

Planning Assessment Report

Tully Battery Energy Storage System

Prepared for: RWE Renewables Australia Pty Ltd

Date: 23 September 2025



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Attexo Group Pty Ltd 2025

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1. Introduction

1.1 Purpose of Report

This Planning Assessment Report (Report) has been prepared by Attexo Group Pty Ltd (Attexo) on behalf of RWE Renewables Australia Pty Ltd (the Applicant) to provide supporting information for a development application to Cassowary Coast Regional Council (CCRC) under the *Planning Act 2016* (Planning Act). The application seeks approval from the Assessment Manager (CCRC) for a development permit for Material Change of Use for an Undefined Use (Battery Energy Storage System (BESS)).

This Report evaluates the Tully BESS Project (the Project) against the Cassowary Coast Regional Council Planning Scheme (CCRC Planning Scheme) and relevant State planning provisions. Further details regarding the statutory framework relevant to the proposed development are provided in **Section 6**.

1.2 Proponent Details

RWE Renewables Australia Pty Ltd (RWE) is part of RWE Renewables, one of the world's leading producers of renewable energy. With a global operating portfolio of 19 gigawatts (GW) of wind, solar and battery storage projects, and a further 12 GW under construction. RWE has been active in Australia since 2013, successfully delivering large-scale projects such as the 249 MW Limondale Solar Farm in New South Wales. At Limondale, RWE is also delivering Australia's first eight-hour battery, currently under construction with commissioning scheduled for late 2025.

The Australian team of around 80, is supported by RWE's global workforce of approximately 20,000 people across Europe, North America, and Asia Pacific.

In Queensland, RWE is advancing the Theodore Wind Farm, which recently received state government planning approval. The project will include up to 170 wind turbines and an integrated Battery Energy Storage System (BESS), generating around 1 GW of renewable energy. 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.

1.3 Project Overview

RWE is seeking to develop the proposed Tully BESS (the Project) across a 28.7 hectare (ha) site (the Project Site), consisting of two freehold parcels, Lot 1 on RP735276 and Lot 1 on RP852238. Grid connection is proposed via the neighbouring Powerlink 132 kV Tully substation, located to the northeast on Lot 1 on RP716718.

The Site is located approximately 4 km south-west of the township of Tully in far north Queensland.

The Project will have a capacity of up to 200 MW for a duration of 4 hours and is proposed to take electricity from the grid in periods of low demand, and feed back into the grid at periods of high demand.

The location of the Project is shown in **Figure 1.1** and the proposed Project infrastructure is shown in **Figure 1.2**.

1.4 Application Details

The particulars of the development application are included in **Table 1.1**.

Table 1.1: Application details

Application Details		
Applicant	RWE Renewables Australia Pty Ltd	Refer to DA Form 1 in Appendix A .



Application Details				
Site Address	37 Sandy Creek Road, Tully QLD 4854	71 Sandy Creek Road, Tully QLD 4854	175 Tully Gorge Road, Tully QLD 4854	Refer to the Proposed Development Plans
Real Property Description	Lot 1 on RP735276	Lot 1 on RP852238	Lot 1 on RP716718	in Appendix C .
Lot Area	8.094 ha	20.6 ha	2.704 ha	
Registered Owner	Glenn John Dawe Sirikul Wongsa- Nga	Terry John Lack	Queensland Electricity Transmission Corporation Limited	Refer to Owner's Consent in Appendix B .
Development Footprint Area	9 ha			
Project Description	A BESS with a capacity of up to 200 MW for a duration of 4 hours and associated infrastructure (e.g. transformer, overhead transmission line (OHTL), air insulated switchgear, access roads, laydown areas, foundations, hard stand, parking, switch rooms and storage).			
Local Government Area	Cassowary Coast Regional Council			
Assessment Manager	Cassowary Coast Regional Council			
Zone	Rural			
Use Definition	'Undefined Use' for Battery Energy Storage System			
Approval Sought	Development Permit for Material Change of Use for an Undefined Use (Battery Energy Storage System)			
Level of Assessment	Impact Assessment			
Referral Agencies	 Schedule 10 – Part 9, Division 1, Table 1 Development on designated premises Lot 1 on RP852238 is subject to a designation for the Powerlink OHTL that traverses the lot. State Assessment and Referral Agency (SARA)			and Referral
	 Material Change of Use of premises near a substation or subject to an easement The Project Site is near the Ergon and Powerlink Tully Substations and is subject to the Powerlink OHTI 		The chief executive of the distribution entity or transmission entity – being Powerlink and Ergon	
			SARA	



1.5 Defined Terms

The following terms are used to describe the Project and proposed development:

- <u>Project Site</u> identifies the extent of the lot boundaries for Lot 1 on RP735276 and Lot 1 on RP852238. The combined area of both lots is 28.694 ha.
- <u>Grid Connection</u> refers to the proposed OHTL tie-in to the existing 132kV Powerlink Tully substation within Lot 1 on RP716718. The Grid Connection requires approximately 60 m of OHTL to be constructed within Lot 1 on RP716718.
- <u>Development Footprint</u> is the area that will be directly impacted by the Project. The total area of the Development Footprint is approximately 9 ha and includes infrastructure located within the Project Site and the Grid Connection.
- <u>Project Infrastructure</u> includes the components that form the construction and operation of the Project proposed within the Development Footprint. Further detail of the Project Infrastructure that is proposed is provided in Section 5.

1.6 Pre-lodgement Meeting and Advice

A pre-lodgement meeting was held between CCRC, RWE and Attexo on 5 December 2024. Key items discussed are summarised in **Table 1.2**.

Table 1.2: Pre-lodgement discussion items

Item	Project Response
Site characteristics	
The site is considered suitable for the proposed use.	Refer to Section 4 for a discussion of the Project Site and the proposal plans in Appendix C .
The mahogany glider corridor partially present on site and the adjacent lots to the east.	Ecological assessment has been undertaken for the site to identify any areas of key habitat. Project design has incorporated mitigation measures to protect the mahogany glider corridor. Refer to Section 7.2 and Appendix F .
While not currently used for agricultural purposes, the site has historical agricultural uses and can still support cattle grazing or similar.	An Agricultural Land Assessment has been undertaken for the Project. Refer to Section 7.1 and Appendix D .
The site contains a Great Barrier Reef wetland protection area, which will require assessment against State Code 9.	As the Project involves Material Change of Use of premises in a wetland protection area, the development application will be referred to SARA and includes assessment against State Code 9. Refer to Section 6.2 and Appendix N .
Design considerations	
Floor levels to be suitable for flood immunity, at 0.2% AEP for the substation and 1% AEP for the office.	Project design has been undertaken with consideration of flood immunity. A design level equal to the 0.2% AEP has been adopted for the site. The majority of the proposed development is located outside of the 1% AEP flood event. Refer to Section 7.6 and Appendix I . for further discussion of flood hazard assessment.



Item	Project Response	
Buffers to waterway corridors.	Project design has incorporated buffers to waterways and the Great Barrier Reef wetland protection area. Refer to the proposal plans in Appendix C and assessment against State Code 9 in Appendix N .	
Ensure all fencing is free of barbed wire.	Barbed wire will not be used for fencing of Project site. The applicant can commit to adhering to the requirement as part of a subsequent condition of approval.	
Minimum supporting technical studies required for the development application		
Visual impact assessment, including landscaping that will be visible from public roads.	Refer to Section 7.4 and Appendix G for the Scenic Amenity Impact Assessment (SAIA) and for the Landscape Plan.	
Bushfire risk assessment.	Refer to Section 7.2 and Appendix E.	
Traffic impact assessment, including construction and operation phases.	Refer to Section 7.7 and Appendix K .	
Ecological assessment report.	Refer to Section 7.2 and Appendix F.	
Stormwater management plan.	Refer to Section 7.6 and Appendix I.	

1.7 Additional Approvals

1.7.1 Commonwealth

1.7.1.1 Environment Protection and Biodiversity Conservation Act 1999

Ecological survey and assessment under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) has been undertaken for the Project. While it has been determined that the Project is unlikely to have a significant impact on Matters of National Environmental Significance (MNES), referral under the EPBC Act will be undertaken for the Project.

1.7.2 State

1.7.2.1 Fisheries Act 1994

Lot 1 on RP735276 contains a mapped low impact (green) waterway for waterway barrier works. The proposed OHTL alignment to the Powerlink Tully substation will traverse the waterway. Any waterway barrier works will be undertaken in accordance with the *Accepted development requirements for operational work that is constructing or raising waterway barrier works*.

1.7.2.2 Nature Conservation Act 1992

The objective of the *Nature Conservation Act 1992* (NC Act) is the conservation of nature; the NC Act provides for the gazettal of protected areas including nature refuges, prescribes classes of wildlife and sets out restrictions on the taking or harm to native wildlife without a valid permit.

The following permits and management plans may be required for the Project under the NC Act:

• Clearing Permit (Protected Plants) – for the clearing of vegetation contained within high-risk areas identified on the flora survey trigger map. The development footprint does not include areas mapped as high-risk trigger mapping.



Species Management Program (high risk or low risk) – for the tampering with animal breeding places.

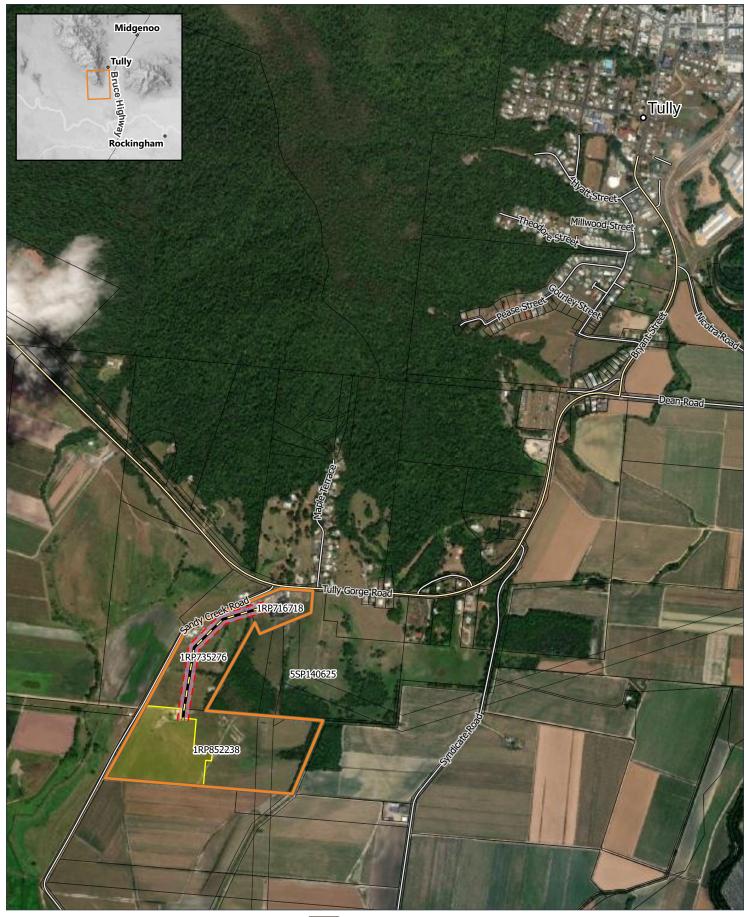
1.7.2.3 Vegetation Management Act 1999

Clearing of vegetation regulated under the *Vegetation Management Act 1999* is not anticipated for the Project. However, should any clearing of mapped Category R vegetation be required to facilitate construction of the OHTL, this will be undertaken in accordance with the *Accepted development vegetation clearing code for infrastructure* (ADVCC). If required, ADVCC notification will be completed as part of the Project's secondary approvals.

1.8 Supporting Information

The following supporting information is provided to support this Development Application:

- **Appendix A** Development Application Form
- **Appendix B** Owner's Consent and Title Searches
- **Appendix C** Development Plans
- **Appendix D** Agricultural Land Assessment prepared by Attexo
- Appendix E Bushfire Assessment and Management Plan prepared by Meridian Urban
- **Appendix F** Ecological Assessment Report prepared by Attexo
- Appendix G Scenic Amenity Impact Assessment prepared by Iris Visual Planning + Design
- Appendix H Noise Impact Assessment prepared by Marshall Day Acoustics
- Appendix I Flood Hazard Assessment and Stormwater Management Plan prepared by Water Technology
- Appendix J Preliminary Erosion and Sediment Control Plan prepared by Attexo
- Appendix K Traffic Impact Assessment prepared by Cambray Consulting
- Appendix L Landscape Plan, prepared by Cusp Landscape Architecture + Urban Design
- **Appendix M** CCRC Planning Scheme Code Assessment
- **Appendix N** SDAP Code Assessment.



Project Location

Figure 1.1

DWG No: RWE-002-013 [B] **DATE:** 11/09/2025 DRAWN: KB **REVIEWED** SW **SCALE (A4):** 1:15,000



Project Area

Development Footprint

Proposed Transmission Line Corridor

Proposed

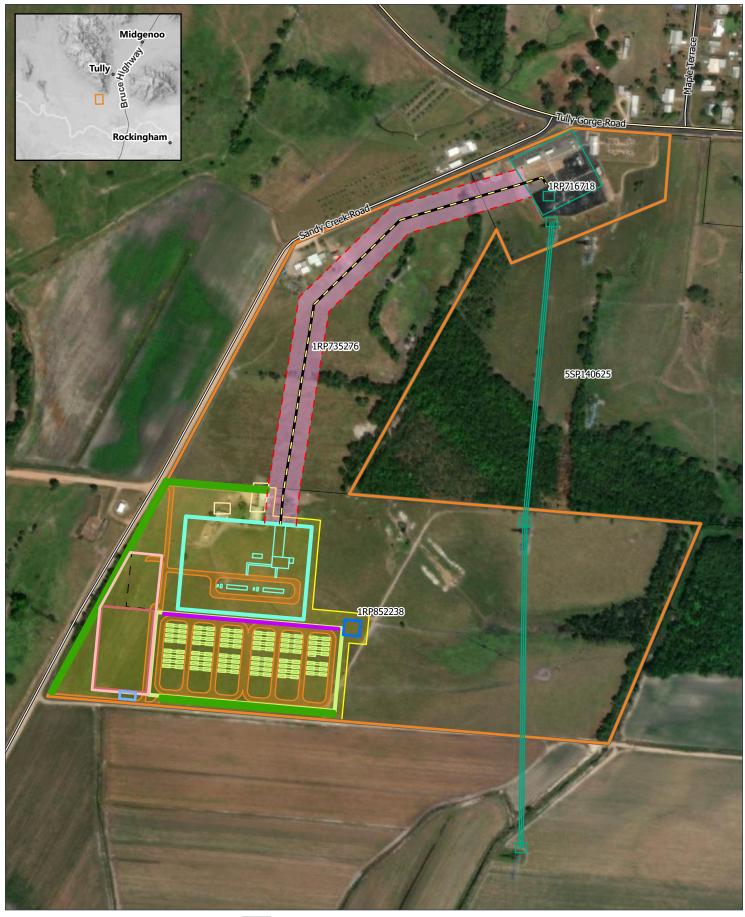
transmission line _

20m exclusion zone

− Main Road

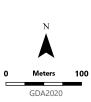
■ Local Road

Cadastral Parcels



Project Layout Plan Figure 1.2

DWG No: RWE-002-014 [B]
DATE: 19/09/2025
DRAWN: KB
REVIEWED EJ
SCALE (A4): 1:5,000



Existing Dwellings Project Area Proposed Bioretention basin transmission line В Development Fence 20m exclusion O & M Area Footprint zone Main Road Construction Proposed Access Switchroom/ laydown area Local Road Track Footprint Transformer Noise wall Proposed Cadastral Parcels BESS Transmission Line Landscaping area Bioretention basin Corridor Existing 132kV

Line



2. Project Justification

The Project seeks to support the growing need for grid-scale energy storage and is strategically located near the recently upgraded Powerlink Tully Substation, a key part of the region's high-voltage transmission network. The Project will develop a grid-forming battery which is an energy storage system that will actively regulate the power grid's voltage and frequency, providing network support and stability increasing the resilience of the grid in the locality.

The Project will improve reliability for the Far North Queensland energy network, allowing the storage of excess energy to discharge back into the grid during peak demand times, power outages or to assist with grid balancing.

BESS developments further bolster the existing energy network through:

- Lower emissions reducing reliance on fossil fuels, helping to decrease greenhouse gas emissions
- Decentralisation enabling power to be stored and used closer to where it is needed, reducing the burden on long-distance transmission networks and improving energy reliability, especially within remote areas
- Affordability improving efficiency and reducing peak load demand to contribute to more stable and affordable energy prices.
- Aligning with targets the Federal government's energy targets aim have a 62–70% reduction in emissions below 2005 levels by 2035, and net zero emissions by 2050, this project will support achieving these goals.



3. Community and Stakeholder Engagement

3.1 RWE's Engagement Approach

RWE's overarching approach to stakeholder engagement is focused on delivering best practice engagement founded on the principles of honesty, respect, adaptability, consistency and consideration (**Figure 3.1**).

Figure 3.1: RWE's guiding principles for stakeholder engagement

Honesty

•RWE builds relationships with local communities based on trust, respect, and inclusion, by acting with integrity and honesty, engaging in genuine dialogue and relevant communication with all parties and ensuring they provide information as soon as they can.

Respect

•RWE respect the communities and stakeholders where our projects are based and understand they are passionate about their homes, communities and areas where they live, work and socialise. RWE also bring empathy and understanding to engagement.

Adapability

•RWE's approach involves collaboration with communities and incorporates multiple methods of engagement that can adapt to stakeholders' particular needs. This fluid approach allows RWE to be inclusive by identifying and categorising stakeholders according to their requirements, which informs their approach to each engagement. RWE can then provide multiple channels of engagement to make it easy for them to obtain project information and be involved.

Consistency

•RWE's engagement is ongoing and focuses on consistently keeping our stakeholders informed and engaged through all stages of the project lifecycle.

Consideration

•Consultation with communities and key stakeholders is always used to shape projects where possible. Feedback is key to ensuring projects are developed with a solid knowledge of the area, its residents and social fabric. RWE also ensure the benefits generated from the development are spread fairly within the community, by identifying the needs of the community and addressing them.

RWE is guided by consultation with host communities and key stakeholders to shape their Projects. Feedback is key to ensuring Projects are developed with a solid knowledge of the area, its residents and social fabric. RWE also ensures the benefits generated from the Project are shared equitably within the community, by identifying the needs of the community and addressing them.

RWE's stakeholder engagement activities are informed by the following industry guidelines, engagement frameworks, and relevant contextual documents:

- RWE's Australian Community and Stakeholder Engagement Framework
- The International Association for Public Participation's (IAP2) public participation spectrum
- Australian Institute of Aboriginal and Torres Strait Islander Studies (AIATSIS) Guidance on Engaging with Traditional Owners



3.2 First Nations People and Traditional Owners

The Gulngay people are traditional owners of the land, waterways, and skies of where the Project is proposed. The respective Prescribed Body Corporate is the Gulngay Kinjufile Aboriginal Corporation RNTBC.

The Girringun Aboriginal Corporation RNTAC (GAC) supports the Gulngay People in the administration and management of cultural heritage matters.

RWE has been actively working with the Gulngay People and GAC to progress a Cultural Heritage Agreement. This process is being undertaken in a respectful and collaborative manner to ensure that cultural heritage values are identified, protected, and appropriately managed throughout the development. Ongoing engagement with the Traditional Owners is a key priority, and the agreement will provide a clear framework for managing cultural heritage matters during construction and operation of the project.

3.3 Community and stakeholder engagement plans

RWE's community and stakeholder engagement framework underpins project specific Community and Stakeholder Engagement Plans (CSEP), including for Tully BESS. This is updated as required to reflect changing circumstances, community feedback, and ongoing improvements in the community engagement approach.

The CSEP guides RWE's engagement and details:

- an analysis of Project stakeholders
- a description of engagement tools and methods to be used
- a high-level risk assessment
- communication protocols including recording engagement activities, managing complaints and reporting.

Project stakeholders were identified by considering the groups or individuals within the Project region that could be either directly or indirectly impacted by the Project.

RWE understands the importance of working collaboratively with local communities in the CCRC area. To date RWE has taken a proactive and respectful approach to engagement with landholders, First Nations, stakeholders and the community to seek their feedback and input. **Table 3.1** details RWE's engagement and feedback themes to date.

Engagement with key stakeholders and the local community has indicated a positive sentiment towards the proposed Project. Feedback received through proactive consultation activities highlighted strong recognition of the Project's potential to improve local energy reliability and contribute to regional economic development. Community members and stakeholders have generally expressed support for the project, noting the comparatively low project footprint, the creation of local job opportunities, and the broader contribution to enhancing the reliability of Queensland's electricity network. No significant opposition or concerns have been raised to date, and the overall response has been constructive and encouraging.

Table 3.1: Project stakeholders and feedback themes

Stakeholder group	Engagement to Date	Feedback themes
 Landholders 	Ongoing since 2024	 Commercial in confidence
 Gulngay People & Girragun Aboriginal Corporation RNTAC 	 3 face to face meetings in 2025 Notification letter – Q1 2025 	Cultural and heritage monitoringMinimise environment impacts
 Cassowary Coast Regional Council: 	• 2 Council Project Briefings – 2024 & 2025	 Align with Council's mahogany glider policy.
Mayor: Cr TeresaMillwood	 Pre-lodgement meeting – Q4 2024 Project Update – Q2 2025 	 Community safety – fire hazard management



Stakeholder group	Engagement to Date	Feedback themes
 Deputy Mayor: Cr Nicholas Pervan Cr Peter Reed Cr Ellen Jessop Cr Trudy Tschui Cr Jeffery Baines Cr Renee McLeod Council executive, planners and staff 		Ensure alignment with planning scheme
Primary Neighbours	 Door knocked and notification letter – Q2 2025 	 Keep informed of Project progress
Fenceline Neighbours	 Notification letter and invitation to provide briefing and feedback – Q2 2025 	No feedback received to date
 Near Neighbours – dwellings within a 1.5 km radius 	 Distributed Project Newsletter to notify residents of project – Q3 2025 	No feedback received to date
 Wider Community: Residents of the local geographic area hosting the Project, as well as local interest groups not defined in any previous categories 	 Introduction of Project to the wider community – Q3 2025 Established project website – www.tullybess.com.au Stand at Tully Show 25 – 26 July – more than 500 visitors 	 Energy reliability Contribution to regional economic development
Emergency services	 Queensland Fire and Rescue meeting in Q3 2025 	 Continue to engage on the Emergency Management Plan to align with local
State and Federal Members of Parliament (MPs)	 Introduction of Project - notification letter and invitation to provide briefing and feedback – Q2 2025 Federal Member Kennedy Hon Bob Katter MP State Member for Member for Hinchinbrook Nick Dametto MP 	No feedback received to date
 Powerlink Queensland 	Ongoing since 2024	Commercial in confidence

3.4 Community Investment & Ongoing Engagement

RWE is preparing a Social Impact Assessment (SIA) for the Project; this involves engaging with stakeholders to identify who is impacted, assessing those impacts, and developing strategies to enhance community well-being and share benefits through informed decision-making. As an outcome of the SIA RWE proposes to develop a community sponsorship program to support local social and community wellbeing. The program intends to focus on providing funding and support for local entities, such as schools, sporting clubs, cultural initiatives, and community events. Supporting the community is forefront for RWE to strengthen connections and deliver positive outcomes for residents. Through this initiative, RWE aims to ensure the Project contributes to the long-term wellbeing of the community and leaves a meaningful legacy beyond its role in the energy network.



Looking ahead, RWE's engagement will continue to be proactive and guided by their values of honesty, respect, adaptability, consistency, and consideration. RWE is committed to maintaining open and transparent communication as the project progresses, ensuring that stakeholders and the community remain informed and have opportunities to contribute their views. By embedding these values RWE aims to build strong, enduring relationships and deliver a project that aligns with community expectations and supports positive regional outcomes.



4. Site Description

4.1 Overview

The Project Site is located approximately 4 km south-west of the township of Tully, across two land parcels formally described as Lot 1 on RP735276 and Lot 1 on RP852238, with grid connection proposed within Lot 1 on RP716718. The site addresses are 37 and 71 Sandy Creek Road, Tully (refer to **Figure 1.1**).

4.2 Site Context

4.2.1 Easements and Encumbrances

Table 4.1 describes the easements and encumbrances for Lot 1 on RP852238. There are no easements or encumbrances for Lot 1 on RP735276 and Lot 1 on RP716718. Titles for these lots are included in .

Table 4.1: Fasements and encumbrances

Easement or Encumbrance	Dealing	Grantee
Lot 1 on RP852238		
Easement N on RP730844	Easement in Gross No. 601019808 (N839772) 01/03/1977	Council of the Shire of Cardwell, for drainage
Easement D on SP233167	Easement in Gross No. 713644394 23/12/2010	Powerlink, for electricity purposes
Easement E on SP338637	Easement in Gross No. 722883807 16/11/2023	Powerlink, for electricity purposes

4.2.2 Topography

The Project Site is relatively flat, with an elevation of approximately 12 m AHD.

4.2.3 Watercourses and Wetlands

The Project Site is located within the Wet Tropics Region, which is of the Great Barrier Reef catchment identified under the *Great Barrier Reef catchment and river basins* map (Queensland Government, 2018). The Project Site is also mapped within the Tully catchment area, where the majority of the catchment is drained by the Tully River, characterised by steep ranges transitioning into coastal floodplains.

A Great Barrier Reef wetland protection area is located across the eastern extent of the site, spanning through both Lot 1 on RP735276 and Lot 1 on RP852238. The wetland is predominantly located within the adjacent Lot 5 on SP140625, and the wetland protection trigger area extends into majority of the Project Site (refer to **Figure 4.1**). This area is co-located with the mahogany glider corridor identified under the Planning Scheme and also identified as a wetlands area of high environmental significance.

The Project Site contains several surface water features (refer to **Figure 4.2**), including:

- Two unmapped watercourses under the Water Act 2000 that flow into the wetland area within Lot 5 on SP140625
- An unmapped watercourse traverses both Project lots and is additionally mapped as a low impact (green) waterway for waterway barrier works under the *Fisheries Act 1994*
- A mapped watercourse identified as an unnamed tributary of Tully River (Sandy Creek), located along the eastern boundary of Lot 1 on RP852238 and additionally mapped as a moderate impact (amber) waterway for waterway barrier works.



4.2.4 Vegetation and Biodiversity

The Project Site has been largely cleared to accommodate the existing rural, rural residential and infrastructure use. There is a concentration of vegetation at the wetland protection area in the east of the Project Site.

Vegetation within the Project Site was ground-truthed during ecological survey in November 2024. Ground-truthed regional ecosystems (GTREs) within the Project Site are summarised in **Table 4.2** and shown within **Figure 4.3**.

Table 4.2: Ground-truthed regional ecosystems

Regional Ecosystem	VM Act Status	Category	Description
7.3.5	Least Concern	В, С	Melaleuca quinquenervia and/or Melaleuca cajuputi subsp. platyphylla closed forest to shrubland on poorly drained alluvial plains
7.3.7a	Endangered	С	Eucalyptus pellita and Corymbia intermedia open forest and woodland. Poorly drained alluvium, including seasonal swamps. Contains Palustrine. (BVG1M: 9e).
Non-remnant	None	Χ	Non-remnant

No State or Commonwealth threatened flora species or vegetation aligning with the key diagnostic criteria for Commonwealth listed Threatened Ecological Communities (TEC) were identified within the Project Site.

No threatened fauna were observed during the ecological survey.

Refer to the Ecological Assessment Report (Appendix F) for further discussion of vegetation and biodiversity.

4.2.5 Road Frontages and Access

The Project Site has frontage to Sandy Creek Road:

- Lot 1 on RP735276 has a frontage length of approximately 590 m
- Lot 1 on RP852238 has a frontage length of approximately 320 m.

It is proposed that two vehicular access points be established for the development from Sandy Creek Road into Lot 1 on RP852238, one at the north boundary with Lot 1 on RP735276 utilising an existing crossover. With secondary access at the southern end of Lot 1 on RP852238. Refer to the development plans in **Appendix C**. The requisite approvals will be sought from CCRC to establish the second access point.

4.2.6 Heritage Values

A search of the Aboriginal and Torres Strait Islander Cultural Heritage Database and Register confirmed that there are no cultural heritage areas within the Project Site. Despite the lack of recorded cultural heritage sites of significance, the proposed development is to be undertaken in accordance with the Cultural Heritage Duty of Care Guidelines.

RWE has been actively working with the Gulngay people and GAC to progress a Cultural Heritage Agreement. This process is being undertaken in a respectful and collaborative manner to ensure that cultural heritage values are identified, protected, and appropriately managed throughout the development. Ongoing engagement with the Traditional Owners is a key priority, and the agreement will provide a clear framework for managing cultural heritage matters during construction and operation of the project.

The Traditional Owners have requested to be involved in site earthworks for the Project, and RWE will continue to engage with the Traditional Owners to assist in risk assessment and supervising the work on site.

Parts of the Wet Tropics World Heritage Area are within 1 km of the Project Site (refer to **Figure 1.1**).



4.3 Land Use

4.3.1 Existing

The Project Site is located within the Cassowary Coast Regional Council local government area, located at 37 and 71 Sandy Creek Road, Tully. The real property descriptions are Lot 1 on RP735276 and Lot 1 on RP852238, with a combined area of 28.694 ha. The eastern extent of the Project Site is located within a Great Barrier Reef wetland protection area.

Both lots are currently used as rural residential properties and are largely undeveloped, with a dwelling on each of Lot 1 on RP735276 and Lot 1 on RP852238, as well as livestock grazing. Lot 1 on RP852238 contains the Powerlink OHTL and Infrastructure Designation that connects to the adjacent substations.

The existing Powerlink 132 kV substation is located on Lot 1 on RP 716718 to the north, the proposed OHTL connection is via this lot and substation. The new Powerlink 275 kV substation is located on Lot 5 on SP140625 in adjacent lot to the north-east of the Project Site. Land to the south and east of the Project site are rural areas used for sugar cane farming.

4.3.2 Proposed

The Project proposes a change in land use in order to accommodate the development of a BESS, which is expected to have a capacity of 200 MW / 800 MWh and requires a development footprint of approximately 9 ha; this includes the establishment of the BESS use, the grid connection to the adjoining Powerlink substation within Lot 1 on RP716718, and two site access points from Sandy Creek Road.

RWE's intention is that the remaining area of the site continues to be used for cattle grazing and RWE will maintain the entirety of the site.

While the Project Site currently contains two dwellings, RWE have options to purchase both lots and the dwellings would not be occupied. The dwellings may be used as part of the on-site operations and maintenance (O&M) facilities during Project construction and operation, if not feasible these would be demolished and the area rehabilitated.

Further description of the proposed development is provided in **Section 5** and development plans in **Appendix C**.

SCALE (A4): 1:4,899

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Ground-Truthed Regional Ecosystems

Figure 4.3

DWG No: RWE-002-016 [B] **DATE:** 19/09/2025 DRAWN: KB **REVIEWED** EJ **SCALE (A4):** 1:5,000



Development Footprint Ecosystems

Proposed Transmission Line Corridor

Proposed transmission line

20m exclusion zone

Endangered (regrowth)

Local Road

Cadastral Parcels

Least Concern (regrowth)

Least Concern



5. Proposed Development

5.1 Overview

The Project includes a proposed BESS with a capacity up to 200 MW for a duration of 4 hours and associated infrastructure (e.g. transformer, OHTL, air insulated switchgear, access roads, laydown areas, foundations, hard stand, parking, switch rooms and storage). The BESS and associated infrastructure will comprise a total development footprint of approximately 9 ha within the 28.7 ha Project Site. Refer to development plans in **Appendix C**.

5.2 Built Form and Concept Design

The Project has been designed to minimise impacts, in keeping with the sustainable nature of the development for supporting renewable energy projects and reducing greenhouse gas emissions. Accordingly, the existing environment; existing land use at the Site and the surrounding locality; proximity to existing electricity infrastructure; stormwater management; and noise impact have all been considered in the design development.

The primary components of the Project will consist of the following:

- Up to 188 battery units will cover a total area of approximately 2.5 ha. The foundations for the proposed battery units will likely be screw piles, piers or concrete pad formations. The BESS will be connected to the adjacent switch rooms via underground cables. Inverters may be incorporated as part of the battery units or there may be separate Power Conversion Units (PCU) that convert the DC energy from the battery units.
- Switching station will be located to the north of the battery unit and comprise a 132/33 kV high-voltage transformer, switchgear, an auxiliary transformer, two 33 kV switch rooms and potentially harmonic filters
- Stormwater drainage systems will be constructed to allow for safe collection and diversion of rainwater at the BESS facility and will be established for both construction and operational phases.
- Access to the facility will be via the existing local road network with upgraded access proposed from Sandy Creek Road.
- Grid connection will be via an overhead transmission line running from the north of the BESS area to substation on the adjoining lot. The OHTL will be supported by five (5) single circuit 132 kV concrete poles approximately 27.5m in height.
- The BESS area will be fenced for safety and security purposes.
- An Asset Protection Zone (APZ) will be established and maintained around the battery storage infrastructure to ensure protection from bushfire and to allow access to firefighting personnel in the event of fire.
- A perimeter access track around BESS units will be provided for operations, maintenance and emergency response.
- Earthworks, including batters and clearing required for access to undertake civil works.
- An acoustic wall of 6m in height has been included with the design, this is located directly on the northern perimeter of the BESS units. The acoustic wall may not be required, subject to further design enhancements of the BESS units to reduce noise levels.
- The Project includes provision for lighting for when maintenance works are to be undertaken at night; these will be on 10m high poles. Additionally, there would be security lighting that is controlled by sensor. All lighting would be designed and operated in accordance with AS 4282:2023 Control of the obtrusive effects of outdoor lighting.
- Two lightning arrestors will also be located within the development footprint; these will be up to 20m in height.

Visual representation of the Project is provided with aerial view in Plate 5.1.



Plate 5.1: Photomontage of proposed BESS



5.2.1 Battery Energy Storage System

The battery units will cover an area of approximately 2.5 ha and will include up to 188 battery units, associated infrastructure, inverters, MV transformers, internal access roads, hardstand and security fencing.

The battery units and MV transformers would be installed direct on the pad or with screw piles, piers or concrete pad formations, this will be determined through detailed design. Each battery unit is anticipated to weigh approximately 39 tonnes and be 8.6 m in length, 2.8 m in height and 2.1 m wide. Most battery units are approximately in the form of a 12.2 m shipping container.

The associated transformers up to 47 units are estimated, subject to final equipment selection and design) would similarly be trucked to Site and arranged onto footings or screw piles via mobile crane.

5.2.2 Switching Station

A switching station is proposed comprising a 132/33 kV high-voltage transformer, switchgear, an auxiliary transformer, two 33 kV switch rooms and potentially harmonic filters. The switch rooms will include the switchgear and a Site office, with trenches and conduits for the cabling entering the building. The building would be manufactured off-site and delivered via truck. The switch rooms and transformers would sit on concrete footings or piles.

5.2.3 Grid Connection

The connection to the grid will be via overhead line to connect the BESS to the neighbouring 132 kV Tully Substation. The route is approximately 600m in length. The OHTL will be supported by five (5) single circuit 132 kV concrete pole approximately 27.5m in height. The OHTL will travel north through Lot 1 on RP735276 and then east to connect to



the neighbouring substation site on Lot 1 on RP716718. It is intended to use the Powerlink standard 132 kV pole design.

5.2.4 Operation and Maintenance Area

A temporary construction and permanent operations and maintenance (O&M) area will be established adjacent to Sandy Creek Road. This would include an operations and maintenance building, yard, parking areas and any required office buildings, water tanks or storage sheds. Repurposing of the existing dwellings on Site as O&M areas for operation is being considered.

The temporary laydown areas for use during construction will be hardstand areas, these hard stand areas will remain in place following construction.

5.2.5 Parking and Access

Access to the facility will be via the existing road network, with two upgraded site access points to be constructed from Sandy Creek Road. The proposed access points to the development from the road network are illustrated on the Project concept design. Sufficient parking to meet the needs of the development will be provided at the Project Site.

5.2.6 Fencing

Temporary fencing will be erected at the Site once the main earthworks have been completed. Final perimeter fencing will be erected around the BESS area, switching station and O&M area for safety and security reasons. The proposed security fencing will be fauna-friendly and free of barbed wire. The property boundary will retain the existing 3-wire and post fencing.

5.2.7 Landscaping buffer

A landscape buffer of 5 m depth is proposed along the frontage of Lot 1 on RP852238. This has been designed and will be planted in accordance with the CCRC Planning Scheme requirements.

5.2.8 Ancillary Services

5.2.8.1 Water Supply and Sewerage

Sandy Creek Road has reticulated water supply which will be used if possible. During the construction and operational phases, the development will not require any connection to sewer mains. Rainwater harvesting will be used for potable supplies where possible. A Portable Hire Toilet service will be used during the construction phase. A Home Sewerage Treatment Plant (HSTP) servicing up to four people may be used during the operational phase.

Freshwater may need to be trucked in during drought periods and for use as dust suppression during construction.

An on-site firewater tank with a minimum of 40,000 litre capacity (or as directed by the Queensland Fire Department) will be available on Site.

5.2.8.2 Electricity

Domestic electrical infrastructure is available on the Project Site. It is proposed that the development will require connection to electrical services.

5.3 Construction

Construction of the BESS is estimated to be undertaken over an 18-month period, subject to final equipment selection, construction methodology and appointment of construction contractors(s). Note that stages may occur in parallel with different activities taking place on different parts of the Project Site at the same time. **Table 5.1** provides a summary of the main construction stages.



Table 5.1: Construction stages

Stage		Overview
1	Site preparation	Vegetation clearing Prior to construction works commencing, vegetation within the development footprint would be removed. The clearing methodology has not yet been determined, however, clearing will likely be undertaken through mechanical methods that are suitable for the applicable environmental conditions. The types of machinery will be determined prior to construction by the relevant contractor.
		Existing infrastructure The existing dwellings and sheds on Site will be assessed for suitability to be repurposed as O&M areas for Project operation. Where existing structures cannot be repurposed, they will be removed.
		Earthworks Civil works will be required to prepare the Project Site for construction of the BESS and ancillary facilities. Excavation and filling will be required to make the Site level and cater to stormwater management requirements. Cut and fill volumes and battery design will be finalised during detailed design.
2	Construction	BESS Bench If relevant, topsoil will be removed and stockpiled on Site for use in landscaping and rehabilitation once construction is completed or else disposed of. Where the quality of material is acceptable, excavated material would be used as backfill and compacted during the civil works program. Gravel sheeting will be applied to the BESS bench area.
		Access Roads New internal access roads will be constructed for delivery of equipment and material and ongoing maintenance activities. The access roads would be up to 6 m wide and connect the BESS compound entrance to the Site frontage at Sandy Creek Road. Any topsoil would be removed for use elsewhere where applicable, and the access roads will be finished with compacted gravel. A bitumen crossover will be constructed in accordance with the appropriate standards between Sandy Creek Road and the property boundary.
		Battery Units The battery units and MV transformers would be installed on either screw piles, piers or concrete pad formations (to be determined through detailed design phase). Each BESS unit is expected to be 8.6 m in length, 2.8 m in height and 2.1 m wide. The battery units would be transported to Site via heavy vehicles and craned onto their concrete footings for anchoring. The associated transformers would also be trucked to Site and arranged onto footings via mobile crane.
		Storage and Operation Area Areas will be designated on-site for the storage of materials in open air laydown, for use as required during operations.
		Switchgear Control Room



Stage		Overview
		A switchgear control room will be manufactured off-site and delivered to the BESS bench via trucks. The control building would sit on suitable concrete footings with trenches and conduits for the cabling entering the building.
		Perimeter Fencing
		Fencing will be erected at the perimeter of the BESS area, switching station and O&M area for safety and security reasons.
		Underground cabling
		Underground cabling within the BESS bench would be installed via open trenching, undertaken in accordance with relevant Australian Standards and marked accordingly. Upon installation of the cable, the trench will be backfilled with excavated material and the surface rehabilitated.
		Asset Protection Zone (APZ)
		The APZ will be established and maintained around the site to a width of 48.1 m along the northern and eastern sides and 10 m along the western and southern sides. The APZ will be cleared of any vegetation and have a minimal earth or grass surface. Where a grass surface is chosen, it must be maintained at a height ≤ 10 cm during the fire danger season.
		Demobilisation
		Following completion of construction, all construction equipment will be demobilised from the Site.
3	Rehabilitation	Rehabilitation would occur in stages throughout the construction program. Rehabilitation works comprising compaction and surfacing of the BESS bench area would occur once civil works have been completed. Further rehabilitation of the Site, including disposal of waste materials (at an appropriately licensed waste facility) would occur once equipment installation and construction has been completed.
4	Operation	The BESS will be in operation 24 hours a day, every day of the year. O&M activities may occasionally extend beyond daylight hours for corrective maintenance activities as required. The Site will be remotely monitored 24 hours a day.
5	Decommissioning	The Project is intended to operate for a period of 20 years. Following this period a determination will be made whether to:
		Extend the life of the existing infrastructure with increased maintenance, refurbishment and/or replacement of certain components; or
		Repower the Site with new infrastructure; or
		 Decommission the infrastructure and rehabilitate the Site.

5.3.1 Hours of Construction

Most construction work, including trenching and deliveries, will be undertaken during standard construction hours: Monday to Saturday, 6:30pm.

The following construction activities may be undertaken outside of standard construction hours:

- Distribution of materials within the Site
- Commissioning and testing activities
- Other quiet works including survey work, office work and general mechanical assembly.



The above activities are proposed in consideration of the closest neighbour being approximately 500 m from the proposed project footprint to the north of the site at the south-western corner of Tully Gorge Road and Sandy Creek Road and no noise impacts are expected.

Any other construction activities outside of standard construction hours, including deliveries and use of heavy-duty mechanical equipment, would only be undertaken in consultation with Cassowary Coast Regional Council and in consideration of audible noise impact on nearby residents.

Project construction will generate up to 60 jobs.

5.3.2 Construction Traffic

Maximum traffic generation is expected to be 40 light vehicles and 30 heavy vehicles travelling to and from the Site each day, with an average of 30 light vehicle movements daily and 15 heavy vehicle movements daily.

Given the semi-rural location and size of the Project, it is anticipated that there is sufficient area to provide non-formalised car parking spaces. As such, no formal car parking is proposed for the construction workforce and a temporary construction parking area will be designated on-site.

The construction workforce is expected to commute using private vehicles as no existing active or public transport networks are accessible within the Project's vicinity.

5.3.3 Construction Period

Construction of the Project is anticipated to begin in 2027 and is expected to take approximately 18 months.

5.3.4 Construction Environmental Management Plan

A Construction Environmental Management Plan (CEMP) will be developed and implemented to manage potential environmental impacts from the construction of the Project. The CEMP will address key activities likely to have an environmental impact and implement strategies to protect and manage water quality, waste, flora and fauna, soils (including erosion and sedimentation), air quality, noise and cultural heritage. The CEMP will be finalised during detailed design and will respond to relevant approval conditions.

All contractors involved in the Project will be required to comply with the CEMP.

5.4 Operation

5.4.1 Hours of Operation

The BESS will be in operation, including remote monitoring, 24 hours a day, every day of the year.

5.4.2 Operational Workforce

RWE will manage operations for the life of the project. Primary operation of the project (i.e. the charge and discharge of energy) will be undertaken from a remote operations control centre. Physical monitoring and maintenance of the facility will be undertaken via periodic inspections of the equipment on-site. Project operation will generate approximately 3 full time equivalent roles across various functions.

5.4.3 Maintenance Tasks

Planned maintenance activities will likely include:

- Monthly inspections (electrical, civil and environmental)
- Vegetation management
- Other activities as defined in the O&M management plans



• During fire danger period weekly inspections of the APZ, access road, fire-fighter water supply, signage and building protection systems are required.

Corrective maintenance activities will likely include:

- Testing and replacement of faulty plant components (fuses, etc.), and
- Any other corrective actions within the O&M scope.

5.4.4 Waste

Waste from operations will be generated from the O&M building. Waste will be general rubbish including putrescible waste, and recyclable material which will be placed into bins and collected for disposal at licenced facilities.

5.5 Decommissioning

The Project life is up to 20 years. Following the 20-year period the determination will be made whether to:

- Extend the life of the existing infrastructure with increased maintenance, refurbishment and/or replacement of certain components; or
- Repower the Site with new infrastructure; or
- Decommission the infrastructure and rehabilitate the Site.

Decommissioning will be addressed as part of a Decommissioning Management Plan but would typically consist of removal of all above-ground infrastructure for recycling or disposal and reinstate all disturbed land and return to agricultural use. The land will be returned to its pre-existing condition, or an improved state, to allow for rural use.

The potential of the Project to operate past the original lifespan will depend on the market conditions and the condition of the BESS equipment at the time.



6. Statutory Framework

This section assesses the Project against relevant assessment benchmarks.

6.1 Planning Act 2016

The Planning Act provides for 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 includes:

- State planning policies setting out planning and development assessment policies about matters of State interest for particular regions of the state
- Regional plans setting out integrated planning and development assessment policies for all of a local government area
- Planning schemes setting out integrated planning and development assessment policies to protect all or part of a local government area from adverse impacts in urgent or emergent circumstances
- Planning scheme policies
- A development assessment system, including SARA, for implementing planning instruments and other policies and requirements about development.

The Planning Act regulates and manages development in Queensland, providing a framework for the preparation and implementation of planning instruments. It requires the coordination and integration of State, regional and local planning outcomes. A development permit is required under the Planning Act prior to commencing assessable development.

The relevant planning instruments for the proposed development are:

- Far North Queensland Regional Plan 2009 (FNQ Regional Plan)
- State Planning Policy 2017 (SPP)
- State Development Assessment Provisions (SDAP)
- CCRC Planning Scheme 2019.

6.1.1 Assessment Manager

Schedule 8, Table 2, Item 1 (b)(i) of the Planning Regulation states that where development is made assessable by a local categorising instrument the local government is the assessment manager. As such, the assessment manager for this application is Cassowary Coast Regional Council.

6.1.2 Use Definition and Level of Assessment

With no specific use definition for the proposed BESS, the Project is treated under the CCRC Planning Scheme as an 'undefined use'. The development also includes a range of ancillary infrastructure that do not constitute separately defined uses.

The proposed BESS and ancillary infrastructure are located within the Rural Zone. In accordance with Table 5.5.4 – Rural zone, of Part 5 of the CCRC planning scheme, the proposed use is **impact assessable**.

6.2 Referral Agencies

The Planning Regulation sets out the requisite referral agencies for development applications. In accordance with Schedule 10 of the Planning Regulation, **Table 6.1** provides details of the referral agencies for the development application.



Table 6.1: Referral Agencies

Planning Reg. Reference	Referral Topic and Reason	Referral Agency
Schedule 10, Part 9, Division 1, Table 1	Development on designated premises – Lot 1 on RP852238 and Lot 1 on RP716718 are subject to designations for the Powerlink OHTL and substation.	SARA
Schedule 10, Part 9, Division 2, Table 2	Material Change of Use of premises near a substation or subject to an easement – the Project Site is adjacent to the Ergon and Powerlink Tully Substations and is subject to the Powerlink OHTL easement.	The chief executive of the distribution entity or transmission entity – being Powerlink and Ergon
Schedule 10, Part 20, Division 4, Table 3	Material Change of Use of premises in a wetland protection area.	SARA

6.3 Assessment Benchmarks

The Planning Act sets out matters (assessment benchmarks) that an assessment manager must assess assessable development against. **Table 6.2** lists the assessment benchmarks considered as part of the development application.

Table 6.2: Assessment benchmarks

Document	Assessment Benchmark	Comment/Report Ref.
CCRC Planning Scheme	 Strategic Framework Rural Zone code Overlay Codes Bushfire Hazard Environmental Significance Flood Hazard Scenic Amenity Waterway Corridors and Wetlands Design for safety code Landscaping code Parking and access code 	Assessment against the relevant assessment benchmarks is set out in Section 6.4 with the relevant code tables provided in .
SPP	As per Part 2.1 of the CCRC Planning Scheme, the Minister has identified that the SPP is reflected in the Planning Scheme.	No further assessment against the SPP is required.
FNQ Regional Plan	As per Part 2.2 of the CCRC Planning Scheme, the Minister has identified that the planning scheme, specifically the strategic framework, appropriately advances	No further assessment against the FNQ Regional Plan is required.



Document	Assessment Benchmark	Comment/Report Ref.
	the FNQ Regional Plan, as it applies in the planning scheme area.	
SDAP	The SDAP Version 3.3 is prescribed under the Planning Act and provides assessable benchmarks, being State Codes, for assessment of a development by either the assessment manager or a referral agency where applicable under the Planning Regulation. Assessment against the following State Code is required: State Code 9: Great Barrier Reef wetland protection areas	Assessment against State Code 9 is provided in Appendix N .
Planning Regulation	As per Schedule 10, Part 9, Division 1, Table 1 of the Planning Regulation, a referral agency's assessment for development on designated premises must have regard to the designation. The relevant designations are: ID 493 Ingham to Tully, 275/132 kilovolt double circuit transmission line replacement project ID 286 132/22 kilovolt Tully bulk supply substation.	Considered throughout this Report.

6.4 Cassowary Coast Regional Council Planning Scheme

The following development provisions apply to the Project Site as outlined in the CCRC Planning Scheme.

6.4.1 Strategic Framework

The strategic framework sets the policy direction for the planning scheme and forms the basis for ensuring appropriate development occurs within the planning scheme area for the life of the planning scheme. The strategic framework is structured with the overarching strategic intent, and with nine themes that represent the policy intent of the scheme. **Table 6.3** provides a response to the relevant strategic outcomes.

Table 6.3: Strategic Outcomes

Strategic Outcome	Response	
Settlement Pattern		
(6) Development in Tully ensures that Tully remains instantly recognisable as a Queensland sugar town, with its association to the Tully sugar mill and local agricultural industries.	The Project is located on the outskirts of the Tully urban footprint and adjacent to the existing Powerlink Tully Substation. The Project is suitably sited and designed to be complementary to the area's existing landscape and character and will not detract from the existing rural and agricultural profile of Tully.	



Strategic Outcome Response **Natural Environment** The Project will improve reliability of electricity supply (3) Development allows for the Region's natural assets to be resilient to the impacts of climate change. for the Far North Queensland energy network and support renewable energy generators, allowing the storage of excess energy to discharge back into the grid during peak demand times, power outages or to assist with grid balancing. (7) Development is carried out in a way that is sensitive The mahogany glider corridor within the Project Site to and protective of the Region's endangered and will be buffered and retained. Fencing and other built threatened species, including the cassowary and the infrastructure will be designed to minimise conflict mahogany glider. This means that urban impacts, such with fauna movement throughout the corridor and as fencing, traffic and the introduction of pest plants wetland protection area, ensuring the Project does not and animals do not impact on the future viability of impact mahogany glider movement. The proposed these species. OHTL alignment spans two areas of vegetation at the boundary of Lot 1 on RP735276 and Lot 1 on RP852238, and at the northern end of Lot 1 on RP735276, it is expected that only trimming of this vegetation may be required in order to meet electrical safety requirements. Refer to the Ecological Assessment Report (EAR) in Appendix F. (12) Pest plants and animals pose a significant threat to Weed species will be removed from the Development the Region's biodiversity. The failure to control pest Footprint during construction. Vegetation plants and animals also has economic and social management, including control of pest species, will be impacts across the Region. Development will assist in undertaken as part of scheduled O&M activities to achieving positive pest management outcomes for the manage biosecurity throughout Project operation. Region by removing pest plants and animals from the development site and preventing the spread of weed seed from the site. **Community Identity and Diversity** RWE has been actively working with the Gulngay (9) Development is carried out in a way that is sensitive to and cognisant of local Aboriginal communities, their people and GAC to progress a Cultural Heritage values and beliefs, traditions and cultural heritage. Agreement. This process is being undertaken in a Planning in the Region provides opportunities and respectful and collaborative manner to ensure that encourages a sense of belonging for all cultural cultural heritage values are identified, protected, and groups. appropriately managed throughout the development.

Natural Resources and Landscape

(1) The Region's landscape predominately consists of shades of green, comprising open space, vegetated areas, waterways, cropping land and improved pastures, framed by mountain ranges. The scenic values of the Region's landscape is maintained, protected and enhanced. The features that comprise this landscape are protected from incompatible

The Project will maintain the scenic values of the Region's landscape, as the Project has visual characteristics that are consistent with the existing surrounding landscape, will introduce additional tree planting to improve landscape character, and has only limited visibility from surrounding areas (refer to the Scenic Amenity Impact Assessment (SAIA) in **Appendix G**).

Ongoing engagement with the Traditional Owners is a key priority, and the agreement will provide a clear framework for managing cultural heritage matters during construction and operation of the project.



Strategic Outcome	Response
development, so they remain the dominant visual elements of the Region.	
(3) Land classified as important agricultural land is prevalent in the Region (see strategic framework maps SFM-03a, SFM-03b and SFM-03c). This land is important in maintaining the viability of the Region's agricultural industries. ALC Class A and B land must be protected from development that may lead to its alienation or diminished productivity.	While the Project Site is mapped as important agricultural land and ALC Class A and B land, the proposed development is unlikely to alienate or dimmish its rural productivity due to the relatively small lot sizes and the insignificant impact on the available sugarcane land in the region. The proposed BESS will not permanently alienate the land from future agricultural use and at the end of the Project life, following decommissioning, the site can be returned to the most suitable agricultural use. Refer to the Agricultural Land Assessment (ALA) in Appendix D .
5) The multiple values of agricultural land are recognised, including the ecosystem services it can provide and its ability to contribute to the Region's scenic amenity. Development that negatively impacts on these values is not supported.	The Project Site includes approximately 6 ha of wetlands that are not suitable for agricultural use, 2.5 ha of which are mapped as a wetland of high environmental significance. The proposed development maintains wetland areas and their natural vegetation and incorporates suitable buffers to ensure that the ecosystem and scenic values of these areas are maintained.
Economic Development	
(1) Development in the Cassowary Coast Region seeks to create and maintain a sustainable and diversified economy. In 2014, the Region's economy is largely reliant on cane farming, banana farming and tourism. The goal for planning and development is to assist in diversifying this economic base to provide greater economic resilience and employment opportunities.	 The Project represents a source of diverse economic growth in the region and Rural zone, including benefits generated by grid-strengthening nature of BESS developments, as well as ongoing employment opportunities throughout construction and operation. The Tully BESS economic and community benefits include: Boosts to local and regional businesses, including construction contractors, transport and logistics providers, hospitality and accommodation services, and local trades and vegetation services. Establishment of a community investment fund. Creation of up to 60 jobs during construction, and up to 3 ongoing roles during operations. Improved energy reliability, particularly during extreme weather or peak demand periods.
(4) Commercial activities with minimal impact on the Region's environment as well as those that develop green technologies, are desirable additions to the Region's economy. Innovative industries utilising the Region's natural features (abundance of water, biodiversity, etc) and involving research and development in areas such as tropical medicine, indigenous health and education, pharmaceuticals and	The Project has been sited and designed to minimise environmental impacts and capitalise on the existing transmission network and Tully Substation, allowing for a development that contributes to both the regional economy and the growing renewable and alternative energy supply.



Strategic Outcome	Response
alternative energies are also encouraged in	
appropriate locations.	

Water Management

(5) Large wetland systems exist across the Region, and the wetlands located in the Ella Bay area, the Bulguru/Ninds Creek wetland system, the Moresby catchment and from Maria Creek/Mission Beach down to the northern end of Cardwell are considered particularly vulnerable to human impacts (see strategic framework map SFM-02). All of the Region's wetlands, and in the particular those wetland systems listed, are protected from loss and degradation caused by physical disturbance and contaminated run off.

The Project has been sited and designed to avoid the wetland areas on the Project Site as far as practicable, by locating all BESS infrastructure outside of the wetland and adopting an OHTL design that will span the wetland where crossing is required at the northern end of Lot 1 on RP735276. The Project Stormwater Management Plan (SMP) (refer to **Appendix I**) demonstrates that the proposed stormwater quality management measures will provide an overall improvement runoff water quality.

Flood modelling indicates that shallow overland sheet flow across portions of the site with flow depths of less than 0.15m with some areas of localised ponding evident along the southern boundary adjacent to the irrigation channel. These conditions are anticipated to be mitigated through site development works, including filling, grading, and re-leveling of the affected areas during construction. This would be determined through detailed design works.

Additionally, flow velocities across the proposed infrastructure areas of the site are generally low, remaining below 0.5 m/s. Refer to **Appendix I** for flood assessment of the project.

Natural Hazards

(1) The Cassowary Coast Region is subject to a range of natural hazards, notably flooding and cyclones. Development in the Region must be able to either withstand the impacts of these natural hazards or recover quickly when affected. The highest priority in the design of a development is that people are kept safe from natural hazards. The protection of property is also important, although a secondary concern to ensuring people are safe.

The Project has been sited to avoid flood hazard and minimise risk to people and property. The majority of Project infrastructure is located outside of the 1% Annual Exceedance Probability (AEP) flood event, ensuring Project resilience through avoidance of flood risk (refer to the Flood Assessment (FA) in **Appendix I**). In addition, Project design has adopted the 0.2% AEP flood event as a design standard, ensuring flood risk is minimised.

6.4.2 Rural Zone

The Project is located within the Rural Zone of the CCRC Planning Scheme, with the purpose of the zone to:

- provide for agricultural activities including cropping, intensive horticulture, intensive animal industries, animal husbandry, animal keeping and other primary production activities;
- provide opportunities for non-agricultural activities that are compatible with agriculture, the environmental
 features, and landscape character of the rural area where the activities do not compromise the long-term use of
 the land for rural purposes;
- protect or manage significant natural resources and processes to maintain the capacity for primary production;
- facilitate the continued growth and diversification of the agricultural sector within the Cassowary Coast Region while promoting the adoption of sustainable agriculture management practices;



- ensure the viability of ALC Class A and B land;
- avoid negative impacts from incompatible land uses;
- protect and maintain the scenic values of the Region's landscapes.

The Project is consistent with the purpose of the Rural Zone as it represents a non–rural use that is generally compatible with the existing uses and the landscape character of the locality. The proposed BESS will not permanently alienate the land from future agricultural use and at the end of the Project life, following decommissioning, the site can be returned to a rural use.

An assessment of the relevant overall outcomes sought by the Rural Zone and the Project are addressed in **Table 6.4**.

Table 6.4: Rural Zone Overall Outcomes

Overall Outcome	Response
(a) ALC Class A and B land is protected from fragmentation and alienation	The Project Site has been used for livestock grazing, the site appears to be suitable for sugarcane of approximately 11 ha, however it is understood that is has not been previously cropped. With 6 ha unavailable for agriculture due to the presence of wetland areas.
	The Project Site additionally constitutes relatively small sized lots that constrain the agricultural possibilities of the land.
	The Project will not fragment agricultural land beyond current constraints to viable production. Refer to the Agricultural Land Assessment (ALA) in Appendix D for further discussion of impacts to agricultural land values.
(b) the use of ALC Class A and B land for agricultural production is retained through the separation of incompatible land uses	The Project is compatible with surrounding land uses and the Rural Zone, as it is a non-agricultural opportunity that serves to diversify the regional economy and support the electricity grid, while not adversely impacting or compromising surrounding agricultural operations.
	The site can be returned to rural use at the end of the Project life.
(c) the rural amenity and character of the existing rural landscape, which is dominated by extensive areas of rural production and natural areas, is maintained	The Project is consistent with the character of the existing landscape that features existing substations and an OHTL. The Project will introduce additional landscaping to improve on-site amenity and will not introduce significant visual impacts to the rural landscape. Refer to the Scenic Amenity Impact Assessment (SAIA) in Appendix G and Landscape Plan in Appendix L for discussion of visual impacts, photomontages and proposed landscaping treatments. The Project will maintain buffers to wetland areas and retain undeveloped natural areas on site.
(f) development minimises impacts on any environmental values present on the land or surrounding area	The Project Site includes approximately 6 ha of wetlands, 2.5 ha of which are mapped as a wetland of high environmental significance. The Project has been designed and sited to maintain buffers to wetland



Overall Outcome Response

areas, minimise clearing of native vegetation, and retain undeveloped natural areas on site.

Project design has located all BESS infrastructure outside of the wetland and adopting an OHTL design that will span the wetland where crossing is required at the northern end of Lot 1 on RP735276. The Project Stormwater Management Plan (SMP) (refer to **Appendix I**) demonstrates that the proposed stormwater quality management measures will provide an overall improvement runoff water quality.

Flood modelling indicates that shallow overland sheet flow across portions of the site with flow depths of less than 0.15m with some areas of localised ponding evident along the southern boundary adjacent to the irrigation channel. These conditions are anticipated to be mitigated through site development works, including filling, grading, and re-leveling of the affected areas during construction. This would be determined through detailed design works. Additionally, flow velocities across the proposed infrastructure areas of the site are generally low, remaining below 0.5 m/s. Refer to **Appendix I** for flood assessment of the project.

An assessment against the Rural Zone Code is provided in **Appendix M**.

6.4.3 Special Purpose Zone

The proposed grid connection includes tie-in to the Powerlink Tully substation within Lot 1 on RP716718, located within the Special Purpose Zone of the CCRC Planning Scheme. Accordingly, the extent of the proposed development within the Special Purpose Zone is limited to the grid connect ion to the existing 132 kV substation with approximately 60 m of OHTL (refer to **Figure 1.2**).

The purpose of the zone is to:

- provide for public uses that are owned or operated by a government, statutory authority, government owned corporation, local government or private organisation in the course of a public utility undertaking, such as a defence establishment, airport, sea port, rail line, railway station or the provision of water supply, sewerage, electricity, gas, telecommunications, transport, waterway maintenance, drainage or other like services;
- ensure development is buffered from encroachment by incompatible uses.
- protect and maintain the operation of important local, regional and State infrastructure, including the State and cane rail network, airports, aerodromes, sewerage, water, waste and electricity infrastructure and the Port of Mourilyan;
- allow important local, regional and State infrastructure to continue to function as intended as well as allow for expansion and upgrades that benefit the Region and the State as a whole.

An assessment of the relevant overall outcomes sought by the Special Purpose Zone and the Project are addressed in **Table 6.5**.



Table 6.5: Special Purpose Zone Overall Outcomes

Overall Outcome	Response
(a) development is designed and located in a way that is appropriate to the type of existing or proposed infrastructure;	The proposed OHTL grid connection is consistent with the existing infrastructure within Lot 1 on RP716718, which includes the Powerlink Tully substation and existing OHTLs.
(c) development within the special purpose zone is undertaken to minimise the impact on adjacent sensitive land uses;	In its operational phase, the proposed OHTL grid connection will not introduce any impacts adjacent sensitive land use as it is consistent with the existing use of Lot 1 on RP716718.
	All construction works will be undertaken in accordance with the CEMP to be developed and implemented to manage potential amenity impacts from the construction of the Project.
(g) development minimises impacts on any environmental and scenic values present on the land or surrounding area.	The proposed grid connection is to be an OHTL to minimise impacts to on-site wetland values. Clearing of vegetation within wetland areas is avoided, with impacts limited to trimming to maintain electrical safety requirements (if required).
	The appearance and visual impacts of the OHTL are consistent with the existing visual profile of the Powerlink Tully substation and existing OHTLs.

An assessment against the Special Purpose Zone Code is provided in **Appendix M**.

6.4.4 Overlays

A summary of the applicable overlay codes is provided in **Table 6.6**. A full assessment against the relevant overlay codes is provided in **Appendix M**.

Table 6.6: Applicable overlays

Overlay	Sub-category	Response
Agricultural Land	Class A1	There is no corresponding code for this overlay. An Agricultural Land Assessment is provided in Appendix D . Assessment against relevant sections of the Strategic Framework and Rural Zone overall outcomes are included in Table 6.3 and Table 6.4 respectively.
Bushfire Hazard	High potential & potential impact buffer	A Bushfire Hazard Assessment and Management Plan, including assessment against the bushfire hazard overlay code, is provided in Appendix E .
Environmental Significance	Mahogany Glider Corridor & Area of Environmental Significance	Assessment against the Environmental significance overlay code is provided in Appendix M . An Ecological Assessment is provided in Appendix F .
Flood Hazard	Low, high & extreme potential	Assessment against the Flood hazard overlay code is provided in Appendix M .



Overlay	Sub-category	Response
		A Flooding Impact Assessment is provided in Appendix I .
Scenic Amenity	Tourist Route (Tully Gorge Road)	Assessment against the Scenic amenity overlay code is provided in Appendix M .
		A Scenic Amenity Impact Assessment is provided in Appendix G .
Waterway Corridors and Wetlands	Wetlands area of high environmental significance & waterway envelope	Assessment against the Waterway corridors and wetlands overlay code is provided in Appendix M .
		An Ecological Assessment is provided in Appendix F .



7. Assessment of Project

7.1 Agricultural Land

The Project Site is mapped as ALC Class A & B land under the CCRC Planning Scheme. In order to identify agricultural values on site and assess the potential impacts associated with the Project, an Agricultural Land Assessment (ALA) has been prepared by Attexo and is provided as **Appendix D**.

While the Project Site is located within the Rural Zone, it comprises small lots that are more suited to rural residential use and are not a sufficient size to support an agricultural production enterprise system. At a biophysical level, the Project Site's most likely and valuable agricultural use is considered to consist of:

- 11.5 ha of potential sugarcane land
- 9.5 ha of potential grazing land
- 6 ha of wetland that is not suitable for agricultural use
- 1 ha of residential and farm infrastructure.
- Considering the characteristics of the Project Site, development of the Project will not have a significant impact on agricultural land as:
- No further agricultural production on the Project Site will result in a loss of approximately 11.5 ha of cropping land and 9.5 ha of grazing land for the life of the Project after which the Site can be returned to rural use
- Impact to agricultural production is estimated to be valued between \$35,404 to \$37,861 in gross annual productivity based on an extrapolation from the indicative annual commodity values
- Project impact is insignificant to the sugarcane industry based on the Project removing 11.5 ha of potential sugarcane land from future production out of approximately 56,000 ha in the LGA (0.02%).

7.2 Bushfire

Parts of the Project Site are mapped within a Bushfire Prone Area (High potential bushfire intensity and potential impact buffer) in both the CCRC Planning Scheme and SPP mapping.

Accordingly, a Bushfire Hazard Assessment and Management Plan (BHAMP) has been prepared by Meridian Urban and is provided as **Appendix E**. The BHAMP includes assessment against the CCRC Planning Scheme and SPP Natural hazards, risk and resilience (bushfire) State interest, and has regard to relevant guidance material including the Bushfire Resilient Communities Technical Reference Guide (prepared Queensland Fire and Emergency Services).

A number of mitigation measures have been identified for implementation on site to reduce the likelihood and severity of bushfire hazard, including:

- Establishing and maintaining an APZ of 48.1 m along the northern and eastern boundaries, and 10 m along the western and southern boundaries of the BESS
- Provision of a minimum 40,000 L static water supply dedicated to bushfire fighting purposes (or as directed by the Queensland Fire Department)
- Provision of direct access from the BESS facility to Sandy Creek Road
- Storage of all hazardous materials and chemicals away from hazardous vegetation
- Implementation of appropriate procedures during construction and operation of the Project.

7.3 Biodiversity

The potential impacts on the ecological values of the Project Site as a result of the Project have been assessed as part of an Ecological Assessment Report (EAR) prepared by Attexo (**Appendix F**). The EAR includes assessment of environmental values prescribed as Matters of State Environmental Significance (MSES) and Matters of Local



Environmental Significance (MLES). Ecological values within the Project Site have been identified through desktop assessment and field surveys undertaken in November 2024.

7.3.1 MSES

7.3.1.1 Regulated Vegetation and Regional Ecosystems

GTREs within the Project Site are summarised in **Section 4.2.4** and shown within **Figure 4.3**.

The Development Footprint avoids mapped and ground-truthed regulated vegetation and REs as far as practicable. Impacts to vegetation have been minimised through:

- Selection of compact BESS components to minimise footprint size
- Siting of infrastructure to minimise distance for the transmission to the existing Powerlink Tully substation
- Siting of infrastructure to avoid clearing of mapped regulated vegetation
- Siting of infrastructure to avoid clearing vegetation associated with nearby wetlands or water features
- Siting of infrastructure to avoid disruption of connectivity to the adjacent patch of mapped regulated vegetation.

While the proposed OHTL alignment spans two areas of vegetation at the boundary of Lot 1 on RP735276 and Lot 1 on RP852238, and at the northern end of Lot 1 on RP735276, it is expected that only trimming of this vegetation may be required in order to meet electrical safety requirements.

7.3.1.2 Wetlands and Watercourses

There is a single watercourse mapped as an 'MSES regulated (defined watercourse)' in the Project Site. The wetland area located in the east of the Project Site is mapped as an MSES high ecological significance wetland and within a Great Barrier Reef wetland protection area (refer to **Figure 4.1** and **Figure 4.2**).

The Project avoids impacts to wetlands and watercourses through siting of infrastructure in the south-western corner of the Project Site and adopting an OHTL design to span watercourse and wetlands where crossing is required to facilitate the grid connection. Ground disturbance within the watercourse and wetland is therefore avoided, with impacts to vegetation within these areas limited to trimming (if required) to meet electrical safety requirements.

The Project will maintain the existing hydrology regime and flow to the wetland area. Water quality impacts will be managed through the site-specific SMP (**Appendix I**) and P-ESCP (**Appendix J**) developed for the Project. The SMP demonstrates that there will be an overall net improvement in the runoff water quality discharging from the site. Refer to **Section 7.6** for further details.

Refer to **Appendix N** for assessment against State Code 9: Great Barrier Reef wetland protection areas.

7.3.1.3 Waterways Providing for Fish Passage

There are two waterways for waterway barrier works located within the Project Site, one moderate impact (amber) waterway that is outside of the Development Footprint, and one low impact (green) waterway which is crossed by the proposed OHTL alignment (refer to **Figure 4.2**). As discussed in **Section 7.3.1.2** the OHTL has been designed to span the waterway and direct impacts to the waterway are avoided.

7.3.2 MLES

7.3.2.1 Mahogany Glider Corridor

A mahogany glider habitat corridor under the Planning Scheme Environmental Significance Overlay is mapped within the Project Site. This area coincides with the area mapped as a Wetland of High Ecological Significance (refer to **Section 7.3.2.2**

Field surveys within the mapped mahogany glider corridor indicated that the vegetation is unlikely to be suitable as preferred habitat as:



- vegetation throughout the mapped corridor represents closed regrowth vegetation consisting of dense young tree canopy with a dense small tree and shrub layer, indicating it may not be ideal for Mahogany glider movement
- Abundant presence of two other tree species which are contra-indicator for Mahogany glider
- there were few large trees of a suitable size to support den hollows.

The Project avoids adverse impacts to the mahogany glider corridor through siting of BESS infrastructure in the south-western corner of the Project Site and adopting an OHTL design to span the corridor where crossing is required at the northern end of Lot 1 on RP735276 to facilitate grid connection. It is expected that only trimming of this vegetation may be required in order to meet electrical safety requirements. Refer to EAR at **Appendix F**.

7.3.2.2 Wetlands of High Ecological Significance

The wetland area within the Project Site is also mapped as a Wetland of High Ecological Significance under the Planning Scheme Waterway Corridors and Wetlands Overlay and further identified as an Area of High Ecological Significance under the Environmental Significance Overlay.

As discussed in **Section 7.3.1.2**Project design avoids direct impacts to the wetland area with the existing hydrology regime and flow to the wetland area being maintained. Water quality impacts will be managed through the site-specific SMP (**Appendix I**) and P-ESCP (**Appendix J**) developed for the Project. The SMP demonstrates that there will be an overall net improvement in the runoff water quality discharging from the site. Refer to **Section 7.6** for further details.

7.3.3 Impacts and Mitigation

As discussed in **Sections 7.3.1** and **7.3.2**, the Project avoids direct impacts to ecological values as far as practicable through siting and design measures. Indirect impacts will be avoided through development and implementation of a P-ESCP and CEMP that will include a range of standard mitigation and management measures to minimise impacts from dust, air, noise and light pollution, as well as weed and pest management.

The EAR (**Appendix F**) identifies that, due to the nature of the existing ecological values of the Project Site and mitigation measures incorporated into Project design, the Project is not anticipated to have any significant impacts on MSES or MLES. Ecological values of the Project Site and ecological connectivity, waterways and wetlands are protected and maintained.

7.4 Scenic Amenity

A Scenic Amenity Impact Assessment (SAIA) has been prepared by Iris Visual + Design to assess potential impacts of the Project on scenic and rural amenity and is included as **Appendix G**. The SAIA includes the following:

- A visibility analysis to identify the visibility of the Project
- A representative viewpoint assessment
- A discussion of potential visual impacts from private properties (refer to section 5.3 of the SAIA)
- A discussion of the potential visual impacts at night (refer to section 5.4 of the SAIA)
- Identification of visual impacts during construction (refer to section 5.5 of the SAIA)
- A review of the project in relation to the planning provisions relating to scenic amenity in the Cassowary Coast Regional Council Planning Scheme (refer to section 5.7 of the SAIA).

Visibility analysis undertaken as part of the SAIA shows a reduced potential visibility due to the amount of vegetation surrounding the Project Site, with potential views extending into the following areas:

- A few hundred meters from the Project Site to the north, including along Sandy Creek Road
- Northeast to adjoining paddocks
- Scattered visibility on adjoining paddocks within 1 km of the site
- Scattered visibility on elevated locations between 1 and 2 km to the north.



Public and private viewpoints were developed based on these potential views, with visual assessment undertaken and photomontages prepared for five viewpoints (refer to Section 5.2.3 of the SAIA). It is noted that while Mount Tyson is relatively close to the Project site (around 1.5 km to the north) and elevated, there are no lookouts or trails on the mountain that would have a view to the Project.

The assessment of visual impact on public viewpoints are presented in the following sections 5.2.2.1 to 5.2.2.5 of the SAIA, and in conjunction with the photomontages demonstrate that there will be negligible residual visual impacts from Project infrastructure on the surrounding area, due to:

- The rural nature of the area, with a sparse road network and scattered rural dwellings
- Existing vegetation that surrounds Tully Gorge Road and the areas to the northeast of the Project Site
- Low-lying landform.

Section 5.3 of the SAIA also addressed views from private properties to the Project site, the nearest residences being the following with all considered to have no view of the project:

- 8 Sandy Creek Road, north of the Project site and opposite the existing Tully Substation
- 119 Tully Gorge Road, about 860m from the Project
- 122 Syndicate Road around 720 m east of the Project site
- A cluster of dwellings on Maple Terrace, north of Tully Gorge Road, around 250 m north of the Project site.

The following mitigation measures have been incorporated into the Project to minimise visual impact:

- Landscaping including screening vegetation along Sandy Creek Road (refer to Section 7.4.1)
- Painting of infrastructure, including the proposed noise wall in neutral shades that are compatible with the surrounding area
- Provision of lighting used during construction in accordance with AS/NZS 4282:2023 Control of the obtrusive effects of outdoor lighting.

7.4.1 Landscape Plan

A Landscape Plan has been prepared by Cusp Landscape Architecture + Urban Design and provides proposed landscaping treatments for the Project Site to appropriately screen Project infrastructure and minimise visual impacts. The Landscape Plan is included as **Appendix L**.

The proposed landscaping treatments include a combination of:

- Screening vegetation along the frontage of Lot 1 on RP852238 to a depth of 5 m
- Scattered tree planting alongside existing road vegetation and the southern boundary of Lot 1 on RP852238, comprising a single row of mixed trees at 2 m spacing.

An indicative species list has been developed for the landscaping treatments and includes species identified within Planning Scheme Policy C6.4 Landscaping and the Bushfire Resilient Building Guidance for Queensland Homes (2020). It is considered that the selected species are consistent with the landscape character of the Project Site and its surrounds.

7.5 Noise

Marshall Day Acoustics has undertaken an assessment of operational noise associated with the Project (see the Noise Impact Assessment Report in **Appendix H**). The assessment report contains the details of the proposed Project infrastructure and associated noise data, and an evaluation of predicted noise levels at sensitive receptors against Performance Outcome (PO) 5 and Acceptable Outcome (AO) 5.1 of the CCRC Planning Scheme, as well as broader requirements of the Environmental Protection (Noise) Policy 2019 (EPP 2019).



7.5.1 Sensitive Receptors

For the purposes of noise assessment, sensitive receptors are typically dwellings, educational establishments, hospitals, parks, and other places or spaces at which environmental values are expected to be enhanced or protected.

Utilising publicly available data, 490 receptors within 3 km of the Project boundary were identified. The list was filtered to exclude non-sensitive receptors such as industrial buildings or sheds. Following this filtering process, 343 sensitive receptors were considered.

The nearest sensitive receptors are likely to experience noise from the existing Tully substations, and from Bruce Highway, located approximately 3 km to the east. Locations further away from the Project, within the town of Tully, are expected to experience local traffic noise, as well as commercial and industrial noise.

Receptors located to the south and north-west of the Project are located within a rural environment. Existing background and ambient noise levels may be comparatively low.

7.5.2 Operational Noise Assessment

At this stage, prior to planning approval, tender and procurement, it is not feasible to definitively determine equipment that will be installed at construction. This limitation is not unique to this Project and is typical of any large-scale utility or infrastructure project. RWE has provided details of the following noise generating equipment for the basis of the assessment:

- Battery/inverter units
- MV transformers
- HV transformer

Noise mitigation should be considered by the proponent for multiple purposes including:

- Controlling noise levels such that the acoustic quality objectives can be achieved
- Reducing noise levels to manage background creep
- Minimising noise as a best practice.

The full extent of noise mitigation that might be required for the Project cannot be determined at this early stage. Mitigation and noise control design will be specific to the 'for construction' Project design that will be determined following detailed design, tender and procurement, post-approval. As such limited mitigation has been considered in the design of the facility, that which has been considered is aimed at managing the noise levels to meet the acoustic quality objectives and reflects obligations under the management framework with respect to background creep.

The following noise mitigation measures have been included in the noise modelling:

- Provision of a 6 m high noise barrier located directly to the north of the batteries.
- Adoption of 'reduced maximum' noise levels for MV and HV transformers.

The mitigation measures detailed above represent a single way in which required mitigation could be achieved.

7.5.3 Predicted Noise levels

The predicted noise levels determined by the noise assessment indicate that, based on the information detailed in the Noise Assessment report, the Project is capable of being designed and operated such that:

- Predicted Project noise levels are below the CCRC Planning Scheme AO5.1 criteria.
- Cumulative noise is likely to be below the EPP 2019 acoustic quality objectives, subject to determination of existing noise emissions from the Tully substations and holistic design development.
- Background creep and deterioration of existing acoustic environment, assessed under the EPP 2019, is minimised.

The above meets the provisions of EPP 2019 and the CCRC Planning Scheme PO5/AO5.1.



7.5.4 Summary

Based on the nominated Project design and equipment selections, and generally conservative noise assessment assumptions, operational noise from the Project is predicted to be below the acoustic quality objectives at all sensitive receptors, by a minimum margin of 5 dB. This meets the requirements of PO5 and AO5.1 of the CCRC Planning Scheme.

The broader requirements of the EPP 2019 have also been considered, including background creep, deterioration of the existing acoustic environment and cumulative noise.

No adverse impact is indicated with respect to background creep or deterioration of the existing acoustic environment. Absolute predicted noise levels from the project are generally low, mitigation measures have been adopted into the project design, and the management intent and management hierarchy of the EPP 2019 have been followed. It has been determined that there is sufficient detailed design and engineering noise control opportunities available as the Project progresses that compliance with the broader requirements of the EPP 2019 is feasible.

The cumulative noise levels at some locations are contingent on existing noise levels from the Tully substations. Predicted cumulative noise levels considering the Project and existing substations have the potential to be greater than the EPP 2019 acoustic quality objectives at the nearest receptors, where the 'standard maximum' transformer noise levels are considered.

Conversely, predicted cumulative noise levels are indicated to be below EPP 2019 acoustic quality objectives at the nearest receptors, where the 'reduced maximum' transformer noise levels are considered

This indicates that cumulative noise considerations are a material factor for the Project. It will be critical to have a detailed understanding of existing noise levels from the Tully substations to inform the ongoing design development of the Project.

It is recommended that noise from the substations is measured and cumulative noise is reevaluated post approval, at the detailed design stage.

7.6 Surface Water

The Project Site is located within the Tully catchment, within the Wet Tropics region. Located within the lower part of the Tully River Drainage Basin, the Project Site is subject to dynamic hydrodynamic processes, including floodplain inundation, overland flow and potential backwater effects from downstream constraints.

The Great Barrier Reef wetland protection area is the primary surface water feature within the Project Site, and functions as an ephemeral watercourse that receives flows from the nearby irrigation channel, as well as overland sheet flow from the north.

The following assessments have been undertaken to assess and provide appropriate mitigation measures for impacts to surface water:

- Stormwater Management Plan (SMP), prepared by Water Technology (Appendix I)
- Flood Assessment (FA), prepared by Water Technology (Appendix I)
- Preliminary Erosion and Sediment Control Plan (P-ESCP), prepared by Attexo (Appendix J).

7.6.1 Stormwater Management

The SMP documents the methodology and outcomes of the assessments undertaken to demonstrate that the proposed development achieves the stormwater quality requirements of CCRC and the Queensland State Government, including:

- MUSIC modelling to quantify changes to stormwater runoff quality during the operational phase
- Conceptual sizing of stormwater quality management measures to meet the relevant Water Quality Objectives (WQOs).



The assessment of the Project has identified potential impacts on the environmental values of the surface waters in the receiving environment. These impacts will be managed through detailed design and the implementation of appropriate mitigation measures during construction and operation. The following measures are recommended to mitigate impacts of the development on stormwater quality.

- Three vegetated swales to convey stormwater runoff from the development site area to the end-of-line treatment device
- Two end-of-line bioretention basins.

Modelling has showed that the proposed stormwater quality management measures achieve the WQOs, comply with the Reef 2050 Water Quality Improvement Plan and provide an overall net improvement in the runoff water quality discharging from site.

7.6.2 Flooding

The FA documents modelling undertaken to characterise existing overland flow flood behaviour within and surrounding the site and quantity potential impacts of the Project on overland flow flooding as well as:

- Development of a local flood model (using TUFLOW) to characterise existing overland flow behaviour
- Provision of high-level recommendations to minimise impacts of flooding on the Project
- Quantification of hydraulic impacts associated with the development and high-level recommendations to ensure the development does not cause material impacts on flooding external to the site.

The proposed development, including ancillary infrastructure, has been sited to minimise flood risk. Table 8.2.7.4 of the Flood Hazard code does not prescribe design floor levels for an 'undefined use', given that the proposed use will function similar to a power station use, a design level equal to the 0.2% AEP has been adopted for the site. The majority of the proposed development is located outside of the 1% AEP flood event.

The model results showed:

- Overland flow from the north is conveyed via culverts beneath Tully Gorge Road before diverging east and west
 of the site, ultimately draining to the Tully River without posing a flood risk to the Project Site
- Flows along the eastern boundary interact with an irrigation channel and an adjacent wetland system, which functions as an ephemeral watercourse and receives both channel breakout and minor sheet flow from the north
- Within the Project Site, modelling indicates shallow sheet flow (<0.15 m) and localised ponding near the southern boundary, which is expected to be mitigated through construction earthworks and site grading. Flow velocities are generally low, remaining below 0.5 m/s.
- Impacts to flood behaviour are not anticipated as the majority of Project infrastructure is located outside of the 1% Annual Exceedance Probability (AEP) flood extent.

Overall, the Project will incorporate flood modelling into detailed design and final earthworks levels, by which the Project will return a no-worsening of existing conditions with respect to flooding.

7.6.3 Erosion and Sediment Control

The P-ESCP has been prepared to establish the baseline requirements for soil erosion and sediment control (ESC) applicable to Project construction works. The broad objective of this P-ESCP, and all erosion and sediment control measures for the Project, are:

• To take all reasonable and practicable measures to minimise short and long-term soil erosion and adverse effects of sediment transport (IECA, 2008, p2.1).

The P-ESCP provides the overall framework for management of water quality and erosion control, including:

- A description of the Project site and construction works required for Project establishment
- A description of the site environmental conditions relevant to ESC planning
- An assessment of the Project erosion risk



- Identification of site constraints, values and potential threats
- A description of the erosion, drainage and sediment controls to be implemented for the Project
- Definition of the ESC monitoring and maintenance activities that will be undertaken during Project construction
- Identification of potential ESC failures and corrective actions to be taken should these be realised.

Construction phase stormwater quality management will occur in accordance with current industry standards including the requirements of the SPP and *Best Practice Erosion and Sediment Control* (International Erosion Control Association (IECA) 2008). A summary of the specific actions that will be taken to control erosion during Project construction is as follows:

- Soil amelioration requirements (where required) will be documented within the construction ESCP or a dedicated soil management plan.
- Earthworks will be limited to a maximum total area of 9 ha for the BESS facility with limited earthworks expected for the OHTL.
 - The earthworks extent will be visibly delineated while earthworks are underway.
 - The earthworks extent will be delineated by spatial data guiding earthworks activities.
 - The earthworks extent will be communicated with Project personnel via inductions and reinforced during toolbox talks and pre-start meetings.
- The land clearing and stabilisation timeframes specified in Table 4.2 will be abided and accounted for within the construction schedule (or equivalent auditable evidence of compliance maintained).
- Final permanent site stabilisation will be required to achieve a minimum permanent groundcover percentage of 80% to coincide with the 'extreme' erosion risk groundcover criteria (Table 4.2).
- Final permanent site stabilisation criteria will be signed off as being met by an accredited ESC and / or rehabilitation practitioner prior to relinquishment of site by the construction contractor.

7.6.4 Summary

The results of the surface water and flooding assessment are as follows:

- Based on the modelling outcomes, the following measures are recommended to mitigate the potential impacts on stormwater quality:
 - In Catchment A, a vegetated swale at least 150 m long to convey stormwater runoff from the developed site area to the end-of line treatment device and an end-of-line BRB with a minimum filter area of 800 m². It is proposed that the BRB will be located at the downslope end of the southern boundary, adjacent to the proposed location of the temporary construction area. A 235 m long vegetated swale will also be required to divert clean water runoff along the western boundary of the site.
 - In Catchment B, vegetated swales with a combined length of 360 m in to convey stormwater runoff from the developed site area to the end-of line treatment device and end end-of-line BRB with a minimum filter area of 200 m². It is proposed that the BRB will be located to the east of the subcatchment, adjacent to the battery container.
- Modelling demonstrated that the proposed stormwater quality management measures achieved the WQO's and provide an overall net improvement relative to baseline conditions. That is, the development returns a net improvement in the runoff water quality discharging from site.
- The proposed stormwater treatment infrastructure ensures the proposed development complies with the requirements of PO3 to PO5 of State Code 9 Great Barrier Reef wetland protection areas by:
 - PO3 (Hydrology): Minimising earthworks, using pervious surfaces, and incorporating vegetated swales and bioretention basins to maintain natural flow paths and support infiltration, helping preserve surface and groundwater hydrology.
 - PO4 (Water quality): Implementing a WSUD treatment train designed to meet SPP and Reef 2050 water quality objectives, supported by MUSIC modelling and robust ESC measures during construction.



- PO5 (Wetlands): Locating all stormwater treatment devices outside mapped wetlands and buffers, ensuring wetlands are not used for detention or treatment.
- Appropriate measures for the safe handling and storage of chemical and hazardous materials at the project site
 during the construction and operational phases should be included in the Final Stormwater Management Plan,
 Construction Management Plan and/ or Emergency Response Plan as required.
- The flood assessment found:
 - Overland flow from the north is conveyed via culverts beneath Tully George Road before diverging east and
 west of the site, ultimately draining to the Tully River without posing a flood risk to the Subject Property.
 - Flows along the eastern boundary interact with an irrigation channel and an adjacent wetland system, which
 functions as an ephemeral watercourse and receives both channel breakout and minor sheet flow from the
 north.
 - Within the proposed BESS site, modelling indicates shallow sheet flow (<0.15 m) and localised ponding near the southern boundary, which is expected to be mitigated through construction earthworks and site grading. Flow velocities are generally low, remaining below 0.5 m/s.

Overall, the assessments described in this SMP and FA demonstrate that the proposed development, including the mitigation measures described above, returns a no-worsening of existing conditions with respect to flood as well as providing an improvement in stormwater runoff quality. Detailed design of the management and mitigation measures described conceptually within this report will be required to ensure the final design provides the intended outcomes.

7.7 Traffic and Access

A Traffic Impact Assessment (TIA) has been prepared by Cambray Consulting and is provided as **Appendix K**. The TIA considers the anticipated access and traffic generation impacts during both construction and operation of the Project. The TIA includes the following:

- Overview of the Route Assessment and Project Transport Route Options
- Location and form of intersections between the State Controlled Road Network and the Local Road Network expected to be used by construction and operational traffic
- Review of the proposed access to the BESS site from the Local Road Network
- Summary of existing road features (turn treatments and road corridors)
- Overview of the background traffic at key locations
- Anticipated traffic generation for the construction and operational phases
- Qualitative assessment of the development generated traffic impact
- A turn warrant assessment from State Controlled Road Network into Local Road Network.

7.7.1 Project parameters

The TIA has assessed the following aspects of the proposed development:

- The Project proposes to construct and operate a 200MW (four-hour duration) BESS Facility.
- The battery units will cover an area of approximately 2.5ha and will include up to 188 battery units, associated infrastructure, inverters, internal access roads and security fencing. Each battery unit is anticipated to weigh 39 tonnes and size of 8.6m in length, 2.8m in height and 2.1m wide. Most battery units are approximately in the form of a 40ft (12.2m) shipping container.
- The associated transformers / inverters (up to 47 units are estimated, subject to final equipment selection and design) would similarly be trucked to Site and arranged onto footings or screw pile via mobile crane.
- Construction of the Project is anticipated to begin in 2027 and is expected to take approximately 18 months. Construction will be undertaken from 6:30am to 6:30pm six (6) days per week. The construction period is anticipated to generate the highest traffic demands; this assessment will focus on the construction impacts of the development.



- The Project Area will gain access to the local road network via two (2) accesses to Sandy Creek Road.
- The Project is proposed to provide a dedicated parking area containing seven (7) parking spaces, with sufficient space on-site to accommodate any overflow parking within the Project area.
- The highest traffic impacts of the Project are anticipated during the Construction Phase, with maximum traffic generation is expected to be 40 light vehicles and 30 heavy vehicles travelling to and from the Project Area each day, with an average of 30 light vehicle movements daily and 15 heavy vehicle movements daily.
- The expected number of traffic movements during the operational phase is anticipated to be very low. Daily movements of light vehicles are expected to be around eight (8) vehicle trips. Service vehicles may visit the site one (1) to two (2) times a week, including occasional maintenance trucks, refuse collection vehicles and the like.

7.7.2 Transport Route

Section 3.3 of the TIA (**Appendix K**) has assessed two potential options for the Project Transport Route (PTR) being from Port of Townsville (PTR 1) and the Port of Cairns (PTR 2). With both options utilising the same local road route from the Bruce Highway to the Project Area, avoiding the Tully CBD and main residential area of the Tully township.

Review of both PTR indicates that the State-controlled Road (SCR) network can accommodate B-Doubles between the Port of Townsville and Port of Cairns and Sandy Creek Road. Access may be negotiated with relevant authorities, given the proximity of the Project Area to the end of the gazetted network for these vehicle combinations.

However, PTR 2 may require single trip permits may be required for OSOM vehicle movements along this route, specifically for the Centenary Bridge, Sweeneys Creek Bridge and Bamboo Creek bridge crossings through Innisfail, and the Banyan Creek Bridge near Tully.

A review of the local road network has been undertaken with Dean Road, Tully Gorge Road, and Sandy Creek Road all being determined as presenting no issues to prevent the Project traffic from using these roads to access the Project area.

Both PTR are accessible by 25/26m B-double and PBS 2A (B25/26) vehicles up to the intersection of Tully Gorge Road and Sandy Creek Road. The project route is additionally accessible by HML vehicles between the Port of Townsville and the Port of Carins and up to the intersection of Bruce Highway and Dean Road. Sandy Creek Road may require approval for configurations larger than 19m Semi-Trailer. Further discussions with Council may be required.

Intersection review has also been undertaken in the TIA with intersections from SCR to local roads being reviewed including:

- Bruce Highway/ Dean Road intersection no turn warrant assessment required as the intersections has the highest level of treatment existing
- Tully Gorge Road/ Sandy Creek Road with the site distances and existing intersection configuration consistent with guidelines.

7.7.3 Site access review

The TIA (Figure 5.2 and 5.3) illustrates to available sight distance at the Northern and Southern Access, respectively. The assessment suggests that the available sight distances would meet the requirements. Some vegetation management may be required, and it is recommended that this is confirmed onsite prior to the construction of the accesses. An in-person sight distance assessment should be conducted prior to the construction of the accesses to confirm the vertical components of the available sight distances. This could be reasonably conditioned prior to the commencement of construction activities.

7.7.4 Construction traffic

Traffic generation estimates for the construction phase of the development have been estimated based on similar developments. These volumes include both the anticipated light and heavy vehicle movements. Section 6 of the TIA (**Appendix K**) provides details of the distribution and breakdown of vehicles across peak periods, determining that that the net increase in traffic demands as a result of the proposed development will be very low, and as such, a detailed Traffic Impact Assessment (SIDRA) was not warranted.



7.7.5 Operational traffic

Development traffic is anticipated to reduce significantly after completion of the Construction Phase. Continued operation will consist primarily of inspection and maintenance activities, with primary operation of the project to be undertaken from a remote operations control centre.

7.7.6 Summary

The findings of the TIA are summarised as follows:

- The State Controlled Road (SCR) network running along both PTR routes between the Port and the end of the State Controlled network (intersection of Bruce Highway and Dean Road) has the capacity to carry up to 35.0m OSOM vehicles to deliver construction equipment and BESS components;
- The local road network has the capacity to carry up to 26m B-Double vehicles from the end of the SCR and the intersection of Tully Gorge Road / Sandy Creek Road;
- The existing Tully Gorge Road / Sandy Creek Road intersection configuration appears adequate in its current form to facilitate the expected construction traffic and operational traffic;
- Available sight distances at the proposed access locations appear to be reasonable based on an 100km/h speed limit in accordance with AS2890.1 and AS2890.2;
- The access configurations can be provided generally in accordance with the Far North Queensland Regional Organisation of Councils (FNQROC) Development Manual;
- Internal access tracks are intended to be utilised for the project and improvements to the existing flat site may be undertaken for set down and car parking arrangements; and
- The Civil Works Phase is anticipated to increase traffic by a maximum of 38 vehicles during peak hours for 18-months. The impact of this traffic is negligible on the surrounding road network.
- Parking supply proposed is sufficient to meet the expected parking demands of the project, noting that there is sufficient space on-site to accommodate any overflow parking within the Project Area.
- Both proposed transport routes avoid the Tully CBD and main residential area of the Tully township.



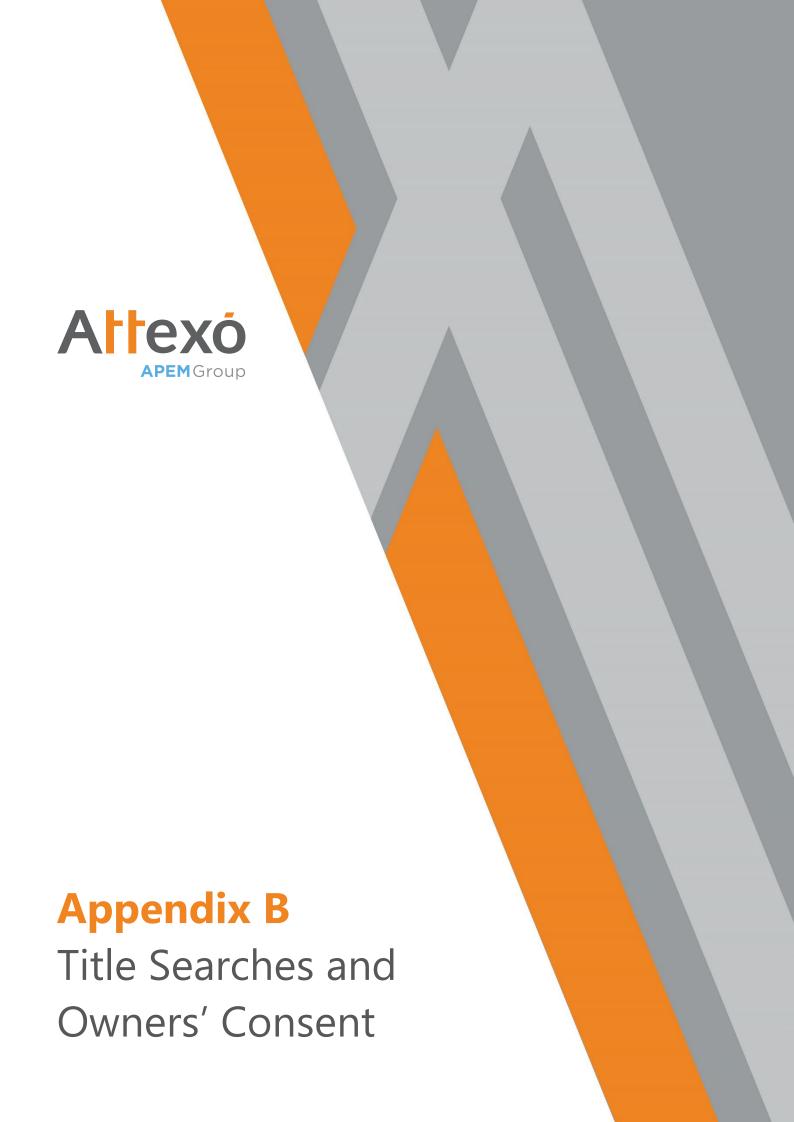
8. Summary and Conclusion

This Planning Report has been prepared by Attexo on behalf of RWE to seek approval for a development permit for Material Change of Use for an Undefined Use (Battery Energy Storage System (BESS)).

The Project includes a BESS of 200 MW (four-hour duration) and associated infrastructure comprising approximately 9 ha within the 28.7 ha Project Site. The Project will take electricity from the grid in periods of low demand, and feed back into the grid at periods of high demand. Grid connection is proposed via the neighbouring Powerlink 132 kV Tully Substation, located to the northeast on Lot 1 on RP716718.

This Planning Report and supporting documentation provide an assessment of the Project against the Cassowary Coast Regional Council Planning Scheme, which demonstrates that the Project represents a suitable land use outcome for the Project Site which will benefit the local community and region. It is therefore requested that the Project receives a development permit subject to reasonable and relevant conditions.











Appendix E

Bushfire Hazard
Assessment and
Management Plan









Appendix I

Stormwater
Management Plan
and Flood
Assessment Report



Appendix J

Preliminary Erosion and Sediment Control Plan











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