with PO15 – 17 of State Code 23 and PO22 – 23 of State Code 27 as identified in Table 6-1.

6.10 TRANSPORT NETWORKS

6.10.1 RATIONALE

Wind farm and BESS construction generates substantial construction traffic, including heavy vehicle haulage. The OSOM loads and other heavy vehicles place significant, and at times disruptive, demands on local and state road networks during the construction period.

As such, a Traffic Impact Assessment and Heavy Vehicle (Appendix D) Preliminary Route Assessment (Appendix E) has been prepared to address PO18 to PO21 of State Code 23 and PO24 to PO28 of State Code 27.

6.10.2 ASSESSMENT

A Preliminary Route Assessment (refer to Appendix E) and Traffic Impact Assessment (refer to Appendix D) have been prepared for the Proposed Development and provides a Preliminary assessment of the movement of WTG and BESS components and traffic movements into and out of the Project Area. The assessment were informed by an inspection of the potential routes conducted by individuals from Rytenksild Traffic Engineering in April 2026.

6.10.2.1 PRELIMINARY ROUTE ASSESSMENT

The Preliminary Route Assessment (refer to Appendix E) identifies how components required for the Proposed Development might be transported from a nominated port to the Project Area. The Port of Brisbane has been selected as the preferred port. The common route from the Port of Brisbane to Charlton has been assessed and is generally suitable for OSOM transport up to 5.4 m in height, subject to minor localised constraints. OSOM vehicles exceeding 5.4 m in height will require detours at identified overhead structure constraints.

Four OSOM routes from Charlton to the Project Area has been considered. The Preliminary Route Assessment confirms that all four OSOM routes are considered generally feasible, subject to localised upgrades and detailed design verification.

6.10.2.2 TRAFFIC IMPACT ASSESSMENT

The Traffic Impact Assessment has been prepared to consider the proposed vehicle access locations and potential traffic generation during the construction and operational phases of the Proposed Development and determines if upgrades are necessary.

The Proposed Development will generate a total of approximately 24,000 heavy vehicles movements (one-way) over the construction period, with peak activity occurring during the turbine foundation and electrical work phases. At Cecil Plains Moonie Road, the traffic volumes during construction are anticipated to be approximately 110 vehicles per day. The existing road network generally operates safely, with no identified crash 'black spots' that warrant a detailed assessment, however there are some localised safety constraints such as narrow pavements, horizontal curves and irregular intersections.

6.10.3 POTENTIAL IMPACTS

6.10.3.1 SITE ACCESS AND ROUTE IMPACT

The Preliminary Route Assessment identifies key constraints across all routes such as floodway vertical geometry limitations, intersection swept path constraints, overhead structure clearance restrictions, and bridge/culvert capacity verification requirements. Further structural verification will be required for bridges and culverts associated with high-mass components. Additionally, detailed topographical surveys will be required to confirm floodway levels and final OSOM vertical clearance requirements.

6.10.3.2 TRAFFIC IMPACT

Although traffic volumes on Cecil Plains Moonie Road are expected to increase, overall volumes will remain low and consistent with the rural road capacity. Traffic increases on State-controlled road networks will be minor and within acceptable operational limits.

Intersection impacts will be generally minor from an operational perspective; however temporary traffic management measures will be required to facilitate OSOM manoeuvring. Key risks associated with road safety include OSOM vehicle interactions with school buses, agricultural traffic, potential rollover and manoeuvring requirements. The requirements for OSOM movements and route constraints will be outlined in the Transport Management Plan prior to construction.

Pavement impacts will occur on the Toowoomba Cecil Plains Road and Cecil Plains Moonie Road due to the concentration of heavy vehicle movements. A detailed pavement impact assessment will be undertaken and will outline the contributions to road maintenance. Additionally, dilapidation surveys will be taken prior to, during and post construction, with ongoing monitoring and maintenance implemented throughout this period.

Subject to the implementation or recommended road upgrades, traffic management measures, and pavement mitigation strategies, the Proposed Development is not expected to result in any significant adverse impacts on the safety of operation of the surrounding road network.

6.10.4 MITIGATION MEASURES

Prior to the commencement of construction, the following reports will be prepared in consultation with relevant authorities:

- Construction Traffic Management Plan – including designated haulage routes, use of traffic control personnel and signage, scheduling of OSOM movements, coordination with local stakeholders, and ongoing road condition monitoring and maintenance.
- Site access intersections to be upgraded prior to peak construction activities.
- Pavement impact assessment to be finalised.

Appropriate mitigation measures for OSOM road safety will be implemented such as escort vehicles, driver induction requirements and communication strategies.

Further measures will be undertaken upon detailed design. This will include:

- Design investigations for floodway modification works;
- Further structural assessment and verification for bridges and culverts associated with high-mass transport loads;
- Detailed swept path verification during the detailed design stage;
- Consultation with relevant stakeholders;
- Detailed overhead clearance verification prior to transport commencement to confirm all vertical clearance constraints and required detour arrangements are in place for vehicles exceeding 5.4 m in height;
- Temporary roadside infrastructure protection and final OSOM route confirmation; and
- Confirmation of the final OSOM route in consultation the appointed haulage contractor.

The Proposed Development achieves the requirements associated with PO18 – 21 of State Code 23 and PO24 – 28 of State Code 27 as outlined in Table 6-1.

6.11 AVIATION SAFETY, INTEGRITY AND EFFICIENCY

6.11.1 RATIONALE

Wind farms involve the construction and installation of tall structures which may be a potential safety risk to low-flying commercial private and defence aircraft. The movement, material and size of wind turbines and blades, as well as the marking and lighting, also have the potential to interfere with radio communications equipment for other aircraft and the meteorological radar.

An Aviation Impact Assessment (refer to Appendix S) has been prepared for the Proposed Development and provides an assessment of potential aviation impacts to address PO22 and PO23 of State Code 23.

6.11.2 ASSESSMENT

The report concludes that the Proposed Development:

- Will not infringe any certified airports Obstacle Limitation Surfaces;
- Will not infringe any certified airports Procedures for Air Navigation Services – Aircraft Operations (PANS-OPS) surfaces;
- Is wholly contained within Class G airspace;
- Is located within R639A and R639C restricted sections, however there will be no impacts;
- Is located within the danger area D621A and D621C, however some air flight routes are within these areas and the Proposed Development should not be of much concern;
- Will not impact on aviation facilities of nearby airports; and
- Will not impact on the closest radar installations.

6.11.3 POTENTIAL IMPACTS

The report noted that:

- The WTGs will impact the Grid Lowest Safe Altitude, which will need to be raised by 400 ft;
- The WTGs will impact air route Lowest Safe Altitude and as a result:
 - Air route Z418 will need to be increased by 200 ft to 3200 ft; and
 - Air route W279 will need to be increased by 200 ft to 3400 ft.

6.11.4 MITIGATION MEASURES

The Aviation Impact Statement has been informed by consultation with the following stakeholders:

- Airservices Australia;
- Department of Defence;
- Toowoomba Regional Council;
- Western Downs Regional Council;
- Royal Flying Doctor Service;
- Queensland Ambulance Service;
- Queensland Fire and Emergency Services; and
- Queensland Police Services.

The Proposed Development was concluded to not affect the safety of existing airports and associated navigation and communication facilities. However, the following measures were recommended from stakeholders:

- Airservices Australia and the Department of Defence requires the Vertical Obstacle Notification Form to be submitted as the Proposed Development is more than 30 m AGL;
- Queensland Fire and Emergency Services would like to be informed of Proposed Development details including confirmation of the coordinates for each WTG and meteorological mast.

The Aviation Impact Assessment recommends the following measures:

- The Department of Defence is to be informed to mitigate risks in danger area D621A and D621C.
- The WTGs and met masts must be reported to CASA and construction details are to be provided to Airservices Australia.
- A white colour will provide sufficient contrast with the surrounding environment to maintain an acceptable level of safety while lowering visual impact to the neighbouring residents.

The Proposed Development achieved the requirements associated with PO22 and PO23 of State Code 23 as outlined in Table 6-1.

6.12 SOCIAL IMPACTS

6.12.1 RATIONALE

The Queensland Government introduced a community benefit system for all renewable energy projects. Prior to lodging the application, the Proponent is required to have a Social Impact Assessment prepare and Community Benefit Agreement/s with relevant Councils.

As such, a Social Impact Assessment (Appendix B) has been prepared as per the requirements in PO16 of State Code 23 and PO8 of State Code 27, with the Community Benefit Agreement with TRC and WDRC provided in Appendix T.

6.12.2 ASSESSMENT

The Social Impact Assessment (Appendix B) presents the identification and assessment of the Project's potential social impacts and include measures to enhance potential positive social impacts and mitigate potential negative social impacts. This includes an assessment of both direct and indirect social impacts on potentially affected stakeholders and communities throughout the project's lifecycle. In accordance with the SIA Guideline, this SIA addresses the following key matters:

- Community and stakeholder engagement;
- Workforce management;
- Housing and accommodation;
- Local business and industry procurement; and
- Health and community wellbeing.

6.12.3 POTENTIAL IMPACTS

The Proposed Development is expected to generate a range of social impacts, these are mostly during the construction phase, with a few ongoing into operation. These include pressures housing and accommodation, disruptions to agricultural activities, increases in traffic and safety risks, strain on health and emergency services, changes to landscape and amenity, and broader effects on community cohesion, identity, and wellbeing.

Key potential impacts themes include:

- Housing & Accommodation Pressures;
- Agriculture & Agribusiness Impacts;
- Traffic, Roads & Safety;
- Health, Emergency Services & Community Wellbeing;
- Landscape, Amenity & Environmental Values;
- Loss or decline of rural landscape character and visual amenity;
- Disturbance from noise, lighting, shadow flicker, and dust;
- Decline in ecological values due to clearing and habitat disruption;
- Social Cohesion & Identity;
- Livelihoods & Property Values; and
- Infrastructure & Utilities.

6.12.4 MITIGATION MEASURES

The proposed mitigation approach involves the development of a suite of management plans to reduce construction and operational impacts.

Key measures include:

- housing the construction workforce in an on-site camp to avoid pressure on local rentals;
- prioritising local hiring and training;
- supporting local and First Nations businesses through tailored procurement strategies; and minimising agricultural disruption via traffic management, biosecurity controls, and ongoing landholder engagement;
- Community wellbeing is supported through a dedicated liaison officer, improved communication channels, a complaints process, and neighbour benefit initiatives; and
- Additional measures include providing on-site medical and emergency response, implementing bushfire management, noise and dust controls, visual screening, biodiversity and rehabilitation programs, and ensuring the camp is largely self-sufficient for water, waste and telecommunications.

The Project achieves the requirements associated with PO16 of State Code 23 and PO8 of State Code 27 as outlined in Table 6-1.

6.13 DECOMMISSIONING

6.13.1 RATIONALE

Following construction, the Proponent is required to rehabilitate all areas cleared during construction that are not required for ongoing wind farm operations. These areas will need to include areas cleared for temporary uses such as worker's accommodation sites, parking, concrete batching plants, construction site offices and construction laydowns. Rehabilitation to access tracks will also need to be considered.

At the end of the operational phase of the Proposed Development, decommissioning will need to be considered. For BESS', consideration will need to be made in relation to battery recycling (see PO34 of State Code 27).

As such, the following have been prepared to address the above, Preliminary Post-Construction Rehabilitation Plan (Appendix G) to address PO1 to PO4, PO7, PO9, PO12, PO14, PO80 to PO85, PO88 and PO89 of State Code 16 and PO4 of State Code 23, and Decommissioning Management Plan (Appendix U) to address PO24 of State Code 23 and PO35 of State Code 27.

For information, rehabilitation and decommissioning is discussed in Section 4.7

6.13.2 ASSESSMENT

6.13.2.1 BATTERY RECYCLING

As part of decommissioning the Proposed Development, the reuse, recycling and recovery of battery components will be undertaken. Within the Decommissioning Management Plan, a Preliminary Battery Recycling Strategy has been prepared. This strategy outlines the current state of the Lithium-ion battery (LIB) recycling industry and the opportunities for growth in Australia. At this stage of the Proposed Development, understanding the existing LIB recycling landscape is essential, as new technologies and processes are expected to emerge over the operational life of the Project, influencing the decommissioning procedure.

The end-of-life battery volumes are projected to surge, particularly LIBs, enforcing the need for scalable, efficient and nationally consistent collection, recovery and recycling systems. With ongoing government investment, advancing in recycling technologies and increasing circular-economy expectations, it is reasonable to expect that by the time the Proposed Development reaches decommissioning, other commercial interests may have entered the market, significantly expanded recycling infrastructure and improved end-of-life processing capability, enabling more cost-effective and sustainable outcomes for the reuse, recovery and recycling of BESS components. Further details regarding the Preliminary Battery Recycling Strategy is provided within the Decommissioning Management Plan (Appendix U).

6.13.2.2 DECOMMISSIONING

At the end of the Proposed Development's economic life, the WTGs towers and other above ground infrastructure will be removed, and the area rehabilitated in accordance with the regulatory framework applicable at the time and in consultation with the landowner per the existing sublease agreement. The components will be disassembled and transported to a lawful facility for recycling or reprocessing to the greatest extent possible to minimise disposal at landfill. Disturbance areas will be rehabilitated using stockpiled topsoil to promote regrowth which is consistent with the surrounding area.

A Decommissioning Financial Security Framework has been developed in Appendix U to satisfy PO35 of State Code 27, ensuring that decommissioning obligations at the end of construction and operations can be fully funded and delivered without financial risk to landowners or the State. These arrangements provide a legally enforceable mechanism demonstrating that decommissioning liabilities will be met in accordance with statutory and approval requirements.

6.13.3 MITIGATION MEASURES

The following mitigation measures are proposed:

- An End of Construction Decommissioning Management Plan will be prepared prior to the finalisation of construction of the Project. This will include outlining the removal of above-ground non-operational equipment, including materials storage and handling facilities, construction offices, and concrete batching plants.
- An End of Operation Decommissioning Management Plan will be prepared prior to the cessation of the Project operations as required under State Code 23 and State Code 27. This will encompass a Battery Recycling Strategy as per the State Code 27 planning guideline, including but not limited to:
 - Details of a qualified professional to assist with the deinstallation of batteries;
 - Any risks associated with the deinstallation of batteries, in particular management steps necessary to contain harmful and dangerous battery materials and any direction provided from the supplier regarding an 'end-of-life' plan;
 - Whether the battery system contains recycled content and if it is recyclable; and
 - Itemised breakdown of materials to be reused, recycled and/or recovered. Additionally, this should detail what happens to other system components associated with the decommissioned BESS;
 - Deconstruct and remove off-site all above ground structures and infrastructure (including turbines, substations, and above ground cabling);
 - Manage impacts on the transport network arising from removal of materials from the site;
 - Dismantle turbine bases to a depth of 0.5 m below surface level and cover with top soil; and
 - Lightly rip and reseed with native vegetation all hardstand areas (after being cleared of stone and geotextile material).
- Prior to the commencement of construction, the Proponent will provide the DSDIP with evidence of a financial assurance in an amount equal to the total costs or expenses associated with the timely decommissioning of the Proposed Development at the end of construction.
- Prior to commissioning, the Proponent will provide the DSDIP with evidence of financial assurance in an amount equal to the total costs or expenses associated with the timely decommissioning of the Proposed Development's at the end of operations.

The Project achieves the requirements associated with PO24 of State Code 23 and PO35 of State Code 27 as outlined in Table 6-1.

7. CONCLUSION

This Planning Report has been prepared by ERM on behalf of the Applicant in support of a combined Development Application for a Material Change of Use (Wind Farm and ancillary infrastructure including BESS) and Operational Works (vegetation clearing) in accordance with the Planning Act.

The Proposed Development comprises the construction, operation and decommissioning of up to 135 WTGs, a battery storage facility and ancillary infrastructure including meteorological masts, as well as associated infrastructure including WTG foundations, crane hardstands, crane boom laydown, blade laydown and rotor assembly areas, access tracks including new and upgraded tracks within the Project Area, underground cabling and overhead transmission lines, internal collector substations, a switching station, construction compounds and laydown areas, washdown areas, operational and maintenance facilities, and a construction workers accommodation facility.

Following a detailed assessment against the relevant assessment benchmarks for the Proposed Development, particularly State Code 16, State Code 23 and State Code 27 the Proposed Development represents a suitable land use outcome that will deliver clean, renewable energy to the southeast Queensland region, benefiting the local community and aligning with the Queensland Government's renewable energy priorities under the Queensland Energy Roadmap (2025).

It is recommended that the Proposed Development be approved, subject to the provision of reasonable and relevant conditions, for the following reasons:

- the MSES Impact Assessment concluded that while the Proposed Development will result in significant residual impacts to limited areas of regulated vegetation and habitat for listed threatened species, these impacts have been avoided and minimised where possible, and can be managed via mitigation measures and offsets.
- The Agricultural Land Assessment concluded that the Proposed Development is unlikely to result in significant impacts to high quality agricultural land and can co-exist with existing agricultural activities, and as such the risk of impacts to agricultural productivity is considered low.
- The Stormwater Assessment concluded that the potential impacts on drainage, flooding and water quality can be managed through best-practice stormwater management and erosion control measures.
- The Erosion Risk Assessment concluded that potential erosion and sediment impacts can be effectively managed through the implementation of standard erosion and sediment control measures and appropriate site design.
- The Risk Management Assessment concluded that BESS-related hazards can be effectively managed through the implementation of design safeguards, operational controls and emergency response measures, with risks reduced to an acceptable level and consistent with the requirements of State Code 27.
- The Natural Hazard Risk Assessment (Bushfire) concluded that the Proposed Development can be designed and operated to appropriately manage bushfire risk, with sufficient setbacks and mitigation measures available to achieve compliance with relevant State and local planning requirements.

- The Noise Impact Assessment concluded that the proposed development will comply with applicable acoustic criteria and will not result in unreasonable impacts on the acoustic amenity of surrounding sensitive receivers.
- The Electromagnetic Interference Assessment concluded that the Proposed Development is unlikely to adversely affect existing telecommunications services and that any potential impacts can be appropriately managed through ongoing consultation and mitigation measures.
- The Landscape and Visual Impact Assessment concluded that the existing landscape can accommodate the Proposed Development with a relatively low degree of visual impact and that landscape character and visual amenity can be maintained through recommended mitigation measures.
- The Preliminary Route Assessment concluded that the transport of wind turbine and BESS components is feasible and that the road network can accommodate the proposed transport task, subject to identified upgrades and management measures.
- The Traffic Impact Assessment concluded that the surrounding transport network can safely accommodate traffic generated by the Proposed Development and that any temporary construction impacts can be appropriately managed through traffic management and road upgrade measures.
- The Aviation Impact Assessment concluded that the Proposed Development will not adversely affect aviation safety, airspace operations, aviation facilities or radar infrastructure, subject to standard aviation notification and compliance requirements.
- The Social Impact Assessment concluded that the Proposed Development will create social and economic benefits and that potential social impacts can be appropriately managed through stakeholder engagement and implementation of the proposed social impact management measures.
- The Post-Construction Rehabilitation Plan concluded that disturbed areas can be progressively rehabilitated following construction, supporting the return of land.
- The Decommissioning Management Plan concluded that the Proposed Development can be safely decommissioned and rehabilitated at the end of its operational life, with disturbed areas able to be restored and future land uses maintained.
- A Community Benefit Agreement has been executed with both Councils.

Given the above, it is recommended that SARA issues a Development Permit subject to reasonable and relevant conditions.

8. REFERENCES

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APPENDIX A PROJECT LAYOUT PLAN



APPENDIX B SOCIAL IMPACT ASSESSMENT



APPENDIX C RECORD OF PRE-LODGEMENT MEETINGS



APPENDIX D TRAFFIC IMPACT ASSESSMENT



APPENDIX E PRELIMINARY ROUTE ASSESSMENT



APPENDIX F

PRELIMINARY CONSTRUCTION ENVIRONMENT MANAGEMENT PLAN



APPENDIX G

PRELIMINARY POST-CONSTRUCTION
REHABILITATION PLAN



APPENDIX H STATE DEVELOPMENT ASSESSMENT
PROVISION CODE RESPONSE



APPENDIX I STATE PLANNING POLICY MAPPING



APPENDIX J AGRICULTURAL LAND ASSESSMENT



APPENDIX K MATTERS OF STATE ENVIRONMENTAL
SIGNIFICANCE IMPACT ASSESSMENT
REPORT



APPENDIX L STORMWATER ASSESSMENT



APPENDIX M NATURAL HAZARD RISK ASSESSMENT (BUSHFIRE)



APPENDIX N NOISE IMPACT ASSESSMENT



APPENDIX O LANDSCAPE AND VISUAL IMPACT ASSESSMENT



APPENDIX P EROSION RISK ASSESSMENT



APPENDIX Q

RISK MANAGEMENT ASSESSMENT
REPORT



APPENDIX R ELECTROMAGNETIC INTERFERENCE ASSESSMENT



APPENDIX S AVIATION IMPACT ASSESSMENT



APPENDIX T COMMUNITY BENEFIT AGREEMENT



APPENDIX U

DECOMMISSIONING MANAGEMENT
PLAN



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