Romani Battery Energy Storage System

Scoping Report

PREPARED FOR

SAMSUNG C&T REA

Samsung C&T Renewable Energy Australia Pty Ltd

DATE
15 May 2025

REFERENCE
0704056

DOCUMENT DETAILS

DOCUMENT TITLE	Romani Battery Energy Storage System
DOCUMENT SUBTITLE	Scoping Report
PROJECT NUMBER	0704056
Date	15 May 2025
Version	Final
Author	James Salinas, Simon Bennett
Client name	Samsung C&T Renewable Energy Australia Pty Ltd

DOCUMENT HISTORY

				ERM APPROVAL TO ISSUE		
VERSION	REVISION	AUTHOR	REVIEWED BY	NAME	DATE	COMMENTS
Draft	01	Catherine Mackay	Simon Bennett	Lucy Baker	21.11.23	For review and comment
Draft	02	Catherine Mackay	Simon Bennett	Lucy Baker	30.11.23	Comments addressed
Final	03	Catherine Mackay	Simon Bennett	Lucy Baker	24.01.24	Final
Final	04	James Salinas	Simon Bennett	Lucy Baker	15.05.2025	Updated Scoping Report

SIGNATURE PAGE

Romani Battery Energy Storage System

Scoping Report

0704056

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ACRONYMS AND ABBREVIATIONS

Acronyms	Description
ABN	Australian Business Number
ABS	Australian Bureau of Statistics
ACHAR	Aboriginal Cultural Heritage Assessment Report
AEMO	Australian Energy Market Operator
AHD	Australian Height Datum
AHIMS	Aboriginal Heritage Information Management System
ARENA	Australian Renewable Energy Agency
ASC	Australian Soil Classification
BAM	Biodiversity Assessment Method
BC Act	Biodiversity Conservation Act 2016
BDAR	Biodiversity Development Assessment Report
BESS	Battery Energy Storage System
BSAL	Biophysical Strategic Agricultural Land
CHMP	Cultural Heritage Management Plan
CPHR	Conservation Programs, Heritage and Regulation Group within DCCEEW
CSEP	Community and Stakeholder Engagement Plan
CSP	Community Strategic Plan
Conargo LEP	Conargo Local Environmental Plan 2013
DCCEEW (Cmth)	Department of Climate Change, Energy, the Environment and Water (Commonwealth)
DCCEEW (NSW)	Department of Climate Change, Energy, the Environment and Water (NSW)
DER	Distributed Energy Resources
DPE	Department of Planning and Environment (now Department of Planning, Housing and Infrastructure)
DPHI	Department of Planning, Housing and Infrastructure
EDM	Electronic Direct Mail
EEAP	Energy Efficiency Action Plan
EIS	Environmental Impact Statement
ESOO	Electricity Statement of Opportunities
EMF	Electromagnetic Field
EP&A Act	*Environmental Planning and Assessment Act 1979*
EPBC Act	*Environment Protection and Biodiversity Conservation Act 1999*
ERM	Environmental Resources Management Australia
GDE	Groundwater Dependant Ecosystem

Acronyms	Description
GHG	Greenhouse gas
GW	Gigawatt
GWh	Gigawatt hours
Ha	Hectare
IAP2	International Association for Public Participation 2
IBRA	Interim Biogeographic Regionalisation for Australia
ISP	Integrated System Plan
LALC	Local Aboriginal Land Council
LCA	Land Category Assessment
LEP	Local Environmental Plan
LGA	Local Government Area
LSC	Land Soil Capability
MW	Megawatt
NEM	National Electricity Market
NSW	New South Wales
PCT	Plant Community Type
POEO Act	*Protection of the Environment Operations Act 1997*
PVIA	Preliminary Visual Impact Assessment
RET	Renewable Energy Target
REZ	Renewable Energy Zone
RMRP	Riverina Murray Regional Plan 2041
RNE	Register of the National Estate
SA1	ABS Statistical Area Level 1 dataset
SEARs	Secretary's Environmental Assessment Requirements
SEED	Sharing and Enabling Environmental Data
SEIFA	ABS Socio-Economic Indexes for Areas
SEPP	State Environmental Planning Policy
SIA	Social Impact Assessment
SSD	State Significant Development
TEC	Threatened Ecological Community
TfNSW	Transport for New South Wales
TIA	Transport Impact Assessment
UCLs	ABS Urban Centres and Localities dataset

GLOSSARY

Term	Description
Project Area	The term Project Area refers to all affected lots where the Project may be located
The Project	In this report, the Project refers to the proposal by the Applicant (Samsung C&T Renewable Energy Australia Pty Ltd) to construct and operate the Romani BESS as described in this Scoping report.
The Applicant	Samsung C&T Renewable Energy Australia Pty Ltd (SREA)

1. INTRODUCTION

Samsung C&T Renewable Energy Australia Pty Ltd ('SREA' or 'the Applicant') proposes to construct, operate and decommission the Romani Battery Energy Storage System (BESS) (the Project). The Project is located 44 km southwest of Hay in the Riverina Murray Region of New South Wales (NSW). The Project is situated north of Booroorban-Tchelery Road and extends over an area of 20.26 hectares (ha).

The proposed BESS would have an anticipated storage capacity of up to 200 megawatts (MW) / 800 megawatt hours (MWh), with grid connection to the existing 220 kV transmission line (X5 line) that is adjacent to the northern boundary of the Project. The temporary disturbance area is approximately 18 ha, and the permanent disturbance area is approximately 12 ha subject to further design development.

The Applicant is seeking State Significant Development (SSD) consent under Part 4, Division 4.7 of the *Environmental Planning and Assessment Act 1979* (EP&A Act) for the Project.

A Scoping Report was lodged on 24 January 2024 for a renewable energy project named 'Romani Solar Farm' comprising a 250 MW solar photovoltaic energy generating facility and 150 MW / 300 MWh BESS (Hybrid Project). Secretary's Environmental Assessment Requirements (SEARs) were issued 1 March 2024 under SSD-67105475. An amended project description was lodged with the Department of Planning, Housing and Infrastructure (DPHI) 22 August 2024 to revise the Romani Solar Farm to include a second BESS with 200MW / 800 MWh storage capacity connected to the X5 line (X5 BESS).

Subsequently, a further amendment was submitted to DPHI on 2 April 2025 to remove the Hybrid Project from the application and to proceed with only the X5 BESS under SSD-67105475. The project amendments have reduced the disturbance footprint from approximately 870 ha to approximately 20 ha. Amended SEARs were requested at the time but have not yet been issued.

The Applicant has engaged Environmental Resources Management Australia Pty Ltd (ERM) to prepare this updated Scoping Report for the X5 BESS Project and to request amended SEARs under SSD-67105475. The SEARs will guide the preparation of the environmental impact statement (EIS) for the Project.

The Scoping Report has been prepared in accordance with the following guidelines:

- Large-Scale Solar Energy Guideline (DPE, 2022a) in lieu of specific guidelines for BESS facilities in NSW;
- Renewable Energy Planning Framework (DPHI, 2024a);
- State Significant Development Guidelines (DPHI, 2024b);
- State Significant Development Guidelines - Preparing a Scoping Report: Appendix A to the State Significant Development Guidelines (DPE, 2021a) (Scoping Report Guidelines);
- Social Impact Assessment Guideline for State Significant Projects (DPE, 2023a);
- Cumulative Impact Assessment Guidelines for State Significant Projects (DPE, 2022a); and
- Undertaking Engagement Guidelines for State Significant Projects (DPHI, 2024c).

1.1 THE APPLICANT

SREA is a global leader in innovative technology and sustainability. SREA has successfully delivered similar renewable energy projects across Europe, Korea, Canada, and USA. SREA has recently entered into the Australian renewable energy market and have been developing solar farm, BESS and other projects.

SREA is committed to best practice community and stakeholder engagement through transparent and open communication, accounting for even the smallest voices, making communication and engagement open to all.

SREA is a wholly owned company of Samsung C&T Corporation, Korea. The relevant contact details are listed below:

- **Applicant Name:** Samsung C&T Renewable Australia Pty Ltd;
- **ABN:** 74 661 046 331; and
- **Address:** Suite 8.04, Level 8, 227 Elizabeth Street, Sydney NSW 2000.

1.2 PROJECT OVERVIEW

The Project would involve the construction, operation and eventual decommissioning of a BESS and associated infrastructure. The Project is situated in the locality of Booroorban NSW, approximately 44 km south of the town of Hay NSW. The regional context, land cadastre and landscape features are shown in **Figure 1-1**.

The Project is expected to be comprised of the following:

- Installation of lithium-ion battery modules with an aggregate capacity of 200 MW / 800 MWh;
- Electrical reticulation to connect the Project to the X5 220kV transmission line;
- Project access from Booroorban-Tchelery Road;
- Associated ancillary infrastructure including switchyard, onsite substation, site office and perimeter fencing; and
- Temporary facilities used in construction including construction compound, laydown area and car parking.

A preliminary layout and development footprint has been prepared. The development footprint refers to the area of permanent disturbance associated with the BESS facility, ancillary infrastructure, grid connection and access tracks. The EIS and associated technical assessments will facilitate further refinement to the Project layout in response to environmental values and constraints and will include strategies to minimise and mitigate potential impacts.

This Scoping Report assesses the Project as displayed in **Figure 3-2** (**Section 3** of this report).

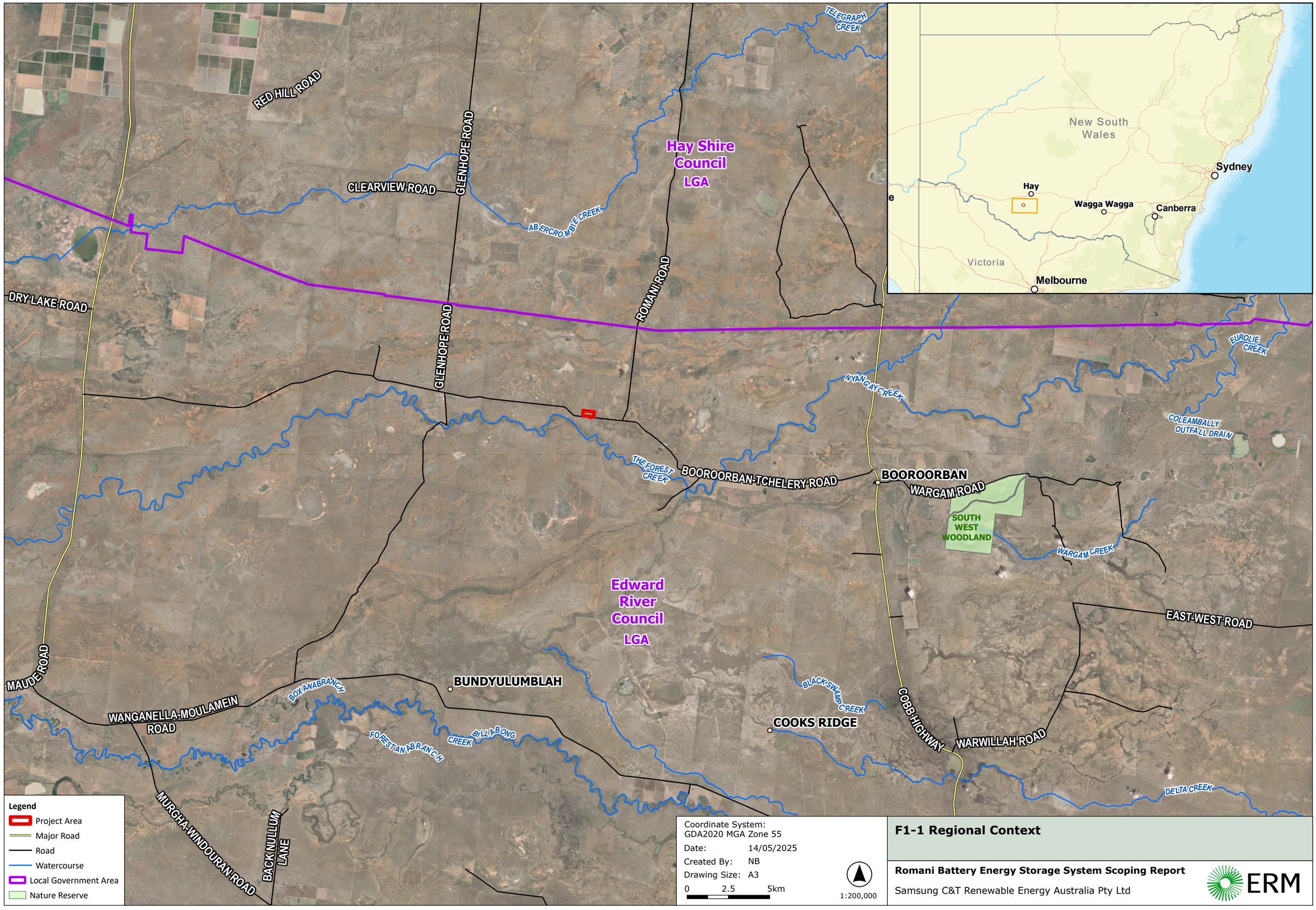
1.3 PROJECT OBJECTIVES

The objectives of the Project are to:

- Contribute to Commonwealth and NSW renewable energy targets and the reduction of greenhouse gas emissions;
- Contribute to the storage capacity required to meet the growing energy demand in NSW and generation shortfalls predicted as coal fire power stations reach the end of their operational lives;
- Deliver energy security, reliability, and network stability to NSW consumers through the Project's ability to store and subsequently discharge energy as required by the network;
- Supply electricity during periods of peak demand and reduce risks associated with potential loadshedding and black out events;
- Provide both direct and indirect employment opportunities during construction and operation;
- Liaise and work with the community and all potentially affected stakeholders in the identification, mitigation and/or monitoring of any potential environmental effects;
- Ensure quality, safety and environmental standards are maintained; and
- Recycle and reuse materials where practical and economically feasible.

1.4 RELATED DEVELOPMENT

The Project does not have related development. All works associated with the Project including the construction and operation of the BESS, electrical reticulation, and access via Booroorban-Tchelery Road are subject to this SSD application.



F1-1 Regional Context

Romani Battery Energy Storage System Scoping Report

Samsung C&T Renewable Energy Australia Pty Ltd

ERM

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2. STRATEGIC CONTEXT

This section addresses the key government strategies, policies and plans that provide strategic support for undertaking the Project.

2.1 COMMITMENTS TO RENEWABLE ENERGY

2.1.1 FEDERAL COMMITMENTS

Australia is one of 195 countries that signed on to the United Nations Paris Agreement on climate change (Paris Agreement). The Paris Agreement sets in place a durable and dynamic framework for all countries to take climate action from 2020, building on existing international efforts in the period up to 2020. The aim of the Paris Agreement is to limit emissions globally to net-zero in the second half of this century. Australia set a target to reduce emissions by 43 per cent (%) below 2005 levels by 2030, as part of its commitments under the Paris Agreement, which builds on its previous target of reducing emissions by 5% below 2000 levels by 2020 (PoA, 2017; DCCEEW, 2022).

Ahead of the G20 Summit in Rome and the UN Climate Change Conference in Glasgow (COP2), the Australian Government also committed to achieving net zero GHG emissions by 2050. The Project would assist in delivering on this key commitment for Australia.

The current efforts to achieve this goal are reflected in the Renewable Energy Target (RET) Scheme. The RET was implemented in 2009 with an initial target of 44,000 GWh (later reduced to 33,000 GWh) of renewable energy generation by 2020. The RET has been an extremely successful initiative that has, in part, driven a more than 50% reduction in the cost of large-scale wind and solar projects over the past 10 years.

2.1.2 STATE COMMITMENTS

In November 2020, the NSW Government released the NSW Electricity Infrastructure Roadmap with the aim of facilitating reliable and affordable energy. This roadmap is facilitated by the *Electricity Infrastructure Investment Act 2020* (EII Act). Part of this includes the appointment of the NSW Energy Corporation (EnergyCo), as the Infrastructure Planner under section 63 of the EII Act for five Renewable Energy Zones (REZs).

In May 2023, EnergyCo released the Network Infrastructure Strategy for NSW (NIS), which outlines a 20-year plan for the state's electricity network and the target to deliver a total capacity of 12 GW of renewable electricity generation and 2 GW of long-duration storage within the REZs by 2030. The Strategy also includes a "Secure Now" and "Plan for the Future" approach, which seeks to identify options to increase network capacity and resilience into and beyond 2030. Although the Project is located within the South West REZ, it will not use the REZ transmission infrastructure provided by EnergyCo. The Project does support the 2030 target by offering up to 200 MW of dispatchable energy to the NEM and storage capability for nearby renewable energy developments.

Additionally, these are supported by the newly implemented Climate Change (Net Zero Future) Act 2023. This Act legislates net zero GHG in NSW by 30 June 2050.

The Project would provide additional energy storage capacity, energy demand management and grid stability and reliability. This will assist both Australia and NSW meet their emissions reduction targets by facilitating additional renewable energy development.

2.1.3 CONTRIBUTION TO THE NATIONAL ELECTRICITY MARKET

The National Electricity Market (NEM) operates as a power system to deliver electricity from generators to market consumers, through an extensive transmission and distribution network comprising of around 40,000 km of transmission lines and cables. The NEM services the entire eastern and south-eastern coastline of Australia, connecting five states, and providing electricity to approximately nine million customers.

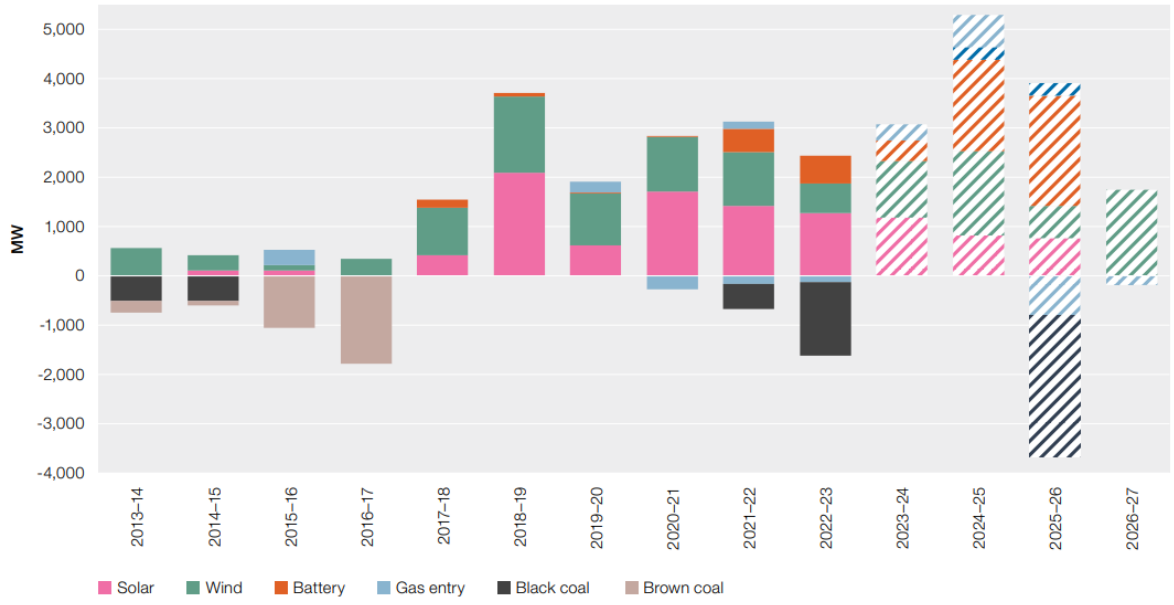
The Australian Energy Market Operator's (AEMO) 2023 Electricity Statement of Opportunities (ESOO) provides updated forecasts for demand and supply of electricity, focusing commentary on the next ten years, and includes forecasts over the next 30 years (AEMO, 2024).

A significant component that drives electricity consumption is business electrification and electrical vehicle uptake in the residential and business sectors, which combined are responsible for more than three quarters of forecast consumption growth over the next ten years.

The energy sector in Australia is undergoing a necessary and inevitable transition from a centralised system of large fossil fuel generation to a decentralised system of widely dispersed, renewable energy (mainly wind and solar) (Australian Energy Regulator, 2023). The Australia Energy Regulator (2023) identifies key drivers for the transition as:

- Increasing community concern regarding the impact of fossil fuel generation of carbon emissions. There has been no energy business investing in new coal fired generation in Australia since 2012, whilst investment in wind, solar and batteries continues to grow (refer to **Figure 2-1**);
- Technological advancements and cost reductions in grid scale wind and solar generation, facilitating lower cost options for new build generation, including advancements in solar panel technology; and
- Deteriorating economics of fossil fuel generation associated with aging of the coal fired generation fleet and increasing fuel costs.

FIGURE 2-1 EXIT AND ENTRY OF GENERATION CAPACITY IN THE NEM



Note: Capacity includes scheduled and semi-scheduled generation, but not rooftop solar capacity. New entry and exit are by registered capacity, except for solar which uses maximum capacity. Committed investment and closures from 30 June 2023 are shown as shaded components. These include Eraring power station in 2025.

Source: AER; AEMO (data).

Source: (Australian Energy Regulator, 2023)

Traditionally, NSW's electricity needs have been met by coal-fired generation and some gas peaking power plants. While wind and solar power has increased and accounted for a combined 28% of total generation in 2023, fossil fuel generation continued to produce approximately 64% of electricity in the NEM (Australian Energy Regulator, 2023). However, about 58% of the current coal-fire capacity is expected to withdraw by 2030, initiated by the closure of Liddell's Power Station in April 2023, which marked the first of four coal station closures.

The imminent exit of much of the NEM's coal fired generation has prompted the AEMO to forecast reliability gaps (risk of unserved electricity demand) as early as 2024 in some regions. AEMO's forecasts of these reliability gaps are accelerating in response to growing demand via electrification and generation investment proceeding slower than hoped.

Wind and solar projects provide emission-free, low-cost electricity when weather conditions allow. However, their supply will need to be supplemented with adequate electricity storage technology to avoid reliability gaps as coal stations continue to retire (Australian Energy Regulator, 2023).

Renewable energy generation is projected to continue to grow to 73% in 2030 and reach up to 82% 'with additional measures' scenario. This scenario includes higher generation from large-scale renewables projects such as solar and wind, for on grid electricity and lower fossil fuel generation, when compared with the baseline scenario (DCCEEW, 2023).

The Project would facilitate investment in renewable energy by providing 200 MW of energy storage capacity that will regulate the supply of energy to the gird. This will increase the reliability of the NEM and encourage further development of renewable energy assets.

The Project would thereby provide an essential input into the additional renewable energy sources needed in the transition from coal fired generation to renewable generation.

2.1.4 BATTERY ENERGY STORAGE SYSTEM BENEFITS

BESS' are an integral component of a modernised, decentralised energy system. They increase the reliability of the system, storing electricity when demand is low and adding it when demand is high. This minimises load shedding and enhances the resilience of the grid. Benefits of a BESS include:

- Providing additional energy storage capacity and dispatchable energy during periods of high demand;
- Improving security and resilience of the NEM;
- Helping to maintain grid stability; and
- Supporting the stabilisation of the supply of electricity in NSW.

The above will support the transition of the energy sector away from a centralised system of fossil fuel generation, towards a decentralised system of renewable energy production and storage, assisting in the reduction of GHG emissions.

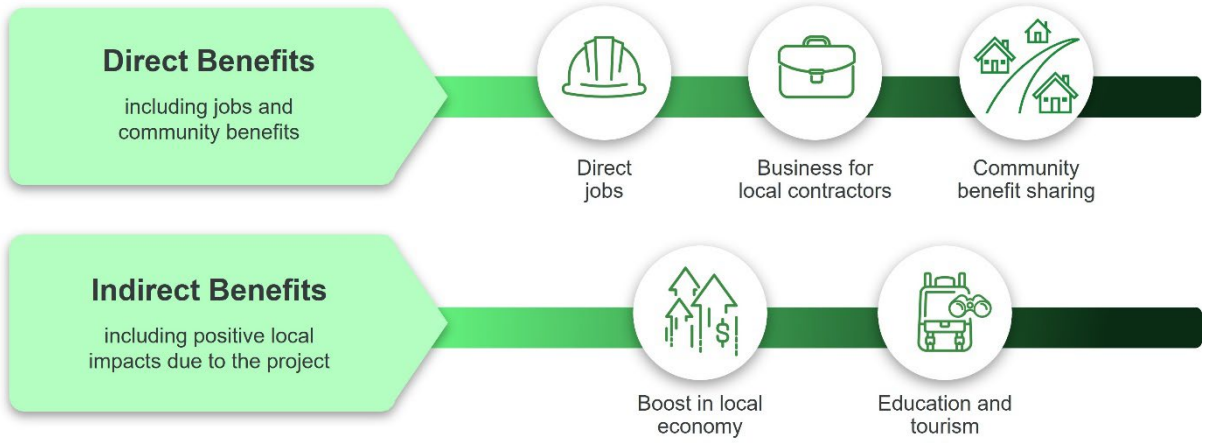
2.1.5 PROJECT-SPECIFIC BENEFITS

The Project would deliver significant benefits to the Edward River Council and local communities through:

- Direct investment in region;
- Consultation with the Edward River Council to establish a benefit sharing agreement or voluntary planning agreement in accordance with the Benefit Sharing Guideline (DPHI, 2024);
- Opportunities for local businesses and contractors to be part of construction and operational activities;
- Diversified income for the Project landowner;
- Supporting the resilience of the NEM, which could reduce the cost of electricity; and
- Aid in the development of new skilled labour in the region, within the growing South West REZ.

A summary of the Project benefits is displayed in **Figure 2-2**.

FIGURE 2-2 PROJECT BENEFITS



2.2 STRATEGIC FRAMEWORK

The Project aligns with various state, regional, and local strategies, policies and plans as outlined in **Table 2-1** below.

TABLE 2-1 ALIGNMENT WITH STRATEGIC FRAMEWORK

Strategy, Policy or Plan	Description	Project Alignment
NSW Context		
Net Zero Plan Stage 1: 2020-2030	This Plan outlines the NSW Government's strategy to reduce emissions and mitigate the impacts of climate change. In 2021, the NSW Government announced an updated objective to reduce emissions by 50% below 2005 levels by 2030 under the Net Zero Plan Stage 1: 2020 – 2030 Implementation Update.	The Project would facilitate the development of additional renewable energy by firming energy supply, providing stability and reliability. Facilitating additional renewable energy will assist in reducing emissions
NSW Electricity Strategy	This Strategy outlines the NSW Government's plan to provide reliable, affordable and sustainable electricity across NSW. The Strategy encourages $5.6 billion in regional electricity infrastructure investment. It aligns closely with the NSW Government's Net Zero Plan Stage 1: 2020–2030 by: • Delivering the coordinated Renewable Energy Zone in the South-West region; • Saving energy via the Energy Security Safeguard; • Supporting the development of new electricity generators; • Setting a target to increase the state's energy resilience; and • Making it easier to do energy business in NSW.	The Project is consistent with the Strategy as it provides renewable storage capacity that, together with other renewable generation projects, is expected to result in the lower cost of power in comparison to wholesale prices. The Project would also contribute to greater energy resilience by providing a mechanism to stabilize electricity supply.

Strategy, Policy or Plan	Description	Project Alignment
NSW Transmission Infrastructure Strategy	The NSW Transmission Infrastructure Strategy is the government's plan to use private sector investment in energy infrastructure projects in NSW. The Strategy forms part of the government's broader plan to make energy more affordable, secure investment in network infrastructure and ensure new technologies deliver benefits for consumers. The aims of the Strategy include improved energy reliability, security, timely project delivery, increased affordability and access to cheaper electricity.	With the provision of a BESS, the Project would provide energy storage and dispatch capacity to facilitate and provide electricity demand management.
NSW Electricity Infrastructure Roadmap	The NSW Electricity Infrastructure Roadmap (the Roadmap), released in November 2020, is the government's plan to transform the NSW electricity sector to be cleaner, cheaper and more reliable (DPE, 2020b). The Roadmap builds on the NSW Electricity Strategy (2018) and the NSW Transmission Infrastructure Strategy (2019) and emphasises the need for NSW to transition to renewable energy. It aims to replace NSW's ageing coal-fired power stations with a coordinated portfolio of energy generation, storage and network investment.	The BESS would provide energy demand management, leading to greater reliability and stability of the NEM. This in turn should facilitate further renewable energy development.
Regional Context		
Riverina Murray Regional Plan 2041	The Riverina Murray Regional Plan 2041 (RMRP) is a 20-year blueprint for the future of the Riverina Murray Region (DPE, 2023a). The RMRP provides a framework for guiding land use plans, development proposals, and infrastructure funding decisions over the next 20 years and includes both priority and longer-term actions (DPE, 2023a). It aims to grow the region's cities and local centres, support the protection of high value assets, and develop a strong, diverse and competitive economy.	The Project connects to the existing transmission infrastructure. The Project supports a transition to net zero by 2050 and will generate local investment and employment opportunities.
Local Context		
Edward River Council Local Strategic Planning Statement 2020-2040	The Edward River Council Local Strategic Planning Statement (LSPS) provides a framework for the social, economic, and environmental land use needs throughout the Edward River LGA over the next 20 years (ERC, 2020).	The Project would provide jobs and investment within the Edward River Council LGA which contributes to the objectives of the LSPS.

Strategy, Policy or Plan	Description	Project Alignment
Edward River Council 2018-2030 Community Strategic Plan	Edward River Council 2018-2030 Community Strategic Plan (CSP) is a 10-year plan that outlines the long-term vision and strategic directions for the Edward River community (ERC, 2018).	The Project has been sited to minimise impacts to biodiversity and the environment and is consistent with Outcome 3 of the CSP to protect and enhance the natural environment.

2.3 SITE AND SURROUNDING DEVELOPMENT

2.3.1 REGIONAL CONTEXT

The Project is situated within the locality of Booroorban in the Edward River Local Government Area (LGA) in the Riverina Murray Region of NSW. The Edward River LGA covers a total area of 8,881 km^2 and has a population of 8,456 (DPE, 2022b). The key land uses within the region are centred on agriculture and food production, and its economy is reliant on tourism, agriculture and associated industries. The rice industry is of significance in the Edward River LGA, as Deniliquin is the home to Sun Rice – the largest rice mill in the southern hemisphere (ERC, 2020).

The Edward River LGA is located in the Riverina Murray Region of NSW and includes the town of Deniliquin and six rural villages of Blighty, Booroorban, Conargo, Mayrung, Pretty Pine, and Wanganella. The LGA is linked by highways to Adelaide, Sydney and Melbourne. The Project sits in the Deniliquin Local Aboriginal Land Council (LALC). The Project Area is within the Kulin language group of the Western Murrumbidgee, this includes the Nari Nari and Wemba Wemba languages.

2.3.1.1 SOUTH WEST RENEWABLE ENERGY ZONE

The Project is situated within the boundaries of the South West REZ. While the Project is not proposed to connect to the transmission infrastructure being developed for the South West REZ, it is relevant for the consideration of social, economic and cumulative impacts. In this regard, **Table 2-2** lists the relevant existing and future projects within 50 km of the Project. Only Projects within a 20 km radius of the site will be assessed for cumulative impacts. However, the table demonstrates the significant number of renewable energy developments in the South West REZ. It should be noted that some of these projects may not proceed to construction and will depend on the availability and capacity of transmission infrastructure in the South West REZ[1]. The locations of these developments in relation to the Project are shown in **Figure 2-3** below.

[1] Four renewable energy and storage projects have been granted access rights to date within the South West REZ. These are; Bullawah Wind Farm (SSD-50505215), Pottinger Energy Park (SSD-59235464, and SSD-59254709), Yanco Delta Wind Farm (SSD-41743746), and Dinawan Energy Hub Point of Connection 1, 2 and 3 (SSD-50725708, and SSD-50725959). Energy Co 23 April 2025.

TABLE 2-2 MAJOR PROJECTS IN THE REGION

Development	Application Number	Developer	Proximity	Status
Project Energy Connect (NSW – Eastern Section	SSI-9172452	TransGrid	1 km	Approved (under construction)
The Plains Wind Farm	SSD-50629707	ENGIE ANZ	4 km	Proposed (response to submissions)
West Nyangay Solar Farm	SSD-74990235	Australian Solar Farms	20 km	Proposed (prepare EIS)
Saltbush Wind Farm	SSD-70636459	Octopus Investments	22 km	Proposed (prepare EIS)
Pottinger Wind Farm	SSD-59235464	Someva Renewables	35 km	Proposed (under assessment)
Pottinger Solar Farm	SSD-59254709	Someva Renewables	35 km	Proposed (prepare EIS)
Abercrombie Wind Farm	SSD-77340978	Vestas	33 km	Proposed (prepare EIS)
Baldon Wind Farm	SSD-40138508	Goldwind Capital (Australia)	39 km	Proposed (response to submissions)
Keri Keri Wind Farm	SSD-38358962	Acciona Energia Australia	47 km	Proposed (response to submissions)
Bullawah Wind Farm	SSD-50505215	BayWa r.e. Projects Australia	49 km	Proposed (under assessment)
Hay Solar Farm	SSD-8113	OVERLAND	50 km	Approved

2.3.2 LOCAL CONTEXT

The Project is located over 21 ha in the locality of Booroorban NSW. This area is characterised by a flat landscape with elevation across the Project having limited change. The local area is dominated by agricultural land uses including grazing and irrigated cropping. The land within the boundary of the Project is currently used for livestock grazing including sheep and cattle. The land in and around the Project is zoned RU1 Primary Production.

There are no built features within the boundary of the Project, although the wider property contains a single dwelling and farming infrastructure to support livestock grazing (sheep). The X5 transmission line runs adjacent to the northern boundary of the Project. This transmission corridor is also proposed to house Project EnergyConnect, a 330 kV transmission line that traverses the South West REZ.

Natural features in proximity to the Project include the Forest Creek to the south and an ephemeral tributary that intersects the southwest boundary of the Project. This area is not proposed to house any Project infrastructure. Further afield the Kalyarr and Oolambeyan National Parks are over 40 km to the north and west respectively. Toogimbie Indigenous Protected Area is located 27 km northwest of the Project and covers 4,600 ha of former pastoral land. Vegetation present includes saltbush shrublands and disturbed pasture with a mix of native grasses and exotic weed species.

2.3.2.1 KEY HAZARDS AND RISKS

Table 2-3 outlines the key hazards and risks associated with the site and surrounds that have the potential to influence the development of the Project.

TABLE 2-3 KEY HAZARDS ASSOCIATED WITH THE PROJECT

Hazard	Description
Access	The Project would be accessed via Booroorban-Tchelery Road from the south. This road connects to the Cobb Highway to the east and subsequently to the Sturt Highway to the north. Project access is further discussed in **Section 3.2.5**
Mining and Exploration	The Project is not located within a mine subsidence district and has no active mining and exploration titles or applications. Active mineral and coal exploration titles exist in the locality. This has not been considered further.
Topography	The Project site is generally flat with little change in topography. The project site has a topography of 81 – 82 m above sea level.
Groundwater and Groundwater Dependant Ecosystems	A review of the Groundwater Dependant Ecosystems (GDE) Atlas determine that there is a low potential for terrestrial GDEs based on regional studies conducted in the area. There are no other GDEs mapped on site.
Bushfire and Vegetation	Vegetation on the site consists of native chenopod shrublands and exotic weed species. The Project is mapped as Vegetation Category 3. This is further discussed in **Section 6.7.2.**
Surface Water	An ephemeral tributary of Forest Creek extends into the southwest of the Project site. There are no other water courses, artificial or natural, present on site.
Flooding	There is no flood prone land mapped on the Project site. The nearest flood studies are associated with the Murrumbidgee River to the North of the Project and the towns of Hay and Maude. This is further discussed in **Section 6.10.1.2.**
Contamination	Review of the NSW EPA Contaminated Land Records determined that there were no contaminated sites registered with the NSW EPA within proximity to the Project.

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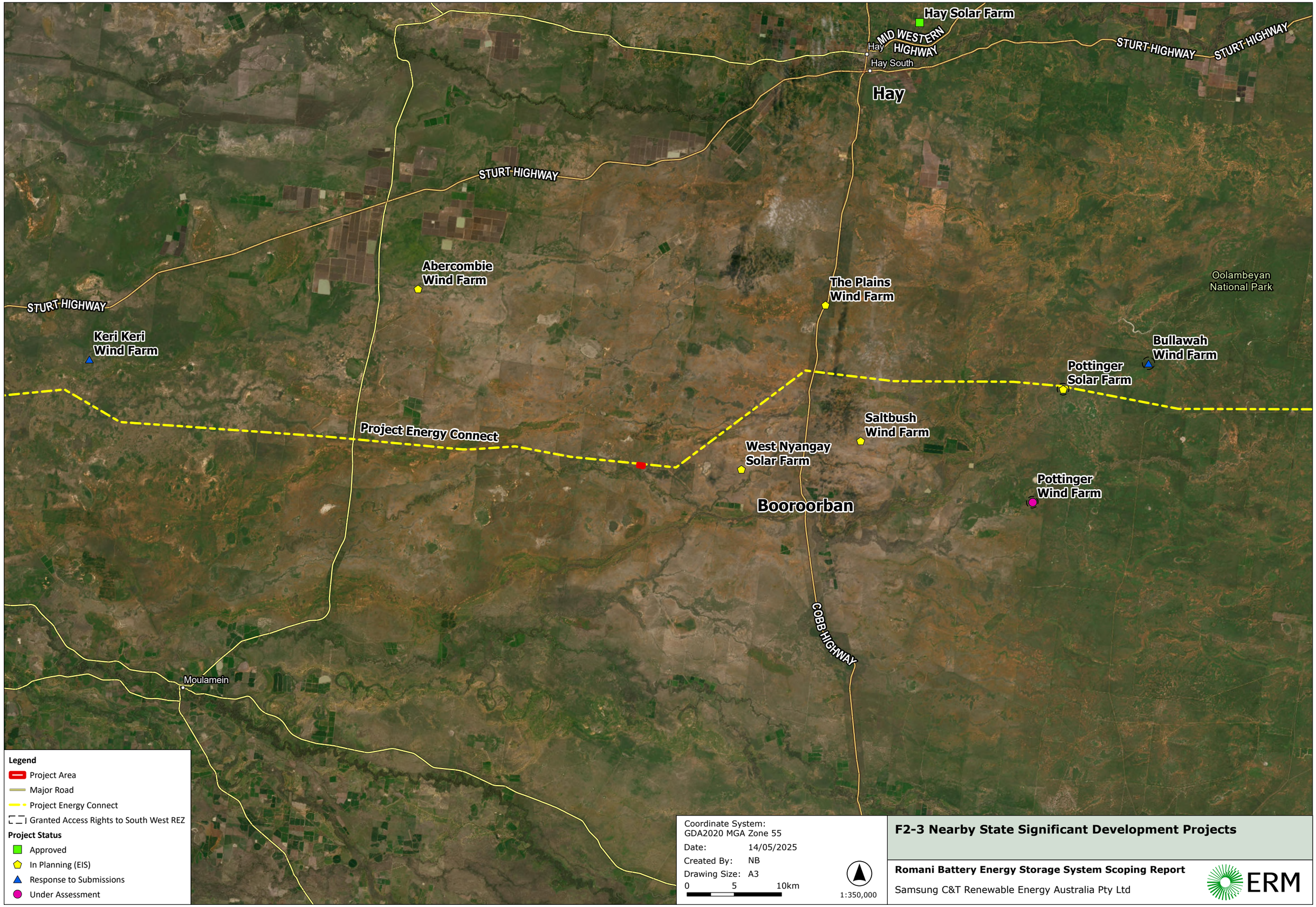

F2-3 Nearby State Significant Development Projects

Romani Battery Energy Storage System Scoping Report

Samsung C&T Renewable Energy Australia Pty Ltd

ERM

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3. THE PROJECT

This section presents a detailed description of the design, construction and operation of the Project, including Project staging, construction and operational activities and Project alternatives.

3.1 PROJECT AREA

The Project Area comprises the total 21 ha of land at Lot 57 DP756561 and Lot 92 DP756561. The Project Area is zoned RU1 Primary Production under the Conargo Local Environmental Plan 2013 (Conargo LEP). The land zoning of the Project Area is displayed in **Figure 3-1**.

The permanent disturbance footprint comprises approximately 12 ha within the Project Area. The temporary area of disturbance is approximately 18 ha which includes temporary construction facilities and laydown areas. The proposed disturbance area is subject to further refinement and design development during the preparation of the EIS.

Table 3-1 below provides the property details of the Project Area. The Project Area is shown in **Figure 3-2**.

TABLE 3-1 PROPERTY DETAILS OF THE PROJECT

Aspect	Description
Address	377 Romani Road, Booroorban NSW (access from Booroorban-Tchelery Road)
Lot/DP	Lot 57 DP756561 Lot 92 DP756561
LGA	Edward River Council
Land Zoning	RU1 – Primary Production
Land Use	Agricultural livestock grazing

3.2 PROJECT DESCRIPTION

The Project will involve the construction, operation and decommissioning of a 200 MW / 800 MWh BESS facility, electrical reticulation and connection to the X5 transmission line, site access from Booroorban-Tchelery Road and ancillary infrastructure.

Project components and specifications are listed in **Table 3-2** below. An indicative Project layout is presented in **Figure 3-2** and a preliminary assessment is presented in this Scoping Report. Project design is subject to further design refinements during the EIS and detailed design phases. The EIS and associated technical assessments will further assess identified constraints to facilitate further layout design changes and refinements in response to identified values and constraints, as well as strategies to minimise and mitigate impacts. The Project Area has been sized appropriately to accommodate design refinements and micro-siting of the infrastructure in future project stages.

TABLE 3-2 INDICATIVE PROJECT COMPONENTS AND SPECIFICATIONS

Component	Feature	Specification
Energy Storage	BESS	BESS facility with an anticipated storage capacity of 200 MW / 800 MWh.
Battery	Lithium-ion Batteries	Battery modules over an indicative area of approximately 12 ha (subject to further design development).
Electrical Reticulation Network	On-site substations	New high voltage substation proposed adjacent to the X5 Transmission line.
	Internal electrical reticulation network	Connection to the main substation directly via underground cables.
	Switchyard	Switch and other electrical equipment providing connection to the existing 220 kV transmission network.
Access Roads	Access to site	Access is via Booroorban-Tchelery Road and Cobb Highway. A new vehicle entry is proposed on Booroorban-Tchelery Road.

92 DP756561

57 DP756561

BOOROORBAN-TCHELERY ROAD

93 DP756561

1 DP756561

108 DP820129

THE FOREST CREE

Legend

- Project Area
- Lots
- Road
- Path/Track
- Watercourse
- X5 Transmission line (220 kV)

Land Zoning

- RU1 Primary Production

Coordinate System:
GDA2020 MGA Zone 55

Date: 14/05/2025

Created By: NB

Drawing Size: A3

0 50 100m

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F3-1 Land Zoning

Romani Battery Energy Storage System Scoping Report

Samsung C&T Renewable Energy Australia Pty Ltd

ERM

0704056_SRSF_BESSAR_R2.aprx

92 DP756561

57 DP756561

BOOROORBAN-TCHELERY ROAD

93 DP756561

1 DP756561

108 DP820129

Legend

- Project Area
- Lots
- Road
- Path/Track
- X5 Transmission line (220 kV)
- Construction Compound and Laydown
- 200MW BESS
- BESS Infrastructure
- Access Road
- Proposed Vehicle Access

Coordinate System:
GDA2020 MGA Zone 55

Date: 14/05/2025

Created By: NB

Drawing Size: A3

0 50 100m

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F3-2 Indicative Project Layout

Romani Battery Energy Storage System Scoping Report

Samsung C&T Renewable Energy Australia Pty Ltd

ERM

0704056_SRSF_BESSAR_R2.aprx

3.2.1 BATTERY ENERGY STORAGE SYSTEM

The primary component of the Project is a centralised large-scale BESS facility. The BESS will store, and discharge electricity to and from the NEM. The BESS will store electricity during periods of oversupply or low demand. Subsequently, the BESS will discharge stored electricity during times of peak demand. This will assist in the stabilisation of the NEM during periods of disruption, or when the solar and wind farms, and other generators, are not supplying energy.

The BESS will consist of lithium-ion battery units housed in shipping container style enclosures with inverters, transformers and other associated electrical equipment.

3.2.2 ELECTRICAL RETICULATION NETWORK AND GRID CONNECTION

The Project comprises medium voltage substations connected to battery modules. The MV substations would be connected via a 33 kV electrical reticulation to the main high voltage substation which would then connect to the existing 220 kV X5 transmission line to the north of the Project Area. Each substation would have a dedicated power conversion unit and invert. The substation would also comprise electrical reticulation, voltage controls, high voltage switchgear, storage units, control and protection equipment, drainage, and an oil containment system. The internal electrical reticulation network comprises underground and/or overhead 33kV cables.

3.2.3 OTHER INFRASTRUCTURE AND ASSOCIATED WORKS

The Project would also require additional project infrastructure and associated works including:

- Internal access roads;
- Operations and Maintenance Building;
- Substation; and
- Additional switchyard and transformer.

3.2.4 CONSTRUCTION AND TEMPORARY FACILITIES

The Project is expected to require the following construction and temporary facilities:

- Temporary construction facilities such as offices, car park and amenities;
- Fencing and landscaping works;
- Delivery of project components including battery modules, substations, transformers and associated components;
- Installing maintenance and environmental managements processes and equipment;
- Internal access roads;
- Earthworks required to establish hardstand and laydown areas;
- Installation of underground and overhead cabling; and
- Access to project site via Booroorban-Tchelery Road.

3.2.5 TRANSPORT ROUTE AND SITE ACCESS

Access to the Project Area during construction and operations is proposed via the existing road network on Booroorban-Tchelery Road. The port of origin used to deliver Project components would be either the Port of Geelong or the Port of Melbourne. The vehicles used to transport components will utilise the existing heavy vehicle network.

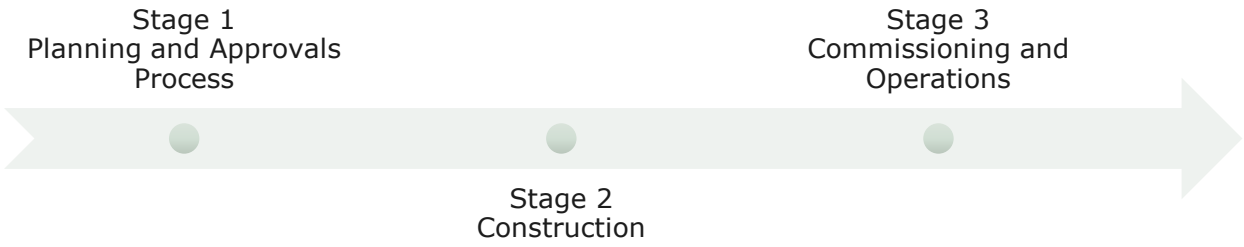
3.3 STAGING

The anticipated staging of the Project is summarised in **Table 3-3** and presented in **Figure 3-3**. The Project is currently in Stage 1, during the planning and approvals process, involving the preparation of the Scoping Report and EIS. The planning and approval process is expected be completed by late 2025. Construction of the Project is expected to commence in mid to late 2026, with operations commencing in 2027.

TABLE 3-3 PROJECT STAGING

Stage of Project	Estimated Date of Completion
Planning and Approvals Process	2025-2026
Construction	2027
Commissioning and Operations	2027 onwards

FIGURE 3-3 PROJECT STAGING MAP



3.3.1 DEVELOPMENT PHASES

3.3.1.1 CONSTRUCTION

Construction of the Project is anticipated to begin in 2027 with design and procurement activities leading into early works including groundworks. Construction is anticipated to take approximately 18 months to complete, including commissioning of the Project to achieve full grid export.

The construction workforce required for the Project is expected to be between 80 – 100 full time employees during the peak and an average of 30 – 50 full time employees during standard times.

Construction activities are expected to include the following:

- Earthworks and site establishment for the foundations;
- Installation of security fencing and landscaping;
- Installation of Project components including:

- Lithium-ion battery modules;
- Invertors;
- Transformers and switching stations; and
- Ancillary infrastructure.

Project components are expected to be manufactured offsite and delivered to the Project Area.

3.3.1.2 OPERATIONS

The Project is proposed to operate 24 hours a day, seven days a week. Project components are expected to have a 30-year lifespan. The Project will be managed by 3-5 full time employees. Maintenance and monitoring will be completed on a regular basis by the appropriate external contractors. Ongoing maintenance would include:

- Landscaping;
- Maintaining asset protection zones (if required); and
- Repair and replacement of Project components (if required).

3.3.1.3 DECOMMISSIONING

At the end of the BESS lifetime, the Project could be formally decommissioned, all infrastructure removed and the land rehabilitated, or repowered. Decommissioning will be completed with relevant legal requirements, regulations and conditions of approval. If a decision is made to repower the BESS a new planning approval would be required.

3.4 PROJECT ALTERNATIVES

Alternatives to the development of the Project have been considered as part of this assessment. These include:

- 'Do nothing' (not undertaking the project); and
- Alternative site selection.

3.4.1 NOT UNDERTAKING THE PROJECT

Not undertaking the project would result in the continued livestock grazing on the site. This would represent a missed opportunity for the increased storage capacity of the NEM. There are several proposed renewable energy projects within 50 km of the Project (see **Section 2.3**) that have the potential to benefit from increased storage and discharge capacity offered. Additionally, the benefits outlined in **Section 2.1.4** and **2.1.5** would not be achieved.

3.4.2 ALTERNATIVE SITE SELECTION

The Applicant has considered an alternative site selection for the Project. The Project's current location is preferred due to the following factors:

- Limited impacts to native vegetation including woody vegetation;
- No sites of Aboriginal cultural heritage significance within the development footprint;
- Proximity to the X5 transmission line; and
- Agricultural activities can still occur on the host property in areas not occupied by the BESS facility.

4. STATUTORY CONTEXT

4.1 POWER TO GRANT CONSENT

The Project is development for the purpose of "electricity generating works" and has an estimated development cost of more than $30 million. Therefore, the Project is classified as SSD pursuant to Schedule 1, Clause 20 of State Environmental Planning Policy (Planning Systems) 2021 (Planning Systems SEPP) under Part 4 of the EP&A Act and will require development consent. Approval for the Project will be sought under Part 4, Division 4.7 of the EP&A Act, which outlines the approval pathway for development deemed to be SSD.

4.2 PERMISSIBILITY

The Project Area is contained wholly within the Edward River Council LGA and is subject to the provisions of the Conargo LEP. The Project Area is zoned in its entirety as "RU1 – Primary Production" under the Conargo LEP.

State Environmental Planning Policy (Transport and Infrastructure) 2021 (Transport and Infrastructure SEPP) is applicable to the Project. The Project meets the definition of 'electricity generating works', which are defined in Section 2.35 of the Transport and Infrastructure SEPP.

Pursuant to Section 2.36 (1) of the Transport and Infrastructure SEPP states that 'electricity generating works' may be carried out with development consent on land within a prescribed rural, industrial or special use zone.

As RU1 is a prescribed non-residential zone, the Project is permissible with consent under the provisions of Section 2.36 (1) of the Transport and Infrastructure SEPP.

4.2.1 OTHER APPROVALS

Other approvals required under relevant NSW and Commonwealth legislation are detailed in **Table 4-1**.

TABLE 4-1 OTHER APPROVALS REQUIRED UNDER NSW AND COMMONWEALTH LEGISLATION

Legislation	Requirements
Commonwealth Approvals	
Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act)	The Applicant referred the original Project comprising the Hybrid Project and the X5 BESS as a proposed action to the Commonwealth DCCEEW. The referral decision resulted in the Project not being a controlled action under the EPBC Act. Referral EPBC 2024/10077.
NSW Approvals	
Approvals not Required for SSD, Section 4.41 of the EP&A Act	
Fisheries Management Act 1994	The Project will not require a dredging or reclamation work permit under Section 201, a marine vegetation regulation of harm permit

Legislation	Requirements
	under Section 205, or a passage of fish not to be blocked permit under Section 219.
Heritage Act 1977	The Project will not require a Part 4 approval to carry out an act, matter or thing referred to in Section 57(1), or an excavation permit under Section 139.
National Parks and Wildlife Act 1979	The Project will not require an Aboriginal heritage impact permit under Section 90.
Rural Fires Act 1997	The Project will not require a bush fire safety authority under Section 100B, as the development does not involve subdivision for residential or rural residential development. A Bushfire Assessment will be prepared as part of the EIS.
Water Management Act 2000	The Project will not require a water use approval under Section 89, a water management work approval under Section 90, or an activity approval (other than an aquifer interference approval) under Section 91.
Approvals that Cannot be Refused to Carry Out an Approved SSD, Section 4.42 of the EP&A Act	
Roads Act 1993	The Project will require consent from the appropriate road authority under Section 138 of the Roads Act for any works undertaken on public roads. The impacts of the Project on roads and traffic will be assessed within the EIS.

4.3 MANDATORY MATTERS FOR CONSIDERATION

The consent authority is required to consider a range of matters when deciding whether to grant consent for the Project. These are referred to as mandatory considerations, which are detailed in **Table 4-2**.

TABLE 4-2 MANDATORY CONSIDERATIONS

Statutory Reference	Mandatory Consideration
Considerations under the EP&A Act and Regulation	
Section 1.3 – Objects of the Act	Relevant objects of the Act • to promote the social and economic welfare of the community and a better environment by the proper management, development and conservation of the State's natural and other resources • to facilitate ecologically sustainable development by integrating relevant economic, environmental and social considerations in decision-making about environmental planning and assessment • to promote the orderly and economic use and development of land • to protect the environment, including the conservation of threatened and other species of native animals and plants, ecological communities and their habitats
Section 4.15 – Evaluation	Relevant environmental planning instruments • State Environmental Planning Policy (Resilience and Hazards) 2021 • State Environmental Planning Policy (Biodiversity Conservation) 2021

Statutory Reference	Mandatory Consideration
	• Conargo LEP
Considerations under other legislation	
Biodiversity Conservation Act 2016 – Section 7.14	The Minister for Planning is required to take into account the impact of the development on biodiversity values as assessed in the Biodiversity Development Assessment Report (BDAR). The Minister may (but is not required to) further consider under the Act the likely impact of the proposed development on biodiversity values.
Considerations under relevant EPIs	
State Environmental Planning Policy (Resilience and Hazards) 2021 (Resilience and Hazards SEPP) – Chapter 3	Departmental guidelines: • Applying SEPP 33 • HIPAP No. 6 – Hazard Analysis • HIPAP No. 4 – Risk Criteria for Land Use Planning
State Environmental Planning Policy (Resilience and Hazards) 2021 (Resilience and Hazards SEPP)– Chapter 4	Consider whether the land is contaminated, and if it is, whether the land will be suitable for the proposed use either in its contaminated state or following its remediation.
Conargo Local Environmental Plan 2013	The EIS will address relevant components of the Conargo LEP, including the land use objectives for the 'RU1 – Primary Production' zone.

5. COMMUNITY AND STAKEHOLDER ENGAGEMENT

SREA recognises that individual communities are both diverse and unique. Across our renewable energy portfolio, we work closely with local communities to deliver projects that leave a positive, long-term impact in the regions we operate.

While renewable energy developments provide valuable community investment, economic diversity, and local jobs, they can sometimes receive a mixed response from the community. An effective and well-executed stakeholder engagement and consultation strategy is essential to building and maintaining positive community sentiment towards the Project and garnering local support, acceptance, and approval.

5.1 OBJECTIVES

The Community and Stakeholder Engagement Plan (the CSEP) documents the communications and consultation strategy and activities that will be undertaken by the Project team up to and including the EIS public exhibition phase of the application process.

In addition, the CSEP intends to identify communication and engagement activities to proactively manage Project perceptions and expectations. This includes responding to enquiries, concerns and issues, to ensure stakeholders and community are heard and understood, and wherever possible, issues resolved.

The objectives of the CSEP are to:

- **Identify stakeholders** – map the community and engagement environment to identify stakeholders with an interest in and influence on the Project;
- **Actively and respectfully engage** – identify and provide multiple, targeted communication channels for two-way engagement with stakeholders. Provide clear, consistent and compelling messages to increase stakeholder awareness and understanding of the Project and its benefits;
- **Build support** – identify opportunities to build positive sentiment, with residents and stakeholders across various channels;
- **Anticipate risk** – identify and proactively manage risk to minimise issues with the potential to create resistance, impacting Project timelines and budgets;
- **Respond to community feedback** – provide opportunities for stakeholders to raise concerns and provide feedback. Act on feedback received to build trust, legitimacy and credibility to enhance SREA's social licence to operate; and
- **Reflect best practice** – ensure compliance with the NSW Government consultative requirements under relevant planning instruments and guidelines.

The Plan complies with NSW Government consultative requirements under relevant planning instruments and guidelines.

5.2 ENGAGEMENT PRINCIPLES

The CSEP provides the blueprint for robust, consistent engagement that aligns with the following principles[2]:

- **Respectful** – seek to understand and be responsive to community concerns;
- **Honest** – be open and transparent about the project, decisions and activities, and about what aspects of the Project can be influenced by stakeholders;
- **Accessible and inclusive** – provide clear, concise information in formats and channels that best meet a community's needs;
- **Proportionate** – tailor engagement to reflect the level of impact across the stakeholder environment;
- **Evidence-based** – base engagement activities and tools on an understanding of community demographics, history, and social and economic influences;
- **Timely and high-profile** – engage early, across the entire Project lifecycle, and widely promote access to Project information, feedback channels and engagement activities; and
- **Accurate reporting** – build robust systems to record feedback, track response timeframes and record how feedback has been incorporated into the Project.

5.3 STAKEHOLDERS

The Applicant has identified the following stakeholder groups for the Project:

- **Community** – proximal landowners, sensitive residential receivers, community interest groups, environmental groups, Indigenous communities, media, surrounding communities;
- **Business** – sensitive business receivers, business representative groups, local service providers, local industry (coal and electricity), utilities;
- **Local government** – Edward River Council elected officials and executive staff;
- **Elected representatives** – State and Commonwealth; and
- **Government agencies** – NSW and Commonwealth.

5.4 PROPOSED ENGAGEMENT TOOLS AND ACTIVITIES

To facilitate engagement, the Project will deploy a range of communication and engagement channels to keep stakeholders informed, consulted, and engaged throughout the Project's life. **Table 5-1** below outlines the proposed engagement channels to use across the Project stages.

[2] These engagement principles are Project-specific, based on the foundational principles outlined in the IAP2 Core Values, the NSW Government's Undertaking Engagement Guidelines for State Significant Projects, and the CEC's Community Engagement Guidelines

TABLE 5-1 COMUNICATION AND ENGAGEMENT CHANNELS

Channel / Tool	Description and purpose
Stakeholder database	A stakeholder database will be established and maintained to ensure that all stakeholder feedback, concerns, enquiries and interactions are recorded and responded to.
Project email	A Project email address will be established to provide an ongoing channel for stakeholders to communicate with the Project team The email address will be used to send Project updates, construction notices, fact sheets and other collateral to registered stakeholders.
Project hotline	Project information phone line: 1-800-607-484 The phone line is available to stakeholders and the community during the life of the Project. During regular business hours, calls will be answered and responded to. Outside business hours, a recorded message and voice mail facility will encourage callers to leave a message or send an email.
Project website	Project website: http://samsungrenewableenergy.com The website will be regularly updated to ensure information currency. Core information on the website will include a Project overview and map, benefits, contact details, complaints process and feedback form, and FAQs (updated regularly). The site will also include information on upcoming engagement activities, Project milestones, fact sheets, Project updates, construction notifications, and upon lodgement, a link to the EIS on DPHI's Planning Portal website.
Project cards	Printed Project cards with contact details, including email, hotline, and website. Project cards will direct stakeholders to contact the Project community relations team Project cards to be distributed to stakeholders and local community During construction, workers would keep and distribute when asked questions about the Project.
Introductory letters – addressed mail	Introduce the Project and Project team to identified stakeholders within 4km of the site.
Briefing pack	PowerPoint (or similar) briefing pack created for stakeholder briefings and meetings to ensure consistency of information. Include details about the Project, map, benefits, timeline, development process, current status and FAQs.
Direct, targeted engagement, such as in-person meetings and stakeholder briefings	Opportunity to engage stakeholders and decision makers to better understand their perspectives, such as landowners and proximal neighbours May include in-person or online meetings, phone calls and presentations.
Letterbox drops – unaddressed mail	Used in conjunction with digital communication channels to provide Project information (including fact sheets, FAQs) Unaddressed letterbox drops used during construction phase to deliver construction notifications.
Electronic direct mail (EDM)	Project updates, newsletters, notifications, etc, sent via email to register stakeholders following Scoping Report stage.

Channel / Tool	Description and purpose
FAQs	Create and regularly update a list of frequently asked questions with responses These would be placed on the Project website and also sent to stakeholders upon request.
Fact sheets	Project factsheets would be used to support engagement activities, for letterbox drops and uploaded to the website May expand factsheets to provide information on topics such as the planning process, solar farm operations and the electricity grid, benefits of renewable energy or solar farms and health and safety.
Surveys and questionnaires	If required, use surveys and/or questionnaires to invite comments and detailed feedback These may be online only or a mix of online and hard copy.
Community information sessions	Local community information sessions, e.g., drop-in sessions, will commence following the Scoping Report lodgement to support genuine engagement and provide opportunities to provide direct feedback These sessions provide an opportunity for the community to meet Project team experts, and ask questions Events will feature visually interesting and easily understood visual materials to describe the Project, its benefits, planning process, timeframes May also include stands at local events such as field days or local shows.
Advertising	Used to promote community information sessions, community events and public exhibition periods during the EIS phase.
Image library	Site photography, including timelapse, may be used for promotional activities, including the Project website, EDMs and community events.

Note: This list of channels and tools will be updated in the Community and Stakeholder Engagement Plan following SEARs and to reflect any changes to the Project based on stakeholder feedback.

5.5 CURRENT COMMUNICATION AND ENGAGEMENT ACTIVITIES

Table 5-2 below details the engagement activities the Applicant has conducted to prepare the updated Scoping Report. It should be noted that the table includes engagement undertaken since August 2024 which covered both the Hybrid Project and the X5 BESS. Earlier engagement that was only specific to the Romani Solar Farm (Hybrid Project) is detailed in the previous Scoping Report.

TABLE 5-2 ENGAGEMENT ACTIVITIES TO DATE

Timing	Objectives	Activities
August 2024	Romani Solar Farm project amended include X5 BESS	• Amended project description submitted to DPHI and published on Planning Portal.
September 2024	Notification of drop-in sessions for the Hybrid Project and X5 BESS	• Phone calls and emails to inform government officials, community and businesses about drop-in sessions.

Timing	Objectives	Activities
September 2024	Community engagement for the Hybrid Project and X5 BESS	• Drop-in sessions at Booroorban Town Hall and Hay Show.
September 2024	Encourage local community to provide feedback via the Romani online survey	• Social media campaign, promoted via Edward River and Hay Shire Council Facebook pages.
April 2025	Project update to inform the community that the Project has been amended and now only includes the X5 BESS	• Updated Project and online survey live on Project website. • Advertisement in local media to inform community about Project updates.

5.6 STAKEHOLDER FEEDBACK AND ENGAGEMENT OUTCOMES

Table 5-3 below provides a summary of stakeholder feedback and engagement outcomes received during project initiation, Scoping Report preparation.

TABLE 5-3 FEEDBACK AND ENGAGEMENT OUTCOMES SUMMARY

Stakeholder	Feedback and outcomes
Host Landowner	• Discussions have occurred with the host landowner and the Applicant has an option to lease the land required to undertake the Project.
Neighbours/Community	• Drop-in sessions raised concerns around biodiversity, Aboriginal cultural heritage, energy flow, and cumulative impacts from nearby developments. • Drop-in sessions expressed positive views of the Project and renewable energy. • No concerns raised by neighbours.
Council	• Positive around renewable developments, job creation and local growth. • Relevant council representatives expressed interest in meeting once EIS assessments are complete to discuss the transport route and road infrastructure upgrades.
Government agencies	• NSW government agencies were notified of the amendments to the project description to include the X5 BESS. Most agencies indicated that comments would be provided on the assessments once the EIS is lodged and publicly exhibited. • A Land Category Assessment report was prepared and endorsed by Conservation Programs, Heritage and Regulation Group within DCCEEW (CPHR) and defined the extent of Category 1 and Category 2 lands within the property. • An EPBC referral was submitted to Commonwealth DCCEEW for the Hybrid Solar and X5 BESS projects. The proposed action was determined to not be a controlled action and does not require approval under the EPBC Act
Aboriginal Community	• Invitation to register interest in participating in the Project assessment. • Assessment methodology issued and reviewed; responses received by two parties.

5.7 PROPOSED COMMUNICATION AND ENGAGEMENT ACTIVITIES

Table 5-4 below provides a matrix mapping engagement objectives and planned activities to support the project's planning and approvals phase. It covers the period from the submission of the scoping report to the EIS public exhibition.

This is a significant time for any major construction project. It presents significant opportunities for engagement and building a solid understanding of the local community and stakeholders. If engagement is effective at this stage, it will help build trust and lay the foundation for a lasting social licence to operate – which is vital for a project with an operating life in excess of 30 years.

Pending project approval, this plan will be updated to reflect engagement requirements for announcing project determination, detailed design, construction, operation and decommissioning.

TABLE 5-4 FUTURE COMMUNICATION AND ENGAGEMENT ACTION PLAN

Timing	Objectives	Activities
Planning and approvals		
Agency and Council engagement	• Engage with government agencies and Council on the methodology for EIS technical studies • Engage with Council on development contributions and planning agreement	• Consult with Transport for NSW on transport route for OSOM. • Consult with CPHR on the proposed methodology for BDAR. • Meet with Edward River Council to discuss development contributions, planning agreement and local road upgrades.
SEARs issued	• Establish genuine, transparent relationships with the community and council • Announce commencement of EIS process and brief council. • Reassure proximal and non-proximal non-associated sensitive receivers of SREA's intention to maintain consultation during the project design phase • Provide clear information about the planning process and focus areas of EIS • Promote opportunities for community and stakeholder input into the development of EIS and project design • Keep stakeholders informed on progress and timeframes.	• Send letters to impacted proximal and non-proximal non-associated sensitive receivers inviting them to meet with the project team. • The Applicant has hosted two community information sessions in September 2024. This was to introduce the Project and provide information about the planning process, EIS focus areas and opportunities for stakeholder input. • Promote Community Information Session/s via multiple channels, including website, EDMs, letterbox drops, advertising and media. • Record feedback in stakeholder database and demonstrate how it may inform final project design. • Develop factsheet on planning approval process and update website FAQs.
EIS public exhibition (28 days)	• Continue building genuine, transparent relationships with the community and council • Offer support for impacted non-associated sensitive receivers to prepare EIS submissions • Provide clear information about the planning process and focus areas of EIS	• Brief council on EIS before submission. • Issue media release announcing the EIS public exhibition. • Develop strong visual collateral to support information sessions. • Record feedback in stakeholder database and demonstrate how it may inform final project design.

Timing	Objectives	Activities
	• Promote opportunities for community and stakeholder input • Keep stakeholders informed on the progress of development application. • Promote community information sessions	• Promote Community Information Sessions via multiple channels, including website, EDMs, letterbox drops and advertising. • Develop factsheets aligned with EIS focus areas, including construction impacts, operational impacts, biodiversity, flooding and bushfires in response to community feedback.

6. PROPOSED ASSESSMENT OF IMPACTS

This section of the Scoping Report outlines the matters requiring further assessment in the Project EIS and the level of assessment likely to be required. This report contains a preliminary assessment of key environmental factors, to identify potential areas that could be impacted by the construction and operation of the Project.

6.1 CATEGORISATION OF ASSESSMENT MATTERS

The following has been considered in the identification of matters requiring further assessment in accordance with the State Significant Development Guidelines – preparing a Scoping Report:

- The scale and nature of the likely impacts of the Project and the sensitivity of the receiving environment;
- Whether the Project is likely to generate cumulative impacts with other relevant projects (current and future) in the areas; and
- The ability to avoid, minimise and/or offset the impacts of the Project.

Each matter and its proposed level of assessment (detailed or standard) is identified in **Table 6-1**. Detailed assessments include environmental aspects that present a potential high constraint to the development, and other aspects which require detailed assessment, but do not pose a high-risk constraint. In addition, the matters have been categorised to align with those identified in the Scoping Report Guidelines, and a Scoping Summary Table has been included in **Appendix B**.

The key matters requiring more detailed assessments have been identified based on a preliminary assessment of the Project Area and by taking into consideration other BESS developments in NSW.

TABLE 6-1 PROPOSED ASSESSMENT

Level of Assessment	Aspect
Detailed (potential constraint)	• Biodiversity – terrestrial flora and fauna • Heritage - Aboriginal • Access - Traffic and Transport
Standard	• Amenity – Visual • Amenity – Noise, vibration • Heritage – Historic • Hazards and Risks – bushfire, environmental hazards, waste, contamination • Social – surroundings, livelihoods • Water - hydrology • Land – land capability

The EIS will be prepared in accordance with the SEARs to be issued by DPHI in response to this Scoping Report and will incorporate the issues which have been outlined in **Table 6-1** above. All assessments (including specialist assessments) will be completed by taking into consideration consultation with stakeholders, industry best practice guidelines, and the experiences from other renewable energy projects.

6.2 VISUAL AMENITY

The Project EIS will consider the visual impact of the Project within the surrounding landscape context. In accordance with the Solar Guideline (in lieu of a guideline for BESS), a visual impact assessment has been prepared to inform this Scoping Report. In accordance with the guidelines, this includes landscape character assessment and visual impact assessment. For the purpose of this assessment a 'Study Area' has been defined which incorporates the Project Area.

6.2.1 EXISTING ENVIRONMENT

The proposed Project Area exists in a rural context, characterised by vast open paddocks that are generally used for livestock grazing. Scattered areas of woody vegetation typically occur along ephemeral and permanent waterways and along the roadside.

The Study Area is predominantly modified pasture that has been cleared and disturbed for the purpose of livestock grazing. Infrastructure includes the X5 transmission line and eventually Project EnergyConnect in the same corridor. The wider landscape includes minor undulations in topography, trees with chenopod shrub understories, remnant creek lines, grazing pastures and farming infrastructure. There is one associated dwelling approximately 4 km from the Project Area, and two non-associated dwellings 2.5 km south of the Project. The associated and non-associated dwelling in proximity to the Project are shown in **Figure 6-1** below.

6.2.2 ASSESSMENT APPROACH

The visual impact assessment prepared for the EIS will incorporate assessments of viewpoints surrounding the Project Area. Viewshed mapping will determine the Project's visibility from public viewpoints including Booroorban-Tchelery Road, Romani Road, and the non-associated dwelling to the south of the Project. Where necessary, mitigation measures will be proposed to address any visual impacts.

THE FOREST CREEK

BOOROORBAN-TCHELERY ROAD

ROMANI ROAD

Legend

- Project Area
- Associated Dwelling
- Non-Associated Dwelling
- Road
- Path/Track
- Watercourse

Coordinate System:
GDA2020 MGA Zone 55

Date: 14/05/2025

Created By: NB

Drawing Size: A3

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F6-1 Associated and Non-associated Dwellings

Romani Battery Energy Storage System Scoping Report

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6.3 NOISE AMENITY

6.3.1 EXISTING ENVIRONMENT

The existing noise environment at the closest noise sensitive receptors is characterised to be that of a typical rural area, dominated by natural sounds, having little or no road traffic noise and generally characterised by low background noise levels.

The closest residential receptor is the existing farm dwelling (377 Romani Road, Booroorban) on the Site (i.e. associated dwelling). There are two non-associated residential receivers within the area of influence of 2 km from the Project Area. Noise impacts from the construction and operation of the BESS at the closest sensitive receptors are not anticipated to be significant.

6.3.2 ASSESSMENT APPROACH

The EIS will assess the construction and operational noise impacts at the noise sensitive receptors within the area of influence.

During the construction phase, noise and vibration impacts from machinery, equipment and vehicle movements on access roads may adversely impact nearby sensitive receptors. Construction noise generated by the Project will be assessed as part of the EIS, including noise impact levels and duration.

During the operational phase of the Project, noise impacts are anticipated to be minimal and will likely be associated with noise sources such as vehicle movements on local roads within the study area and electrical infrastructure (transformers, power conversion units, BESS and substation). It is not anticipated that the operation of the BESS will produce significant vibration impacts.

The noise and vibration assessment will be developed in accordance with the following standards and guidelines:

- NSW Interim Construction Noise Guideline (DECC 2009);
- NSW Noise Policy for Industry (EPA 2017);
- NSW Road Noise Policy (DECCW 2011); and
- Assessing Vibration: A Technical Guideline (DECC 2006).

6.4 BIODIVERSITY

The identification of key ecological constraints at the early stage of a Project aids the process of identifying meaningful impact avoidance and minimisation outcomes. These two considerations form part of the mitigation hierarchy (i.e. avoid, minimise and mitigate), which precedes the determination of residual impacts where offset obligations are incurred. Biodiversity values present within the Project Area have been identified and are detailed in this section of the Scoping Report as well as the assessment approach for the EIS.

6.4.1 EXISTING ENVIRONMENT

The Project is located within the:

- Riverina Interim Biogeographic Regionalisation for Australia (IBRA) bioregion; and
- Murrumbidgee IBRA sub-region.

The Murrumbidgee Sub-region is characterised by dry semi-arid climate, distributary channels and floodplains and lignum/saltbush shrublands. The Project Area consists of a two Plant Community Types (PCTs) 164 Cotton Bush open shrubland of the semi-arid (warm) zone, and 157 Bladder Saltbush shrubland on alluvial plains in the semi-arid (warm) zone including the Riverina Bioregion.

There are no watercourses, caves and karst environments or areas of outstanding biodiversity present within the Project Area.

6.4.1.1 LAND CATEGORISATION

Rural lands are regulated lands under the NSW *Local Land Services Act 2013* (LLS Act), which includes the classification of lands with reference to native vegetation cover. Several land categories exist for this purpose, each influencing the type and nature of assessment involved in a native vegetation clearing proposal. Land categories defined under the LLS Act include:

- Category 1 – exempt lands;
- Category 2 – regulated land;
- Category 2 – vulnerable regulated land; and
- Category 2 – sensitive regulated land.

A Land Categorisation Assessment (LCA) was prepared for a former version of the Project and encompassed the Project Area that will be assessed in the EIS. The LCA was submitted to CPHR and was endorsed on 20 September 2024.

The LCA mapped the Project Area as Category 2 – Regulated Land, due to the presence of native vegetation in the form of PCT 164. The LCA mapping completed for the Project Area is presented in **Figure 6-2**.

6.4.1.2 PLANT COMMUNITY TYPES

Two PCT occurs within the Project Area. These PCTs has been identified through biodiversity field assessment conducted in accordance with the NSW BAM by ERM.

Table 6-2 below lists the PCT present on site and the area it occupies within the Project Area. **Figure 6-3** presents PCT mapping completed by ERM for the Project Area.

TABLE 6-2 PLANT COMMUNITY TYPES WITHIN THE PROJECT AREA

PCT No.	PCT Name	Vegetation Class	Area (ha)
157	Bladder Saltbush shrubland on alluvial plains in the semi-arid (warm) zone including the Riverina Bioregion	Riverine Chenopod Shrublands	2
164	Cotton Bush open shrubland of the semi-arid (warm) zone	Riverine Chenopod Shrublands	19

6.4.1.3 THREATENED ECOLOGICAL COMMUNITIES

PCTs 157 and 164 do not have any associated threatened ecological communities.

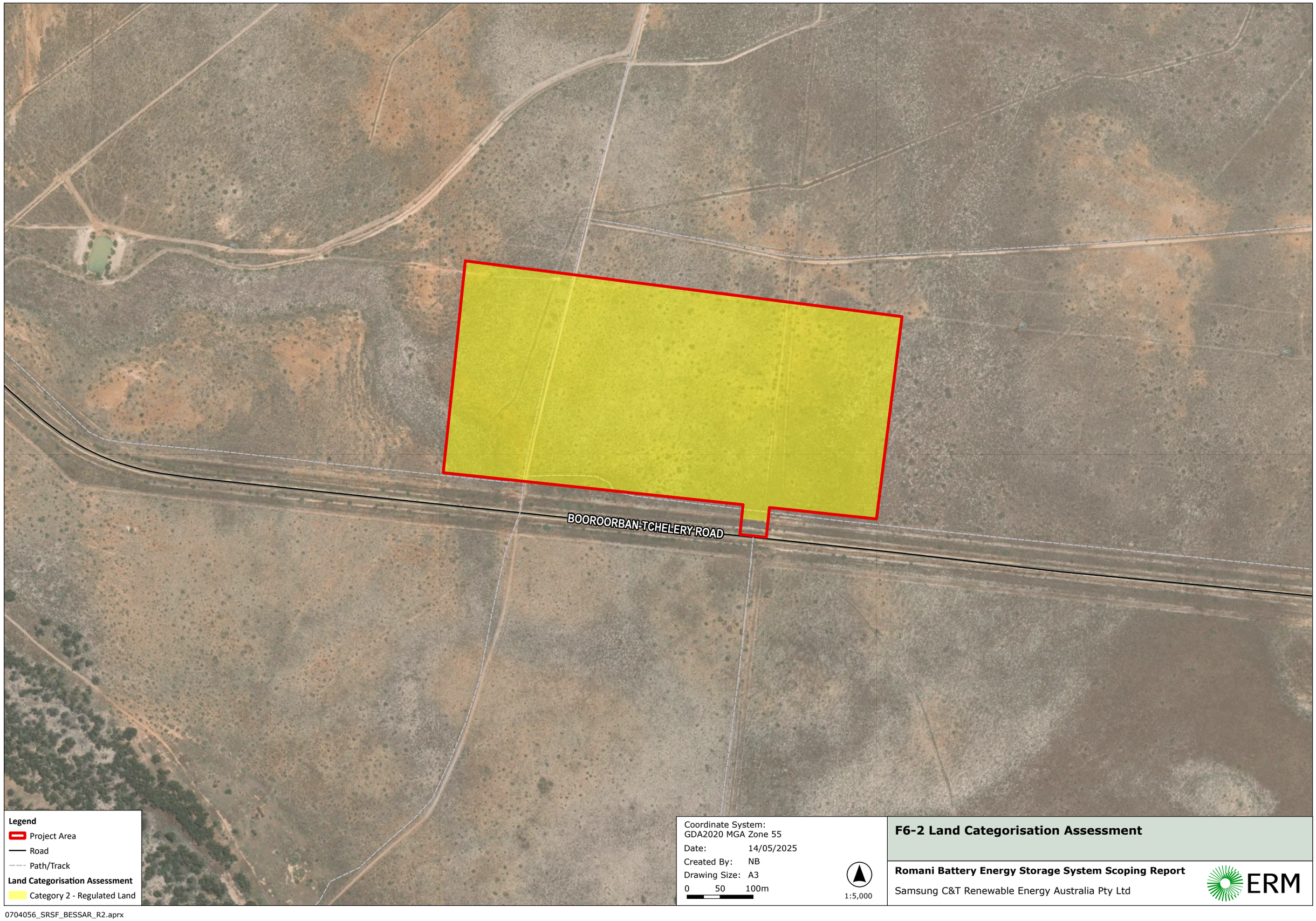
6.4.1.4 THREATENED FLORA AND FAUNA SPECIES

No threatened species have been identified within the Project Area to date.

In accordance with the requirements of Section 5.2 of the BAM, the BDAR will identify the habitat suitability for threatened species within the Project Area. Species that meet all the relevant criteria will be automatically populated in the BAM-C to be assessed either for ecosystem credits or species credits.

6.4.2 ASSESSMENT APPROACH

The construction and operation of the Project has the potential to cause impacts to native biodiversity listed under the BC Act. These will need to be considered as part of the EIS to be prepared under Part 4 of the NSW EP&A Act. As there are recorded biodiversity values, in the form of native vegetation, within the Project Area, the preparation of the BDAR will be required.



Legend
- Project Area
- Road
- Path/Track

Land Categorisation Assessment
- Category 2 - Regulated Land

Coordinate System:
GDA2020 MGA Zone 55

Date: 14/05/2025

Created By: NB

Drawing Size: A3

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F6-2 Land Categorisation Assessment

Romani Battery Energy Storage System Scoping Report

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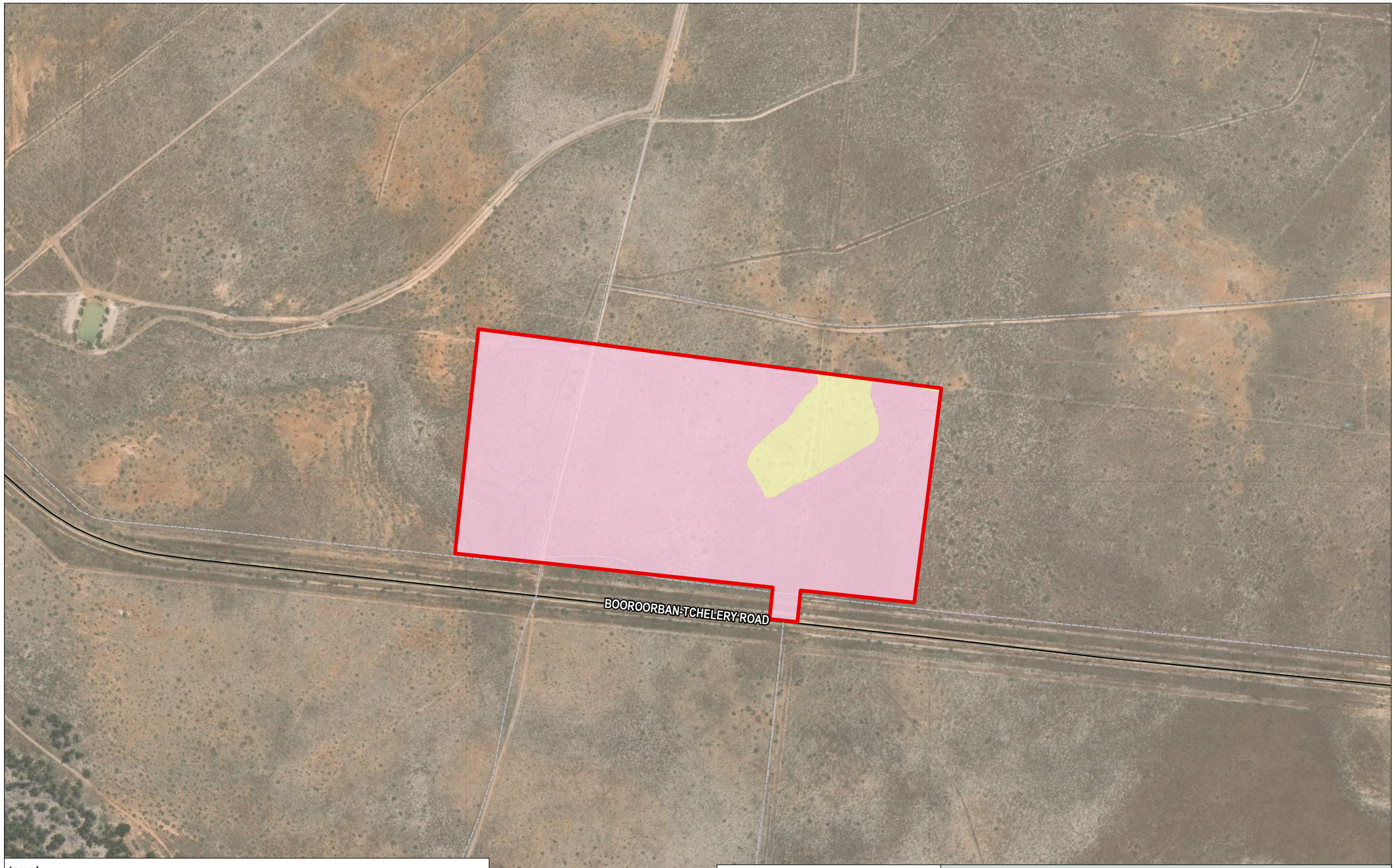

Legend

- Project Area
- Road
- Path/Track
- PCT 157 - Bladder Saltbush shrubland on alluvial plains in the semi-arid (warm) zone including Riverina Bioregion
- PCT 164 - Cotton Bush open shrubland of the semi-arid (warm) zone

Coordinate System:
GDA2020 MGA Zone 55

Date: 13/05/2025

Created By: NB

Drawing Size: A3

0 50 100m

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F6-3 Plant Community Types within the Project Area

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6.5 ABORIGINAL CULTURAL HERITAGE

6.5.1 EXISTING ENVIRONMENT

The Project Area is located within the Murrumbidgee Province of the Riverina Bioregion. Environmental influences on this landscape have varied dramatically over time with post glacial climate changes in the Holocene reducing flood peaks and sediment load. Over time this has resulted in modern watercourses crossing and cutting through earlier palaeochannels. These landscape features provide complexity to an assessment of archaeological sensitivity within the Riverine region that may not be identified through the predictive features of the Due Diligence Code of Practice for the Protection of Aboriginal Objects in NSW (DECCW, 2010).

Large-scale reviews of archaeological site types were completed on the Hay Plain (Martin, 2007a; Martin, 2010). Martin noted a number of patterns in site distribution related to environmental features. In particular, Martin (2007a, 2010) noted that:

- The narrow floodplains or confined traces of the Murrumbidgee and Lachlan, the Lowbidgee distributary system, the Gum Creek palaeochannel, and the Abercrombie Creek system in the Hay Plain have the highest density of sites. Large open water lakes also have a high density of sites;
- Sites are widely spread over different geomorphic categories across the Hay Plain with certain site types most likely to be identified in specific soil types. Confined traces (including the Murrumbidgee River), plains with channels, plain with depressions and channelled plains contained a higher density of sites. Localised landforms including lunettes and lakes were also identified to have a higher-than-average site density;
- Mounds were identified to be located to particular parts of the Hay Plain and not directly related to geomorphology. Mounds were noted to be particularly dense along confined traces of The Lowbidgee and Hay Plain Southeast;
- Middens were identified to be largely located along the confined traces of the major rivers and on the banks of large water lakes and lunettes;
- Open sites were more commonly found away from riverine grey cracking clays;
- Burials appeared to cluster in the western portion of the Hay Plain in similar locations to mounds. These sites were not identified to be connected to geomorphology;
- Artefact sites and ground ovens were recorded to have been spread widely across the Hay Plain; and
- All archaeological site types were considered likely to occur on slightly raised sandier paleochannel features.

Cultural heritage surveys conducted within the Project Area were conducted by ERM and Registered Aboriginal Parties (RAPs) engaged through the cultural heritage assessment process. These surveys did not identify any artefacts or areas of Aboriginal Cultural Heritage Significance within the boundary of the Project Area.

Although twelve sites were noted north of the Project Area, associated with the wider property used to house the Project. These sites were registered with the Aboriginal Heritage Information Management System (AHIMS). While no tangible cultural heritage items were located within the Project Area, it is noted that intangible ceremonial, dreaming, and story sites may exist in proximity to the Project. These were often associated with landscape features such as waterholes, hills, trees, or other minor features

6.5.1.1 AHIMS SEARCH RESULTS

The AHIMS database provides information concerning previously recorded Aboriginal sites in NSW. An extensive search of the AHIMS database using a shapefile of the Project, was conducted on 26 September 2024 to encapsulate the Project Area. The search was conducted utilising the parameters provided in **Table 6-3**.

TABLE 6-3 AHIMS DATABASE SEARCH DETAILS

Parameters	Search
Client Service ID	934287
Buffer	0 m
Number Sites	12

Twelve sites were identified in close proximity to the Project Area and their locations are illustrated in **Figure 6-4** .

6.5.1.2 NATIVE TITLE ACT 1994

The NSW *Native Title Act 1994* was introduced to work in conjunction with the Commonwealth *Native Title Act 1993*. The Native Title Act recognises and protects the traditional and continuing rights and interests of Aboriginal and Torres Strait Island people. This may include the right to protect places and areas that are important under traditional law where native title has been determined.

The Project Area is not located within the boundaries of a native title claim or determination.

6.5.2 ASSESSMENT APPROACH

Based on the results of the preliminary assessment, it is considered possible that there could be areas within the Project Area which contain evidence of past Aboriginal land use. In consideration of these factors, the following approach will be taken for the EIS:

- Comprehensive investigation, to include pedestrian field survey, consultation with Aboriginal stakeholders, sensitivity mapping, and archaeological test excavation (as required) should be undertaken during the development application stage;
- The investigations are to be undertaken in accordance with all NSW legislation and relevant guidelines including the Guide to investigating, assessing and reporting on Aboriginal cultural heritage in NSW (OEH, 2011), the Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010 (DECCW, 2010c), and the Code of

Practice for the Archaeological Investigation of Aboriginal Objects *in NSW* (DECCW, 2010);

- Results of the investigations are to be detailed in an Aboriginal Cultural Heritage Assessment Report (ACHAR), in accordance with the Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW (DECCW, 2010b); and
- Upon completion of the ACHAR, a Cultural Heritage Management Plan (CHMP) should be prepared in consultation with the Project RAPs to ensure appropriate management of any identified cultural heritage throughout the construction process.

FIGURE 6-4 AHIMS SITES IN PROXIMITY TO THE PROJECT

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6.6 HISTORIC HERITAGE

6.6.1 EXISTING ENVIRONMENT

Early colonial exploration of the Murrumbidgee Region occurred from the 1820s with Sturt's exploration originally focused along the Murrumbidgee River. Through the 1830s, stockholders gradually encroached westward into the region Sturt and his men explored, and by 1839, squatters had occupied the area surrounding nearby Hay, approximately 45 km north-east of the Project Area. Occupation was initially focused on cattle and sheep farming and later grain crops.

In the October 1858, Henry Leonard completed construction of an inn at Lang's-Crossing-Place, and by mid-1859, the Department of Lands had proclaimed reservations either side of the Murrumbidgee River. A township coalesced here, and by October 1859, Lang's-Crossing-Place was renamed Hay. In 1859 the first Post office was opened and in 1860 the original courthouse was built (now present location of the Post Office). Cobb & Co Coaches made Hay the headquarters of their Victoria and Riverine operations from 1862 to 1896, setting up a coach factory on the corner of Lachlan and Randall Streets; this became the largest coach factory in Australia outside of Sydney (Hay Shire Council, 2023). Given the amount of traffic from Langs Crossing to Deniliquin in the south, there was a need for a place to rest and be reliably watered. In 1859, Hay citizens raised money to dig a well at Pine Ridge (now Booroorban, approximately 16 km south-east of the Project Area). In 1868 the Royal Mail Hotel was built adjacent to the well, and it became a vibrant Cobb & Co staging post. By 1885 Booroorban was formerly proclaimed as a village and two hotels, a school, post office, and general store had been established (Aussie Towns, 2023).

The Project Area is within the historic Miranda Parish of Wakool County. Historical maps and aerials of the Project Area indicate that historic land use comprised agricultural pursuits. Land use associated with pastoral properties would have included the construction of homesteads as well as a variety of structures associated with grazing activities including sheds, tanks, and shearing quarters. Little has changed in the use of these properties, as pastoral grazing of sheep and cattle is still the principal industry of the region.

6.6.2 STATUTORY HERITAGE REGISTER SEARCHES

TABLE 6-4 HERITAGE REGISTER SEARCHES

Register	Description	Consideration
Statutory Heritage Registers		
World Heritage List	The United Nations Educational, Scientific and Cultural Organisation (UNESCO) World Heritage List includes properties in Australia that are matters of national environmental significance and are protected and managed under the EPBC Act.	There are no World Heritage places within a 2 km radius of the Project Area.

Register	Description	Consideration
Commonwealth Heritage List	The Commonwealth Heritage List includes natural, Indigenous, and historical heritage places owned or controlled by the Australian Government. Items on the list have satisfied the minister as having one or more Commonwealth Heritage values.	There are no Commonwealth Heritage listed places within a 2 km radius of the Project Area.
National Heritage List	The Australian National Heritage List contains natural, historic, and Indigenous places deemed to be of outstanding heritage significance to Australia. Before a site is placed on the list a nominated place is assessed against nine criteria by the Australia Heritage Council.	There are no National Heritage listed places within a 2 km radius of the Project Area.
State Heritage List	A search of the NSW State Heritage Register (SHR) was conducted on 11 September 2023.	The search revealed that there are no SHR-listed items within a 2 km radius of the Project Area.
Conargo Local Environmental Plan 2013	A search of the Conargo Local Environmental Plan (LEP) 2013 was conducted on 11 September 2023.	The search identified no local heritage listed sites within a 2 km radius of the Project Area.
Section 170 Heritage Registers	Section 170 of the *Heritage Act* 1977 requires all NSW state agencies to identify, conserve and manage the heritage assets owned, managed and occupied by that agency. In order to facilitate this, Section 170 heritage registers were established for all NSW government agencies. These registers are held and maintained by each state agency and updated as assets are acquired, altered, or decommissioned.	A search of the relevant Section 170 registers was undertaken on 13 May 2025 No Section 170 heritage places are located within a 2 km radius of the Project Area.
Non-Statutory Considerations		
Register of the National Estate	The Register of the National Estate (RNE) is a non-statutory archive of natural, historic, and Indigenous places and incorporates over 13,000 places. Originally compiled between 1976 and 2003 by the Australian Heritage Commission, the register is now maintained by the Australian Heritage Council. Following amendments to the *Australian Heritage Council Act 2003*, the RNE was frozen on 19 February 2007, which means that no new places can be added, or removed. Since February 2012 the RNE has been maintained as a non-statutory archive.	A search of the Australian Heritage Database was undertaken on 13 May 2025. This search identified no RNE listed places within a 2 km radius of the Project Area.
National Trust of Australia Heritage Register	The National Trust of Australia maintains a register of landscapes, townscapes, buildings, industrial sites, cemeteries, and other heritage places which the Trust determines to have cultural significance. This register is non-statutory but provides an indication of places considered significant by the wider community.	A search of the National Trust Heritage Register conducted on 13 May 2025 indicated there are no National Trust listed properties within a 2 km radius of the Project Area.

6.6.3 ASSESSMENT APPROACH

Preliminary assessment has shown there are no historic heritage items within the Project Area. While no registered historic heritage items are located within the Project Area, further assessment would be required to better establish the archaeological potential of the Project Area. A preliminary historic heritage assessment will be prepared as part of the EIS.

6.7 HAZARDS AND RISKS

6.7.1 PRELIMINARY HAZARD ANALYSIS

A Preliminary Hazard Assessment (PHA) is required for potentially hazardous or offensive development under State Environmental Planning Policy Resilience and Hazards 2021 (Resilience and Hazards SEPP). Clause 3.2 of the Resilience and Hazards SEPP defines a 'potentially hazardous industry' is as:

> *"development for the purposes of any industry which, if the development were to operate without employing any measures (including, for example, isolation from existing or likely future development on other land) to reduce or minimise its impact in the locality or on the existing or likely future development on other land, would pose a significant risk in relation to the locality—*
>
> *(a) to human health, life or property, or*
>
> *(b) to the biophysical environment"*

Appendix 3 of the Applying SEPP 33 Guidelines (DoP, 2011) lists the industries that may fall within the Resilience and Hazards SEPP (former SEPP 33), which does not include energy storage facilities. However, the BESS facility proposed for the Project is likely to utilise lithium-ion batteries, which are listed as Class 9 - Miscellaneous dangerous goods. While Class 9 materials are excluded from the SEPP 33 screening test, the hazards related to these materials should be considered in accordance with the Applying SEPP 33 Guidelines.

Batteries can be a serious safety risk for occupants and installers if incorrectly installed or operated, potentially leading to electric shock, fire, flash burns, explosion or exposure to hazardous chemicals and released gases. The battery installation guidelines for accredited installers guidelines, prepared by the Clean Energy Council (2017) state that there are numerous hazards associated with battery systems and storage in relation to electrical, energy, fire, chemical, explosive gas, and mechanical hazards. Where a hazard is identified, risk reduction should be applied to eliminate or reduce these risks, in order to protect persons, property and livestock from fire, electric shock, or physical injury (CEC, 2017).

A Preliminary Hazards Assessment will be undertaken as a component of the EIS, which will assess the potential hazards and risks associated with the Project in accordance with the requirements of the Resilience and Hazards SEPP. Specifically, it will assess the potential hazards associated with the inclusion of a battery energy storage system at the Project Area, and evaluate the likely risks to public safety, by focusing on the transport, handling and use of hazardous materials. The assessment will also determine whether the Project should be considered a hazardous or potentially hazardous industry under the Resilience and Hazards SEPP.

6.7.2 BUSHFIRE

6.7.2.1 EXISTING ENVIRONMENT

Bushfire presents a threat to human life and assets and can adversely impact ecological values. Bushfire risk can be considered in terms of environmental factors that increase the risk of fire (fuel quantity and type, topography and weather patterns), as well as specific activities (such as hot works and construction activities) or infrastructure components that exacerbate combustion or ignition risks (such as transmission lines and other electrical components).

A review of the NSW RFS Bushfire Prone Land mapping confirms that the Project Area is currently recognised as Vegetation Category 3[3] (refer to **Figure 6-5**). In line with the NSW RFS Guide for Bush Fire Prone Land Mapping (RFS, 2015), Vegetation Category 3 is considered to be medium bush fire risk vegetation.

6.7.2.2 ASSESSMENT APPROACH

The EIS will include a Bushfire Risk Assessment and will aim to identify potential hazards and risks associated with bushfires / use of potential bushfire prone land. The assessment will aim to demonstrate that the proposed BESS can be designed, constructed and operated to minimise ignition risks and provide for asset protection consistent with the NSW Rural Fire Service Guidelines - Planning for Bushfire Protection 2019 (NSW RFS, 2019).

The Bushfire Risk Assessment and mitigation strategies will be guided by the following factors that contribute to bushfire risk:

- Fuels, weather, topography, predicted fire behaviour and local bushfire history;
- Suppression resources, access (roads, tracks) and water supply; and
- Values and assets.

Mitigation will be a combination of complementary strategies, all of which are required to provide the best possible protection outcome for the Project, land managers and the community.

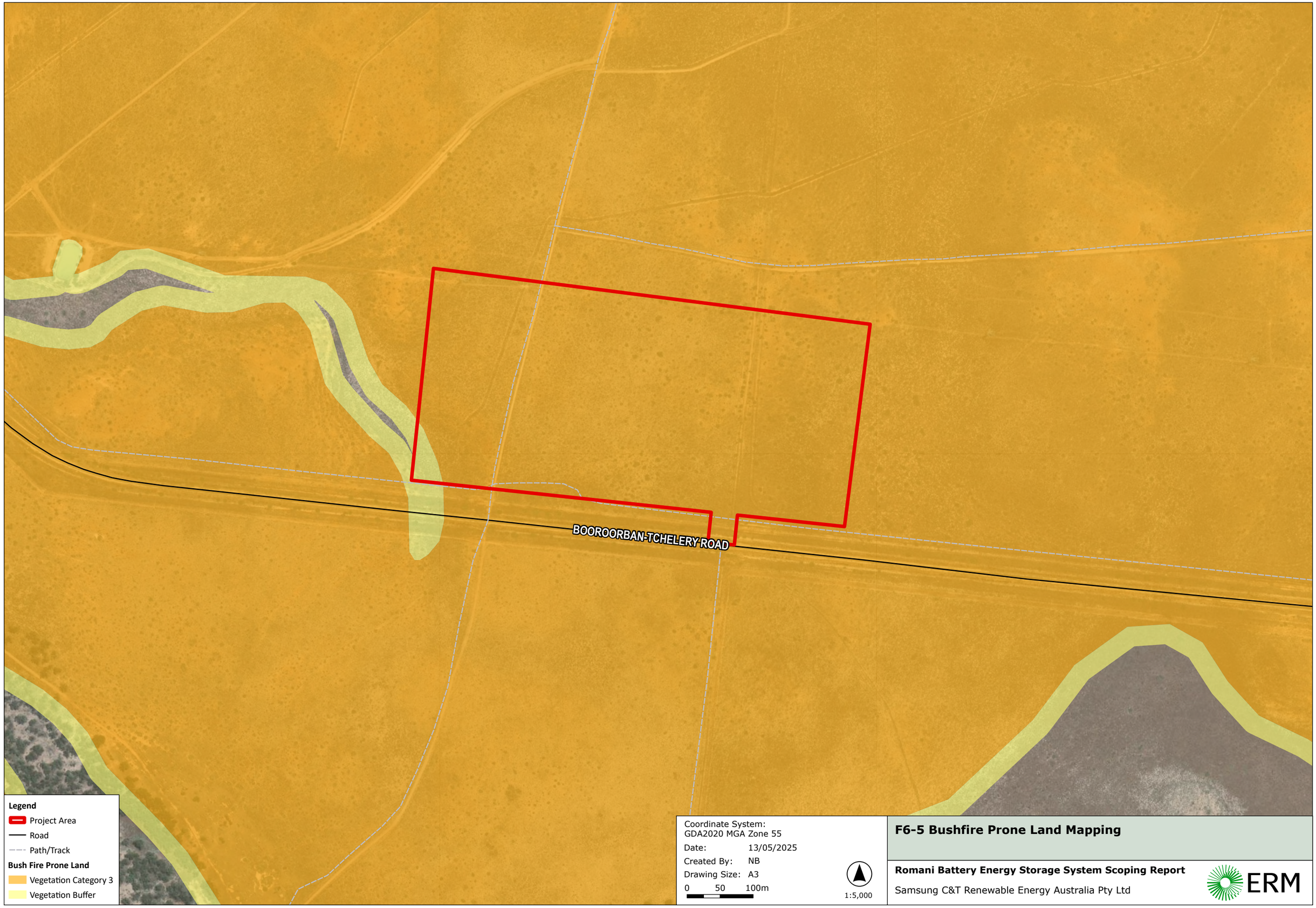
6.7.3 ELECTROMAGNETIC FIELD (EMF)

Electromagnetic Fields (EMF) are associated with all electrical wiring and equipment. Electrical fields are caused by the voltage of the equipment, while magnetic fields are caused by the current flowing (amperage). Electric fields and magnetic fields are independent of one another and, in combination, cause energy to be transferred along electric wires.

The Project is anticipated to generate EMFs during operation from the proposed transmission lines and substations. The Project is unlikely to cause significant EMF impacts due to the distance from sensitive receivers such as dwellings.

[3] The SEED database identifies the area as Category 3 Vegetation (Environment NSW, 2021). Category 3 Vegetation is considered to be medium bush fire risk vegetation. It is higher in bush fire risk than Category 2 (and the excluded areas) but lower than Category 1.

An EMF assessment will be prepared as a component of the EIS, which will assess the potential impacts and risks to human health associated with the EMF generated by the BESS and electrical infrastructure. While adverse health effects from exposure to extremely low frequency EMFs have not been established, the possibility remains that such effects may exist, and it remains a risk during the construction and operational phases of the Project.



F6-5 Bushfire Prone Land Mapping

Romani Battery Energy Storage System Scoping Report

Samsung C&T Renewable Energy Australia Pty Ltd

ERM

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6.8 TRAFFIC AND TRANSPORT

6.8.1 EXISTING ENVIRONMENT

The Project Area is located approximately 375 km from Melbourne, Victoria, 640 km from Adelaide, South Australia, and 770 km from Sydney (by road). Access to the Project Area during construction and operation would be via the existing regional road network, with the entry point located on Booroorban-Tchelery Road.

The road network surrounding the Project Area includes Booroorban-Tchelery Road, Romani Road, the Cobb Highway and the Sturt Highway. The Cobb Highway is a State Road under the management of Transport for New South Wales (TfNSW). It runs in a general north-south alignment between the Barrier Highway in the north and Echuca in the south. It has a speed limit of 100km/hr within the vicinity of the site, and a carriageway width of approximately 7 metres accommodating one lane of traffic in each direction with grassed verges on both sides of the road.

It is anticipated that major Project components (transformers, plant) would be delivered via either the Port of Geelong or Port of Melbourne and transported by road to the Project Area.

6.8.2 ASSESSMENT APPROACH

The port of delivery is anticipated to be either Geelong or Melbourne. This will be confirmed in the EIS phase of the Project as well as the transport route for Oversize Overmass (OSOM) vehicles. A Transport Impact Assessment (TIA) will be prepared for the EIS and supported by the Transport Route Assessment. The TIA will be prepared in accordance with:

- Guide to Traffic Generating Developments (RTA, 2002);
- Austroads Guide to Road Design; and
- Austroads Guide to Traffic Management (Austroads, No Date).

Vehicle access to the Project would be via Booroorban-Tchelery Road, which is currently not approved for OSOM vehicles expected to be used in the delivery of Project components. This will be incorporated into the TIA.

There is no traffic volume data available for Booroorban-Tchelery Road, however available data from 2006 to 2012 suggests that the Cobb Highway in the vicinity of the Project carries in the order of 600 vehicles per day (two-way volume).

Traffic surveys including tube counts and turning movement counts at key intersections will be undertaken for the EIS. The assessment of the road network is to be undertaken against the requirements set out in the Austroads Guide to Traffic Management. Given the low traffic volumes expected on the surrounding road network, it is not anticipated that the increase in traffic generated during construction stage would result in any significant adverse impacts to the operation of the road network. Any future assessment should consider the cumulative impacts of other nearby major projects. During operation the project would generate a negligible level of traffic on the road network.

6.9 SOCIAL AND ECONOMIC

This section provides an overview of the first phase Social Impact Assessment (SIA) undertaken for the Project. The first phase SIA aligns with the DPE's Social Impact Assessment Guideline for State Significant Projects (SIA Guideline) (DPE, 2023a) and DPE's Technical Supplement: Social Impact Assessment Guideline for State Significant Projects (SIA Technical Supplement) (DPE, 2021d)

The first phase SIA involves scoping and preliminary assessment and sets further parameters for the second phase SIA (the assessment report to be appended to the EIS) (DPE 2021e, p.12). Accordingly, the first phase SIA includes:

- Defining the Project Social Locality;
- Social baseline describing the profile of the community in the Social Locality;
- Preliminary assessment of potential social impacts to inform Project refinement; and
- Outlining the approach that will be undertaken to complete the second phase SIA.

The Preliminary Social Impact Assessment is included at **Appendix C**.

6.9.1 EXISTING ENVIRONMENT

6.9.1.1 SOCIAL LOCALITY

The Project is located on the northern boundary of the Edward River Council LGA, which borders the Hay Shire LGA. The two nearest regional centres are Deniliquin (94km by road and 2,316 people) and Hay (44km by road and 6,833 people). These localities are likely to provide goods and services to support the construction and operation (e.g., ongoing maintenance) phases of the Project. Importantly, the Cobb Highway, which runs north-south approximately 15km east of the Project Area, provides easy accessibility to these two regional centres.

6.9.1.2 COMMUNITY PROFILE

This first phase SIA draws on both 2016 and 2021 ABS datasets (i.e. latest available) for the purposes of providing a socio-economic baseline analysis. Review of socio-economic indexes for areas (SEIFA) data highlighted the decreasing level of socio-economic disadvantage since the 2016 ABS census period. Additionally, 2021 SEIFA data shows that the two SA1's immediately surrounding the Project Area are moderately advantaged.

6.9.1.3 SOCIAL INFRASTRUCTURE

The two regional centres that are likely to provide social infrastructure for the Project are Hay and Deniliquin due to their size, proximity, and accessibility to the Project via Cobb Highway. Social infrastructure comprises schools and other education institutions, medical services, emergency services, recreational facilities and community organisations.

The preliminary desktop assessment has determined that the social infrastructure provided by Hay and Deniliquin will likely be sufficient to the meet the demands during the construction and operation phases of the Project.

The second phase SIA will further investigate the capacity of social infrastructure in the Social Locality and will draw on engagement activities undertaken with relevant stakeholders, including local government, local businesses and the wider community.

6.9.2 ASSESSMENT APPROACH

The desktop analysis of social impacts has revealed a range of positive and negative social impacts that will be assessed in detail in the second phase SIA. The negative social impacts identified were mainly to local amenity, and landscape and land use changes; whereas positive impacts regarded local employment and procurement opportunities, and community benefits. The identified potential impacts will be investigated further during the EIS preparation and supplemented by stakeholder feedback and reviewed against any proposed changes to the design following the issue of the SEARs.

6.10 WATER RESOURCES

6.10.1 EXISTING ENVIRONMENT

6.10.1.1 HYDROLOGY

The Project Area is located within the Murrumbidgee and Lake George Catchment which covers an area of 84,000 km^2. Elevations across the catchment vary from over 1,400 metres in the high mountain ranges north of the catchment, to less than 50 metres associated with floodplains. The Ramsar site NSW Central Murray State Forests Wetlands is located 44 km south of the Project Area.

The Lowbidgee floodplain, between Maude and Balranald, is the largest remaining wetland in the Murrumbidgee Valley covering an area of over 2,000 km^2. The Catchment also includes the second largest red gum forest in Australia along the river downstream of Redbank Weir (Australian Government, 2023).

The Forest Creek is approximately 1 km south of the Project Area, with a hydro line associated with the creek extending into the southwest corner of the Project (Project infrastructure will be designed to avoid this area). There are no boreholes or water monitoring areas located within the Project Area. Furthermore, the site is not within an area mapped as 'Groundwater Vulnerability' under the Conargo LEP.

A map of the local hydrology present within the Project Area and its surroundings is provided in **Figure 6-6**.

6.10.1.2 FLOODING

The Project Area is characterised by generally flat topography with several manmade dams and intermittent, ephemeral waterways. Land uses are typical of a rural setting, with large pockets of farmland, isolated buildings/sheds and unsealed roads. Flood maps for the Booroorban area are not available in the Conargo LEP. Hay and Maude have experienced several large floods since the 1880s associated with the Murrumbidgee River floodplain (HSC, 2023).

6.10.2 ASSESSMENT APPROACH

The EIS will include an assessment of impacts to flooding and hydrology and consideration of the water resources required to construct and operate the Project. The assessment for the EIS will consider:

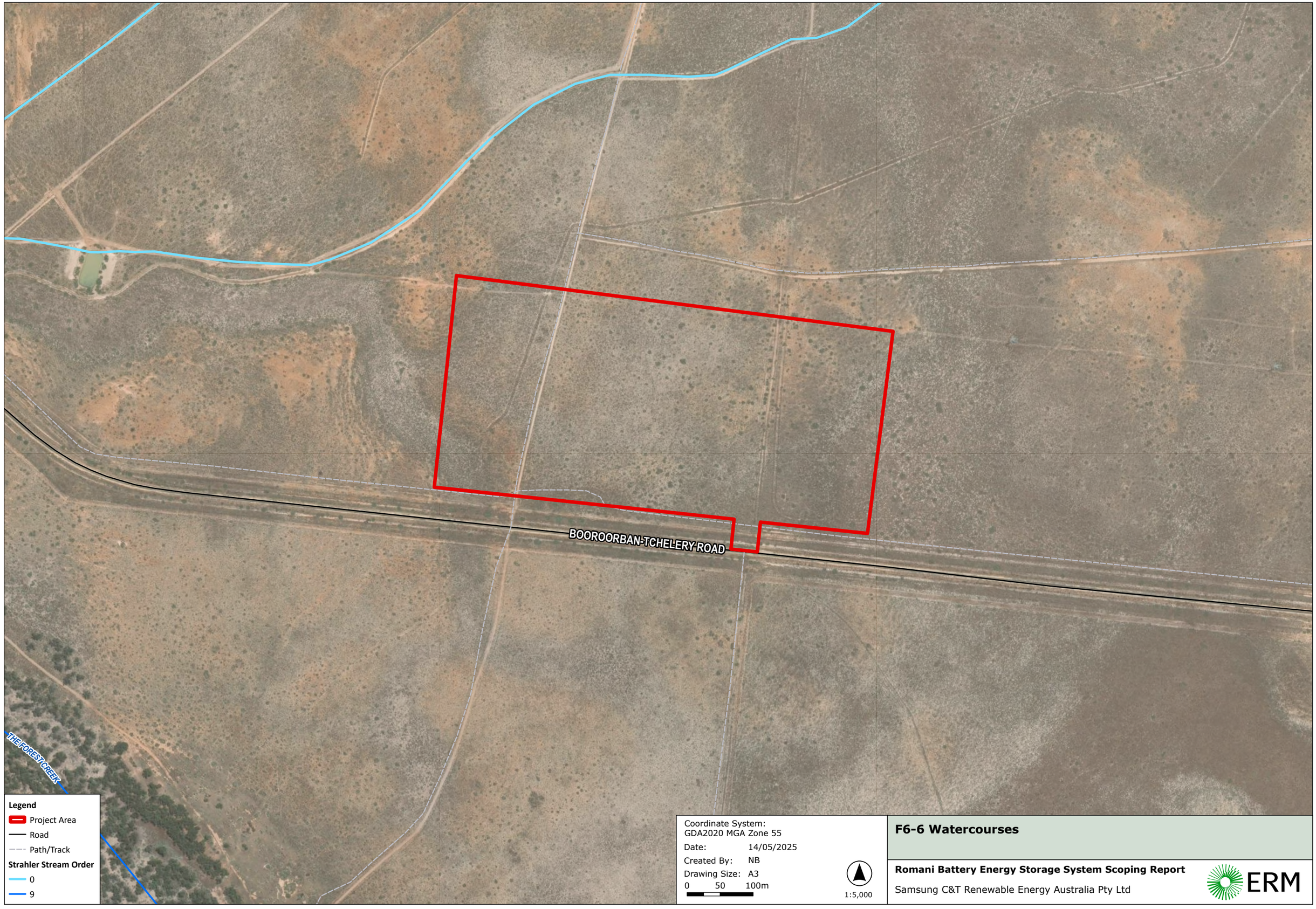
- Existing flood behaviour through review of existing available data, developing computer models and defining flood levels, depths, velocities and flood hazard category for the Project Area for existing topographic conditions; and
- Post development flood behaviour, including quantifying flood levels, depths, velocities and flood hazard category with the Project in place.

A Surface Water Impact Assessment will be undertaken which will include a review of standard construction environmental management plans to ensure that impacts during excavation, road works, transport of machinery, etc. are adequately mitigated through avoidance, minimisation and management.

The assessment will consider the potential impacts of the Project on hydrology and groundwater and will determine the need for further hydrological investigations. The assessment will also identify and quantify sources of water required during construction and operation of the Project and determine whether any water access licences under the *Water Management Act* 2000 will be required. All required licences and approvals will be obtained prior to the commencement of construction activities.

The water impact assessment will be generally undertaken in accordance with the following guidelines and resources:

- Managing Urban Stormwater; Soils & Construction (Landcom, 2004);
- Guidelines for Controlled Activities on Waterfront Land (DPI Water, 2018);
- Relevant Water Sharing Plans (DPI Water); and
- Guidelines for Watercourse Crossings on Waterfront Land (DPI Water, 2012).



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F6-6 Watercourses

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6.11 LAND RESOURCES

6.11.1 EXISTING ENVIRONMENT

The land and soil capability (LSC) assessment scheme gives an indication of the land management practices that can be applied to a parcel of land without causing degradation to the land and soil at the site and to the off-site environment (OEH, 2012).

A preliminary review of the Soil and Land Capability Mapping data for NSW (DPE, 2020d) suggests that the majority of the Project Area is within LSC Class 5 – Severe limitations. The LSC Class 5 and has severe limitations for high impact land management uses such as cropping. A map of soil classes in the vicinity of the Project Area is provided in **Figure** 6-7.

A search of the Australian Soil Classification (ASC) Soil Type Map of NSW (DPE, 2017a) reveals that the site is largely Vertosols soils, which are also known as cracking clay soils. They have a clay texture throughout the profile, display strong cracking when dry, and shrink and swell significantly during wetting and drying phases. Vertosols generally have high soil fertility, and have a large water-holding capacity.

A review of Biophysical Strategic Agricultural Land (BSAL) data (DPE, 2013) showed that there are no areas of BSAL mapped within, or in close proximity to the Project Area.

Review of the NSW EPA Contaminated Land Records and the list of notified sites conducted on 13 May 2025 determined that there are no listed contaminated sites within 10 km of the Project Area.

6.11.2 ASSESSMENT APPROACH

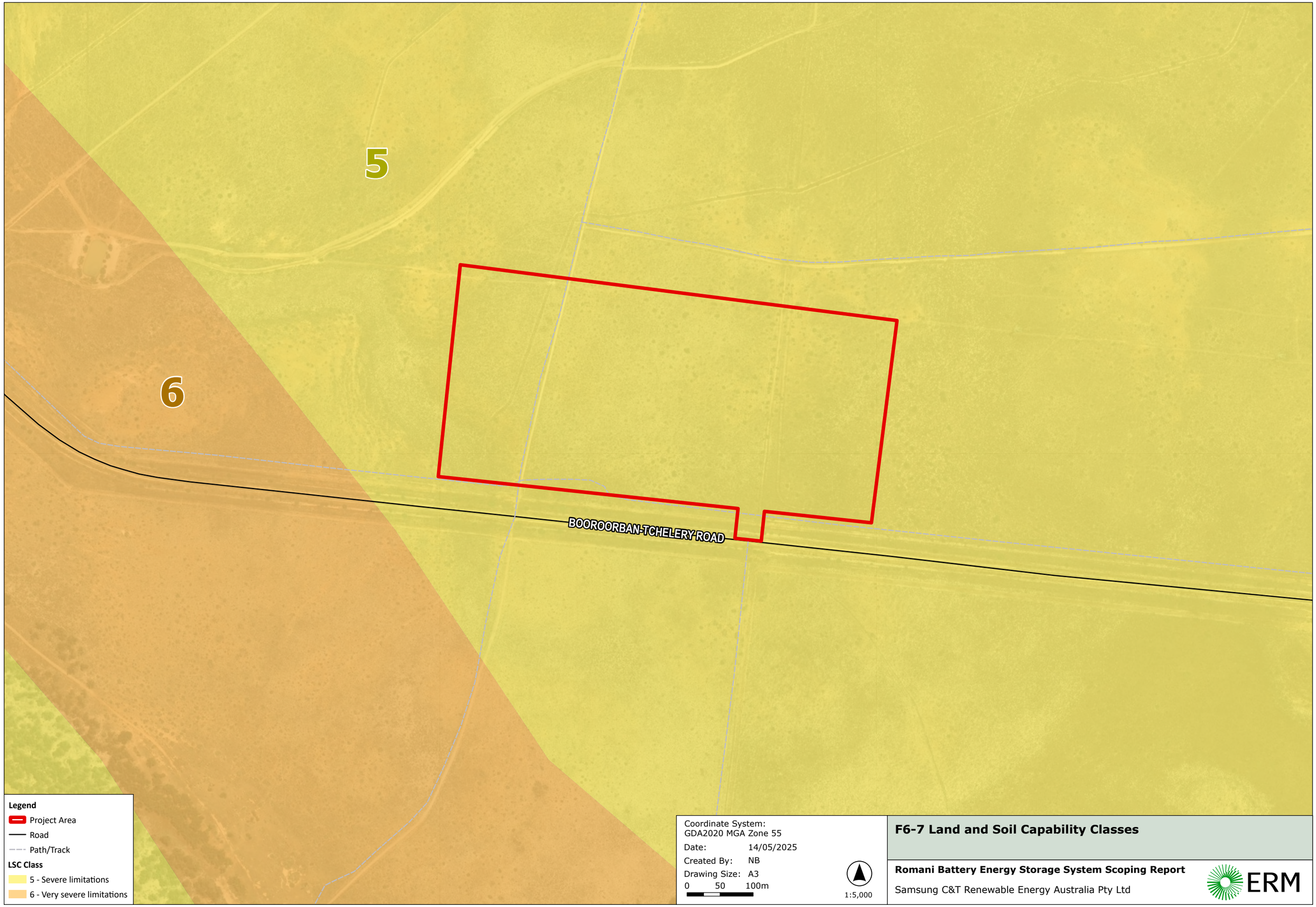
The Solar Guideline provides further guidance on the process for assessing impacts on agricultural land and principles and encourage development on land with limited agricultural productivity.

The Project EIS will follow the approach to agricultural impact assessment as detailed in **Appendix A** of the guideline. Figure 4 of Appendix A of the Solar Guideline provides a flow chart outlining various levels of assessment.

As the Project Area is on land zoned RU1, is not mapped BSAL, and is mapped as LSC Class 5 a Level 1 Basic Agricultural Impact Assessment is required which includes:

- Land and soil capability mapping, and site investigation results;
- Include consultation with neighbouring landholders to identify potential project impacts (if any) on immediately adjacent agricultural land;
- Describe project impacts (if any) on immediately adjacent land;
- Describe consultation undertaken; and
- Consider measures to reduce impacts on neighbouring agricultural land.

Additionally, the EIS will include a Preliminary Site Investigation into potential contamination in accordance with the Resilience and Hazards SEPP.



F6-7 Land and Soil Capability Classes

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6.12 AIR QUALITY

The Project is not expected to have significant impacts on air quality in the region. Impacts during construction will generally relate to dust generation from construction works, while impacts during operation are expected to be minimal. An air quality assessment is not required for a project of this scale.

6.13 WASTE MANAGEMENT

The EIS will quantify and classify the likely waste streams to be generated during construction and operation and describe measures to manage, reuse, recycle and dispose of waste in accordance with waste Classification Guidelines (NSW EPA, 2014).

6.14 CUMULATIVE IMPACTS

The Cumulative Impact Assessment Guidelines for State Significant Projects (DPE, 2022a) provides a framework for assessing and managing project-level cumulative impacts.

A cumulative impact assessment will be undertaken as a component on the EIS in accordance with the Cumulative Impact Assessment Guidelines for State Significant Projects (DPE, 2022b).

TABLE 6-5 CUMULATIVE IMPACTS AND TIMEFRAMES

Project Phase	Estimated Timeframe	Likely Scale of Impact	Duration of Impact	Potential Cumulative Impacts
Assessment	2025	Minor	Temporary	Social – community health and wellbeing
Approval	2025	Minor	Temporary	Social – community health and wellbeing
Construction	2026 - 2028	Minor to moderate	Temporary	Amenity – visual, noise Social – community health and wellbeing Transport and traffic
Operation	2028 - 2058	Minor to Moderate	Ongoing during operations	Amenity – noise
Decommissioning	Post 2058	Moderate	Temporary	Social – community health and wellbeing Amenity – air quality and noise Transport and traffic

7. CONCLUSION

The preliminary environmental assessment undertaken for this Scoping Report finds the Project Area to be suitable for the Project for the following reasons:

- It has access to existing transmission lines, which will allow for the renewable energy generated from the Project to be supplied to the region;
- It is located within the boundaries of the proposed South West REZ, a region in NSW dedicated to renewable energy developments;
- There are a number of other existing and proposed renewable energy projects located within the region and in close proximity to the Project Area;
- It is easily accessible via Booroorban-Tchelery Road, Booroorban;
- The Project is consistent with the RU1 – Primary Production zoning and will meet the following objective of the RU1 zone to encourage sustainable primary industry production;
- The Project will allow for existing grazing activities to continue within the Project Area and wider parcels of land; and
- The Project will contribute to diversifying the local economy and creating new employment opportunities.

Detailed assessments will be undertaken for environmental aspects that present a potential constraint to the development, or where detailed assessment is required by legislation or guidelines. These assessments are listed in **Table 7-1** below.

TABLE 7-1 PROPOSED ASSESSMENT

Level of Assessment	Aspect
Detailed (potential constraint)	• Biodiversity – terrestrial flora and fauna • Heritage – Aboriginal cultural heritage • Access - Traffic and Transport
Standard	• Amenity – Visual • Amenity – Noise, vibration • Heritage – Historic • Hazards and Risks – bushfire, environmental hazards, waste • Social – surroundings, livelihoods • Water - hydrology • Land – land capability

The EIS will be prepared in accordance with the SEARs to be issued by DPHI in response to this Scoping Report. All assessments (including specialist assessments) will be completed by taking into consideration consultation with stakeholders, industry best practice guidelines, and the experiences from other BESS projects.

8. REFERENCES

ABS. (2021). *2021 Census Data*. Retrieved from Australian Bureau of Statistics: https://www.abs.gov.au/census/find-census-data/search-by-area

AEMO. (2024). *2024 Electricity Statement of Opportunities.* Australian Energy Market Operator. Retrieved from https://aemo.com.au/-/media/files/major-publications/isp/2022/draft-2022-integrated-system-plan.pdf?la=en

AEMO. (2024). *2024 Integrated System Plan.* Australian Energy Market Operator. Retrieved from https://aemo.com.au/-/media/files/major-publications/isp/2020/final-2020-integrated-system-plan.pdf?la=en&hash=6BCC72F9535B8E5715216F8ECDB4451C

Aussie Towns. (2023). *Booroorban, NSW*. Retrieved from https://www.aussietowns.com.au/town/booroorban#:~:text=A%20group%20of%20citizens%20in,Mail%20Hotel%20beside%20the%20well

Australian Energy Regulator. (2023). *State of the energy market 2023.*

Australian Energy Regulator. (2023). *State of the Energy Market 2023.*

Australian Government. (2023). *Murray-Darling Basin Authority.* Australian Government.

CEC. (2017). *Battery Install Guidelines for Accredited Installers.* Clean Energy Council . Retrieved from https://www.acsolarwarehouse.com/wp-content/uploads/2016/04/battery-installation-guidelines.pdf

DCCEEW. (2022). *Australia's Emmissions Projections 2022.* DCCEW.

DCCEEW. (2023). *Australia's emissions projections 2023.*

DECCW. (2010). *Due Diligence Code of Practice for the Protection of Aboriginal Objects in NSW .*

DECCW, D. o. (2010b). *Code of Practice for archaeological investigation of Aboriginal Objects in New South Wales.*

DECCW, D. o. (2010c). *Aboriginal cultural heritage consultation requirements for proponents 2010.*

DoP. (2011). *Hazardous and Offensive Development Application Guidelines: Applying SEPP 33.* Department of Planning. Retrieved from https://www.planning.nsw.gov.au/-/media/Files/DPE/Guidelines/hazardous-and-offensive-development-application-guidelines-applying-sepp-33-2011-01.pdf?la=en

DPE. (2013). *Strategic Regional Land Use Policy (SRLUP) - Strategic Agricultural Land - Biophysical*. Retrieved from NSW Government SEED Portal: https://geo.seed.nsw.gov.au/Public_Viewer/index.html?viewer=Public_Viewer&locale=en-AU&runWorkflow=AppendLayerCatalog&CatalogLayer=SEED_Catalog.79.SALBiophysical

DPE. (2017a). *Australian Soil Classification (ASC) soil type map of NSW*. Retrieved from NSW Government SEED Portal: https://datasets.seed.nsw.gov.au/dataset/australian-soil-classification-asc-soil-type-map-of-nsweaa10

DPE. (2020b). *NSW Electricity Infrastructure Roadmap*. Retrieved from https://www.energy.nsw.gov.au/sites/default/files/2020-12/NSW%20Electricity%20Infrastructure%20Roadmap%20-%20Detailed%20Report.pdf

DPE. (2020d). *Land and Soil Capability Mapping for NSW*. Retrieved from NSW Government SEED Portal: https://datasets.seed.nsw.gov.au/dataset/land-and-soil-capability-mapping-for-nsw4bc12

DPE. (2021a). *State Significant Development Guidelines - Preparing a Scoping Report: Appendix A to the State Significant Development Guidelines.* Department of Planning and Environment.

DPE. (2021d). *Technical Supplement: Social Impact Assessment Guideline for State Significant Projects.* Department of Planning and Environment.

DPE. (2022a). *Cumulative Impact Assessment Guidelines for State Significant Projects.* Department of Planning and Environment.

DPE. (2022a). *Large-Scale Solar Energy Guideline.* NSW Department of Planning, Housing and Infrastructure.

DPE. (2022b). *State Significant Development Guidelines - Preparing a Scoping Report: Appendix A to the State Significant Development Guidelines.* Department of Planning and Environment.

DPE. (2023a). *Riverina Murray Regional Plan 2041.* NSW Department of Planning and Environment.

DPE. (2023a). *Social Impact Assessment Guideline for State Significant Projects.* Department of Planning and Environment.

DPHI. (2024). *Benefit-Sharing Guideline.* NSW Department of Planning, Housing and Infrastructure.

DPHI. (2024a). *Renewable Energy Planning Framework.* Department of Planning, Housing and Infrastructure.

DPHI. (2024b). *State Significant Development Guidelines.* Department of Planning, Housing and Infrastructure.

DPHI. (2024c). *Undertaking Engagement Guidelines for State Significant Projects.* Department of Planning, Housing and Infrastructure.

Energy NSW. (2021). *Renewable Energy Zones*. Retrieved from NSW Government: https://www.energy.nsw.gov.au/renewables/renewable-energy-zones

Environment NSW. (2021). *SEED*. Retrieved from Bushfire prone land in the Upper Hunter Region: https://www.seed.nsw.gov.au/

ERC. (2018). *Edward River Council 2018-2030 Community Strategic Plan.* Edward River Council.

ERC. (2020). *Edward River Council Local Strategic Planning Statement 2020-2040.* Edward River Council.

ERC. (2020). *Edward River Council Local Strategic Planning Statement 2020-2040.* Edward River Council. Retrieved from https://www.planning.nsw.gov.au/-/media/Files/DPE/Plans-and-policies/riverina-murray-regional-plan-2017.pdf

Hay Shire Council. (2023). *Where we came from*. Retrieved from https://www.hay.nsw.gov.au/About-Our-Region/About-Hay/Hay#:~:text=The%20township%20of%20Hay%20was,post%20office)%20built%20in%201860

HSC. (2023). *Hay and Maude Flood Study.* Hay Shire Council.

Martin, S. (2007a). *Inscribing the Hay Plain, Earth Mounds as Elements in a Cultural Landscape.* Sydney University: Paper given at Australian Archaeological Association Annual Conference.

NSW EPA. (2014). *Waste Classification Guidleines .*

NSW EPA. (2020). *Consultants reporting on contaminated land: Contaminated land guidelines.* State of NSW and the Environment Protection Authority.

NSW RFS. (2019). *Planning for Bush Fire Protection: A guide for councils, planners, fire authorities and developers.*

OEH. (2011). *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in New South Wales.* Office of Environment and Heritage.

OEH. (2012). *The land and soil capability assessment scheme.*

Pardoe, C., & Martin, S. (2001). *Murrumbidgee Province Aboriginal Cultural Heritage Study - Report to New South Wale National Parks and Wildlife Service and Aboriginal Communities of the Region.* Gilberton: Colin Pardoe Bio-Anthropology & Archaeology.

PoA. (2017). *Paris climate agreement: a quick guide*. Retrieved from Parliament of Australia: https://www.pmc.gov.au/domestic-policy/taskforces-past-domestic-policy-initiatives/united-nations-framework-convention-climate-change-unfccc

RFS. (2015). *Guide for Bush Fire Prone Land Mapping.* NSW Rural Fire Service. Retrieved from https://www.rfs.nsw.gov.au/__data/assets/pdf_file/0011/4412/Guideline-for-Councils-to-Bushfire-Prone-Area-Land-Mapping.pdf

APPENDIX A SCOPING SUMMARY TABLE

APPENDIX A SCOPING SUMMARY TABLE

Level of Assessment	Aspect	Scale of Impact	Nature of Impact	Sensitivity of Receiving Environment	Mitigation Measures Required	Cumulative Impact Assessment	Engagement	Relevant Government Plans, Policies and Guidelines	Scoping Report Reference
Standard	Visual	Low	Direct Cumulative Perceived	Sensitive (receptors, townships, communities)	Likely	Yes	Specific	Landscape Institute and Institute of Environmental Management and Assessment, Guidelines for Landscape and Visual Impact Assessment Third Edition (2013)	**Section 6.2**
Standard	Noise	Low	Direct Cumulative Perceived	Sensitive (receptors)	Likely	No	General	Noise Policy for Industry (2017) (NSW Environment Protection Authority) Interim Construction Noise Guidelines 2009 (Department of Environment, Climate Change) NSW Road Noise Policy 2011 (Department of Environment, Climate Change and Water) Assessing Vibration: A Technical Guideline 2006	**Section 6.3**
Detailed	Biodiversity	Moderate	Direct Indirect	Sensitive (ecological values of species / biodiversity present)	Likely	No	General	Biodiversity Assessment Methodology (DPE 2020) Commonwealth EPBC 1.1 Significant Impact Guidelines – Matters of National Environmental Significance (Commonwealth of Australia, 2013) Commonwealth Department of the Environment – Survey Guidelines for Threatened Species (various)	**Section 6.4**
Detailed	Aboriginal Cultural Heritage	Low	Direct Indirect Perceived	Sensitive (cultural values)	Likely	No	Specific	Guide to investigating, assessing and reporting on Aboriginal cultural heritage in NSW (OEH 2011) Code of Practice for the Archaeological Investigation of Aboriginal Objects in NSW (DECCW 2010) Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010 (DECCW, 2010c) Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW (DECCW, 2010b)	**Section 6.5**
Standard	Historic Heritage	Low	Direct Indirect	Sensitive (heritage values)	Likely	No	General	Historical Archaeology Code of Practice (Heritage Council, 2006)	**Section 6.6**
Standard	Hazard and Risk - BESS	Low	Direct Indirect Perceived	Sensitive (safety)	Likely	No	General	Hazardous and Offensive Development Application Guidelines: Applying SEPP 33 (Department of Planning, 2011) Assessment Guideline: Multi-level Risk Assessment (Department of Planning and Infrastructure, 2011) Hazardous Industry Planning Advisory Paper No 6: Hazard Analysis (Department of Planning, 2011)	**Section 6.7.1**

Level of Assessment	Aspect	Scale of Impact	Nature of Impact	Sensitivity of Receiving Environment	Mitigation Measures Required	Cumulative Impact Assessment	Engagement	Relevant Government Plans, Policies and Guidelines	Scoping Report Reference
Standard	Hazard and Risk - Bushfire	Low	Direct Indirect	Sensitive (safety)	Likely	No	General	Hazardous and Offensive Development Application Guidelines: Applying SEPP 33 (Department of Planning, 2011) Assessment Guideline: Multi-level Risk Assessment (Department of Planning and Infrastructure, 2011) Hazardous Industry Planning Advisory Paper No 6: Hazard Analysis (Department of Planning, 2011) Planning for Bushfire Protection 2019 – NSW Rural Fire Service (RFS, 2019)	**Section 6.7.2**
Standard	Hazard and Risk - EMF	Low	Direct Perceived	Sensitive (safety)	Likely	No	General	National Health and Medical Research Council advice	**Section 6.7.3**
Detailed	Traffic and Transport	Low	Direct Indirect Cumulative	Sensitive (disturbance to other road users)	Likely	Yes	Specific	Guide to Traffic Generating Developments (RTA, 2002) Austroads Guide to Road Design Austroads Guide to Traffic Management	**Section 6.8**
Standard	Social	Low	Direct Indirect Cumulative Perceived	Sensitive (social, environmental and economic values)	Likely	Yes	General	Social Impact Assessment Guideline for State Significant Projects (DPE, 2021) Technical Supplement: Social Impact Assessment Guideline for State Significant Projects (Technical Supplement) (DPE, 2021)	**Section 6.9**
Standard	Water Resources	Low	Direct Indirect	Sensitive (local hydrology and water quality)	Likely	No	General	Managing Urban Stormwater; Soils & Construction (Landcom, 2004) Guidelines for Controlled Activities on Waterfront Land (DPI Water, 2018) Relevant Water Sharing Plans (DPI Water) Guidelines for Watercourse Crossings on Waterfront Land (DPI Water, 2012) Floodplain Risk Management Guidelines (Department of Environment and Climate Change, 2016) Floodplain Development Manual: The management of flood liable land (NSW Government, 2005)	**Section 6.10**
Standard	Land Resources	Low	Direct Indirect	Sensitive (agricultural land use)	Likely	No	General	Soil and Landscape Issues in Environmental Impact Assessment (OEH, 2000) Landslide Risk Management Guidelines (AGS, No Date) Site Investigations for Urban Salinity (OEH, 2002) Revised Large Scale Solar Guidelines (DPE, 2022)	**Section 6.11**
Standard	Air Quality	Low	Direct Indirect	Sensitive (local air quality)	Likely	No	General	National Greenhouse Accounts Factors (Australian Government, 2021) NSW Climate Change Policy Framework (Office of Environment and Heritage, 2016).	**Section 6.12**
Standard	Waste Management	Low	Direct Indirect	Sensitive (environmental values, safety)	Likely	No	General	Waste Classification Guidelines (DECCW, 2009)	**Section 6.13**
Standard	Contamination	Low	Direct	Sensitive (environmental values)	Unlikely	No	General	Contaminated Land Guidelines (NSW EPA, 2020)	**Section 6.11**

APPENDIX B CUMULATIVE IMPACT ASSESSMENT SCOPING SUMMARY

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APPENDIX B CUMULATIVE IMPACT ASSESSMENT SCOPING SUMMARY

Level of Assessment	Description
Detailed Assessment	The Project may result in significant impacts on the matter, including cumulative impacts. Detailed assessment is characterized by: Potential overlap in impacts between a future project (e.g. Project A) and the proposed project Potential for significant cumulative impacts as a result of the overlap, requiring detailed technical studies to assess the impact Sufficient data is available on the future project to allow a detailed assessment of cumulative impacts with the proposed project for the relevant matter Uncertainties exist with respect to data, mitigation, assessment methods and criteria
Standard Assessment	The Project is unlikely to result in significant impacts on the matter, including cumulative impacts. Standard assessments are characterized by: Impacts are well understood Impacts are relatively easy to predict using standard methods Impacts are capable of being mitigated to comply with relevant standards or performance measures the assessment is unlikely to involve any significant uncertainties or require any detailed cumulative impact assessment.
N/A	No potential overlap in impacts between a future project and the proposed project that would warrant any consideration in the cumulative impact assessment.

APPENDIX B CUMULATIVE IMPACT ASSESSMENT SCOPING SUMMARY

Project	Distance to Project (Approx)	Project Status/ Indicative timing/ Overlap	Potential overlap between impacts of Project and impact of other projects			
			Access (Traffic)	**Amenity – Noise**	**Amenity – Visual**	**Social (workforce, workers accommodation, health and wellbeing, goods and services)**
Project EnergyConnect (NSW – Eastern Section)	1 km	SSI-9172452 Under construction. Proposed operational life of 30 years Potential construction overlap Operations overlap				
	Key Features 330kV transmission line Includes 375 km of new transmission lines and associated infrastructure		No potential overlap in access, traffic and transport impacts between this project and the proposed Project.	No potential overlap in noise impacts between this project and the proposed Project.	No potential overlap in visual impacts between this project and the proposed Project.	No potential overlap of social impacts
The Plains Wind Farm,	4 km	SSD-50629707 SEARs issued 16 December 2022 In response to submissions phase. Construction and Operations overlap				
	Key Features 1,800 MW 226 Wind Turbine Generators (WTGs)		Potential overlap in access, traffic and transport impacts between this project and the proposed Project.	Potential overlap in noise impacts between this project and the proposed Project.	Potential overlap in visual impacts between this project and the proposed Project.	Low risk of cumulative social impacts, given the distance of this project from the proposed Project. Further assessment required.
West Nyangay Solar Farm	20 km	SSD-74990235 SEARs issued 19 September 2024 Prepare EIS phase Construction and Operations overlap				
	Key Features Solar Farm 800 MW BESS 500 MW / 200 MWh		Potential overlap in access, traffic and transport impacts between this project and the proposed Project.	Potential overlap in noise impacts between this project and the proposed Project.	Potential overlap in visual impacts between this project and the proposed Project.	Low risk of cumulative social impacts, given the distance of this project from the proposed Project. Further assessment required.

APPENDIX C PRELIMINARY SOCIAL IMPACT ASSESSMENT

PREPARED FOR

SAMSUNG C&T REA

Romani BESS

Preliminary Social Assessment

DATE
20 May 2025

REFERENCE
0704056

DOCUMENT DETAILS

DOCUMENT TITLE	Romani BESS
DOCUMENT SUBTITLE	Preliminary Social Assessment
PROJECT NUMBER	0704056
Date	20 May 2025
Version	01
Author	Isabelle Robert/Catherine Mackay
Client name	Samsung C&T Renewable Energy Australia

DOCUMENT HISTORY

				ERM APPROVAL TO ISSUE		
VERSION	REVISION	AUTHOR	REVIEWED BY	NAME	DATE	COMMENTS
Draft	01	Isabelle Robert	Simon Bennett	Lucy Baker	21.11.2023	Issued to client for review and comment
Draft	02	Catherine Mackay	Simon Bennett	Lucy Baker	30.11.2023	Cover pages added
Final	03	Catherine Mackay	Simon Bennett	Lucy Baker	25.01.2024	Final
Updated	04	Catherine Mackay	Simon Bennett	Lucy Baker	20.05.2025	Updated Final

SIGNATURE PAGE

Romani BESS

Preliminary Social Assessment

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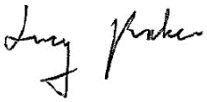

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ACRONYMS AND ABBREVIATIONS

Acronyms	Description
ABS	Australian Bureau of Statistics
EIS	Environmental Impact Assessment
LGA	Local Government Area
NSW	New South Wales
SA1	Statistical Area Level 1
SEIFA	ABS Socio-Economic Indexes for Areas
SIA	Social Impact Assessment
UCL	Urban Centres and Localities

1. PRELIMINARY SOCIAL IMPACT ASSESSMENT

1.1 EXISTING ENVIRONMENT

The Project is located on the Northern boundary of the Edward River LGA, which borders on the Hay LGA. Deniliquin and Hay are two nearby town centres likely to provide goods and services to support the construction and operation (e.g. ongoing maintenance) phases of the Project. Importantly, the Cobb Highway, which runs North-South approximately 15km East of the Project area, provides easy accessibility to these two regional centres. Moulamein and Swan Hill are secondary regional centres that may also provide goods and services to support both phases of the Project, Moulamein is a small town with only 339 residents and a labour force of 125 people, while Swan Hill, although having a population of 10,600, is situated beyond a safe commuting distance at 139km by road from the Project Area.

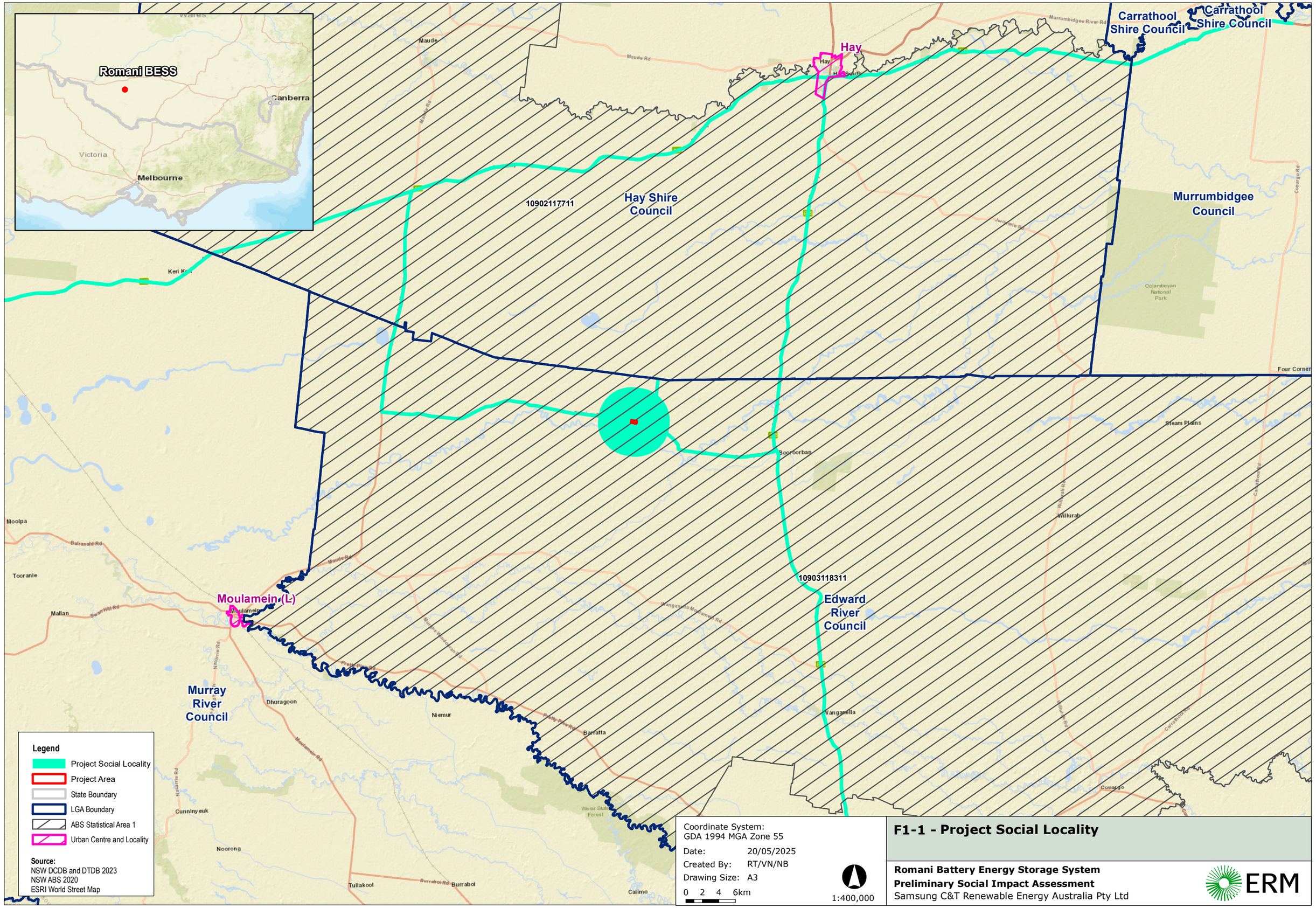
Based on the above, the Project Social Locality, as defined for the purposes of the SIA, was determined to comprise of the following three components:

- The Project Area and immediate surrounding areas, located within the Australian Bureau of Statistics (ABS) Statistical Area Level 1 (SA1) Nos. 10903118311 (containing the Project), SA1 10902117711 (adjacent to Project Area to the North). SA1 data has been used to identify key socio-economic baseline indicators for the Social Locality, where applicable. Additionally, data for the Edward River and Hay LGAs, and state level data for NSW have been used to provide an understanding of the broader and comparative social context within which the Project is located;
- The possible transportation and haulage routes to the Project Area, which include the road network along the Cobb Highway via Booroorban-Tchelery Rd and Romani Rd; and
- The surrounding towns and regional centres of Hay, Deniliquin, Moulamein and Swan Hill, which may provide goods and services to support the construction and operation phase of the Project. ABS Urban Centres and Localities (UCLs) provide baseline data for these towns and regional centres.

The Project Area and immediate surrounding areas, SA1s 10903118311 and 10902117711, Edward River and Hay LGAs, transportation and haulage routes, and UCLs for Hay, Deniliquin, Moulamein and Swan Hill form the Social Locality, as depicted in **Table 1-1** and **Figure 1-1**.

TABLE 1-1 APPROXIMATE DISTANCES TO THE PROJECT AREA

Town/Regional Centre	Travel Distance
Hay	65 km
Moulamein	68 km
Deniliquin	94 km
Swan Hill	139 km



F1-1 - Project Social Locality

Romani Battery Energy Storage System
Preliminary Social Impact Assessment
Samsung C&T Renewable Energy Australia Pty Ltd

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1.2 COMMUNITY PROFILE

The community profile presented in this section will inform the social baseline in the second phase SIA (part of the EIS) and is primarily based on ABS 2021 Census data.

Table 1-2 outlines the ABS datasets used to provide key demographic data across the Project Social Locality.

This first phase SIA draws on both 2016 and 2021 ABS datasets (i.e. latest available) for the purposes of an initial socio-economic baseline. A trend analysis of these socio-economic baseline data sets will be provided in the second phase SIA.

TABLE 1-2 SUMMARY OF RELEVANT ABS DATASETS

Location	ABS Data Reference (Census)
Edward River LGA	LGA 12730
Hay LGA	LGA 13850
SA1 (area containing the Project)	SA1 10903118311
SA1 (adjacent to Project Area to the North)	SA1 10902117711
Hay UCL	UCL 115079
Moulamein UCL	UCL 122091
Deniliquin UCL	UCL 114008
Swan Hill UCL	UCL 213014
NSW	Code 1 (STE)

In addition to the above listed ABS datasets, the second phase SIA social baseline will be informed by a desktop review of sources including from public health advisory bodies, principally NSW Health and local hospitals (i.e. regarding physical and mental health issues prevalent in the local community), and educational institutions, principally the NSW Department of Education and local schools. Information relating to the economic profile of the Project is also provided by ABS 2016 and 2021 Census data, while information on developmental priorities and challenges in the region will be provided by local and State government planning documents, such as Edward River Shire Council LGAs' Local Strategic Planning Statements.

Table 1-3 draws on the ABS datasets listed in **Table 1-2** to provide a demographic overview of the Project Social Locality. As outlined above, the Project Area is located within ABS SA1 no.10903118311 and adjacent to SA1 no. 10902117711. These Statistical Area are the primary source of information about the potentially impacted community's, which defines the characteristics and is used to provide an understanding of potentially vulnerable groups within the Project's immediate Social Locality.

Table 1-3 also includes the ABS' Socio-Economic Indexes for Areas (SEIFA)[1] based on 2021 census to provide an indication of comparative socio-economic advantage and disadvantage (ABS, 2023). The ABS broadly defines socio-economic advantage and disadvantage in the SEIFA as, *"…people's access to material and social resources, and their ability to participate in society"* at an area rather than individual level (ABS, 2023). SEIFA combines Census data such as income, education, employment, occupation, housing and family structure to summarise the socio-economic characteristics of an area. Each area receives a SEIFA score, referred to as the socio-economic advantage and disadvantage score, indicating how relatively advantaged or disadvantaged that area is compared with other areas. A lower score indicates that an area is relatively disadvantaged compared to an area with a higher score. The SEIFA scores in **Table 1-3** are a percentile score which divide a distribution into 100 equal groups. The lowest scoring 1% of areas are given a percentile number of 1 and the highest 1% of areas are given a percentile number of 100. A score of 50 suggests an area is neither advantaged nor disadvantaged.

Table 1-3 indicates that Hay LGA is relatively disadvantage based on the SEIFA index (34/100). Edward River LGA (42/100) is less disadvantaged than Hay LGA on average. However, LGA areas are large and contain urban and regional areas. Therefore, to understand the more immediate Project surroundings, it is important to look at SA1, small geographic area contained within an LGA, which provide more granular data. The SA1 SEIFA data reveals that the SA1s are relatively advantaged, particularly, when compared to each of the LGAs they are located within. This suggests that socio-economic disadvantage and vulnerable groups are concentrated to regional centres surrounding the Project, which is reflected in the median household income data.

TABLE 1-3 KEY INDICATORS FOR ALL ABS DATASETS (2016 AND 2021) ACROSS THE PROJECT'S SOCIAL LOCALITY

Population		Median Age	Indigenous Pop. (%)	Pop. Over 65 Years of Age	Median Weekly Household Income	Unemployment (%)	SEIFA (Percentile in NSW)	Dwelling Count (Occupied / Unoccupied (%))	Dwelling Tenure (Owned Outright + Mortgaged / Rented, %)	Household Composition (Families / Singles / Groups, %)
Edward River LGA 12730 (LGA)										
2016	8,851	45	4.0%	22.2%	$1,080	5.0%	37	3,378/ 472 (12.3%)	67.5% / 28.4%	65.2% / 32.2% / 2.6%
2021	8,456	46	4.8%	24.9%	$1,240	3.6%	42	3,331 / 523 (13.6%)	70.0% / 24.8%	64.2% / 33.4% / 2.4%
Hay LGA 13850 (LGA)										
2016	2,946	46	6.8%	21.8%	$1,075	4.6%	24	1,087/ 294 (21.3%)	62.8%/ 30.3%	66.8% / 31.6% / 1.6%
2021	2,882	48	8.3%	23.3%	$1,236	4.0%	34	1134 / 239 (17.4%)	64.7% / 26.4%	64.3% / 33.5% / 2.2%
SA1 10903118311 (SA1) (area containing the Project)										
2016	308	45	3.5%	13.3%	$1,211	2.6%	55	106 / 48 (31.2%)	60.0% / 31.3%	69.8% / 27.4% / 2.8%
2021	254	47	14.1%	22.4%	$1,412	2.0%	56	97 / 34 (25.8%)	66.0% / 14.4%	65.7% / 31.3% / 3.0%
SA1 10903117711 (SA1) (adjacent to Project Area to the North)										
2016	197	45	2.0%	12.5%	$1,437	0.0%	69	61 / 30 (33.0%)	63.5% / 28.4%	77.1% / 18.6% / 4.3%
2021	202	52	14.4%	27.4%	$1,797	3.6%	62	73 / 29 (28.2%)	52.0% / 6.8%	73.1% / 26.9% / 0.0%
Hay 115075 (UCL)										
2016	2,316	47	6.3%	24.4%	$1,013	5.5%	-	891 / 213 (19.3%)	60.9% / 32.8%	63.0% / 35.1% / 1.9%
2021	2,208	49	9.3%	26.1%	$1,116	4.9%	-	899 / 177 (16.4%)	64.1% / 31.1%	62.0% / 38.0% / 0.0%
Moulamein 122091 (UCL)										
2016	305	48	5.3%	29.8%	$778	2.6%	-	121 / 45 (27.1%)	63.9% / 28.6%	60.5% / 39.5% / 0.0%
2021	339	46	2.7%	26.1%	$1,062	3.2%	-	128 / 44 (25.9%)	64.9% / 25.0%	62.0% / 38.0 / 0.0%
Deniliquin 114010 (UCL)										
2016	6,833	45	4.7%	24.1%	$1,018	5.9%	-	2,704/ 298 (9.9%)	66.0% / 30.6%	62.0% / 35.2% / 2.8%
2021	6,431	47	5.6%	26.9%	$1,159	4.4%		2,646 / 376 (12.5%)	68.0% / 28.4%	60.7% / 36.6% / 2.7%
Swan Hill 213015 (UCL)										
2016	10,600	39	3.6%	20.6%	$1,090	5.0%	-	3,924 / 426 (9.8%)	62.1% / 33.6%	64.3% / 31.7% / 4.0%
2021	10,869	38	4.3%	26.9%	$1,380	3.1%	-	4,246 / 309 (8.8%)	64.4% / 32.2%	65.6% / 30.9% / 3.5%
NSW Code 1 (STE)										
2016	7,480,228	38	2.9%	16.2%	$1,486	6.3%	-	2,604,320 / 284,741 (10%)	64.5% / 31.8%	72.0% / 23.8% / 4.2%
2021	8,072,163	39	3.4%	17.7%	$1,829	4.9%	-	2,900,486 / 299,524 (9.4%)	64.0% / 32.6%	71.2% / 25.0% / 3.8%

Note: SEIFA is not provided for ABS UCL and STE Statistical Areas.

Table 1-4 outlines the key industries and areas of employment for SA1s and LGAs in the Project Social Locality. The most prominent occupations across the SA1s in 2021 was Managers, Labourers, and Technicians & Trades Workers. The Social Locality has a prominent amount of the workforce in the agricultural sector, with 125 people (3.3%) employed in Sheep Farming in the Edward River LGA and 96 people (7.5%) employed in specialised Sheep Farming in Hay LGA. Both LGAs display low working populations, which is typical in remote regions in NSW.

TABLE 1-4 KEY INDUSTRIES FOR SELECT ABS STATISTICAL AREAS (2021 CENSUS DATA)

Location	Workforce Population	Key Occupation and Industries
Edward River LGA LGA12730	3,918	56.2% of the LGA's residents reported being in the workforce. The top occupations reported in the LGA were Managers (19.3%), Professionals (14.7%), Community and Personal Service Workers (13.1%), Technicians and Trades Workers (12.6%), Labourers (12.0%), Clerical and Administrative Workers (11.3%), Sales Workers (7.9%), and Machinery Operators and Drivers (6.7%). Of the employed people in the LGA, the top industries of employment were Other Social Assistance Services (4.5%), Hospitals (3.7%), Grain-Sheep or Grain-Beef Cattle Farming (3.3%), Primary Education (3.2%), and Supermarkets and Grocery Stores (3.2%)
Hay LGA LGA13850	1,337	55.3% of the LGA's residents reported being in the workforce. The top occupations reported in Hay LGA were Managers (19.9%), Labourers (17.7%), Technicians and Trades Workers (14.8%), Clerical and Administrative Workers (10.4%), Professionals (10.3%), Community and Personal Service Workers (9.5%), Sales Workers (8.6%), and Machinery Operators and Drivers (7.5%). Of the employed people in Hay LGA, the top industries of employment were Sheep Farming (specialised) (7.5%), Local Government Administration (3.0%), Primary Education (3.8%), Supermarket and Grocery Stores (3.4%), and State Government Administration (3.1%).
SA1 (area containing the Project) SA1-10903118311	148	66.7% of the UCL's residents reported being in the workforce. The top occupations reported in the UCL were Managers (53.7%), Labourers (20.8%), Clerical and Administrative Workers (5.4%), Community and Personal Service Workers (4.7%), Technicians and Trades Workers (3.4%), Machinery Operators and Drivers (3.4%), professionals (2.0%), and Sales Workers (2.0%). Of the employed people in the UCL, the top industries of employment were Sheep Farming (specialised) (24.2%), Grain-Sheep or Grain-Beed Cattle Farming (13.4%), State Government Administration (8.7%), Sheep-Beef Cattle Farming (8.1%), and Beef Cattle Feedlots (specialised) (3.4%).

Location	Workforce Population	Key Occupation and Industries
SA1 (adjacent to Project Area to the North) SA1-10902117711	111	62.4% of the SA1's residents reported being in the workforce. The top occupations reported in the SA1 were Managers (48.1%), Labourers (17.6%), Clerical and Administrative Workers (11.1%), Professionals (8.3%), Machinery Operators and Drivers (7.4%), Technicians and Trades Workers (4.6%), Sales Workers (3.7%), and Community and Personal Service Workers (2.8%). Of the employed people in the SA1, the top industries of employment were Sheep Farming (specialised) (24.1%), Beef Cattle Farming (specialised) (13.0%), (10.9%), Sheep-Beef Cattle Farming (6.5%), Cotton Growing (5.6%), and Site preparation Services (5.6%).
Hay UCL115079	978	52.2% of the UCL's residents reported being in the workforce. The top occupations reported in the UCL were Labourers (18.0%), Technicians and Trades Workers (17.6%), Managers (12.8%), Professionals (11.0%), Community and Personal Service Workers (11.0%), Clerical and Administrative Workers (10.1%), Sales Workers (9.6%), and Machinery Operators and Drivers (9.0%). Of the employed people in the UCL, the top industries of employment were Supermarket and Grocery Stores (4.3%), Local Government Administration (4.1%), Accommodation (3.7%), Primary Education (3.3%), and Secondary Education (3.1%),
Moulamein UCL122091	125	46.3% of the UCL's residents reported being in the workforce. The top occupations reported in the UCL were Labourers (22.8%), Managers (17.1%), Community and Personal Service Workers (17.1%), Machinery Operators and Drivers (11.4%), Technicians and Trades Workers (9.8%), Clerical and Administrative Workers (9.8%); Sales Workers (7.3%), and Professionals (5.7%). Of the employed people in the UCL, the top industries of employment were Local Government Administration (14.6%), Aged Care Residential (12.2%), Pig Farming (8.1%), Postal Services (4.1%), and Meat Processing (3.3%).
Deniliquin UCL114008	2,840	52.6% of the UCL's residents reported being in the workforce. The top occupations reported in the UCL were Professionals (15.9%), Community and Personal Service Workers (15.2%), Technicians and Trades Workers (14.2%), Labourers (12.0%), Clerical and Administrative Workers (11.6%), Managers (11.0%), Sales Workers (9.6%), and Machinery Operators and Drivers (7.2%). Of the employed people in the UCL, the top industries of employment were Other Social Assistance Services (5.3%), Hospitals (4.1%), Supermarket and Grocery Stores (3.8%), Ages Care Residential Services (3.3%), and Primary Education (3.1%).

Location	Workforce Population	Key Occupation and Industries
Swan Hill UCL213014	5,235	59.5% of the UCL's residents reported being in the workforce. The top occupations reported in the UCL were Professionals (17.2%), Labourers (15.1%), Technicians and Trades Workers (13.5%), Managers (13.5%), Community and Personal Service Workers (12.9%), Clerical and Administrative Workers (11.2%), Sales Workers (9.7%), and Machinery Operators and Drivers (4.9%). Of the employed people in the UCL, the top industries of employment were Hospitals (7.1%), Primary Education (3.4%), Supermarket and Grocery Stores (2.6%), Secondary Education (2.5%), and Meat Processing (2.4%).
NSW Code 1 (STE)	3,874,012	58.7% of the State's residents reported being in the workforce. The top occupations reported in NSW were Professionals (25.8%), Managers (14.6%), Clerical and Administrative Workers (13.0%), Technicians and Trades Workers (11.9%), and Community and Personal Service Workers (10.6%), Labourers (8.2%), Sales Workers (8.0%), and Machinery Operators and Drivers (6.0%). Of the employed people in NSW, the top industries of employment were Hospitals (4.2%), Supermarket and Grocery Stores (2.5%), Other Social Assistance Services (2.4%), Computer System Design and Related Services (2.3%), and Aged Care Residential Services (2.2%).

1.3 SOCIAL INFRASTRUCTURE OVERVIEW

Social infrastructure comprises schools and other education institutions, medical services, emergency services, recreational facilities and community organisations. The two regional centres that are likely to provide social infrastructure for the Project are Hay and Deniliquin due to their size, proximity, and their connectivity to the Project via Cobb Highway.

Hay is located 65km by road to the north of the Project and comprises of a hospital offering primary healthcare services, a variety of emergency services, educational institutions, and a diverse range of amenities and organizations. Specifically, the hospital provides services like community nursing, early childhood nursing, mental health support, palliative care, physiotherapy, speech therapy, and nutrition guidance, in addition to a 24-hour Accident and Emergency Department. Emergency services include Fire and Rescue NSW, the Hay Police Station, and NSW Ambulance. In terms of education, Hay has one preschool, a private and three public primary schools, as well as a public high school and a TAFE institution. The town also offers a multitude of amenities such as sporting and social clubs, aged care services, social support services, religious groups, a post office, supermarkets, accommodation options, and community facilities including a public swimming pool, library, memorial hall, and an airport.

Deniliquin is located approximately 94 kilometres by road to the south of the Project Area. This town hosts a hospital with a 24-hour Accident and Emergency Department, as well as specialized services like a day surgery, maternity ward, Renal Unit, and a separate Oncology Service. Emergency services in Deniliquin include Ambulance NSW, NSW Police, NSW Fire Brigade, and the Deniliquin-Conargo State Emergency Services Unit. Deniliquin provides a diverse spiritual landscape with Catholic, Baptist, Uniting, Presbyterian, and Anglican churches, as well as a Kingdom Hall for Jehovah's Witnesses. The town's educational infrastructure includes four primary schools (including one private institution), one public high school, a private school for kindergarten to year 10, and a TAFE institution. Social amenities in Deniliquin include sporting facilities and clubs, a swim centre, aged care services, service stations, supermarkets, a post office, a library, news agencies, banks, and an airport.

1.4 POTENTIAL SOCIAL IMPACTS

The first phase SIA provides a preliminary desktop assessment of the potential impacts while the second phase SIA, that will be incorporated into the EIS, develops this preliminary assessment into a full assessment report. The full assessment report provides a detailed analysis of the potential impacts and incorporates key stakeholder feedback.

The identified potential impacts listed **Table 1-5** will be ground-truthed, supplemented by stakeholder feedback, and reviewed against any changes associated with further design development subsequent to issuing the SEARs.

Generally, SA1s are more likely to experience direct impacts, UCLs and LGAs will experience indirect impacts.

TABLE 1-5 PRELIMINARY SOCIAL IMPACT ASSESSMENT

Description of Impact	Impact Categories	Impact Influence	Project Phase	Level of Assessment
Employment and Procurement				
Increased demand for labour in the Social Locality (generates direct and indirect employment opportunities)	Livelihoods	Positive	Construction	Detailed Assessment
Increased demand for labour in the Social Locality leading to a skill shortages/ reduced labour availability for local services and/or businesses	Livelihoods	Negative	Construction	Detailed Assessment
Increased demand for goods and services in the Social Locality (stimulates local economies)	Livelihoods	Positive	Construction	Detailed Assessment
Increased demand for goods and services in the Social Locality (creates shortages)	Livelihoods	Negative	Construction	Detailed Assessment

Description of Impact	Impact Categories	Impact Influence	Project Phase	Level of Assessment
Diversification of income streams for host landowners	Livelihoods	Positive	Life of the Project	Detailed Assessment
Local Disruptions				
Disruptions to agricultural activities / farming practices (e.g. activities may limit access and cause temporary inconveniences for the operation of rural properties, such as stock movements, paddock access, etc.)	Livelihoods	Negative	Life of the Project	Detailed Assessment
Increased vehicular movement from workers employed by the Project, and the transportation of materials and equipment to site, increasing the potential for accidents and wear and tear on road infrastructure	Health and Wellbeing	Negative	Construction	Detailed Assessment
Interruptions to daily life, such as changes in traffic conditions (e.g. diversions for school buses, road closures, changes to public vehicular access), utility disruptions, etc.	Way of Life Access	Negative	Construction	Detailed Assessment
Impacts associated with noise, vibration, and dust, which may cause impacts or disruptions to community health.	Health and Wellbeing Surroundings	Negative	Construction	Detailed Assessment
Changes to public vehicular access in the vicinity of the Project Area has the potential to impact community access	Access	Negative	Life of the Project	Detailed Assessment
Land Use and Landscape				
Perceived impacts on land and/or property values (i.e. a decrease in land values)	Livelihoods	Negative	Operation	Detailed Assessment
Visual impact through altered rural character/changes to rural amenity (i.e. loss of scenic views and negative changes to visual amenity, glare from solar panels)	Way of Life Surroundings	Negative	Life of the Project	Detailed assessment
Altered landscape has the potential to impact tangible and intangible Aboriginal heritage	Culture	Negative	Life of the Project	Detailed Assessment

Description of Impact	Impact Categories	Impact Influence	Project Phase	Level of Assessment
Accommodation and Worker Influx				
Increased demand / pressures on housing and accommodation potentially resulting in a shortage and/or increased cost of living	Way of life	Negative	Construction	Detailed Assessment
Increased demand and pressure on social, emergency, community, and recreational services and/or facilities including health care	Access Way of Life	Negative	Construction	Detailed Assessment
Stakeholder and Community				
Development of a Community Benefit Fund (or similar Project-specific community benefit sharing scheme), which may generate positive outcomes for the local community (e.g. support of local community groups, scholarships, etc.)	Livelihoods Culture	Positive	Life of the Project	Detailed Assessment

1.5 ASSESSMENT APPROACH

This section outlines the plan for developing the second phase SIA, in accordance with the requirements of the Social Impact Assessment Guideline (DPE, 2023b) and Technical Supplement (DPE, 2021d).

The impact assessment methodology to be applied to the second phase SIA follows DPE's Social Impact Significance matrix as depicted in **Table 1-6**. In this matrix, the likelihood level refers to the probability of a social impact's occurrence as a result of the Project while the magnitude is considered in terms of the following elements:

- **Extent:** Who specifically is expected to be affected (directly, indirectly, and/or cumulatively), including any potential vulnerable people? Which location(s) and people are affected? (e.g. near neighbours, local, regional);
- **Duration:** When is the social impact expected to occur? Will it be time-limited (e.g. over particular Project phases) or permanent?
- **Severity:** What is the likely scale or degree of change? (e.g. mild, moderate, severe);
- **Intensity:** How sensitive/vulnerable (or how adaptable/resilient) are affected people to the impact, or (for positive impacts) how important is it to them? This might depend on the value they attach to the matter; whether it is rare/unique or replaceable; the extent to which it is tied to their identity; and their capacity to cope with or adapt to change; and
- **Level of Concern/Interest:** How concerned/interested are people? Sometimes, concerns may be disproportionate to findings from technical assessments of likelihood, duration and/or severity. Concern itself can lead to negative impacts, while interest can lead to expectations of positive impacts.

The characteristics of the magnitude of impact combine with their likelihood of occurrence to yield a rating of social impact significance, as indicated in **Figure 1-1**. The social impact significance matrix depicted in **Table 1-6** will be applied to yield the initial evaluation of social impacts that are likely to be experienced by different groups within the Project Social Locality. The SIA will recommend mitigations, monitoring and social impact management measures.

TABLE 1-6 ADAPTED SOCIAL IMPACT SIGNIFICANCE MATRIX

		Magnitude Level				
		1 Minimal	**2 Minor**	**3 Moderate**	**4 Major**	**5 Transformational**
Likelihood Level	**A** Almost Certain	Medium	Medium	High	Very High	Very High
	B Likely	Low	Medium	High	High	Very High
	C Possible	Low	Medium	Medium	High	High
	D Unlikely	Low	Low	Medium	Medium	High
	E Very Unlikely	Low	Low	Low	Medium	Medium
*Where impacts are positive the following colour scale is used:						
	Positive		Low	Medium	High	Very High

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