Environmental Impact Assessment

Proposed Molong BESS:
1 Deight Street & 19 Back Saleyards Road, Molong NSW 2866

FOR: StorEnergy 3 Pty Limited

SLR PROJECT No: 620.041615.00016 Revision: v1.1

30 August 2025



Revision Record

Revision	Date	Prepared By	Checked By	Authorised By
1.0	28 August 2025	JD	MT	MT
1.1	30 October 2025	JD	CB	KW

Basis of Report

This report has been prepared by SLR Consulting Australia (SLR) with all reasonable skill, care and diligence, and taking account of the timescale and resources allocated to it by agreement with StorEnergy 3 Pty Ltd (the Client). Information reported herein is based on the interpretation of data collected, which has been accepted in good faith as being accurate and valid.

This report is for the exclusive use of the Client. No warranties or guarantees are expressed or should be inferred by any third parties. This report may not be relied upon by other parties without written consent from SLR.

SLR disclaims any responsibility to the Client and others in respect of any matters outside the agreed scope of the work.

Environmental Impact Statement Declaration

Project Details	
Project Name	Molong BESS
Application Number	SSD-80471210
Address of the land in respect of which the development application is made	1 Deight Street, NSW 2886 19 Back Saleyards Road, NSW 2886 Portion of Back Saleyards Road
Applicant Details	
Applicant Name	StorEnergy 3 Pty Ltd
Applicant Address	Level 7, 1 Macquarie Place Sydney, NSW, 2000
Details of person by who this EIS was prepared	
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Address	Tenancy 202 Submarine School, Sub Base Platypus, 120 High Street, North Sydney NSW 2060, Australia
Professional qualifications	Senior Planner BRP (Massey NZ)
Declaration by registered environmental assessment practitioner	
Name	Clare Brennock
Registration number	59682
Organisation registered with	SLR Consulting Ltd
Declaration	
The undersigned declares that this EIS: • *has been prepared in accordance with the Environmental Planning and Assessment Regulation 2021;* • *contains all available information relevant to the environmental assessment of the development, activity or infrastructure to which the EIS relates;* • *does not contain information that is false or misleading;* • *addresses the Planning Secretary's environmental assessment requirements (SEARs) for the project;* • *identifies and addresses the relevant statutory requirements for the project, including any relevant matters for consideration in environmental planning instruments;* • *has been prepared having regard to the Department's State Significant Development Guidelines - Preparing an Environmental Impact Statement;* • *contains a simple and easy to understand summary of the project as a whole, having regard to the economic, environmental and social impacts of the project and the principles of ecologically sustainable development;* • *contains a consolidated description of the project in a single chapter of the EIS;* • *contains an accurate summary of the findings of any community engagement; and* • *contains an accurate summary of the detailed technical assessment of the impacts of the project as a whole.*	
Signature	
Date	30 October 2025

Executive Summary

Introduction

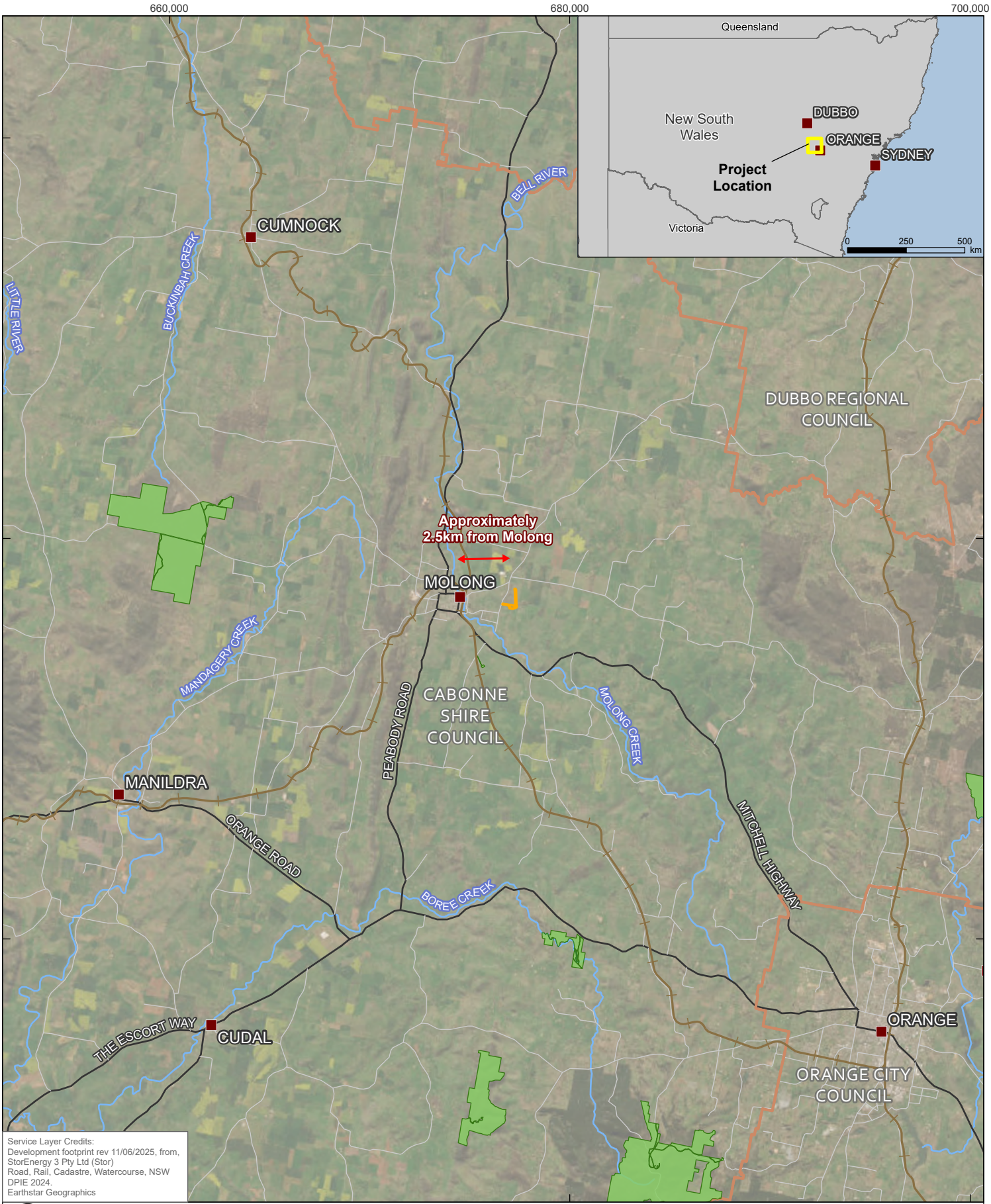
StorEnergy 3 Pty Ltd (Stor) seeks to establish a Battery Energy Storage System (BESS) (150 Megawatt (MW) / 730 Megawatt hours (MWh)) that will connect to the electricity grid at the existing Transgrid Molong 132/66 Kilovolt (kV) transmission substation via a new overhead transmission line approximately 900 metres (m) in length (herein referred to as the 'Project'). The Project is proposed within the Cabonne Local Government Area (LGA), refer to Figure E-1.

The Project involves the establishment of the BESS on 1 Deight Street, Molong, NSW 2866, with the proposed aboveground transmission line and existing substation located at 19 Back Saleyards Road, Molong, NSW 2866.

The proposed BESS comprises a maximum of 264 batteries, each contained individually within a shipping container, and approximately 50 inverters located externally to the shipping containers. Batteries and inverters will be fixed to a proposed hardstand area where they are accessible by an internal road. Other physical features of the development include a control room/switchgear, transformers, circuit breakers, harmonic filters, auxiliary transmission lines, car parking, lay down area, landscaping, security fencing/lighting, and a demountable building used for storage.

The Project aims to add significant benefits to the NSW electricity grid because it allows for the dispatch of energy in accordance with market demand to assist in load leveling and grid support to balance the natural fluctuations in electricity demand throughout the day and reduce congestion on the local grid. Additionally, it will play an important role in providing stability to the NSW energy network by charging up during the day when energy generation is high and then providing that power back to the grid at night to support high demand.

The Project has been specifically located near an existing substation to minimise the need for excessive transmission lines and aligns with the NSW Electricity Strategy and NSW Government's Net Zero Plan.



Service Layer Credits:
Development footprint rev 11/06/2025, from, StorEnergy 3 Pty Ltd (Stor)
Road, Rail, Cadastre, Watercourse, NSW DPIE 2024.
Earthstar Geographics

0 5 10 km

Coordinate System:	GDA2020 MGA Zone 55
Scale:	1:250,000 at A4
Project Number:	620.041615
Date Drawn:	28-Jul-2025
Drawn by:	NT

LEGEND

- Town/City
- Rail
- Watercourse

Road

- Primary Road
- Road

- Development Footprint (9.56 ha)
- Local Government Area
- NPWS Reserve

MOLONG BESS

REGIONAL LOCALITY PLAN

SLR

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FIGURE E-1

Path: H:\Projects-SLR\620-BNE\620-BNE\620.041615.00001 Stor Energy NSW\06 SLR Data\01 GIS\GIS\NSW_Stor.aprx\620041615_EIS_F01_Location Plan

Project Overview

The Project will involve the development, construction, operation, and eventual decommissioning of a BESS with a capacity of 150 MW / 730 MWh connecting via overhead transmission line directly to the existing Molong 132/66kV transmission substation operated by Transgrid.

The BESS will comprise battery units, inverters, transformers, a substation and ancillary infrastructure all within the indicative BESS area. The battery units will be within individual containers (or enclosures), with each container measuring approximately 6 metres (m) or 20 feet (ft) in length with an approximate weight of 43,000 kilograms (kg). The battery units will generally be in a linear arrangement with some minor changes anticipated as detailed design progresses.

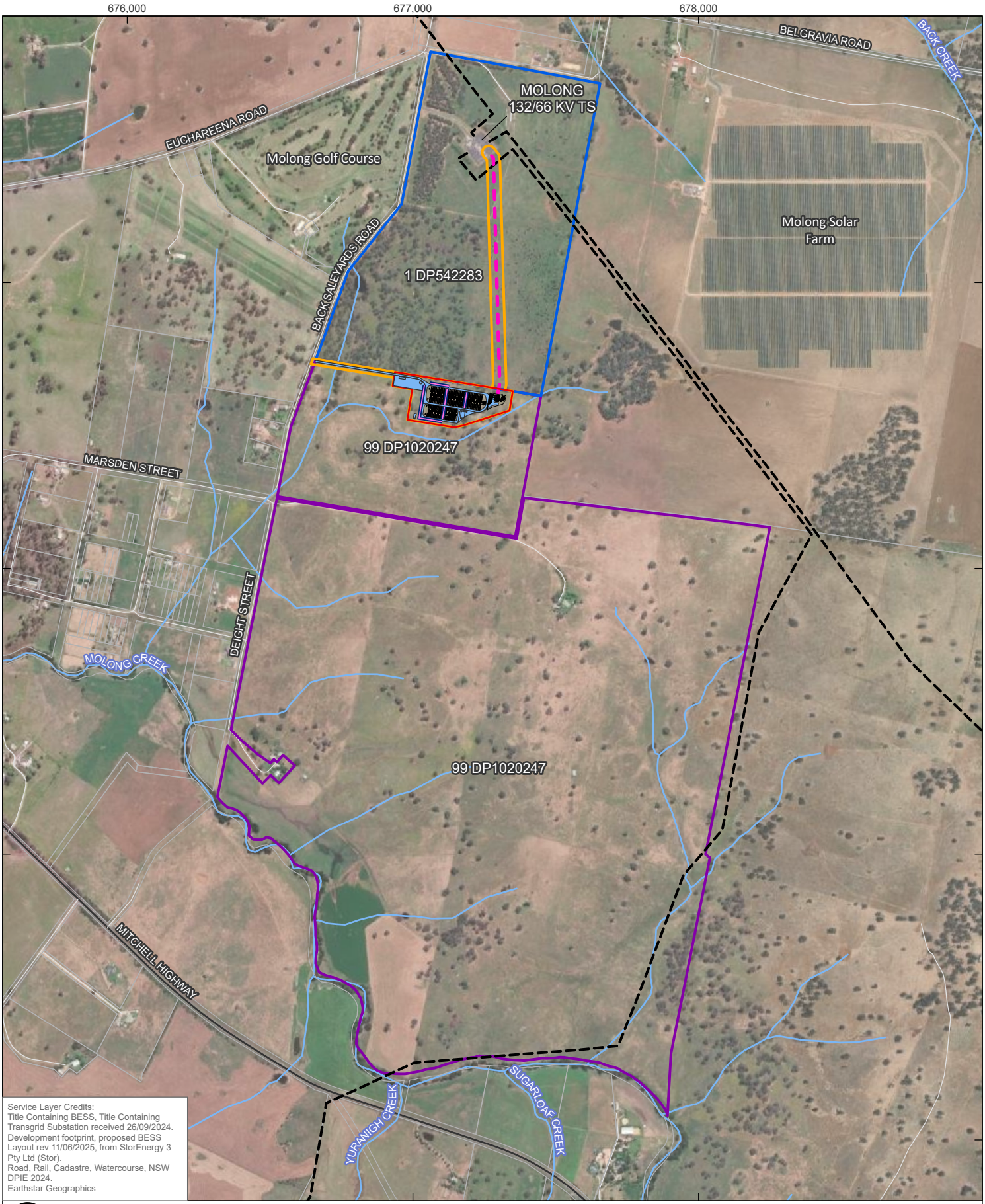
The key elements of the Project include the following:

- Installation and operation of a BESS including approximately 264 battery enclosures, 50 inverters, and transformers on hardstand with subsurface wiring, and benching of the site to level the foundation for each component.
- Construction of a new overhead transmission line (132 kV) to connect the proposed BESS substation, to the existing Transgrid Molong 132/66 kV transmission substation. The overhead transmission line will be approximately 900m in length and be situated within a 45m wide easement, refer Figure E-2.
- Construction of ancillary works including parking areas, water tank, storage structures, stormwater management infrastructure (e.g. bioretention basin), contaminated water (e.g. fire water) retention solution, security cameras, security lighting, noise walls and fencing.
- 4-5m high acoustic walls at strategic locations within the Development Footprint;
- New site access from Back Saleyards Road
- Tree / vegetation removal within the Development Footprint.
- Decommissioning of the BESS at the end of life (EOL).

The ‘Development Footprint’ represents the defined area that will comprise all construction activities, including earthworks and vegetation clearance, the proposed BESS, ancillary, infrastructure, road access and transmission line corridor. The proposed Development Footprint will be approximately 9.56 hectares (ha) (refer Figure E-3).

Construction of the Project is anticipated to take approximately 14 months with commissioning anticipated to take approximately 8 months (22 months total from construction commencement to operational).

It is expected that the operational life of the Project would be approximately 30 years, after which the BESS would be decommissioned and the infrastructure removed, returning the Development Footprint to its original state. Potential ‘repowering’ will be considered towards the end of operational life where a new Development Application (DA) may be lodged to renew the Project albeit with upgraded technology. Any repowering and associated DA would require new project agreements which would be considered in consultation with all relevant stakeholders and the legislative landscape and energy needs at that time.



Service Layer Credits:
Title Containing BESS, Title Containing Transgrid Substation received 26/09/2024.
Development footprint, proposed BESS Layout rev 11/06/2025, from StorEnergy 3 Pty Ltd (Stor).
Road, Rail, Cadastre, Watercourse, NSW DPIE 2024.
Earthstar Geographics

0 250 500 m

Coordinate System:	GDA2020 MGA Zone 55
Scale:	1:17,500 at A4
Project Number:	620.041615
Date Drawn:	28-Aug-2025
Drawn by:	NT

LEGEND

- Watercourse
- Primary Road
- Road

Transgrid Line

- 132kV
- Cadastre
- Proposed Electricity Transmission Line
- Noisewall
- BESS Footprint (5.06 ha)
- Development Footprint (9.56 ha)
- BESS Layout
- Title Containing BESS
- Title Containing Transgrid Substation

MOLONG BESS

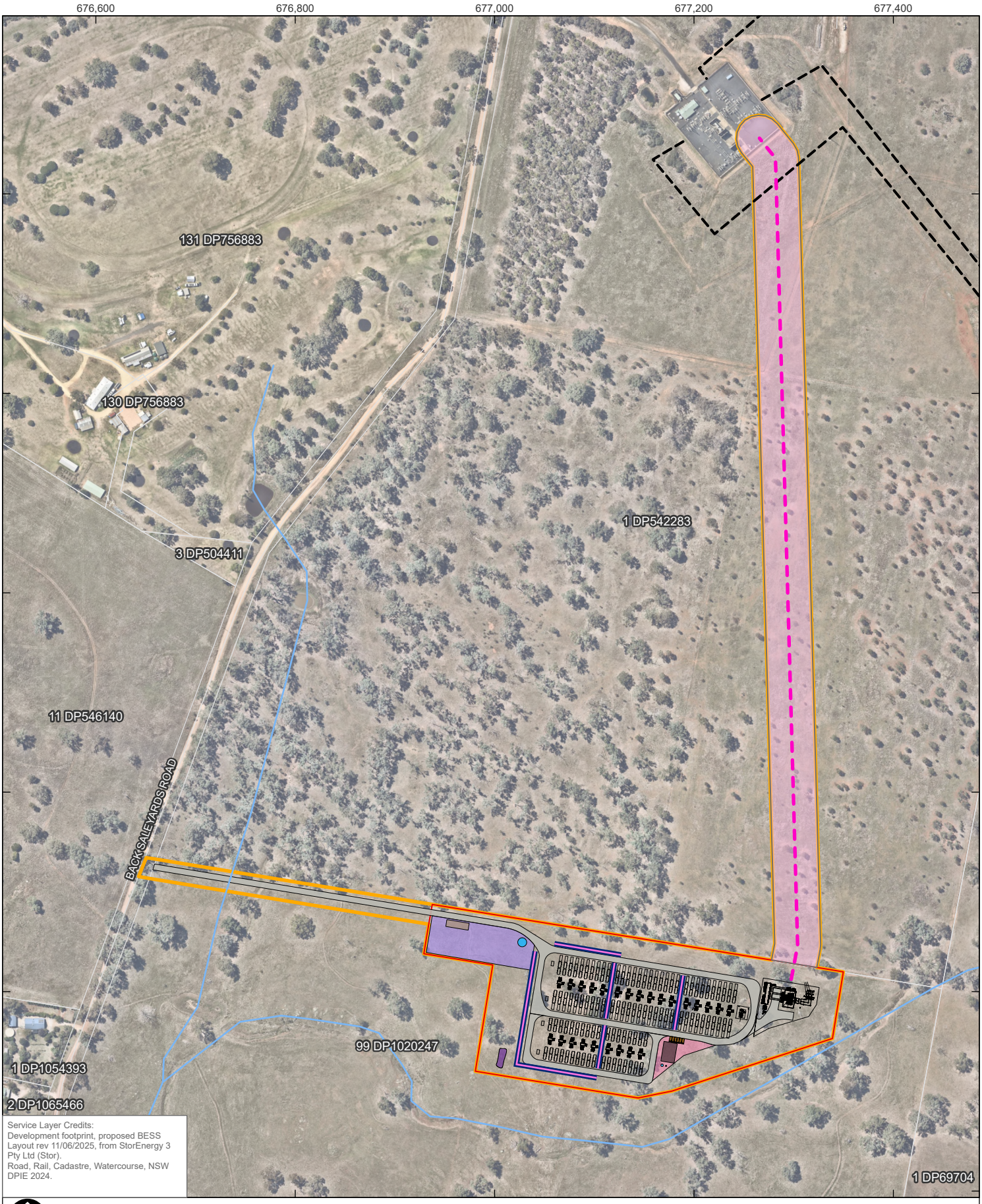
SITE OVERVIEW

SLR

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FIGURE E-2

Path: H:\Projects-SLR\620-BNE\620-BNE\620.041615.00001 Stor Energy NSW\06 SLR Data\01 GIS\GIS\NSW_Stor.aprx\620041615_EIS_F02_Site Overview



Service Layer Credits:
Development footprint, proposed BESS Layout rev 11/06/2025, from StorEnergy 3 Pty Ltd (Stor).
Road, Rail, Cadastre, Watercourse, NSW DPIE 2024.

0 100 200 m

Coordinate System:	GDA2020 MGA Zone 55
Scale:	1:5,000 at A4
Project Number:	620.041615
Date Drawn:	22-Aug-2025
Drawn by:	NT

LEGEND

- Watercourse
- Road

Transgrid Line

- 132kV
- Cadastre
- Proposed Electricity Transmission Line
- Noisewall
- BESS Infrastructure
- BESS Footprint (5.06 ha)
- Development Footprint (9.56 ha)
- Car Parking Spaces
- Construction Compound
- Detention Basin
- Internal Road
- Laydown Area
- O&M Building
- Sewerage Holding Tank
- Washdown Bay
- Water Tank
- Proposed Easement

MOLONG BESS

PROJECT LAYOUT

SLR

DISCLAIMER: All information within this document may be based on external sources. SLR Consulting Pty Ltd makes no warranty regarding the data's accuracy or reliability for any purpose.

FIGURE E-3

Path: H:\Projects-SLR\620-BNE\620-BNE\620.041615.00001 Stor Energy NSW\06 SLR Data\01 GIS\GIS\NSW_Stor.aprx\620041615_EIS_FX_Project Layout

Statutory Context

The Project is deemed to be State Significant Development (SSD), being an electricity generating works development with an estimated development cost (EDC) higher than $30 million. The project therefore requires assessment and approval in accordance with Part 4, Division 4.7 of the *Environmental Planning and Assessment Act 1979 (NSW)* (*EP&A Act*).

Stor have engaged SLR Consulting Australia Pty Ltd (SLR) to prepare this Environmental Impact Statement (EIS) to address the requirements of the Secretary of the NSW Department of Planning, Housing and Infrastructure and Environment (DPHI), known as the Secretary's Environmental Assessment Requirements (SEARs) for the project, SSD-80471210 dated 26 March 2025. The EIS also been prepared in accordance with the NSW Environmental Planning and Assessment Regulation 2021 (EP&A Regulation) and under the guidance of the *State Significant Development Guidelines – preparing an environmental impact statement* (Department of Planning & Environment [now known as DPHI] 2022).

Consultation and Engagement

Consultation with the community and key stakeholders was undertaken to facilitate the preparation of the EIS for the Project.

The engagement program aimed to inform key stakeholders about the Project, gather feedback to inform the EIS, and build early awareness and trust within the Molong community. A range of tailored communication tools were used to reach diverse audiences, including newspaper advertisements, targeted mailouts to near neighbours, and direct engagement with local government representatives and community organisations. These materials provided accessible information about the project and encouraged participation via community engagement sessions and online surveys.

Recognising a largely neutral sentiment toward BESS within the Molong community, Stor and SLR established clear performance indicators to guide the engagement approach. These included:

- Engaging with community members and stakeholders willing to participate, to understand their perceptions and concerns about the project.
- Gathering insights into what the Molong community values and identifying local nuances that may influence project delivery.

Key engagement activities included:

- A community pop-up event held at the Molong Street Stall on Friday 21 March 2025, introducing the project and the proponent to the community and providing high-level project information.
- Two community drop-in sessions held on Monday 23 June 2025 at the Cabonne Community Centre, providing opportunities for stakeholders to engage directly with the project team, ask questions, and access detailed technical information.
- Door knocking with near neighbours along Deight Street and Back Saleyards Road, offering personalised engagement and project collateral.
- Stakeholder meetings with local organisations including the Cabonne Shire Council, the Rural Fire Service (RFS), and the Orange Local Aboriginal Land Council (LALC) allowing for more detailed discussion of project-specific interests and issues.

While participation was modest, consistent with the regional setting and early stage of the project, feedback from those who did engage was generally neutral to positive. Stakeholders expressed a willingness to learn more about the project and provided valuable feedback on a range of topics, including:

- Concerns around battery fires and potential radiation, particularly from near neighbours.
- Interest in the project proponent's structure, responsibilities, and the long-term management of the facility.
- Questions surrounding battery lifespan, recycling, and disposal processes.
- Interest in how local community members, including Aboriginal groups, would benefit from the project.
- Suggestions for local procurement, employment opportunities, and involvement in environmental initiatives.
- Recognition of the battery's potential to enhance energy reliability and support broader energy goals in the region.

The consultation process established a foundation for future engagement. It provided the project team with insight into community attitudes, raised awareness of local values and priorities, and identified areas where further communication and collaboration would be beneficial. This engagement has laid the groundwork for future collaboration between Stor and the local community throughout the Cabonne LGA.

Impact Assessment

A number of comprehensive technical investigations have been completed by appropriately qualified and experienced personnel for the Project to ensure any potential environmental and social impacts associated with the development are appropriately assessed. The investigations have also identified management measures to be implemented for the duration of the Project to avoid or mitigate the identified impacts.

The findings of the technical investigations are summarised in the main body of this EIS and are provided in full in the appendices. The following sub-sections provide an overview of the key findings

Biodiversity

Extensive surveys and assessment were undertaken to complete the Biodiversity Development Assessment Report (BDAR). Specific consideration was given to minimise impacts on biodiversity values by realigning the proposed transmission line easement to avoid hollow bearing trees as well as ensuring appropriate setback from the first order stream located south of the Development Footprint. A summary of the biodiversity values and impacts is as follows:

- The Development Footprint comprises predominantly cleared agricultural land with patches of grassy woodland identified as plant community type (PCT) 277 Blakely's Red Gum – Yellow Box Grassy Tall Woodland. This PCT listed as a critically endangered ecological community under the NSW *Biodiversity Conservation Act 2016* (*BC Act*).
- The Development Footprint also contains foraging and breeding habitat for the Superb Parrot, which was recorded on site, as well as the Pink-tailed Legless Lizard, which was assumed present (based on habitat present within the site).

- The proposed development will likely involve:
  - Direct clearing of native vegetation and removal of threatened species habitat.
  - Indirect impacts (e.g. transport of weeds and pathogens) on patches of grassy woodland adjacent to the works area (including Box Gum Woodland threatened ecological communities (TEC)). A TEC is is a naturally occurring group of native plants, animals, and other organisms interacting in a specific habitat that is at risk of extinction.
  - Prescribed impacts (those that are defined in the Biodiversity Assessment Method (BAM), include potential impacts on habitat corridors and hydrological processes.
  - Impacts on one Serious and Irreversible Impact (SAII) entity, being Box Gum Woodland TEC. A detailed assessment of impacts on Box Gum Woodland (as it occurs on the site) against the BAM criteria for SAIIs has been undertaken and included in the BDAR.
- Residual impacts will be minimised through mitigation measures including clearing protocols, construction management measures (e.g. protective fencing, light shields) and rehabilitation.
- The BDAR also addresses any potential impacts on aquatic ecosystems, as required by the SEARs, notably that the Project will be sufficiently separated from any key fish habitat (KFH) with no impacts anticipated.
- Biodiversity offsets are required under the BAM for the permanent removal of 5.89 hectares (ha) of native vegetation associated with construction of the Project. Offsetting requirements are summarised in Table E-1 and Table E-2 below. A total of 83 ecosystem credits is required to offset the loss of native vegetation (Table E-1), with 28 species credits required to offset the loss of threatened species habitat, comprising 10 credits for the Pink-tailed Legless Lizard and 20 credits for the Superb Parrot (Table E-2).

Table E-1 Impacts that require an offset – ecosystem credits

Vegetation Zone	PCT	TEC	Impact Area (ha)	No. credits
PCT 277 Low	277	White Box-Yellow Box- Blakely's Red Gum Grassy Woodland and Derived Native Grassland	3.16	34
PCT 277 Regrowth	277	White Box-Yellow Box- Blakely's Red Gum Grassy Woodland and Derived Native Grassland	2.73	49
		Total	**5.89**	**83**

Table E-2 Impacts that require an offset – species credits

Common name	Scientific name	Loss of habitat (ha) or individuals	Number of ecosystem credits required
Superb Parrot	*Polytelis swainsonii*	2.27	20
Pink-tailed Legless Lizard	*Aprasia parapulchella*	1.11	10

Aboriginal Cultural Heritage

An Aboriginal Cultural Heritage Assessment Report (ACHAR) has been completed for the Project (refer Appendix G), which identified the following Aboriginal sites within or adjacent to the Development Footprint.

- **SCT1:** A scared tree considered culturally significant, located 50m east of the Development Footprint.
- **SCT2:** A scarred tree considered culturally significant, located approximately 50m north the proposed access handle of the Development Footprint.
- **SCT3:** A scarred tree considered culturally significant, located approximately 300m northwest of the Development Footprint.
- **Molong IF:** A broken hammer stone artefact, approximately 250m west of Development Footprint and 90 metres distance from the first order channel of south-trending unnamed ephemeral creek.
- **Molong Grinding Stone:** A grinding stone artefact within the proposed Development Footprint.
- **Molong IF2:** An isolated basalt core within the proposed Development Footprint.
- **Molong Artefact Scatter 1:** This scatter includes four artefacts including within both highly erosional banks in an ephemeral tributary of Molong Creek, approximately 20m east of the Development Footprint.

Cultural surveys were conducted with input from Registered Aboriginal Parties (RAPs) and included stakeholder consultation and field assessments.

Mitigation and consideration of impacts is provided in ACHAR. Comprehensive management and mitigation measures will be employed to ensure all known and unknown features are suitably protected, including:

- Preparation of an Aboriginal Cultural Heritage Management Plan (ACHMP) informed by the Archaeological Research Design and Methodology (ARDM) that has been prepared.
- Unexpected Finds Protocol.
- Cultural inductions and monitoring during initial ground disturbance.

Ongoing consultation with RAPs and implementation of protective management strategies will ensure respectful treatment of cultural heritage throughout the development.

European Heritage

No heritage-listed items are located within or near the Development Footprint. However, several heritage items are located in the broader vicinity of the Project. The impact on these items is considered neutral as the viewshed analysis undertaken confirms the Project will not be visible from any of these heritage items.

Land Use Conflict

A Land Use Conflict Assessment (LUCRA) has been prepared to assess the likelihood of land use conflicts arising between neighbouring land uses, where one use may be seen to impact the rights, values, or amenity of another.

A total of 34 potential land use conflicts have been identified in the LUCRA (SLR, 2025). The initial risk ranking evaluates the likelihood and consequence of potential land use conflicts without the implementation of management strategies. The assessment identified in

the initial risk evaluation, which were broken down into 18 low risk, 10 moderate risk and 6 high use conflicts. The initial high risk land use conflict primarily relates to potential noise and construction traffic impacts as well fire risk and hazard safety.

Following implementation of the mitigation measures which include the development and implementation of a Construction Environmental Management Plan (CEMP) and Operation Environmental Management Plan (OEMP), all identified conflicts are reduced to a low-risk rating. It is therefore concluded that the Project will generally be compatible and not conflict with surrounding land uses.

Visual Impact Assessment

A Landscape and Visual Impact Assessment (LVIA) was undertaken to evaluate the potential visual and landscape impacts associated with the Project. The LVIA has been prepared in accordance with the *NSW Large-Scale Solar Energy Guidelines* which contains principles for assessing and mitigating the visual effects of solar projects including associated infrastructure, such as BESS.

A LVIA considered visual impacts from a range of publicly accessible locations within the study area. It considered daytime impact of the Project components on visual amenity, with a focus on key landscape and visual values and viewpoints. It considered acoustic walls, battery units, transformers, a substation, transmission poles and other ancillary infrastructure. The LVIA identified the rural township environment, including the low-density setting, agricultural landscape and undulating topography as the key landscape and visual values within the study area.

The LVIA found that “the Project would not detract from any key view lines of significant visual amenity given the existing rural environment and its capacity to visually absorb the permanent elements of the Project”.

Of the 16 Viewpoints assessed, all were rated as having a Very Low (2) or Low (14) visual impact given that visual elements of the Project would be visually absorbed by the landscape or screened by existing vegetation. Visual impact would be further reduced through adoption of the proposed mitigation measures including the use of muted finishes and non-reflective materials for the noise walls.

Overall, the addition of the Project would not detract from any key view lines of significant visual amenity given the existing rural environment and its capacity to visually absorb the permanent elements of the Project. With the incorporation of appropriate mitigation, the project is considered to have an acceptable level of visual and landscape impacts.

Further information regarding the proposed assessment methodology can be found in the LVIA (Appendix J) or Section 6.5 of this EIS.

Noise and Vibration

A Noise and Vibration Impact Assessment (NVIA) has been prepared in accordance with the Interim Construction Noise Guideline (ICNG) and the NSW Noise Policy for Industry (NPfI). The predicted noise levels at the closest 14 noise sensitive receivers during the construction and operation of the Project were assessed against the various requirements of the NPfI and the ICNG.

The key Project impacts in relation to noise and vibration are as follows:

- Noise from construction activities: All construction works will be completed during standard construction hours (Mon. to Fri. 7 am to 6 pm, Saturday 8 am to 1 pm, no work on Sunday or public holidays). Some of the closest receivers will be potentially Noise Affected (but not Highly Noise Affected) at various times during the

construction of the Project. Community engagement and best practice noise management controls will be implemented to minimise impacts on nearby receivers as low as reasonably practicable.

- Construction vibration is unlikely to be perceptible at the nearest receivers.
- Noise from operational activities: Compliance with the NPfI is demonstrated at all receivers for each assessment period with the inclusion of silencing treatment of the BESS battery containers and inverters and 4 m noise walls at strategic locations within the Development Footprint.
- Cumulative noise emissions from the Molong Solar Farm, and Transgrid Molong Substation were also considered. Cumulative noise impacts are not expected to exceed the most stringent recommended amenity criterion during the night period.

All plant, equipment and design layout will be reviewed during the detailed design stage to ensure that compliance with the noise criteria is achieved. On this basis, any noise and vibration impacts will be sufficiently managed and mitigated.

Traffic and Transport

A Transport Impact Assessment (TIA) has been undertaken for the Project. Based on the analysis undertaken in the TIA, the following conclusions are reached and mitigations proposed:

- The proposed development will generate approximately 6,100 inbound trips and 6,100 outbound trips during construction (300 business days or 12 months).
- It was identified that the peak construction traffic volume would be sufficiently low (up to 41 return trips a day) and there are no capacity constraints at the access crossover or any key intersections.
    - During this peak period, the construction traffic volumes will consist of up to 20 heavy vehicle return trips per day, including:
        - 15 inbound and 15 outbound heavy vehicle trips.
        - 5 inbound and 5 outbound Oversize and Overmass (OSOM) vehicle trips.
- The access location from Back Saleyards Road will be designed with a Basic Left Turn (BAL)/ Basic Right Turn (BAR) to ensure compliance with Austroads Guidelines. No upgrades are considered necessary at any other intersections.
- The proposed use of the local road network for the heavy vehicle route (Strathmore Lane off Mitchell Highway, and then Belgravia Road, Euchareena Road and Back Saleyards Road) is consistent with Austroads Guidelines.
- No additional road or intersection upgrades are required along the proposed Heavy Vehicle Routes, including the OSOM Routes from Port Kembla (transformer) and Port of Newcastle (BESS units), beyond those outlined within the two concept route studies prepared.
- Sight distances available at the access driveway crossover satisfy the Safe Intersection Sight Distance (SISD) requirements of the Austroads Guidelines. Limitations to the available sight distances at Euchareena Road/ Back Saleyards Road intersection will be managed by implementing temporary traffic management measures during the construction and decommissioning phases of the project.
- A construction traffic management plan (CTMP) will be prepared prior to the commencement of any works.

- A dilapidation survey will be undertaken before the commencement of the construction activities and following the completion of heavy vehicle activity.
- The operational traffic demands associated with the Project are expected to be minimal and limited to maintenance crews' movements.

Hydrology and Flooding

A Flood Impact Assessment (FIA) and Surface and Groundwater Impact Assessment (SGIA) have been prepared to consider the Project's impact on surface water and groundwater.

Based on the assessed understanding of the local hydrogeological regime and site operations during construction and operation, it is considered that there is negligible risk to groundwater or groundwater dependent ecosystems (GDEs).

A Construction Soil and Water Management Plan (CSWMP) will be prepared to manage and mitigate the impacts of land disturbance activities on soils, landforms and receiving waters by focussing on erosion and sediment control during construction.

Operational impacts on water quality will be sufficiently mitigated by the construction of a bioretention basin, with the Project not anticipated to result in any measurable changes to the water quality of the downstream receiving environments.

Air Quality

The Air Quality Assessment (AQA) prepared for the Project concludes that any dust generated during the construction phase can be suitably mitigated through measures contained in the CEMP.

No potential air quality risks are identified for the operational phase of the Project. Traffic-related emissions, including wheel-generated dust, associated with any Project-related vehicle movements are expected to be minimal.

Bushfire Risk

The Project is proposed in a designated bushfire-prone area. The Bushfire Risk Assessment Report (BRAR) has assessed the Bushfire Attack Level (BAL) of the Project and proposed Asset Protection Zones (APZs) around the project infrastructure to enable sufficient setback from vegetation.

Other mitigation measures include:

- Development and implementation of Bushfire Management Plan (BMP).
- Use of non-combustible building materials for the noise walls.
- Installation of a 150,000-litre (L) dedicated firefighting water tank.

Based on the proposed mitigation measures including implementation of an APZ and construction at BAL12.5, it is considered that bushfire risk can be adequately mitigated.

Hazards and Risk

The Hazard and Risk Assessment (HRA) prepared for the Project has identified various hazardous events, causes, consequences, and controls during the construction, operational and decommissioning stages. The HRA found that most potential events (e.g. lightning strikes, traffic accidents, physical damage to the BESS) could be appropriately mitigated through standard controls to the extent their residual risk is 'Low'.

Hazards associated with Bushfire and BESS facility equipment required more thorough assessment given their potential risk to people and the environment.

The HRA notes that globally manufactured, commercially available BESS units (battery packs, convertors, etc) come with a range of sophisticated in-built hazard reduction mechanisms to avoid the onset of a fire event; detect and contain a fire until external firefighting resources can contain the fire if it has not already been contained.

In addition, automatic fire-management systems, separation of BESS units and APZ zones are designed to limit the spread of a fire event. The design of the BESS allows appropriate access for firefighting vehicles, availability of an adequate water supply for firefighting, emergency response planning, being aimed at containing the fire before it has the chance to spread beyond the BESS perimeter and into the surrounding community.

Following consideration of mitigation measures, the residual risks associated with all identified hazards as part of the HRA, being bushfire and BESS fire, have been assessed to be low, and hence adequately mitigated with the implementation of recommended management measures.

It is the overall conclusion of the HRA that the risks associated with the proposed development would be adequately managed, with suitable engineering controls, operational controls and management controls in place.

Social and Economic Impact

A Social Impact Assessment (SIA) (SLR, 2025) was prepared in response to the SEARs and in accordance with the *NSW Social Impact Assessment Guideline for State Significant Projects* (DPHI, 2023).

The SIA identifies the potential social impacts of the Project as a result of amenity impacts, changes to community cohesion and character due to an influx of construction workers during construction into a relatively small rural community, traffic and construction based disruption, potential loss of Aboriginal cultural heritage values and residents concern about the risk of fire from the BESS. Most social impacts would be effectively managed through a range of project environmental performance requirements, including targeted environmental management measures to reduce amenity impacts and fire safety measures and engagement with local emergency services.

To address further identified social impacts, mitigation measures will be developed, including the ongoing stakeholder consulation to ensure transparent communication throughout all project phases. The SIA found that the Project can proceed with acceptable social outcomes, provided the recommended management measures are implemented effectively and ongoing stakeholder engagement is maintained throughout the project lifecycle.

An Economic Impact Analysis (EIA) was prepared to consider the impacts of the Project. The Project is expected to provide a temporary economic stimulus during construction through:

- Local job creation.
- Procurement of services and materials from regional suppliers.

The construction, operation and decommissioning phases of the Project will have net positive impacts on the level of economic activity in the regional and NSW economy.

Waste Management

A Waste Management Plan (WMP) has been prepared for the Project. Construction activities have the potential to generate waste through excess construction materials, waste generation from construction offices and excess spoil from excavation and foundation works. The construction activities for the Project would be undertaken in accordance with the Construction and Environmental Management Plan (CEMP) that addresses waste management and reduction practices. Discussions have occurred with private contractors to ensure all construction waste can be suitably disposed of.

During the operational phase of the Project, operational waste streams are expected to be generated by site workers, as well as materials generated during maintenance of the site.

The decommissioning phase is anticipated to generate waste such as end-of-life batteries and associated infrastructure (cabling, inverters, transformers and other components). Most materials will be reused or recycled at a facility lawfully able to accept them. Any waste that cannot be reused or recycled would be collected by a licenced contractor and disposed of at a site lawfully able to accept it.

As far as practical, batteries in the BESS will be recycled at approved battery recycling facilities, or subject to confirmation, could be returned to the original equipment manufacturer for refurbishment and recycling. It is anticipated that by the end of the operational life of the Project, almost all batteries will be able to be recycled due to improved recycling facilities and legislation. Where spent batteries are unable to be recycled, they will be disposed of at a facility lawfully able to accept it.

Agriculture

The Project is proposed on land zoned RU1 – Primary Production and verified as Land and Soil Capability (LSC) Class 3 (moderate limitations) and LSC 4 (moderate to high limitations). Soil stripping, required to facilitate the Project, will be localised with materials stored or directly respread near their point to support the return of land to an equivalent LSC class at the end of Project life.

The Project will result in minimal agricultural impact, with minimal loss of active farmland or significant effect on the region's agricultural output. Standard mitigation measures will manage construction-related soil risks. Overall, any agricultural and soil impacts are considered low and manageable.

Cumulative Impact

This cumulative impact section evaluates the potential combined effects of the Project with the existing and approved developments in the locality, specifically other electricity generation or storage activities. The aim is to determine whether the cumulative presence of similar infrastructure results in any significant environmental, social, or land use impacts beyond those identified for the Project in isolation.

There are a range of existing and proposed electricity generation/storage developments in the locality including the Molong Solar Farm (existing) and Aquila Wind Farm (currently been assessed). The various technical assessments undertaken, including the SIA, TIA, LVIA and BDAR, confirm that all potential cumulative impacts can be appropriately managed, noting that the construction timing of the other identified projects is uncertain. Notwithstanding, due to their separation from the Project and different construction routes, no adverse cumulative impacts are expected.

There is the potential for cumulative social benefits and impacts, primarily due to the influx of workers and increased economic activity associated with the simultaneous construction of

multiple renewable energy projects. The Project's proposed use of majority local construction will minimise the contribution of the Project to the negative cumulative impacts of Projects in the region including increased demand for labour and accommodation.

Conclusion

The Project will support grid stability in the region through the provision of energy storage infrastructure. The EIS concludes that, subject to the implementation of recommended mitigation and management measures, the Project can proceed with acceptable levels of environmental, cultural, and community impact.

The proposal aligns with local planning objectives and state environmental policy, and demonstrates a strong commitment to sustainability, Aboriginal heritage protection, and community consultation.

The Project will also contribute to power system strength and assist to stabilise the frequency of the grid at critical times in response to loss of generation or loads by providing frequency control and ancillary services to the National Electricity Market (NEM). The resulting improvement to the stability of grid frequency will reduce the risk of system failure and blackouts. It also helps to ensure that the NEM can accommodate an increasing proportion of variable load and generation forecast in years to come. By addressing grid security, stability, and reliability challenges in the context of rapid thermal unit retirements, the proposed development provides economic, environmental, and social benefits to the immediate and wider community.

Through the implementation of best practice management, the potential environmental impacts associated with the Project can be appropriately managed, which will also address the community concerns and associated social impacts identified during the stakeholder engagement process. Given the net benefit and commitment from Stor to appropriately manage the potential environmental impacts associated with the Project, it is considered the Project would result in a net benefit to the region and broader NSW community.

The Project is consistent with the objects and matters as per the *EP&A Act* and principles of Ecologically Sustainable Development (ESD).

The assessments presented in this EIS indicate that the Project is considered to be in the public interest and should be approved on the basis that it provides a range of benefits to the local region and the State by directly contributing to meeting renewable energy targets.

The specialist studies supporting this EIS confirm that the Project would not lead to any significant environmental, social, or economic impacts and that residual impacts are manageable through the implementation of standard measures.

Table of Contents

Basis of Report i
Environmental Impact Statement Declaration ii
Executive Summary iii
1.0 Introduction 1
1.1 Project Objectives 1
1.2 Project Location 2
1.3 Project Description 7
1.4 Project Background 7
1.5 The Proponent 8
1.6 EIS Purpose and Structure 8
2.0 Site and Strategic Context 10
2.1 National Context 11
2.2 Site Context 16
2.2.1 Site ownership 16
2.2.2 Site Location and Context 17
2.2.3 Surrounding Land Use 19
2.2.4 Electrical infrastructure 26
2.2.5 Roads and Access 26
2.2.6 Aboriginal Cultural Heritage 27
2.2.7 Past Land Use and Approvals History 27
2.2.8 Heritage 28
2.3 Environmental Context 30
2.3.1 Climate 30
2.3.2 Air Quality 30
2.3.3 Topography, Hydrology and Flooding 31
2.3.4 Geology and Soils 31
2.3.5 Groundwater 38
2.3.6 Contamination 38
2.3.7 Biodiversity 40
2.3.8 Bushfire Hazard 40
2.3.9 Noise 40
2.4 Cumulative Impacts 43
2.5 Agreements 46
2.6 Project Alternatives 46

2.6.1 Alternative Sites 46
2.6.2 Site Considerations 46
2.6.3 Do Nothing 47
3.0 Project Description 47
3.1 Project Overview 49
3.1.1 Development Footprint 49
3.1.2 BESS Components 52
3.1.3 Grid Connection 53
3.1.4 Construction 54
3.1.5 Ancillary Infrastructure 61
3.1.6 Operation 63
3.1.7 Decommissioning and Rehabilitation 64
3.1.8 Easements 65
3.1.9 Shared Benefits, Contributions and Agreements 65
4.0 Statutory Context 65
4.1 Power to Grant Approval 65
4.1.1 Approval Pathway 65
4.1.2 Consent Authority 66
4.1.3 State Significant Development Application 66
4.2 Permissibility 66
4.2.1 Pre-Conditions to Exercising the Power to Grant Approval 67
4.3 Commonwealth Considerations 67
4.3.1 Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) 67
4.3.2 Native Title Act 1993 69
4.4 Other State and Local Considerations 79
5.0 Community and Stakeholder Engagement 81
5.1 Aboriginal Consultation 82
5.2 Community Consultation 83
5.2.1 Communication channels 83
5.2.2 Engagement opportunities 85
5.2.3 Engagement Outcomes 86
5.3 Online engagement interactions 89
5.3.1 Online SIA and Community Benefits surveys 89
5.4 Host landholder 89
5.5 Neighbours impacted by Construction Noise 89
5.6 Agency Consultation 89

5.7 Accommodation Providers 92
5.8 Amendment of the Project in Response to Matters Raised 93
5.9 Ongoing and Future Engagement 93
6.0 Assessment of Impacts 94
6.1 Biodiversity 95
6.1.1 Existing Environment 95
6.1.2 Construction and Operation Impact Assessment 107
6.1.3 Mitigation and Management Measures 112
6.1.4 Impacts on threatened species and their habitat (species credits) 113
6.1.5 Concluding Remarks 114
6.2 Aboriginal Cultural Heritage Assessment 114
6.2.1 Existing Environment 115
6.2.2 Surveys 115
6.2.3 Construction Impact Assessment 117
6.2.4 Operational and Decommissioning Impact Assessment 119
6.2.5 Mitigation and Management Measures 119
6.2.6 Concluding Remarks 120
6.3 Historic Heritage 120
6.3.1 Existing Environment, Methodology and Assessment 120
6.3.2 Concluding Remarks 124
6.3.3 Mitigation and Management Measures 124
6.4 Land Use Conflict Risk Assessment 124
6.4.1 Existing Environment 124
6.4.2 LUCRA Methodology 125
6.4.3 Construction, Operational and Decommissioning Impacts 125
6.4.4 Mitigation and Management Measures 128
6.4.5 Concluding Remarks 128
6.5 Landscape and Visual Impact Assessment 128
6.5.1 Existing Environment 128
6.5.2 Construction Impact Assessment 134
6.5.3 Operational Impact Assessment 137
6.5.4 Decommissioning Impact Assessment 138
6.5.5 Mitigation and Management Measures 138
6.5.6 Concluding Remarks 139
6.6 Noise and Vibration 139
6.6.1 Existing Environment 139

6.6.2 Construction Impact Assessment 142
6.6.3 Operational Impact Assessment 148
6.6.4 Decommissioning Impacts 152
6.6.5 Mitigation and Management Measures 153
6.6.6 Concluding Remarks 153
6.7 Traffic and Transport 153
6.7.1 Existing Environment 154
6.7.2 Construction Impact Assessment 155
6.7.3 Operational Impact Assessment 162
6.7.4 Decommissioning Impact Assessment 162
6.7.5 Mitigation and Management Measures 163
6.7.6 Concluding Remarks 164
6.8 Hydrology 164
6.8.1 Existing Environment 165
6.8.2 Construction Impact Assessment 170
6.8.3 Operational Impact Assessment 171
6.8.4 Decommissioning and Rehabilitation 171
6.8.5 Mitigation and Management Measures 172
6.8.6 Concluding Remarks 173
6.9 Air Quality 173
6.9.1 Existing Environment 173
6.9.2 Construction Impact Assessment 174
6.9.3 Operational Impact Assessment 174
6.9.4 Mitigation and Management Measures 175
6.9.5 Concluding Remarks 175
6.10 Bushfire 175
6.10.1 Existing Environment 175
6.10.2 Construction and Operational Impact Assessment 176
6.10.3 Mitigation and Management Measures 176
6.10.4 Concluding Remarks 177
6.11 Hazards and Risk 177
6.11.1 Existing Environment 177
6.11.2 Preliminary Risk Screening 177
6.11.3 Preliminary Hazard Analysis 179
6.11.4 Decommissioning Impacts 183
6.11.5 Mitigation and Management Measures 183

6.11.6 Concluding Remarks 184
6.12 Social Impact 184
6.12.1 Existing Environment 184
6.12.2 Impact Assessment 186
6.12.3 Decommissioning Impacts 198
6.12.4 Mitigation and Management Measures 199
6.12.5 Concluding Remarks 200
6.13 Economic Impact 200
6.13.1 Methodology 200
6.13.2 Construction Impact Assessment 201
6.13.3 Operational Impact Assessment 203
6.13.4 Concluding Remarks 204
6.14 Waste Management 204
6.14.1 Existing Environment 204
6.14.2 Assessment Methodology 204
6.14.3 Construction Impact Assessment 205
6.14.4 Operational Impact Assessment 207
6.14.5 Waste Management Facilities 208
6.14.6 Decommissioning 209
6.14.7 Mitigation and Management Measures 209
6.14.8 Concluding Remarks 210
6.15 Land and Soils 210
6.15.1 Existing Environment 210
6.15.2 Construction, Operation and Decommissioning Impact Assessment 215
6.15.3 Mitigation and Management Measures 215
6.15.4 Concluding Remarks 216
6.16 Cumulative Impact Assessment 216
6.16.1 Biodiversity 218
6.16.2 Land Use Conflict 218
6.16.3 Landscape and Visual Amenity 218
6.16.4 Traffic and Access 219
6.16.5 Noise Impact 219
6.16.6 Social and Economic 220
6.16.7 Flooding 221
6.16.8 Environmental Values 221
6.16.9 Infrastructure Capacity 221

6.16.10 Concluding Remarks 221
7.0 Project Justification and Conclusion 222
7.1 Project Design and Response 222
7.2 Consistency with Strategic Context 222
7.3 Statutory Compliance 223
7.4 Stakeholder Views of the Project 223
7.4.1 Community/others 223
7.5 Economic, Social, and Environmental Impacts 224
7.6 Project Compliance 224
7.7 Key Uncertainties 225
7.8 Ecologically Sustainable Development 225
7.8.1 The Precautionary Principle 225
7.8.2 Inter-Generational Equity 226
7.8.3 Conservation of Biological Diversity and Maintenance of Ecological Values 226
7.8.4 Improved Valuation, Pricing, and Incentive Mechanisms 226
7.9 Site Suitability 226
7.10 Project Alternatives 227
7.11 Conclusion 227
8.0 References 228

Tables in Text

Table E-1 Impacts that require an offset – ecosystem credits x
Table E-2 Impacts that require an offset – species credits x
Table 1 Site Ownership 2
Table 2 Proponent Details 8
Table 3 Strategic Context and Justification 11
Table 4 Land Ownership Details 17
Table 5 Sensitive Receivers 21
Table 6 Surrounding Road Network Characteristics (SLR, TIA, 2025) 26
Table 7 Nearby Local Heritage Items (Cabonne LEP 2012) 28
Table 8 Summary of Review of Available Monitoring Data – Orange (2021-2024) 31
Table 9 Significant Projects in the Cabonne LGA and Surrounds 43
Table 10 Project Summary 47
Table 11 BESS Specifications 52
Table 12 Key Construction Timeframes 54

Table 13 Project Construction Vehicle Fleet (SLR, Traffic Impact Assessment (TIA), 2025) 57
Table 14 Project approvals 67
Table 15 Results of MNES search 69
Table 16 Pre-conditions to grant development consent 69
Table 17 Mandatory matters for consideration 72
Table 18 Other State Legislation 80
Table 19 List of RAPs consulted (Virtus, ACHAR, 2025) 82
Table 20 Communication Tools (SLR, ENS, 2025) 84
Table 21 Engagement Opportunities (SLR, Consultation Report, 2025) 85
Table 22 Agency Discussion During EIS Preparations 89
Table 23 Key actions and recommendations (SLR, Engagement Report, 2025) 93
Table 24 Determining the presence of candidate flora species credit species on the subject land 98
Table 25 Determining the presence of candidate fauna species credit species on the subject land 98
Table 26 PCTs identified within the Development Footprint 99
Table 27 Results for present species (recorded within the Project Lots) (SLR, BDAR, 2025) 104
Table 28 Results for EPBC Act listed species present (recorded within the Development Footprint (SLR, BDAR, 2025) 106
Table 29 Summary of Residual Direct Impacts (SLR, BDAR, 2025) 107
Table 30 Summary of Residual Indirect Impacts (SLR, BDAR, 2025) 109
Table 31 Impacts that require an offset – ecosystem credits (SLR, BDAR, 2025) 112
Table 32 Impacts that require an offset – species credits (SLR, BDAR, 2025) 113
Table 33 Impacts that do not need further assessment for ecosystem credits 113
Table 34 Heritage Items and Assessment 122
Table 35 Risk Assessment (SLR, LUCRA, 2025) 126
Table 36 Description of Landscape Character Zones 132
Table 37 Summary of Visual Impact 137
Table 38 Surrounding Sensitive Receivers (SLR, NVIA, 2025) 139
Table 39 Summary of Unattended Noise Monitoring Results 142
Table 40 Vibration Dose Values for Intermittent Vibration (SLR, NVIA, 2025) 143
Table 41 Construction Equipment (SLR, NVIA, 2025) 144
Table 42 Predicted Exceedance at Nearest Receivers – Standard Daytime Construction Hours (SLR, NVIA, 2025) 146
Table 43 Traffic Noise Assessment 147

Table 44 Recommended Minimum Working Distances from Vibration-intensive Equipment 148
Table 45 Equipment and Sound Power Levels (SLR, NVIA, 2025) 150
Table 46 Operational Noise Assessment (SLR, NVIA, 2025) 150
Table 47 Surrounding Road Network Characteristics (SLR, TIA, 2025) 154
Table 48 Key Level Crossings Details (SLR, TIA, 2025) 154
Table 49 Project Construction Vehicle Fleet (SLR, TIA, 2025) 158
Table 50 Construction Workforce Assumptions (SLR, TIA, 2025) 159
Table 51 Construction (Excluding Commissioning) Workforce Travel Arrangements (SLR, TIA, 2025) 160
Table 52 Summary of Heavy Vehicle Trips 160
Table 53 Turn Warrant Assessment Summary (2-Year Benefit Period) 162
Table 54 TUFLOW Model results – Pre-development Scenario (SLR, FIA, 2025) 166
Table 55 0.5-1% AEP flood results, post-development 168
Table 56 Summary of Review of Available Monitoring Data – Orange (2021-2024) 174
Table 57 Residual Risk Assessment 188
Table 58 Annual capital expenditure assumptions used in analysis ($m) (EIA, BDO, 2025) 201
Table 59 Estimated project revenue assumptions used in analysis ($m) (EIA, BDO, 2025) 201
Table 60 Annual operational expenditure assumptions used in analysis ($m) (EIA, BDO, 2025) 201
Table 61 Potential economic impacts of Project construction, Cabonne area (EIA, BDO, 2025) 202
Table 62 Potential economic impacts of Project construction, New South Wales (EIA, BDO, 2025) 202
Table 63 Potential economic impacts of Project operation, Cabonne area (EIA, BDO, 2025) 203
Table 64 Economic impacts, operation, New South Wales (EIA, BDO, 2025) 203
Table 65 Potential Waste Type, Classifications, and Management Methods - Construction (SLR, WMP, 2025) 205
Table 66 Waste management facilities licensed to accept waste 208
Table 67 Gross Margin Budgets for Livestock 211
Table 68 Soil Units within LSC Study Area 212
Table 69 Land & Soil Capability Assessment 213
Table 70 LSC Class within LSC Study Area 213
Table 71 Significant Projects in the Cabonne LGA and Surrounds 217

Figures in Text

Figure E-1 Regional Context of the Project Area iv
Figure E-2 Site Overview vi
Figure E-3 Project Layout vii
Figure 1 Regional Locality Plan 4
Figure 2 Site Layout 5
Figure 3 Project Layout 6
Figure 4 Surrounding Land Use Plan 20
Figure 5 Sensitive Receivers 25
Figure 6 Historic Heritage Items 29
Figure 7 Long Term Temperature Data for Orange Airport (Source: BOM) 30
Figure 8 Hydrology 33
Figure 9 Key Fish Habitat 34
Figure 10 Topography 35
Figure 11 Soil Classification 36
Figure 12 Verified Soil Management Units 37
Figure 13 Groundwater Vulnerability 39
Figure 14 Native Vegetation Extent within the Site 41
Figure 15 Bushfire Prone Land 42
Figure 16 Significant Projects Proximate to the Subject Sites 45
Figure 17 Project Layout 50
Figure 18 Development Footprint 51
Figure 19 Example of a Battery Enclosure (Source: Stor) 53
Figure 20 Example of a Power Conversion Station (Source: Stor) 53
Figure 21 Examples of Transmission lines and poles (Source: Stor) 54
Figure 22 Proposed Light Vehicle Route (SLR, TIA, 2025) 59
Figure 23 Heavy Vehicle Route (SLR, TIA, 2025) 60
Figure 24 Land Zoning 68
Figure 25 Native Vegetation Extent (SLR, BDAR, 2025) 101
Figure 26 Threatened Ecological Communities Map (SLR, BDAR, 2025) 102
Figure 27 Candidate Species Polygon (SLR, BDAR, 2025) 105
Figure 28 Final Impacts Likely to Occur on the Subject Land (SLR, BDAR, 2025) 108
Figure 29 Location of Aboriginal Features identified during Field Surveys (SLR, 2025) . 118
Figure 30 Study Area (LVIA, SLR, 2025) 130
Figure 31 Landscape Character Zones (SLR, LVIA, 2025) 131

Figure 32 Viewpoint Locations (SLR, LVIA, 2025) 136
Figure 33 Sensitive Receivers Map (SLR, NVIA, 2025) 141
Figure 34 BESS Layout and Noise Wall Configuration (SLR, NVIA, 2025)..... 149
Figure 35 Proposed Light Vehicle Route (SLR, TIA, 2025) 156
Figure 36 Proposed Heavy Vehicle Route (SLR, TIA, 2025)..... 157
Figure 37 Tuflow model results - 0.5% AEP Event - Pre-Development Scenario (SLR, FIA, 2025..... 167
Figure 38 TUFLOW model results – 0.5% AEP Event - Post-development Scenario (SLR, FIA, 2025)..... 169
Figure 39 Key Strategic Links in Managing BESS Fire-Related Risks –The 'Fire Response Chain' (SLR, HRA, 2025) 181
Figure 40 Verified LSC Classes 214

Photos in Text

Photo 1 View east from Back Saleyards Road along proposed access handle towards BESS Footprint 18
Photo 2 View northeast from corner of Deight St and 17 Deight St driveway towards BESS Footprint 18
Photo 3 PCT 277 Low condition state (SLR, BDAR, 2025)..... 103
Photo 4 PCT 277 Regrowth condition state (SLR, BDAR, 2025)..... 103
Photo 5 Cleared area adjacent to the existing TransGrid substation (SLR, BDAR, 2025) 106
Photo 6 Rocky habitat within the Development Footprint (SLR, BDAR, 2025)..... 107

Appendices

Appendix A SEARs Compliance Table
Appendix B Maps and Plans
Appendix C Statutory Compliance Table
Appendix D Estimated Development Cost Report
Appendix E Mitigation Measures Table
Appendix F Biodiversity Development Assessment Report
Appendix G Aboriginal Cultural Heritage Assessment Report
Appendix H Preliminary Air Quality Assessment Report
Appendix I Land Use Conflict Risk Assessment
Appendix J Landscape and Visual Impact Assessment
Appendix K Noise and Vibration Impact Assessment

Appendix L Transport Impact Assessment
Appendix M Flood Impact Assessment
Appendix N Hazards and Risk Assessment
Appendix O Social Impact Assessment
Appendix P Economic Impact Analysis
Appendix Q Waste Management Plan
Appendix R Engagement Summary Report
Appendix S Bushfire Risk Assessment Report
Appendix T Agricultural Impact Assessment
Appendix U Preliminary Site Investigation
Appendix V Surface and Groundwater Impact Assesment
Appendix W Onsite Facilities
Appendix X Land and Soil Capability Assessment

Acronyms and Abbreviations

AA	Archaeological Assessment
ABS	Australian Bureau of Statistics
ACHA	Aboriginal Cultural Heritage Assessment
ACHMP	Aboriginal Cultural Heritage Management Plan
ADGC	Australian Dangerous Goods Code
AEP	Annual Exceedance Probability
AHD	Australian Heritage Database
AHIMS	Aboriginal Heritage Information Management System
AHIP	Aboriginal Heritage Impact Permit
AIA	Agricultural Impact Assessment
ALARP	As Low as Reasonably Possible
ANZIC	Australian and New Zealand Standard Industrial Classification
APZ	Asset Protection Zone
AQA	Air Quality Assessment
AQMS	Air Quality Management System
ARDM	Archaeological Research Design and Methodology
ARR	Australian Rainfall and Runoff
AS	Australian Standard
AUL	Auxiliary Left Lane Turn
AUR	Auxiliary Right Turn
BAL	Bushfire Attack Level
BLA	Basic Left Turn
BAM	Biodiversity Assessment Method
BAR	Basic Right Turn
BC Act	*Biodiversity Conservation Act 2016*
BDAR	Biodiversity Development Assessment Report
BESS	Battery Energy Storage System
bgl	Below Ground Level
BoM	Bureau of Meteorology
BRAR	Bushfire Risk Assessment Report
BSAL	Biophysical Strategic Agricultural Land
CEEC	Critically endangered ecological community
CEMP	Construction Environmental Management Plan
CEO	Chief Executive Officer
CHR	Channelised Right Turn Treatment

CNVMP	Construction Noise and Vibration Management Plan
Code of Practice	Code of Practice for Archaeological Investigation of Aboriginal Objects (NSW)
CSWMP	Construction Soil and Water Management Plan
CTMP	Construction Traffic Management Plan
DA	Development Application
DCCEEW	Commonwealth Department of Climate Change, Energy, Environment and Water
DD	Due Diligence
DEM	Digital elevation model
DIDO	Drive-in drive-out
DFE	Define flood event
DG	Dangerous Goods
DMP	Dust Management Plan
DP	Deposited Plan
DPI	Department of Primary Industries
DPHI	Department of Planning, Housing and Infrastructure
East LLR	East Large Lot Residential Area
EDC	Estimated Development Cost
EEC	Endangered Ecological Community
EIA	Economic Impact Assessment
EIS	Environmental Impact Statement
EMF	Electromagnetic Fields
EMP	Emergency Management Plan
ENS	Engagement Summary Report
EOL	End of life
EPA	NSW Environment Protection Authority
EP&A Act	*Environmental Planning and Assessment Act 1979*
EPBC Act	*Environment Protection and Biodiversity Conservation Act 1999*
ESCP	Erosion and Sediment Control Plan
FIA	Flood Impact Assessment
FDI	Fire Danger Index
FMMP	Flora and Fauna Management Plan
FIFO	Fly-in Fly-out
FFDI	Forest Fire Danger Index
FPL	Flood planning level
FSS	Fire Safety Study
GDEs	Groundwater Dependent Ecosystems

GFDI	Grassland Fire Danger Index
GRP	Gross Regional Product
GRIT	Regional Input-Output Tables
GSP	Gross State Product
ha	Hectares
HIPAP	Hazardous Industry Planning Advisory Board
HFRA	Hydrology and Flood Risk Assessment
HRA	Hazards Risk Assessment
IBRA	Interim Biogeographic Regionalisation for Australia
ICNG	Interim Construction Noise Guideline
IPA	Inner Protection Area
IPC	Independent Planning Commission
ICNIRP	International Commission on Non-Ionizing Radiation Protection
IO	Input-output analysis
IQAM	Institute of Air Quality Management
kg	Kilogram
km	Kilometres
kV	Kilovolt
LALC	Local Aboriginal Land Council
LEP	Local Environmental Plan
LLS	Local Land Services
LGA	Local Government Area
LSC	Land and Soil Capability
LUCRA	Land Use Conflict Risk Assessment
LVIA	Landscape and Visual Impact Assessment
MLRA	Multi-Level Risk Assessment
MNES	Matters Of National Environmental Significance
MV	Medium Voltage
MVA	Megavolt-amperes
m	Metres
mBG	Metres below ground level
NATA	National Association of Testing Authorities
NHVR	National Heavy Vehicle Regulator
NMLs	Noise Management Levels
NNTT	National Native Title Tribunal
NPI	National Pollutant Inventory
NPfI	NSW Noise Policy for Industry

NPW Act	*National Parks and Wildlife Act 1974*
NPWS	National Parks and Wildlife Service
NSW	New South Wales
NTA	*Native Title Act 1993*
NVIA	Noise And Vibration Impact Assessment
O&M	Operation and Maintenance
OEH	Office of Environment and Heritage
OEM	Original Equipment Manufacturer
OEMP	Operational Environmental Management Plan
OSOM	Oversize and / or over mass (vehicles and loads)
PAD	Potential Archaeological Deposit
PCS	Power Conversion Station
PCT	Plant Community Type
PHA	Preliminary Hazard Analysis
PRA	Preliminary Risk Assessment
PPE	Personal Protection Equipment
PM	Particulate Matter
PMST	Commonwealth Protected Matters Search Tool
PNTL	Project Noise Trigger Levels
POEO Act	*Protection of Environment Operations Act 1997*
Proponent	StorEnergy 3 Pty Ltd
PSI	Preliminary Site Investigation
PV	Photovoltaic
RAP	Registered Aboriginal Party
RBLs	Rating Background Noise Levels
REAP	Registered Environmental Assessment Practitioner
RFS	NSW Rural Fire Service
RUSLE	Revised Universal Soil Loss Equation
SCT	Scarred Tree
SEARs	Secretary's Environmental Assessment Requirements
SEED	Sharing and Enabling Environmental Data
SGIA	Surface and Groundwater Impact Assessment
SIA	Social Impact Assessment
SISD	Safe Intersection Sight Distance
SHI	State Heritage Inventory
SLR	SLR Consulting Australia Pty Ltd
SMU	Soil Management Unit

SSAL	State Significant Agricultural Land
SSD	State Significant Development
SWL	Standing Water Level
TEC	Threatened Ecological Communities
TfNSW	Transport for New South Wales
TGS	Traffic Guidance Scheme
TIA	Traffic Impact Assessment
TN	Total Nitrogen
TSP	Total Suspended Particulates
TSS	Total Suspended Solids
TP	Total Phosphorus
TIA	Traffic Impact Assessment
VDV	Vibration Does Value
VPA	Voluntary Planning Agreement
WMP	Waste Management Plan
WQIA	Water Quality Impact Assessment

1.0 Introduction

StorEnergy 3 Pty Ltd (Stor) seeks to establish a Battery Energy Storage System (BESS) 150 Megawatt (MW) / 730 Megawatt hours (MWh)) that will connect to the electricity grid at the existing Transgrid Molong 132/66 Kilovolt (kV) transmission substation via a new overhead transmission line approximately 900 metres (m) in length (herein referred to as the 'Project').

The Project involves the establishment of the BESS on 1 Deight Street, Molong, NSW 2866, with the proposed aboveground transmission line and existing substation located at 19 Back Saleyards Road, Molong, NSW 2866.

The proposed BESS comprises a maximum of 264 batteries, each contained individually within a shipping container, and approximately 50 inverters located externally to the shipping containers. Batteries and inverters will be fixed to a proposed hardstand area where they are accessible by an internal road. Other physical features of the development include a control room/switchgear, transformers, circuit breakers, harmonic filters, auxiliary transmission lines, car parking, lay down area, landscaping, security fencing/lighting, and an ancillary office and storage building.

The Project is deemed to be State Significant Development (SSD), being an electricity generating works development with an estimated development cost (EDC) higher than $30 million. The project therefore requires assessment and approval in accordance with Part 4, Division 4.7 of the *Environmental Planning and Assessment Act 1979 (NSW)* (*EP&A Act*).

Stor have engaged SLR Consulting Australia Pty Ltd (SLR) to prepare this Environmental Impact Statement (EIS) to address the requirements of the Secretary of the NSW Department of Planning, Housing and Infrastructure and Environment (DPHI), known as the Secretary's Environmental Assessment Requirements (SEARs) for the project, SSD-80471210 dated 26 March 2025. The EIS also been prepared in accordance with the NSW Environmental Planning and Assessment Regulation 2021 (EP&A Regulation) and under the guidance of the *State Significant Development Guidelines – preparing an environmental impact statement* (Department of Planning & Environment [now known as DPHI] 2022).

1.1 Project Objectives

Primarily, the purpose of the Project is to support Australia's energy shift and to improve overall grid stability and energy security. This is achieved by storing excess energy from the network during low demand periods (e.g. midday hours with high rooftop solar energy generation) and providing this for use at peak demand times when it is most needed. The Project will also provide ancillary network support services such as frequency and voltage regulation.

Publicly announced generator closure dates indicate that 6.8 Gigawatt (GW) of existing dispatchable power generation in NSW will retire by 2035. This includes the retirement of Eraring, Vales Point, Mt Piper, and Bayswater power stations. While rooftop solar power output suppresses power demand in the middle of the day, overall electricity demand is increasing, and this increase is predicted to continue. As such, there is a clear need for new sources of dispatchable electricity such as the Molong BESS to ensure the security and reliability of the State's power system.

The Project will also contribute to power system strength and assist to stabilise the frequency of the grid at critical times in response to loss of generation or loads by providing frequency control and ancillary services (FCAS) to the National Electricity Market (NEM). The resulting improvement to the stability of grid frequency will reduce the risk of system failure and blackouts. It also helps to ensure that the NEM can accommodate an increasing proportion of variable load and generation forecast in years to come. By addressing grid



security, stability, and reliability challenges in the context of rapid thermal unit retirements, the proposed development provides economic, environmental, and social benefits to the immediate and wider community.

1.2 Project Location

The Project extends across two (2) lots, 1 Deight Street, legally described as Lot 99 DP 1020247 ('Lot 99'), and 19 Back Saleyards Road, legally described as Lot 1 DP 542283 ('Lot 1'). Both properties are within Molong NSW, 2866, and are referred to as the 'Project Lots'. The combined size of the Project Lots is approximately 414 hectares (ha) with the ownership details included in Table 1.

The BESS and proposed access is located on Lot 99, whereas the proposed transmission line and connection work to the existing Molong Substation is located on Lot 1.

The land to which the Project relates within Lot 99 will be leased from the landowner, whereas the proposed overhead transmission line and associated buffer on Lot 1 is proposed as an easement. These areas are collectively referred to as the 'Development Footprint'. The Development Footprint is currently used predominantly for agricultural purposes or Transgrid purposes and comprises an approximate area of 9.56 hectares (ha).

The Project Lots are located within a gently undulating agricultural landscape with small intermittent watercourses that eventually feed into the Molong Creek adjacent to the southern boundary of Lot 99, which is located approximately 1.5 kilometre (km) south of the Development Footprint. The elevation of the Project Lots range from 577 to 600 m above sea level, generally sloping north to south. There is a small watercourse running in a western direction near the southern extent of the proposed BESS, towards a small pond near Back Saleyards Road. Two overland flow paths traverse the Project Lots from the north, discharging into the existing tributary of Molong Creek that runs adjacent to the southern boundary of Lot 99.

The surrounding area is characterised by a mixture of different land uses including predominantly rural land lots to the east, north and south with recreational and rural residential properties to the west. There are 104 sensitive receivers within 2km of the Development Footprint. There is vegetation spread throughout the Project Lots, with the Development Footprint containing a mixture of native and non-native vegetation.

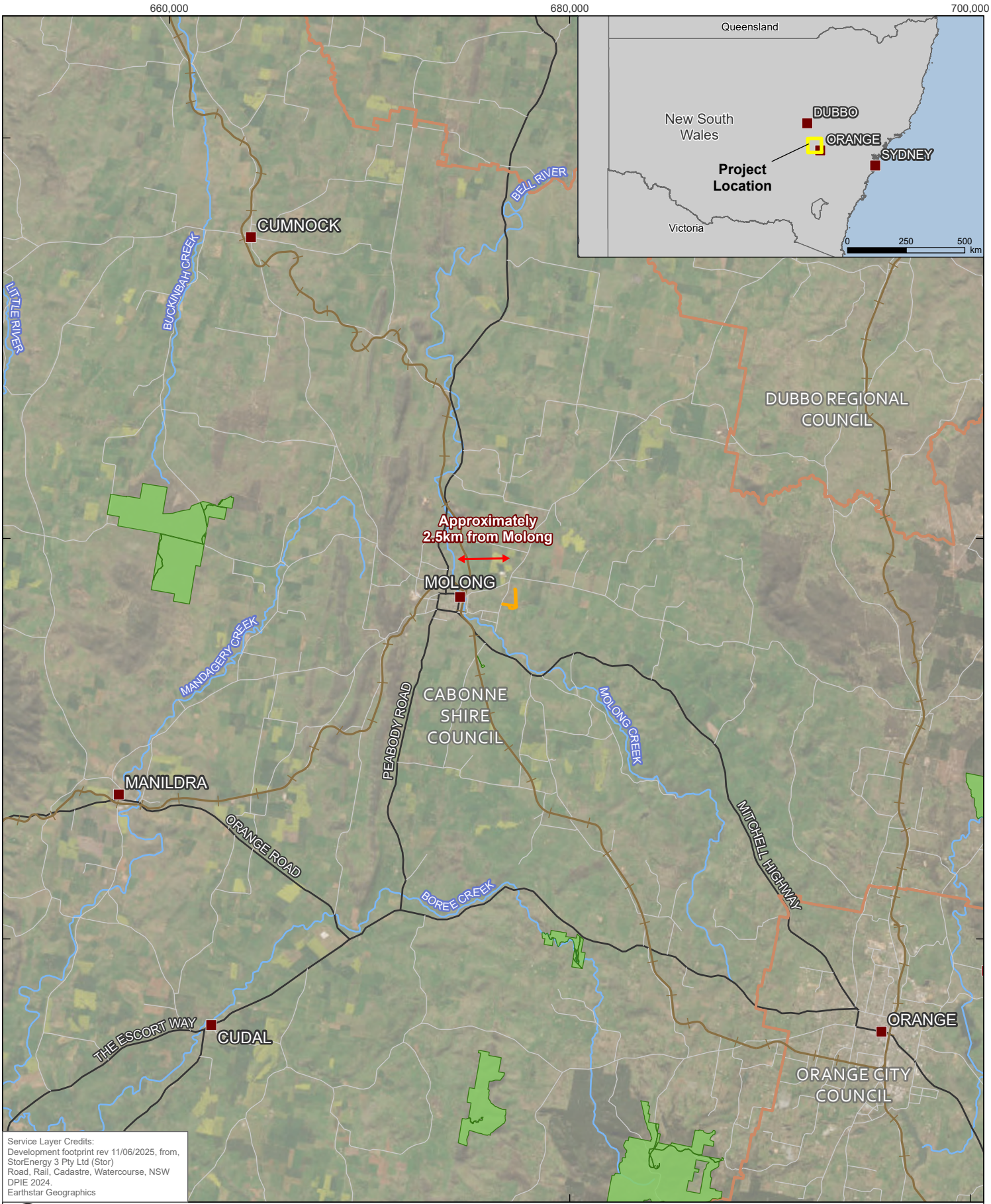
The Project Lots are situated immediately west of the existing Molong Solar Farm. Transmission lines enter Lot 1 from the southeast and exit in the northwest (both 132kV). Most sensitive receivers are generally located west of the Project Lots towards the Molong Township.

The location of the Project is shown in Table 1 and the site layout shown in Figure 1. The Development Footprint is shown in Figure 3.

Table 1 Site Ownership

Reference	Description	Ownership
Lot 99 (Title containing BESS)	1 Deight Street is legally described as Lot 99 DP 1020247 and has an approximate size of 339.3ha. This lot is currently used for predominantly agricultural purposes	Private
Lot 1 (Title containing Transgrid Substation)	19 Back Saleyards Road is legally described as Lot 1 DP 542283 and is approximately 74.9ha. This lot contains the Transgrid Molong 132/66 Kilovolt (kV) Substation.	Transgrid
Back Saleyards Road	The section of Back Saleyards Road where it adjoins the site access, will be upgraded to enable construction vehicle	Cabonne Shire Council

Reference	Description	Ownership
	ingress and egress. Back Saleyards Road will be monitored during construction and maintained in consultation with Council.	



Service Layer Credits:
Development footprint rev 11/06/2025, from, StorEnergy 3 Pty Ltd (Stor)
Road, Rail, Cadastre, Watercourse, NSW DPIE 2024.
Earthstar Geographics

0 5 10 km

Coordinate System:	GDA2020 MGA Zone 55
Scale:	1:250,000 at A4
Project Number:	620.041615
Date Drawn:	28-Jul-2025
Drawn by:	NT

LEGEND

- Town/City
- Rail
- Watercourse

Road

- Primary Road
- Road

- Development Footprint (9.56 ha)
- Local Government Area
- NPWS Reserve

MOLONG BESS

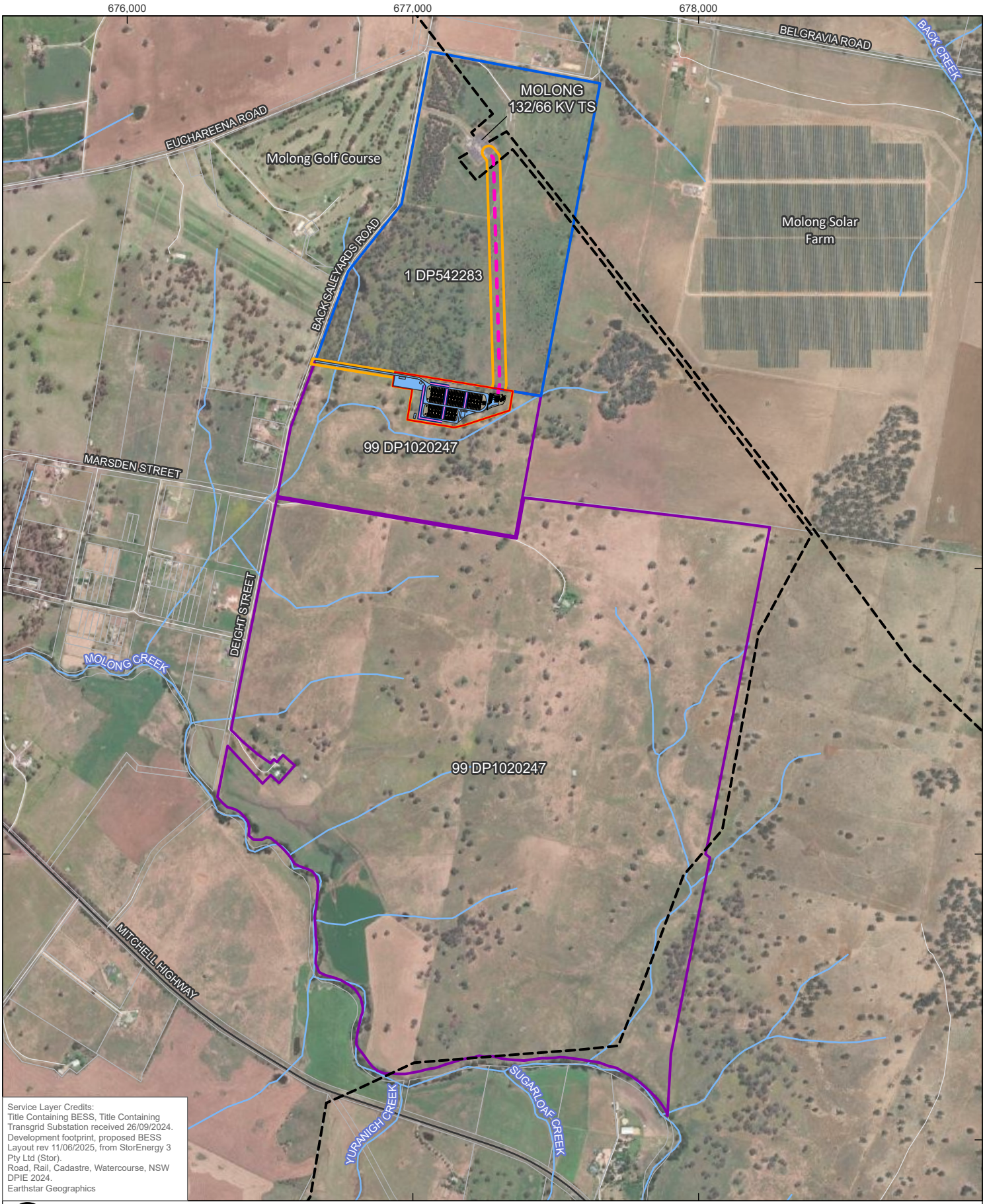
REGIONAL LOCALITY PLAN

SLR

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FIGURE 1

Path: H:\Projects-SLR\620-BNE\620-BNE\620.041615.00001 Stor Energy NSW\06 SLR Data\01 GIS\GIS\NSW_Stor.aprx\620041615_EIS_F01_Location Plan



Service Layer Credits:
Title Containing BESS, Title Containing Transgrid Substation received 26/09/2024.
Development footprint, proposed BESS Layout rev 11/06/2025, from StorEnergy 3 Pty Ltd (Stor).
Road, Rail, Cadastre, Watercourse, NSW DPIE 2024.
Earthstar Geographics

0 250 500 m

Coordinate System:	GDA2020 MGA Zone 55
Scale:	1:17,500 at A4
Project Number:	620.041615
Date Drawn:	28-Aug-2025
Drawn by:	NT

LEGEND

- Watercourse
- Primary Road
- Road

Transgrid Line

- 132kV
- Cadastre
- Proposed Electricity Transmission Line
- Noisewall
- BESS Footprint (5.06 ha)
- Development Footprint (9.56 ha)
- BESS Layout
- Title Containing BESS
- Title Containing Transgrid Substation

MOLONG BESS

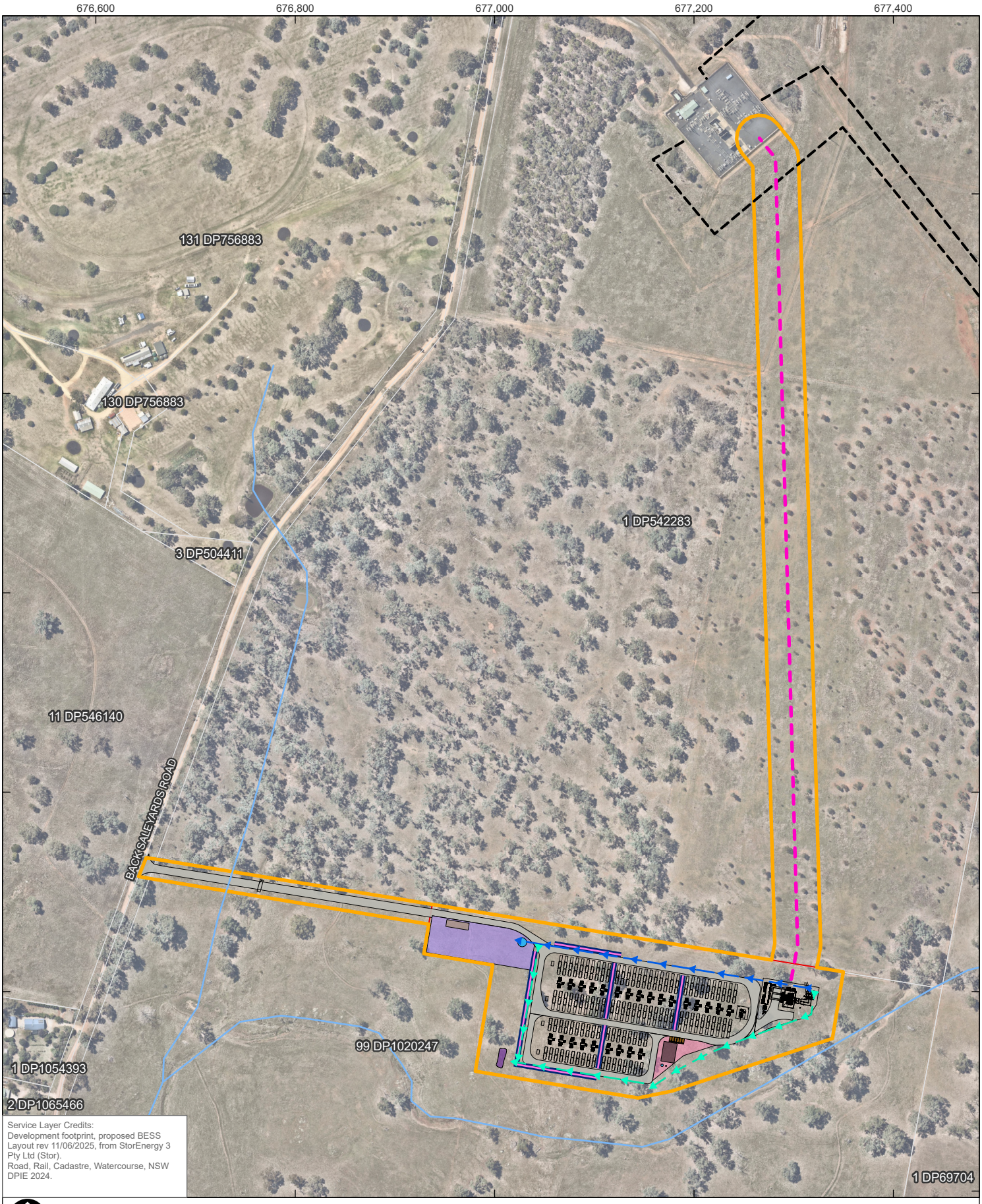
SITE OVERVIEW

SLR

DISCLAIMER: All information within this document may be based on external sources. SLR Consulting Pty Ltd makes no warranty regarding the data's accuracy or reliability for any purpose.

FIGURE 2

Path: H:\Projects-SLR\620-BNE\620-BNE\620.041615.00001 Stor Energy NSW\06 SLR Data\01 GIS\GIS\NSW_Stor.aprx\620041615_EIS_F02_Site Overview



Service Layer Credits:
Development footprint, proposed BESS Layout rev 11/06/2025, from StorEnergy 3 Pty Ltd (Stor).
Road, Rail, Cadastre, Watercourse, NSW DPIE 2024.

0 100 200 m

Coordinate System:	GDA2020 MGA Zone 55
Scale:	1:5,000 at A4
Project Number:	620.041615
Date Drawn:	30-Oct-2025
Drawn by:	NT

LEGEND

- Watercourse
- Road

Transgrid Line

- 132kV
- Cadastre
- Proposed Electricity Transmission Line
- Noisewall
- BESS Infrastructure
- Proposed Site Drain
- Proposed Swale Drain
- BESS Footprint (5.06 ha)
- Development Footprint (9.56 ha)
- Car Parking Spaces
- Construction Compound
- Detention Basin
- Internal Road
- Laydown Area
- O&M Building
- Sewerage Holding Tank
- Washdown Bay
- Water Tank
- Culvert

MOLONG BESS

PROJECT LAYOUT

SLR

DISCLAIMER: All information within this document may be based on external sources. SLR Consulting Pty Ltd makes no warranty regarding the data's accuracy or reliability for any purpose.

FIGURE 3

Path: H:\Projects-SLR\620-BNE\620-BNE\620.041615.00001 Stor Energy NSW\06 SLR Data\01 GIS\GIS\NSW_Stor.aprx\620041615_EIS_FX_Project Layout

1.3 Project Description

The Project will involve the development, construction, operation, and eventual decommissioning of a BESS with a capacity of 150 MW/ 730 MWh connecting via overhead transmission line directly to the existing Molong 132/66kV transmission substation operated by Transgrid.

The BESS will comprise battery units, inverters, transformers, a substation and ancillary infrastructure. The battery units will be within individual containers (or enclosures), with each container measuring approximately 6 metres (m) or 20 feet (ft) in length, with an approximate weight of 43,000 kilograms (kg). The battery units will generally be in a linear arrangement with some minor changes anticipated as detailed design progresses.

The key elements of the Project include the following:

- Installation and operation of a BESS including approximately 264 battery enclosures, 50 inverters, and transformers on hardstand with subsurface wiring, and benching of the site to level the foundation for each component.
- Construction of a new overhead transmission line (132 kV) to connect from proposed BESS substation, to the existing Transgrid Molong 132/66 kV transmission substation. The overhead transmission line will be approximately 900m in length and be situated within a 45m wide easement.
- Construction of ancillary works including parking areas, water tank, storage structures, stormwater management infrastructure (e.g. bioretention basin), contaminated water (e.g. fire water) retention solution, security cameras, security lighting, noise walls and fencing.
- 4-5m high acoustic walls at strategic locations within the Development Footprint.
- New site access from Back Saleyards Road.
- Tree / vegetation removal within the Development Footprint.
- Decommissioning of the BESS at the end of life (EOL).

Construction and commissioning of the Project is anticipated to take approximately 22 months. Construction of the Project will take between 12-14 months, with commissioning anticipated to take approximately 8-12 months, noting there will be overlap with commencement of commissioning activities and completion of construction.

It is expected that the operational life of the Project would be approximately 30 years, after which the BESS would be decommissioned and the infrastructure removed, returning the Development Footprint to its original state. ‘Repowering’ will be considered towards the end of operational life where a new Development Application (DA) may be lodged to renew the Project, albeit with upgraded technology. Any repowering and associated DA would require new project agreements to be considered in consultation with all relevant stakeholders and with consideration of the legislative requirements and energy needs at that time.

Further details on each component of the Project are provided in Chapter 3.0.

1.4 Project Background

Several sites were considered during the site selection process for the Project, with regard made to the following:

- Appropriate zoning of land to facilitate development consent for a BESS.
- Availability of existing access to the site via an established road network.

- Proximity to the existing TransGrid substation, to minimise visual impacts associated with overhead transmission lines and length of easements.
- A location that would avoid and/or minimise impacts to high quality native vegetation and protected fauna. Key strategies adopted to avoid, minimise or offset impacts include realigning the Development Footprint to minimise tree and hollow-bearing tree removal, keeping BESS units away from nearby creek, and positioning the project near an existing substation to reduce transmission line length and associated vegetation loss.
- Area with existing abundance of middle-of-the-day generation and known curtailment issues, and hence the benefit of an energy storage project for the region.
- An area that would not result in, or be subject to, potential flood impacts.
- Minimising impacts to surrounding privately or publicly owned land and residential dwellings due to noise and visual amenity concerns. Key strategies adopted to avoid, minimise or offset impacts include scenario testing to reduce the height and length of the noise walls, applying landscaping and muted colours for visual integration, selecting a generally flat location to reduce earthworks, limiting BESS units along the frontage.

1.5 The Proponent

The proponent StorEnergy 3 Pty Ltd (Stor) is a wholly owned subsidiary of StorEnergy Pty Ltd (Stor-Energy). Stor-Energy is a wholly Australian owned, specialist developer, owner and operator of large-scale BESS across Australia's NEM. Stor-Energy is majority owned and controlled by HMC Capital, a leading ASX-listed diversified alternative asset manager, specialising in high conviction and scalable real asset strategies.

Stor-Energy's purpose is to contribute to the stabilisation of wholesale electricity market pricing through the provision of energy arbitrage and network support services via rapidly dispatchable energy storage technologies. Stor-Energy's portfolio includes BESS projects in Queensland, New South Wales, Victoria and South Australia.

The proponent details are provided at Table 2.

Table 2 Proponent Details

Requirement	Detail
Applicant	StorEnergy 3 Pty Ltd
ABN	21 667 756 630
Applicant Address	Level 31, Macquarie Place, Sydney, NSW 2000
Contact	Oliver Coleman
Contact Details	information@molong-battery.com.au

1.6 EIS Purpose and Structure

SSD to which Division 4.7 of the *EP&A Act* applies is identified in State Environmental Planning Policy (Planning Systems) 2021 (Planning Systems SEPP) and in declarations made by the Minister for Planning. The Project is considered to be SSD as it is of a type listed in Schedule 1 of the Planning Systems SEPP.

The NSW Minister for Planning and Public Spaces is therefore the consent authority for the Project and a DA is required to be lodged with the DPHI, accompanied by an EIS. The EIS will be placed on public exhibition for a period of at least 28 days to allow public and agency

submissions to be lodged, after which the proponent may be requested to respond to issues raised in the submissions.

This EIS has been undertaken to assess the significance of the potential environmental impacts associated with the construction and operation of the Project. The EIS has been undertaken in accordance with the *EP&A Act* and the EP&A Regulation.

The EIS has been based on the SEARs issued by the DPHI on 26 March 2025, in conjunction with a range of other government agencies. The SEARs and agency requirements are provided in Appendix A with cross references to where each requirement is addressed within this EIS.

The structure and content of this EIS has been designed with consideration of the recommendations of Appendix B to the *State Significant Infrastructure Guidelines – Preparing Environmental Impact Statement*. The EIS contains two volumes incorporating the main body within Volume 1 and appendices and specialist technical studies in Volume 2. 3.0 outlines the chapters, appendices and inclusions of Volumes 1 and 2.

Table 3 EIS Structure and Inclusions

Chapter or Appendix	Inclusion
Volume 1	
Chapter 1.0 Introduction	This section provides the context for the detailed assessment of the Project
Chapter 2.0 Strategic Context	This section provides the key strategic context issues that are relevant to the assessment of the Project, the location and site history.
Chapter 3.0 Project Description	This section provides a consolidated description of the Project that the proponent is seeking approval for.
Chapter 4.0 Statutory Context	This section identifies the relevant statutory requirements for the Project including the power to grant approval, relevant legislation and required approvals.
Chapter 5.0 Community and Stakeholder Engagement	This section summarises the findings of the community engagement that was carried out for the project during the preparation of the EIS and describes what further community engagement will be carried if the Project is approved.
Chapter 6.0 Assessment of Impacts	This section provides a detailed summary of the results of the assessment of the potential impacts of the Project. • Biodiversity • Aboriginal Cultural Heritage • Historic Heritage • Land Use Conflict • Landscape Character and Visual Impact • Noise and Vibration • Traffic and Transport • Hydrology • Air Quality • Bushfire • Hazards & Risk • Social Impact • Economic Impact

Chapter or Appendix	Inclusion
	• Waste • Land and Soils • Cumulative Impact
Chapter 7.0 Project Justification and Conclusion	This section provides a justification and evaluation of the Project as a whole.
References	References used throughout the preparation of the EIS
Volume 2 - Appendices	
Appendix A	SEARs compliance table
Appendix B	Maps and plans
Appendix C	Statutory compliance table
Appendix D	Estimated Development Cost Report (WTP Australia PL, 2025)
Appendix E	Mitigation measures table
Appendix F	Biodiversity Development Assessment Report (SLR, 2025)
Appendix G	Aboriginal Cultural Heritage Assessment Report (ACHAR, Virtus, 2025)
Appendix H	Preliminary Air Quality Assessment (SLR, 2025)
Appendix I	Land Use Conflict Risk Assessment (SLR, 2025)
Appendix J	Landscape and Visual Impact Assessment (SLR, 2025)
Appendix K	Noise and Vibration Impact Assessment (SLR, 2025)
Appendix L	Transport Impact Assessment (SLR, 2025)
Appendix M	Flood Impact Assessment (SLR, 2025)
Appendix N	Hazards and Risk Assessment (SLR, 2025)
Appendix O	Social Impact Assessment (SLR, 2025)
Appendix P	Economic Impact Analysis (BDO, 2025)
Appendix Q	Waste Management Plan (SLR, 2025)
Appendix R	Engagement Summary Report (SLR, 2025)
Appendix S	Bushfire Risk Assessment Report (SLR, 2025)
Appendix T	Agricultural Impact Assessment (SLR, 2025)
Appendix U	Preliminary Site Investigation (SLR, 2025)
Appendix V	Surface and Groundwater Impact Assessment (SLR, 2025)
Appendix W	Onsite Facilities (Water and Sewerage) (SLR, 2025)
Appendix X	Land and Soil Capability Assessment (SLR, 2025)

2.0 Site and Strategic Context

The strategic policy context at the national, state, regional and local level underpins the Project's need, and includes plans, policies, key strategic directions, and frameworks. This section outlines the relevant context and framework that applies to the Project. This section also details site and environmental context and identifies surrounding projects that may result in a cumulative impact with the Project.

2.1 National Context

The Australian energy market is undergoing an unprecedented transformation as the generation mix changes and household rooftop solar uptake changes demand patterns. This transformation is seeking the rapid uptake of renewable energy and storage technologies. The need for large-scale energy storage in Australia is growing rapidly, with batteries playing an ever-increasing role in the grid, specifically to smooth out the availability of electricity at the times of peak demand.

BESS projects play a crucial role in storing excess energy during peak generation periods for use during times of high demand or when other sources are not producing. The general key objectives of BESS projects include the following:

- Contribute to improving the power supply in the region including the uptake of variable generation sources.
- Provide critical energy storage within the State.
- Improve the security, affordability, and sustainability of the State's electricity grid.

A number of National policies outline the Government's commitment to reducing carbon emissions and addressing the need for future energy reliability and stability.

Table 3 outlines the strategic plans and policies relevant to the Project.

Table 3 Strategic Context and Justification

Plan/Policy	Comment
National Context	
Powering Australia	The Australian Government's Powering Australia plan prepared by Department of Climate Change, Energy, the Environment and Water (DCCEEW) and established under the Australian Labour Party (ALP) is focused on creating jobs, cutting power bills and reducing emissions by boosting renewable energy. It seeks to capitalise on Australia's abundant natural resources to drive growth, new industries and become a renewable energy superpower. This includes commitments to build a more reliable, affordable and low-emissions energy system for Australia. The proposed BESS will aide in establishing a more reliable energy supply by providing energy capture and firming technology proximate to renewable energy generation projects in the region.
AEMO Integrated System Plan 2024	The Australia Energy Market Operators Integrated System Plan (AEMO, 2024) is a whole-of-system plan that provides an integrated roadmap for the changes happening in the NEM to meet future energy needs and enable a net zero economy by 2050. The proposed BESS will directly contribute to achieving the target by providing large scale energy storage to the network and enhanced firming capacity.
Australia's Long Term Emissions Reduction Plan	Australia's Long-Term Emissions Reduction Plan (Energy Reduction Plan) published by the DCCEEW provides a national level plan to achieve net zero emissions by 2050. This plan was established by the Liberal-National Coalition government (L/NP) in 2021 The Plan focuses on technology that will help Australia cut emissions while creating jobs and growing our economy. The Energy Reduction Plan generally aims to reduce the cost of technology and therein implementation into the network. This includes measures to increase supply of critical minerals and lithium to support the manufacture of grid scale BESS.

Plan/Policy	Comment
State Context	
NSW Transmission Infrastructure Strategy	The NSW Transmission Infrastructure Strategy (NSW Government, 2018) aims to increase the State's energy capacity by prioritising priority energy zones and boosting investments in the Central West, South West, and New England regions of NSW to deliver affordable and reliable energy and increase transmission capacity. This strategy was established under the L/NP in 2018. While not located within a priority energy zone, it is considered to directly contribute to balancing supply and demand and hence energy storage projects such as the Molong BESS can decrease the need for future new transmission lines in the State.
NSW Electricity Strategy	The NSW Electricity Strategy (Department of Planning, Industry & Environment (DPIE), 2019) is the NSW Government's plan for a reliable, affordable and sustainable electricity future that supports a growing economy. This strategy was established under the L/NP in 2019. The strategy encourages an estimated $8 billion of new private investment in NSW's electricity system over the next decade, including $5.6 billion in regional NSW. It will also support an estimated 1,200 jobs, mostly in regional NSW. The strategy closely aligns with the NSW Government's Net Zero Plan Stage 1: 2020–2030. It is estimated that that three-quarters of Australia's coal-fired power stations are operating beyond their original design life, with some receiving extensive 'life extension' re-fits to continue operation. In NSW, all five existing coal-fired power stations are scheduled to retire between 2022 and 2043 (AEMO, 2019), beginning with the Liddell Power Station (Hunter Valley) in 2023 and followed by the Eraring, Vales Point, Mt Piper, and Bayswater power stations. These closures will increase the current demand for new energy generation and storage. The remaining coal-fired generators are set to reach the end of their technical lives and close by 2035. Over the course of the 2020s, NSW is projected to experience its tightest reserve conditions in 2023-24 after the Liddell Power Station closed in April 2023. This tight reserve condition is expected to be partially mitigated by projects funded under the Emerging Energy program for new technologies that provide sustainable and on-demand electricity. The NSW Electricity Infrastructure Roadmap was enabled by the Electricity Infrastructure Investment Act 2020 and builds on the foundations of the Electricity Strategy. The implementation of the Net Zero Plan along with the Electricity Infrastructure Roadmap will result in more than 9000 jobs and up to $37 billion in private investment, with the majority expected to be across regional NSW. The Electricity Infrastructure Roadmap has identified Renewable Energy Zones (REZs) to group new renewable power generation into locations where it can be efficiently stored and transmitted across NSW. The closest REZ to the Site is the proposed Central-West Orana REZ, was identified due to its strong renewable energy resource potential, proximity to the existing electricity network, and existing land use. The Central-West Orana REZ was formally declared by the Minister for Energy and Environment under section 19(1) of the Electricity Infrastructure Investment Act 2020 gazetted on 4 November 2022. While not located within a REZ area, the Project would contribute directly to the goals through the investment in energy storage and the growth of new low carbon industries across the region.

Plan/Policy	Comment
Electricity Infrastructure Road Map	In November 2020, the NSW Government released the Electricity Infrastructure Roadmap, enabled by the Electricity Infrastructure Investment Act 2020 (NSW). The Roadmap builds on the foundations of the Electricity Strategy and is expected to attract up to $32 billion of private investment in regional energy infrastructure by 2030 and support over 9,000 jobs, mostly in regional NSW. This Road Map was established under the L/NP in 2020. The Roadmap is the State's 20 year plan to transform the electricity system into one that is cheap, clean and reliable. It seeks to lay the foundations for future generations to enjoy more secure, reliable and affordable electricity. The Roadmap specifically identifies support for the private sector to deliver short and long duration storage energy solutions and acknowledges the importance of new storage and firming on the network to better respond to electricity needs and improve reliability of the grid. The Project would contribute to the goal of more secure, reliable and affordable electricity.
NSW Climate Change Policy Framework	The NSW Climate Change Policy Framework (State of NSW and Office of Environment and Heritage (OEH), 2016) aims to maximise the economic, social, and environmental wellbeing of the State in the context of a changing climate and given the current and emerging international and national policy settings and actions created to address climate change. This framework was established under the L/NP in 2016. The long-term objectives of the Climate Change Policy Framework are to achieve net-zero emissions by 2050 and make NSW more resilient to a changing climate. The framework establishes that energy storage plays a significant role in managing grid stability while managing the changing generation mix from aging generation resources. As the Project would include the construction and operation of a BESS to further develop the power supply network of NSW, the Project would directly contribute to increasing the capacity and resilience of the State and further the State's efforts to reach net-zero emissions by 2050. Additionally, as the Climate Change Policy Framework aims to manage impacts on natural resources, ecosystems, and communities, the site suitability for the Project has been chosen specifically to ensure minimal impacts to biodiversity values and the surrounding community.
Net Zero Plan Stage 1: 2020-2030	The Net Zero Plan Stage 1: 2020-2030 (DPIE, 2020) established under the then L/NP government sets out how the NSW Government will deliver the ultimate goal of net zero emissions by 2050. This Plan recognises that, in parts of our economy, low emissions technologies are becoming a commercially viable alternative to the traditional ways of doing things. Ultimately, the plan seeks to reduce emissions by 35% (compared to 2005 emission rates) by 2030. The proposal directly aligns with Priority 1 and 2 of the Net Zero Plan. *Priority 1: Drive uptake of proven emissions reduction technologies that grow the economy, create new jobs or reduce the cost of living* The proposal represents a proven emissions reduction technology that will support the electricity network by capturing energy during high yield periods and supplying during low yield periods. The proposal will establish both short term and long-term employment opportunities within the energy sector. *Priority 2: Empower consumers and businesses to make sustainable choices* The proposal represents an effective way to support energy generation in the region and by extension supporting consumers and businesses in making sustainable and effective choices.

Plan/Policy	Comment
Regional Context	
Central West and Orana Regional Plan 2041	The Central West and Orana Regional Plan 2041 (Regional Plan) establishes a strategic framework, vision and direction for land use, addressing future needs for housing, jobs, infrastructure, a healthy environment, access to green spaces and connected communities in the Central West and Orana Region. This Regional Plan considers a 20-year timeframe with a focus on the next 5 years. It is prepared under Section 3.3 of the *EP&A Act* and applies to the local government areas (LGA) of Bathurst, Blayney, Bogan, Cabonne, Coonamble, Cowra, Dubbo, Forbes, Gilgandra, Lachlan, Lithgow, Mid-Western, Narromine, Oberon, Orange, Parkes, Warren, Warrumbungle and Weddin. Objective 2 of the Regional Plan to support the State's transition to Net Zero by 2050, requiring greater renewable electricity generation, transmission and storage. Within 15 years, 75% of the state's coal powered electricity generation is expected to reach the end of its technical life. Replacing these energy sources and building the infrastructure needed to connect and store new energy sources is essential to ongoing energy security. The region offers potential for renewable energy industries with vast open spaces and higher altitude tablelands suitable for wind power generation, large-scale solar energy, bioenergy generation and pumped hydro. There is already $6 billion in planned energy projects in the Central West and Orana region over the next five years. Strategy 2.1 is to prepare for the change to net zero emissions, strategic and statutory planning. This planning is to incorporate appropriate scales of renewable energy infrastructure into existing urban areas, including through urban design and place-making projects. While not linked to or dependent on any other energy projects in the area, the proposed BESS is considered to support the changing energy generation mix in general by providing storage capacity and increasing energy security.
Sub-Regional Rural Land Use Strategy 2008	The Councils of Blayney, Cabonne and Orange City have joined forces to undertake a Comprehensive Rural and Industrial Lands Strategy (CRILS) for the Sub-Region, with a focus of guiding future land use planning for each Council as well as the Sub-Region, for the next 30 years. The Strategy will guide and inform the preparation of a new Local Environmental Plan (LEP) for each representative Council. The CRILS seeks to address five main issues in the subregion including: • Protecting agricultural land, particularly from rural settlement subdivision. • Provided well-located and suitably serviced industrial land. • Releasing and locating rural lifestyle land in a controlled manner. • Protection of the natural and scenic environment. • Including heritage provisions in the LEPs. The Cabonne LEP 2012 has been developed in accordance with the principles of the CRILS including zones and controls that look to enable the above outcomes. The Project has been specifically designed and located to minimise impacts and conflict with agricultural land and will adequately retain the values of the natural and scenic environment.
Local Context	
Cabonne Local Strategic	The Cabonne Local Strategic Planning Statement (Cabonne Shire Council, 2020) (LSPS) sets out the 20-year vision for land use planning across the

Plan/Policy	Comment
Planning Statement (LSPS)	Cabonne Shire, outlining how growth and change will be managed. The LSPS identifies the unique characteristics of Cabonne and sets the economic, social and environmental land use direction over the next 20 years. The LSPS notes that Cabonne can contribute to the shift to renewable energy by allowing for opportunities for large scale renewable energy developments within suitably located areas by way of a review of planning requirements that will contribute to a state-wide shift away from fossil fuels. While not linked to or dependent on any other energy projects in the area, an energy storage project such as the proposed BESS can support the changing energy generation mix and improve grid security in the area. The Project aligns with the LSPS, being suitably located to minimise impacts on agricultural productivity, Aboriginal cultural heritage, biodiversity, and residential amenity.
Cabonne Settlement (Land Use) Strategy 2021-2041	The Cabonne Settlement (Land Use) Strategy is a plan that identifies key issues facing the settlements in Cabonne and develops strategies to address those issues and manage the future growth and enhancement of each of the settlements for the next 10-20 years. In terms of Molong, this strategy identifies various future residential growth areas on the periphery of the Molong Township. The East Large Lot Residential Area (East LLR) is situated east of the Township and extends to Back Saleyards Road, just west of the Project Lots. A planning proposal is lodged to rezone the East LLR for eventual large lot residential subdivision. The Project Lots are not identified in the strategy for future residential development or future investigation of residential lands. Consideration of the intended outcomes of the strategy has been made within the environment assessments undertaken for the Project.
Cabonne Renewable Energy Action Plan	The Cabonne Shire Council Renewable Energy Action Plan (CSCREAP) (Constructive Energy Pty Ltd, March 2019) includes a detailed analysis of electricity consumption and generation opportunities for Cabonne Shire Council sites, including a review of factors related to installation and management of renewable energy and supporting infrastructure. While BESS are not a renewable product subject to this plan, they have become synonymous with energy storage, which is an increasingly critical part of optimising the economic and environmental benefits of renewable energy generation (e.g. lower operational costs). The enduring problem with intermittent renewable energy generation is reliability of supply, a factor which has been improved dramatically at the time of writing, by the improving economics around battery storage. The CSCREAP recommends batteries or BESS should be considered as part of any renewable energy project and at the very least, projects should be made 'battery ready'. The proposed BESS will support the changing generation mix in the region by evening out the supply and demand curves of variable generation and consumption.
Cabonne Community Strategic Plan 2022-2032	The Cabonne Community Strategic Plan (Cabonne Shire Council, 2022) seeks to identify the community's priorities, aspirations and vision for the future and is centred around key strategic themes, being: • Unified and focused leadership. • Reliable and responsive infrastructure. • Connected communities. • Thriving, sustainable and adaptive economy • Improve the natural and built environment.



Plan/Policy	Comment
	The Project will support the above directions by contributing to energy security and, in turn, creating a more thriving, sustainable and adaptive economy.
Transgrid: Increasing capacity for generation in the Molong and Parks area	The Regulatory Investment Test for Transmission (RIT-T) has released a series of reports relating to options for alleviating existing congestion issues in the local network and improving the capacity for renewable generation in the Molong and Parkes area. The existing 132 kV line, known as 'Line 94T', plays a central role in transmitting the electricity from renewable generators in the Molong and Parkes area to the load in Orange. It connects Molong substation to Orange North switching station, which in turn supplies Orange city, Cadia Mine and surrounding areas. Transgrid's investigations have identified significant network congestion in this area and have formalised plans to strengthen the transmission network via line upgrades and have explored the prospect of energy storage (e.g. BESS) as a means of further reducing congestion and achieving broader NEM benefits. The Project involves the provision of BESS which will enhance energy storage resulting in less reduced congestion and broader energy benefits.
Cabonne Local Environmental Plan (LEP) 2012	In accordance with the LEP, the objectives of the RU1 Primary Production zone are: • To encourage sustainable primary industry production by maintaining and enhancing the natural resource base. • To encourage diversity in primary industry enterprises and systems appropriate for the area. • To minimise the fragmentation and alienation of resource lands. • To minimise conflict between land uses within this zone and land uses within adjoining zones. • To enable function centres, restaurants or cafes and appropriate forms of tourist and visitor accommodation to be developed in conjunction with agricultural uses The Project is generally compliant with these objectives as it: • Complementary to sustainable primary industry, being a temporary and reversible change in land use. • Will not result in the fragmentation or alienation of land. • Construction and operation of the Project will be managed as to not conflict with surrounding land uses. • Is highly reversible and will not impact the future productivity of the land. Electricity generation is not listed among developments which are permitted consent for the RU1 zone however, under Clause 2.36 of the State Environmental Planning Policy (Transport and Infrastructure) 2021 (Transport and Infrastructure SEPP), the Project is permissible with consent.

2.2 Site Context

2.2.1 Site ownership

As outlined in Section 1.2, the Project involves works in three separate locations. Table 4 outlines the proposed uses and ownership details.

Table 4 Land Ownership Details

Reference	Description	Ownership
Lot 99 (Title containing BESS)	1 Deight Street is legally described as Lot 99 DP 1020247 and has an approximate size of 339.3ha. This lot is currently used for predominantly agricultural purposes	Private
Lot 1 (Title containing Transgrid Substation)	19 Back Saleyards Road is legally described as Lot 1 DP 542283 and is approximately 74.9ha. This lot contains the Transgrid Molong 132/66 Kilovolt (kV) Substation.	TransGrid
Back Saleyards Road	The section of Back Saleyards Road where it adjoins the site access, will be upgraded to enable construction vehicle ingress and egress. Back Saleyards Road will be monitored during construction and maintained in consultation with Council.	Cabonne Shire Council

2.2.2 Site Location and Context

The Project is located within the Cabonne Shire LGA and is located approximately 2km east of the Molong Township (the local Post Office – Molong LPO has been used as central reference point) as shown in Figure 1. The Project Lots have frontage to both Deight Street and Back Saleyards Road on its western boundary. Lot 1 also has frontage to Euchareena Road in its northwestern corner but is principally accessed by Back Saleyards Road. Views of the Development Footprint from Back Saleyards Road are shown in Photos 1 and 2.

Land immediately surrounding the Project is described in Section 2.2.3 and is shown in Table 4. Various sensitive receivers have been identified in the surrounding land as identified in Figure 5. These receivers also include the three (3) potential rural residential sites approved under Development Consent 2000/182 which involves a subdivision of Lot 99.

The Project Lots contain a few minor water bodies (dams) and intermittent creeks, is bound to the south by Molong Creek, is generally cleared land with dispersed vegetation throughout (refer to Figure 1).



Photo 1 View east from Back Saleyards Road along proposed access handle towards BESS Footprint



Photo 2 View northeast from corner of Deight St and 17 Deight St driveway towards BESS Footprint

2.2.3 Surrounding Land Use

The surrounding area is characterised by a mixture of different land uses including predominantly rural land lots to the east, north and south with recreational and rural residential properties to the west. Refer to Figure 4 which demonstrates land uses surrounding the site.

Recreational activities comprising the Molong Showground and Golf Course are located west of Lot 1. Moving south along the western boundary of the Project Lots, this area is zoned R5 Large Lot residential under the LEP and therefore may contain large residential lots generally 4,000m^2 in size in the future. Currently, this land is predominantly rural in nature with a mixture of grazing activities and rural residential dwellings.

The surrounding landscape has been mostly cleared of the native vegetation that was once present and is currently occupied predominantly by grass for sheep grazing. The Project Lots are situated on a gentle slope that has undergone significant modifications to the topography due to generational agricultural use.

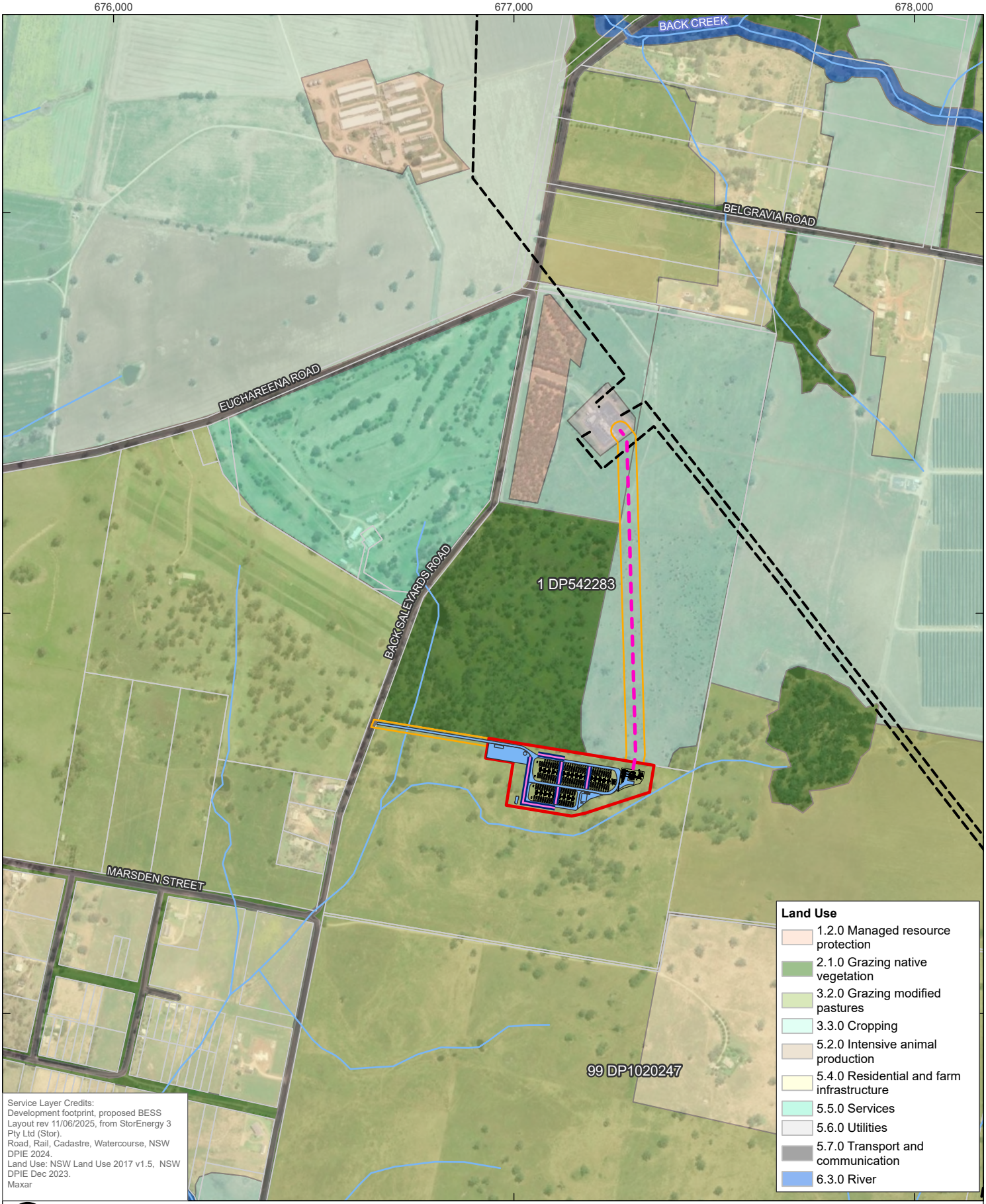
The southern boundary of Lot 99 is bound by Molong Creek which is located approximately 1.3km south of the Development Footprint. Beyond Molong Creek is rural grazing land and the Mitchell Highway. West and north of the Project Lots is predominantly rural land with grazing and other agricultural activities as well as rural dwellings. Back Creek is situated approximately 1.8km north of the Development Footprint. The associated tributaries of Molong Creek and Back Creek are spread throughout the surrounding lands.

The Molong Solar Farm sits approximately 450m northeast of the Development Footprint. The Molong Historic Railway station and railway line is situated approximately 1.9km west on the periphery of the Molong Township. The railway heads south adjacent to Mitchell Highway and wraps around the northern extent of the Molong Township.

The nearest airport is the Orange Regional Airport which is located south of Orange. Goobang National Park is approximately 50km west of the site, with Mullions Range State Forest and Mullion Range State Conservation Area located approximately 25-30km east of the Project Lots. There are no significant Council assets (e.g. wastewater treatment facilities) in the vicinity of the Project Lots.

The township of Molong has an approximate population of around 2,600 people (Australian Bureau of Statistics, 2021). The town features one main ‘strip’ of retail and commercial activities that also extend into adjoining streets. Existing facilities and services in Molong include:

- IGA Supermarket
- Cafes, pubs, restaurants, other small-scale retail
- Service station and Mechanic
- Hardware store
- Post office
- Church
- Schools and Daycare
- Medical Centre and pharmacy
- Police station and fire station
- Rural Fire Service (RFS) and NSW State Emergency Services (SES)
- Visitor accommodation
- Recreational activities such as public pools and parks



Service Layer Credits:
Development footprint, proposed BESS Layout rev 11/06/2025, from StorEnergy 3 Pty Ltd (Stor).
Road, Rail, Cadastre, Watercourse, NSW DPIE 2024.
Land Use: NSW Land Use 2017 v1.5, NSW DPIE Dec 2023.
Maxar

0 250 500 m

Coordinate System:	GDA2020 MGA Zone 55
Scale:	1:12,500 at A4
Project Number:	620.041615
Date Drawn:	28-Jul-2025
Drawn by:	NT

LEGEND

- Watercourse
- **Transgrid Line**
  - 132kV
  - Cadastre
  - Proposed Electricity Transmission Line
- Noisewall
- BESS Footptint (5.06 ha)
- Development Footprint (9.56 ha)
- BESS Layout

MOLONG BESS

SURROUNDING LAND USE PLAN

SLR

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FIGURE 4

Path: H:\Projects-SLR\620-BNE\620-BNE\620.041615.00001 Stor Energy NSW\06 SLR Data\01 GIS\GIS\NSW_Stor.aprx\620041615_EIS_FXX_Surrounding Land Use

It is anticipated that Molong would be the key service centre of the BESS construction workforce, as well as Orange, Manildra and other smaller surrounding towns. In addition to the services listed above, Orange has various additional services including supermarkets and shopping centres and is located approximately 30 minutes drive from the Project.

Nearby sensitive receivers have been identified in Figure 5 and Table 5. There are 104 sensitive receivers within 2km of the Development Footprint, excluding the 'host receiver' (H1) which is located within Lot 99. Five additional future receivers are also identified, three from the potential subdivision to be undertaken on Lot 99, and two from the closest potential dwellings to be established in the proposed rezoning on the western side of Back Saleyards Road.

Table 5 Sensitive Receivers

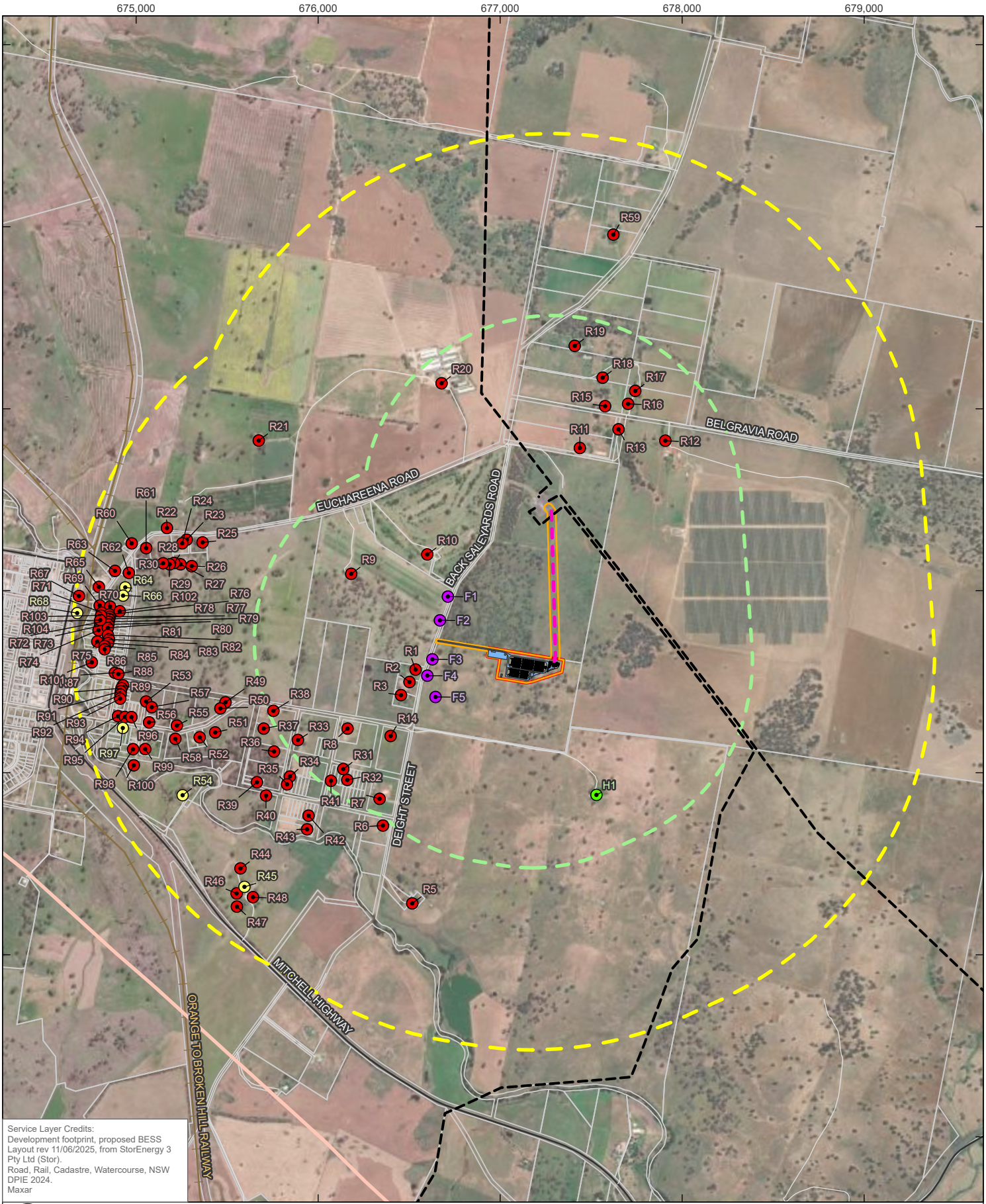
Receptor ID (Figure 5)	Address	Approximate Distance to Development Footprint
H1	Melrose Park 1 Deight St, Molong NSW 2866	700m
R1	134 Back Saleyards Rd, Molong NSW 2866	620m
R2	148 Back Saleyards Rd, Molong NSW 2866	670m
R3	150 Back Saleyards Rd, Molong NSW 2866	710m
R5	81 Deight St, Molong NSW 2866	860m
R6	Lot 17 DP 756883 or Buckland Street Molong, NSW 2866	1010m
R7	36 Deight St, Molong NSW 2866	900m
R8	160 Marsden St, Molong NSW 2866	850m
R9	168 Euchareena Rd, Molong NSW 2866	600m
R10	'Molong Golf Club', Euchareena Road and 184 Euchareena Road, Molong NSW 2866	450m
R11	268 Euchareena Road Molong NSW 2866	320m
R12	286 Euchareena Road Molong NSW 2866	690m
R13	286 Euchareena Road Molong NSW 2866	520m
R14	186 Marsden St, Molong, NSW 2866	600m
R15	2342 Belgravia Rd, Molong NSW 2866	680m
R16	2342 Belgravia Rd, Molong NSW 2866	770m
R17	2340 Belgravia Rd, Molong NSW 2866	790
R18	Lot 85 DP 756875 Euchareena Road Molong	780m
R19	332 Euchareena Rd, Molong NSW 2866	740m
R20	137 Euchareena Rd, Molong NSW 2866	880m
R21	137 Euchareena Rd, Molong NSW 2866	1480m
R22	137 Euchareena Rd, Molong NSW 2866	1620m
R23	80 Euchareena Rd, Molong NSW 2866	1480m
R24	80 Euchareena Rd, Molong NSW 2866	1480m
R25	90 Euchareena Rd, Molong NSW 2866	1390m
R26	82 Euchareena Rd, Molong NSW 2866	1460m



Receptor ID (Figure 5)	Address	Approximate Distance to Development Footprint
R27	82 Euchareena Rd, Molong NSW 2866	1480m
R28	82 Euchareena Rd, Molong NSW 2866	1510m
R29	72 Euchareena Rd, Molong NSW 2866	1530m
R30	72 Euchareena Rd, Molong NSW 2866	1580m
R31	25 Copper St, Molong NSW 2866	900m
R32	25 Copper St, Molong NSW 2866	920m
R33	11 Silver St, Molong NSW 2866	940m
R34	39 Silver St, Molong NSW 2866	1280m
R35	39 Silver St, Molong NSW 2866	1300m
R36	22 Silver St, Molong NSW 2866	1290m
R37	116 Marsden St, Molong NSW 2866	1250m
R38	116 Marsden St, Molong NSW 2866	990m
R39	34 Buckland St, Molong NSW 2866	1430m
R40	33 Buckland St, Molong NSW 2866	1420m
R41	1 Copper St, Molong NSW 2866	990m
R42	Pamella 9 Buckland St, Molong NSW 2866	1270m
R43	Pamella 9 Buckland St, Molong NSW 2866	1320m
R44	3218 Mitchell Hwy, Molong NSW 2866	1750m
R45	3218 Mitchell Hwy, Molong NSW 2866	1780m
R46	3218 Mitchell Hwy, Molong NSW 2866	1840m
R47	3218 Mitchell Hwy, Molong NSW 2866	1900m
R48	3218 Mitchell Hwy, Molong NSW 2866	1790m
R49	87 Marsden St, Molong NSW 2866	1210m
R50	87 Marsden St, Molong NSW 2866	1250m
R51	82 Marsden St, Molong NSW 2866	1320m
R52	70 Marsden St, Molong NSW 2866	1460m
R53	4 Stuart St, Molong NSW 2866	1640m
R54	3306 Mitchell Hwy, Molong NSW 2866	1640m
R55	59 Marsden St, Molong NSW 2866	1510m
R56	20 Stuart St, Molong NSW 2866	1620m
R57	12 Stuart St, Molong NSW 2866	1620m
R58	60 Marsden St, Molong NSW 2866	1540m
R59	385 Euchareena Rd, Molong NSW 2866	1500m
R60	32 Euchareena Rd, Molong NSW 2866	1770m
R61	23 Euchareena Rd, Molong NSW 2866	1680m

Receptor ID (Figure 5)	Address	Approximate Distance to Development Footprint
R62	19 Euchareena Rd, Molong NSW 2866	1740m
R63	10 Euchareena Rd, Molong NSW 2866	1820m
R64	11 Euchareena Rd, Molong NSW 2866	1740m
R65	8 Euchareena Rd, Molong NSW 2866	1880m
R66	2 Betts St, Molong NSW 2866	1750m
R67	2 Euchareena Rd, Molong NSW 2866	1990m
R68	Train Station	2000m
R69	5 Euchareena Rd, Molong NSW 2866	1880m
R70	6 Betts St, Molong NSW 2866	1750m
R71	3 Betts St, Molong NSW 2866	1850m
R72	9 Betts St, Molong NSW 2866	1820m
R73	11 Betts St, Molong NSW 2866	1820m
R74	15 Betts St, Molong NSW 2866	1820m
R75	25-27 Betts St, Molong NSW 2866	1820m
R76	10 Betts St, Molong NSW 2866	1760m
R77	12 Betts St, Molong NSW 2866	1760m
R78	14 Betts St, Molong NSW 2866	1760m
R79	16 Betts St, Molong NSW 2866	1760m
R80	18 Betts St, Molong NSW 2866	1760m
R81	20 Betts St, Molong NSW 2866	1760m
R82	24 Betts St, Molong NSW 2866	1760m
R83	28 Betts St, Molong NSW 2866	1760m
R84	30 Betts Street Molong NSW 2866	1760m
R85	32 Betts St, Molong NSW 2866	1760m
R86	34 Betts Street Molong NSW 2866	1760m
R87	9 Dean Street Molong NSW 2866	1790m
R88	11 Dean St, Molong NSW 2866	1780m
R89	2 Shadforth St, Molong NSW 2866	1750m
R90	4 Shadforth St, Molong NSW 2866	1760m
R91	6 Shadforth St, Molong NSW 2866	1770m
R92	8 Shadforth St, Molong NSW 2866	1780m
R93	10 Shadforth St, Molong NSW 2866	1790m
R94	29 Marsden St, Molong NSW 2866	1800m
R95	31 Marsden St, Molong NSW 2866	1780m
R96	31 Marsden St, Molong NSW 2866	1740m

Receptor ID (Figure 5)	Address	Approximate Distance to Development Footprint
R97	28 Marsden St, Molong NSW 2866	1800m
R98	25 Stuart St, Molong NSW 2866	1800m
R99	26 Stuart St, Molong NSW 2866	1750m
R100	9 Stuart St, Molong NSW 2866	1800m
R101	33 Betts St, Molong NSW 2866	1900m
R102	8 Betts St, Molong NSW 2866	1740m
R103	5 Betts St, Molong NSW 2866	1850m
R104	7 Betts St, Molong NSW 2866	1850m



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Development footprint, proposed BESS Layout rev 11/06/2025, from StorEnergy 3 Pty Ltd (Stor).
Road, Rail, Cadastre, Watercourse, NSW DPIE 2024.
Maxar

0 0.5 1 km

Coordinate System:	GDA2020 MGA Zone 55
Scale:	1:27,500 at A4
Project Number:	620.041615
Date Drawn:	01-Aug-2025
Drawn by:	NT

LEGEND

- Host Receiver
- Sensitive Receiver
- Heritage Receiver
- Future Receiver
- 1km BESS Area Buffer
- 2km BESS Area Buffer
- Rail
- Primary Road
- Road

Transgrid Line

- 132kV
- 66kV
- Cadastre
- Proposed Electricity Transmission Line
- BESS Footprint (5.06 ha)
- Development Footprint (9.56 ha)
- BESS Layout

MOLONG BESS

SENSITIVE RECEIVERS PLAN (1KM AND 2KM RADIUS)

SLR

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FIGURE 5

Path: H:\Projects-SLR\620-BNE\620-BNE\620.041615.00001 Stor Energy NSW\06 SLR Data\01 GIS\GIS\NSW_Stor.aprx\620041615_EIS_FXX_Recievers

2.2.4 Electrical infrastructure

The Molong Substation forms part of the larger Transgrid electricity network and is referenced as MOLONG 132/66KV substation within the network. It is located to the north of the proposed BESS and visual features include infrastructure components and such as transmission lines, notable the 132 kV transmission line that cross Lot 1 in a southeast / northwest direction. The proposed transmission line and associated easement consists of sparce trees and vegetation typical of the broader rural landscape.

There are four transmission lines which are currently connected to the Molong Substation:

- Transgrid – 132 kV transmission lines extend southeast from the substation towards Orange North substation.
- Transgrid – 132 kV transmission lines extends southwest from the substation to the Manildra substation.
- Transgrid – 132 kV transmission lines extend north from the substation to the Wellington substation
- Essential Energy – 66 kV distribution network and supports renewable generation from Molong Solar Farm to the east.

2.2.5 Roads and Access

The Project Lots are located east of the Molong Township and has frontage to both Back Saleyards Road and Deight Street. Back Saleyards Road connects to Euchareena Road in the northwestern corner of the Lot 1, which directs traffic to the Molong Township to the west and the township of Euchareena to the northeast. Belgravia Road connects to Euchareena Road and runs east along the northern extent of Lot 1 towards the suburb of Belgravia. Deight Street is a no through road, bound by Molong Creek to the South.

Both Back Saleyards Road and Deight Street connect to Marsden Street, which connects off Mitchell Highway to the west. Mitchell Highway is the main highway in the area which connects Molong to Orange in the south and Wellington in the north. The characteristics of the surrounding road network are summarised in Table 6.

The visual quality of the landscape surrounding these access corridors are defined by a gently slopping, undulating terrain. The road verges are generally vegetated, with low to medium sized vegetation, with glimpses toward the surrounding landscape.

Table 6 Surrounding Road Network Characteristics (SLR, TIA, 2025)

Road Name	Jurisdiction	Average Daily Weekday Traffic	Average Daily Weekend Traffic	Average Daily Traffic	Speed Limit	Road Classification
Mitchell Highway	TfNSW	2,555 [1]	2,228 [1]	2,502 [1]	50 km/h [2] – 100 km/h [4]	State Road (#7)
Euchareena Road	Council	430 [3]	-	-	50 km/h [3] – 100 km/h [1]	Collector Road
Back Saleyards Road		20 [3]	-	-	100 km/h	Access Road
Belgravia Road		-	-	-	100 km/h [5]	Collector Road

Road Name	Jurisdiction	Average Daily Weekday Traffic	Average Daily Weekend Traffic	Average Daily Traffic	Speed Limit	Road Classification
Strathmore Lane		-	-	-	100 km/h [5]	Access Road

[1] TfNSW Traffic Volume Viewer 2025 (TfNSW Permanent Counter Station ID: T6172S).
[2] Lower speed limit (within Molong town centre).
[3] Derived from Traffic Surveys
[4] Higher speed limit (outside Molong town centre).
[5] No posted speed limit, therefore the default speed limit applies (100km/h for all roads outside of built-up areas).

2.2.6 Aboriginal Cultural Heritage

The Project Lots are within the traditional lands of the Wiradjuri people, a large language group of inter-related tribes that cover a large portion of central NSW, stretching from the Murray River in the south, to Lithgow and Dubbo in the north.

The Project Lots are located in a landscape which was heavily utilised by Aboriginal people, and despite some urban development, evidence of this occupation can still be seen today. A search of the Aboriginal Heritage Information Management System (AHIMS) register and database identified 44 recorded AHIMS sites within the vicinity of the Project, none of which were identified within the Project Lots.

The Project Lots are situated within the Molong soil landscape, which is predominantly comprised of Euchrozems, non-calcic brown soils and yellow podzolic soils. The Project Lots is atop the Cargo Andesite geological unit. Andesite is known for its strength and durability. The area has been mostly cleared of the native vegetation that was once present and is currently occupied predominantly by a contemporary vegetation landscape of grass for sheep grazing. The Project Lots are situated on a gentle slope that has undergone significant modifications to the topography due to generational agricultural use.

The land is currently largely rural and one that retains material evidence of past activity that goes back thousands of years to Aboriginal life before British colonisation. Following from colonial settlers taking up land in the region, Molong was successful as a pastoral landscape with copper mining nearby and possibly the gold workings at Ophir which may have also left a mark.

Archaeological research within the Molong region indicates that, although there have been extensive disturbances from agricultural activity, there is still potential for Aboriginal heritage to remain. Areas within 200m of water sources contain the highest potential for archaeological materials to be identified, with quartz artefact sites and Potential Archaeological Deposits (PAD) being the most common site types. Additionally, there is potential for isolated artefacts to be identified in heavily modified soils depending on the extent of depth from previous impacts and land use history.

An Aboriginal Cultural Heritage Assessment Report (ACHAR) was undertaken for the Project, refer to Appendix G.

2.2.7 Past Land Use and Approvals History

Molong is one of the first colonial settlements in the Cabonne Shire LGA along with Canowindra and Byng. Squatters and free settlers displaced the traditional custodians using the land for grazing and agriculture.

Gold was discovered in Ophir in 1851 which encouraged a wave of new settlers and shift away from agricultural activities. Before the discovery of gold, mining copper was attempted

in the 1840s at Copper Hill, approximately 5 km north-west of the Project Lots. Families moved to the area to try their hands at extracting copper and further settled the region, including Molong, Byng and Cadia.

The construction of infrastructure projects includes the Molong Substation in 1960 and Molong Solar Farm in 2021.

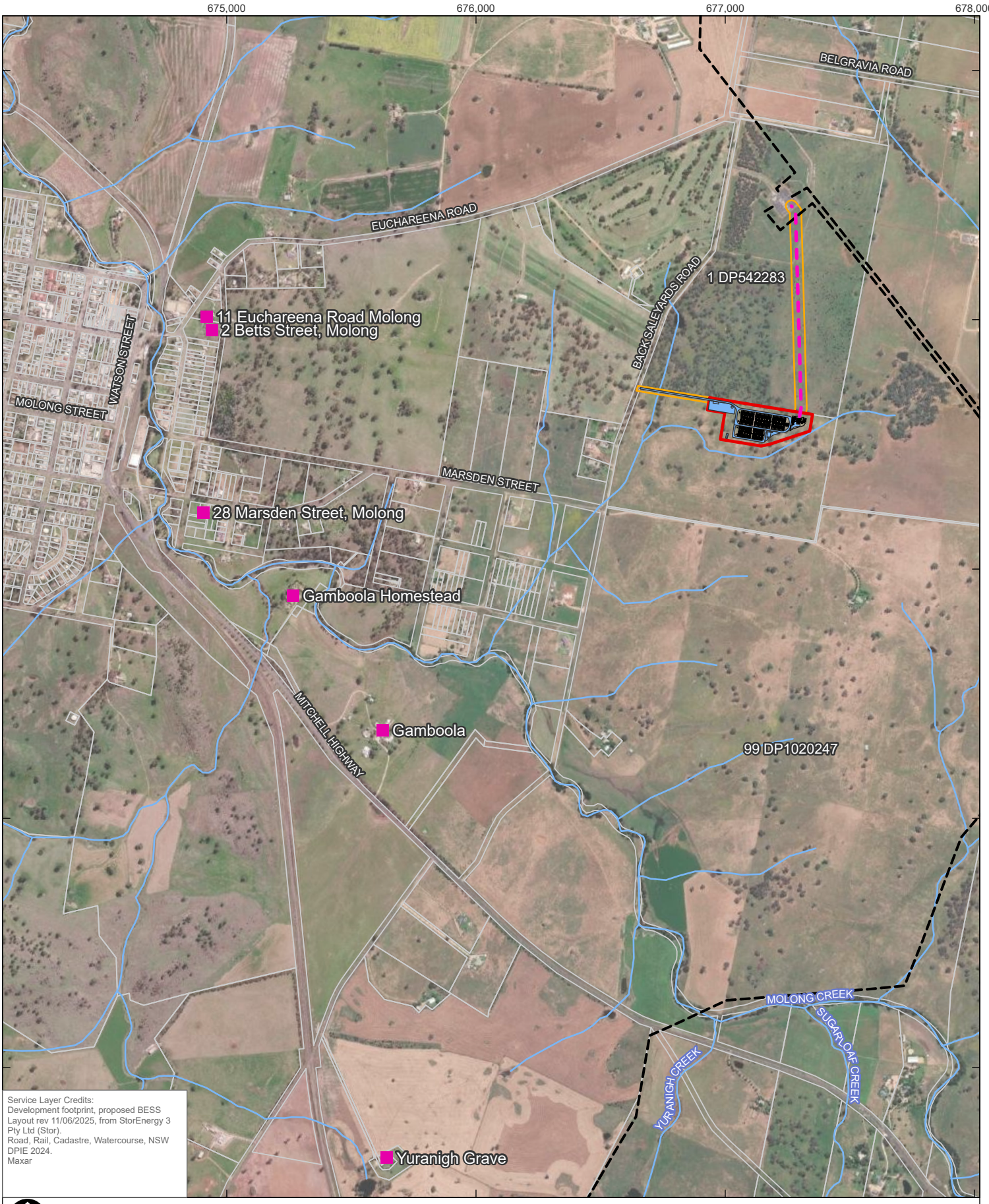
A review of the Cabonne Shire Council Local Development Register (from May 2023 to present) identified that a Modification Application (2000/182/1) had been approved in relation to the approved seven lot subdivision of Lot 99. As part of the Landholder Agreement with Stor, it is understood that it is unlikely that these lots would proceed to additional rural residential dwellings, however the future subdivision lots have been nevertheless considered in the EIS assessment.

2.2.8 Heritage

The site is neither heritage-listed nor within a designated heritage conservation area. As detailed in Table 7, the nearest listed item is approximately 1.2km south of the Development Footprint. The location of the heritage items is shown in Figure 6.

Table 7 Nearby Local Heritage Items (Cabonne LEP 2012)

Item	Significance	Address	Distance
Gamboola Cabonne Homestead (#I203)	Grand historic homestead with a rich pastoral history and architectural charm.	3218 Mitchell Highway, Cabonne	Approximately 1.4 km south of Development Footprint
Gamboola Homestead, Woolshed & Historic Wire Fence (#I202)	Intact original outbuildings include woolshed stables, pump house, workers cottage and wire fence	3306 Mitchell Highway, Cabonne	Approximately 1.2 km southeast of Development Footprint
House (#I198)	Classic 19th century residence in East Molong contributing to streetscape.	11 Marsden Street, Cabonne (LEP) (also known as 28 Marsden Street)	Approximately 1.7 km southwest of Development Footprint
House (#I183)	Victorian villa	2 Betts Street, Molong	Approximately 1.6 km west of Development Footprint
House (#I192)	Victorian villa	11 Euchareena Road Molong	Approximately 1.6 km west of Development Footprint
Yuranighs Grave (#I217)	Yuranighs grave is an excellent example of culture contact. The presence of carved trees around the grave demonstrates commemoration by Aboriginal people while the inscribed headstone indicates the honour bestowed on Yuranigh by Major Mitchell, to whom he acted as guide on his famous last north west exploratory venture. The carved trees are also, as far as is known, the longest remaining, number of carved trees around a grave.	Lot 278 DP 750170 and Lot 2 DP 845407 Yuranigh Road, Molong	Approximately 3.2km south of Development Footprint



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Development footprint, proposed BESS Layout rev 11/06/2025, from StorEnergy 3 Pty Ltd (Stor).
Road, Rail, Cadastre, Watercourse, NSW DPIE 2024.
Maxar

0 250 500 m

Coordinate System:	GDA2020 MGA Zone 55
Scale:	1:20,000 at A4
Project Number:	620.041615
Date Drawn:	28-Aug-2025
Drawn by:	NT

LEGEND

- Heritage Site
- Watercourse

Transgrid Line

- 132kV
- Cadastre
- Proposed Electricity Transmission Line
- BESS Footptint (5.06 ha)
- Development Footprint (9.56 ha)
- BESS Layout

MOLONG BESS

EUROPEAN HERITAGE

SLR

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FIGURE 6

Path: H:\Projects-SLR\620-BNE\620-BNE\620.041615.00001 Stor Energy NSW\06 SLR Data\01 GIS\GIS\NSW_Stor.aprx\620041615_EIS_FXX_European Heritage

2.3 Environmental Context

2.3.1 Climate

Cabonne LGA is located within the NSW South Western Slopes Bioregion, specifically in the Upper Slopes subregion. The region is dominated by sub-humid climate characterised by hot summers with no dry season.

According to temperature data from the Bureau of Meteorology (BOM) at Orange Airport (station no. 063303, elevation 945m), mean maximum temperatures range from 9.9°C in winter to 27.4°C in summer, while mean minimum temperatures range from 0.6°C in winter to around 13°C in summer. Maximum temperatures up to 40°C and minimum temperatures less than -5°C have been recorded. Long-term temperature statistics for Orange Airport are summarised in Figure 7.

The average monthly rainfall is relatively constant throughout the year, with the lowest average rainfall occurring during autumn (down to 50 mm/month recorded during May over an average of around five rain days per month). The highest average monthly rainfall of 95 mm/month occurs in November, with an average of 9 rain days recorded in this month. The highest monthly rainfall recorded over the time period examined was 319.2 mm recorded in December 2010. Peak rainfall events occur during autumn, with the maximum daily rainfall of 109.6 mm recorded on 1 March 2013.

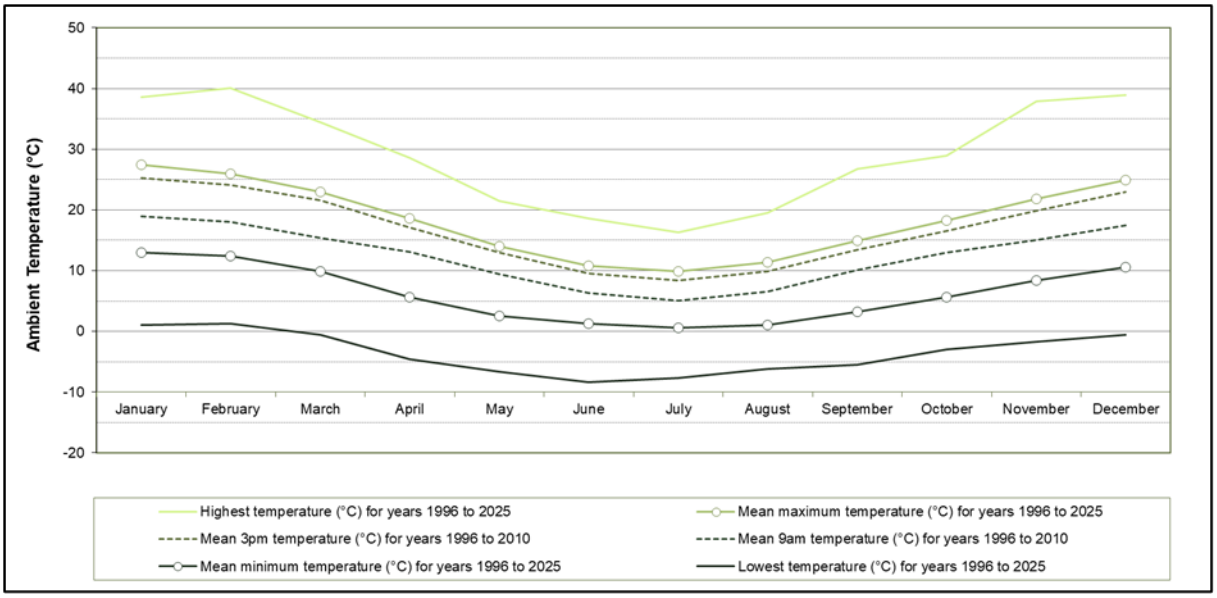


Figure 7 Long Term Temperature Data for Orange Airport (Source: BOM)

2.3.2 Air Quality

Given the rural character and setting of the Project Lots, air quality in the locality is expected to be consistent with other rural environments across NSW. Existing sources of air pollution are expected to include emissions from vehicles and dust from agricultural operations.

The NSW Government operates an Air Quality Management System (AQMS) at Orange (Orange AQMS), located approximately 27 km southeast of the Project that monitors Particulate Matter (PM), PM_{10} and $PM_{2.5}$ concentrations. Available data recorded by Orange AQMS is summarised in Table 8.

The data shows that exceedances of the short-term (24-hour average) air quality criteria for PM_{10} and $PM_{2.5}$ are sometimes recorded in Orange. However, typically, the ambient levels are well below the standards. The main causes of these intermittent exceedance events are bush fires, hazard reduction or agricultural burning, and dust storms.

Table 8 Summary of Review of Available Monitoring Data – Orange (2021-2024)

Year	PM10 (µg/m³)			PM2.5 (µg/m³)		
	24-Hours		Annual Average	24-Hours		Annual Average
	Maximum	90th %ile		Maximum	90th %ile	
2021	46.3	20.4	11.3	32.3 (3)	13.4	6.6
2022	43.1	14.7	8.6	38.9 (5)	9.9	5.3
2023	34.1	21.3	11.4	24.9	15.5	6.7
2024	39.7	20.5	11.3	26.4 (1)	13.1	6.7
All Years	46.3	19.6	10.7	38.9	14.9	6.3
Criterion	**50**		**25**	**25**		**8**
Red indicates exceedance of the criteria with number of exceedances indicated by value in parentheses						

2.3.3 Topography, Hydrology and Flooding

The Project Lots are located within a gently undulating agricultural landscape with small intermittent watercourses that eventually feed into the Molong Creek adjacent to the southern boundary of Lot 99 (refer Figure 8). Molong Creek is identified as 'Key Fish Habitat', however is separated from the Development Footprint by approximately 1.2km (refer Figure 9).

The Project Lots are not situated within a known drinking water catchment.

The elevation of the Project Lots range from 577m to 600m above sea level, generally sloping north to south (refer Figure 10). There is an unnamed first order stream running in a western direction near the southern extent of the proposed BESS towards a small farm dam near Back Saleyards Road. There is also an unnamed first order creek west of the proposed BESS and within the footprint of the proposed access road. The project design will include the installation of creek crossings over this unnamed first order creek to avoid damage to seasonal riparian vegetation. These crossings will be designed in accordance with the *'Controlled activities – Guidelines for watercourse crossings on waterfront land' (DPE, 2022),* Survey's undertaken by SLR Ecologists recorded this creek as dry during November 2024 and February 2025.

The Project Lots are not mapped as having any flood prone land. Council has prepared a Draft Molong Flood Study for the Molong area, however the Site sits immediately east (i.e. outside) of the study area. A Flood Impact Assessment was undertaken to quantify the likely flood conditions in the vicinity of the Development Footprint, refer to Appendix M.

2.3.4 Geology and Soils

The Project is within the Upper Slopes (Inland Slopes) Interim Biogeographic Regionalisation for Australia (IBRA) Subregion. This subregion is characterised by Ordovician to Devonian folded and faulted sedimentary sequences with inter-bedded volcanic rocks and large areas of intrusive granites. Soils are shallow stony soils on steep slopes, texture contrast soils grading from red subsoils on upper slopes to yellow subsoils on

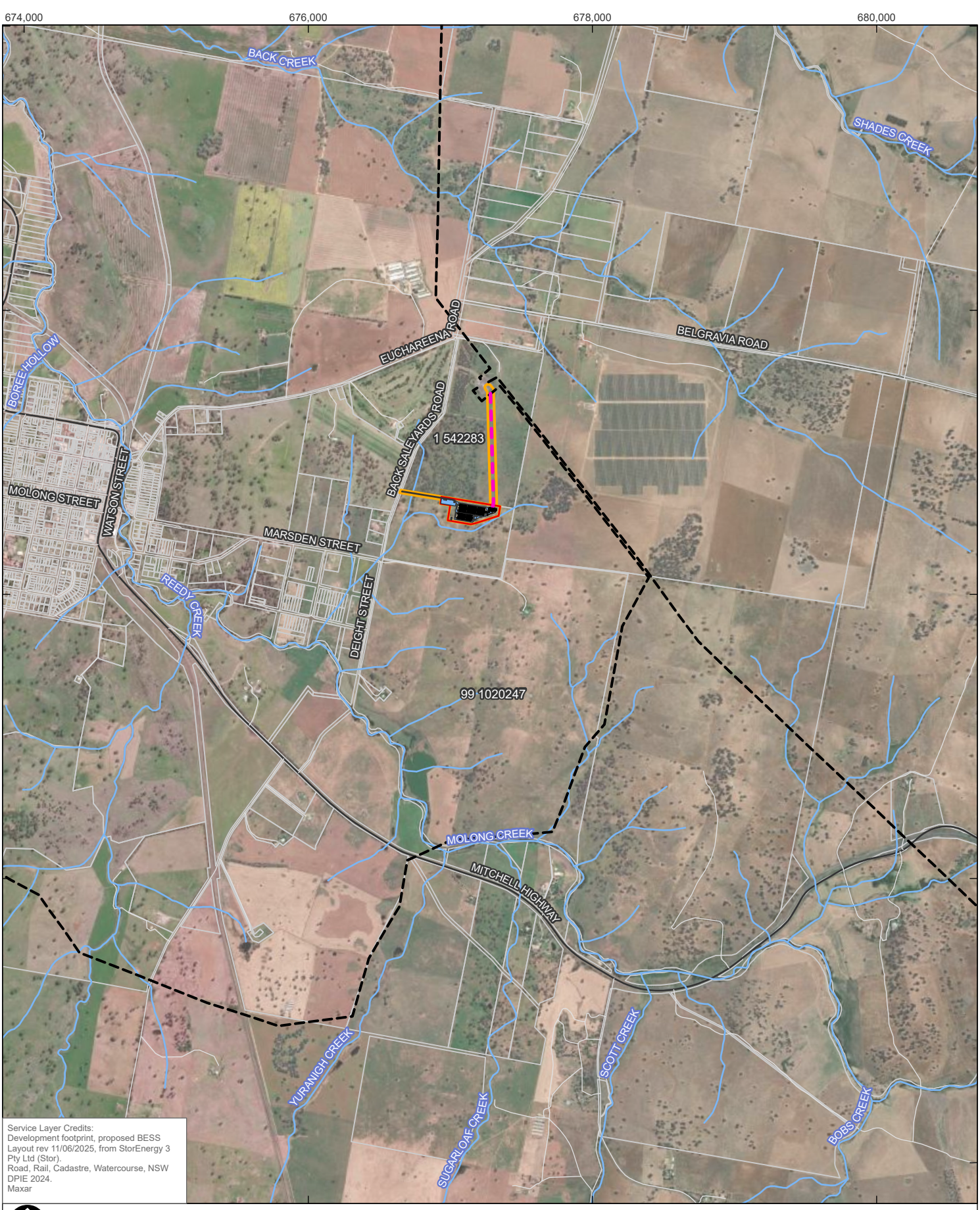
lower slopes. Alluvial sands, loams and clays, with extensive red-brown earths on undulating plains and more extensive grey clays on alluvium.

The Project Lots contains predominantly Euchrozems soils with Alluvial soils adjacent to Molong Creek near the bottom of the site. Euchrozems soils are red, strongly-structured clay soils with a somewhat lower clay content near the surface. The Project Lots are not identified as being steep slope, landslip, or mine subsidence.

Soil investigations undertaken as part of the Land and Soil Capability Assessment (LSCA) (SLR, 2025) in Appendix X confirm that the BESS Footprint comprises predominantly LSC Class 3 and Class 4 soils. Refer to Figure 11 for a map detailing the soil classes on the Project Lots and Figure 12 for the verified LSC classes in the BESS Footprint.

LSC Class 3 is rated as having high capability land. Land has moderate limitations and is capable of sustaining high-impact land uses, such as cropping with cultivation, using more intensive, readily available and widely accepted management practices.

LSC Class 4 is rated as having moderate capability land. Land has moderate to high limitations for high-impact land uses. Will restrict land management options for regular high-impact land uses such as cropping, high-intensity grazing and horticulture.



Service Layer Credits:
Development footprint, proposed BESS Layout rev 11/06/2025, from StorEnergy 3 Pty Ltd (Stor).
Road, Rail, Cadastre, Watercourse, NSW DPIE 2024.
Maxar

0 0.5 1 km

Coordinate System:	GDA2020 MGA Zone 55
Scale:	1:35,000 at A4
Project Number:	620.041615
Date Drawn:	28-Aug-2025
Drawn by:	NT

LEGEND

- Watercourse
- Primary Road
- Road

Transgrid Line

- 132kV
- Cadastre
- Proposed Electricity Transmission Line
- BESS Footprint (5.06 ha)
- Development Footprint (9.56 ha)
- BESS Layout

MOLONG BESS

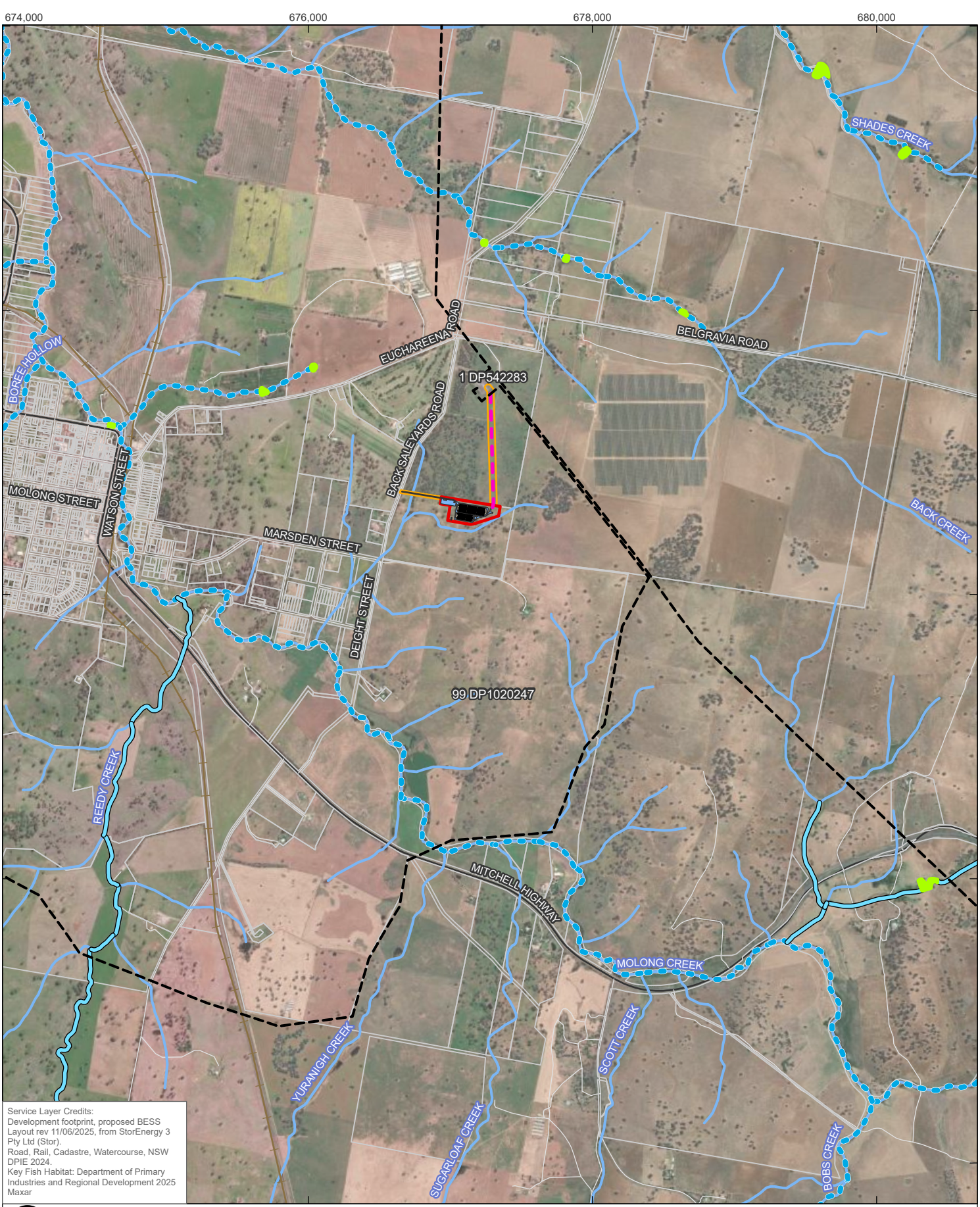
HYDROLOGY

SLR

DISCLAIMER: All information within this document may be based on external sources. SLR Consulting Pty Ltd makes no warranty regarding the data's accuracy or reliability for any purpose.

FIGURE 8

Path: H:\Projects-SLR\620-BNE\620-BNE\620.041615.00001 Stor Energy NSW\06 SLR Data\01 GIS\GIS\NSW_Stor.aprx\620041615_EIS_FXX_Hydrology



Service Layer Credits:
Development footprint, proposed BESS Layout rev 11/06/2025, from StorEnergy 3 Pty Ltd (Stor).
Road, Rail, Cadastre, Watercourse, NSW DPIE 2024.
Key Fish Habitat: Department of Primary Industries and Regional Development 2025 Maxar

0 0.5 1 km

Coordinate System:	GDA2020 MGA Zone 55
Scale:	1:35,000 at A4
Project Number:	620.041615
Date Drawn:	28-Aug-2025
Drawn by:	NT

LEGEND

- Watercourse
- Rail
- Primary Road
- Road

Transgrid Line

- 132kV
- Cadastre
- Proposed Electricity Transmission Line
- BESS Footptint (5.06 ha)
- Development Footprint (9.56 ha)
- BESS Layout

Key Fish Habitat 2

- Modelled Threatened Species Distribution
- Strahler >3
- Key Fish Habitat 2 - Areas

MOLONG BESS

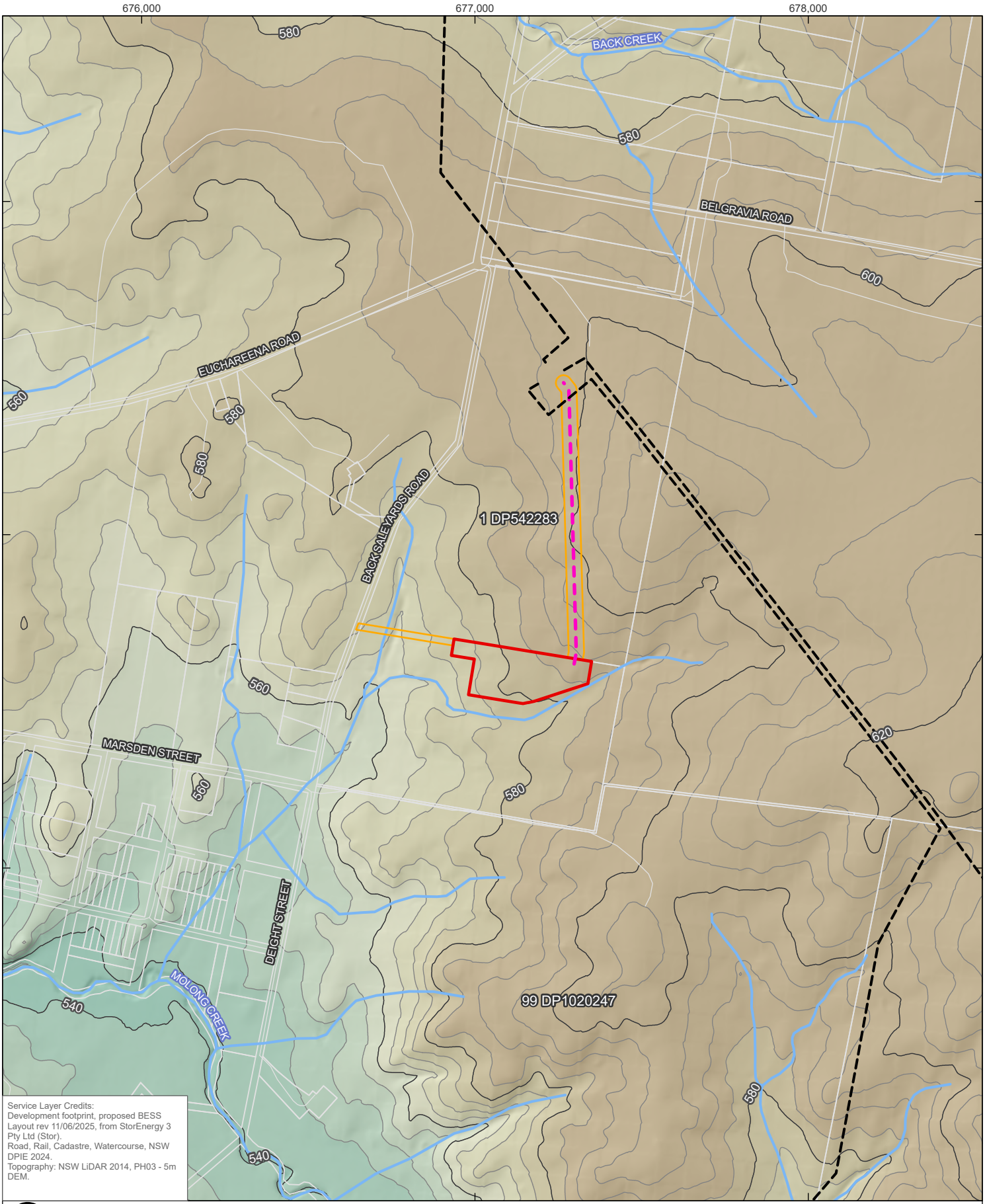
KEY FISH HABITAT

SLR

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FIGURE 9

Path: H:\Projects-SLR\620-BNE\620-BNE\620.041615.00001 Stor Energy NSW\06 SLR Data\01 GIS\GIS\NSW_Stor.aprx\620041615_EIS_FXX_Key Fish Habitat



Service Layer Credits:
Development footprint, proposed BESS Layout rev 11/06/2025, from StorEnergy 3 Pty Ltd (Stor).
Road, Rail, Cadastre, Watercourse, NSW DPIE 2024.
Topography: NSW LiDAR 2014, PH03 - 5m DEM.

0 250 500 m

Coordinate System:	GDA2020 MGA Zone 55
Scale:	1:15,000 at A4
Project Number:	620.041615
Date Drawn:	28-Jul-2025
Drawn by:	NT

LEGEND

- Watercourse
- Primary Road
- Road
- Topographic Contour (20m AHD)
- Topographic Contour (5m AHD)

Transgrid Line

- 132kV

- Cadastre
- Proposed Electricity Transmission Line
- BESS Footptint (5.06 ha)
- Development Footprint (9.56 ha)

Elevation (mAHD)

630
540

MOLONG BESS

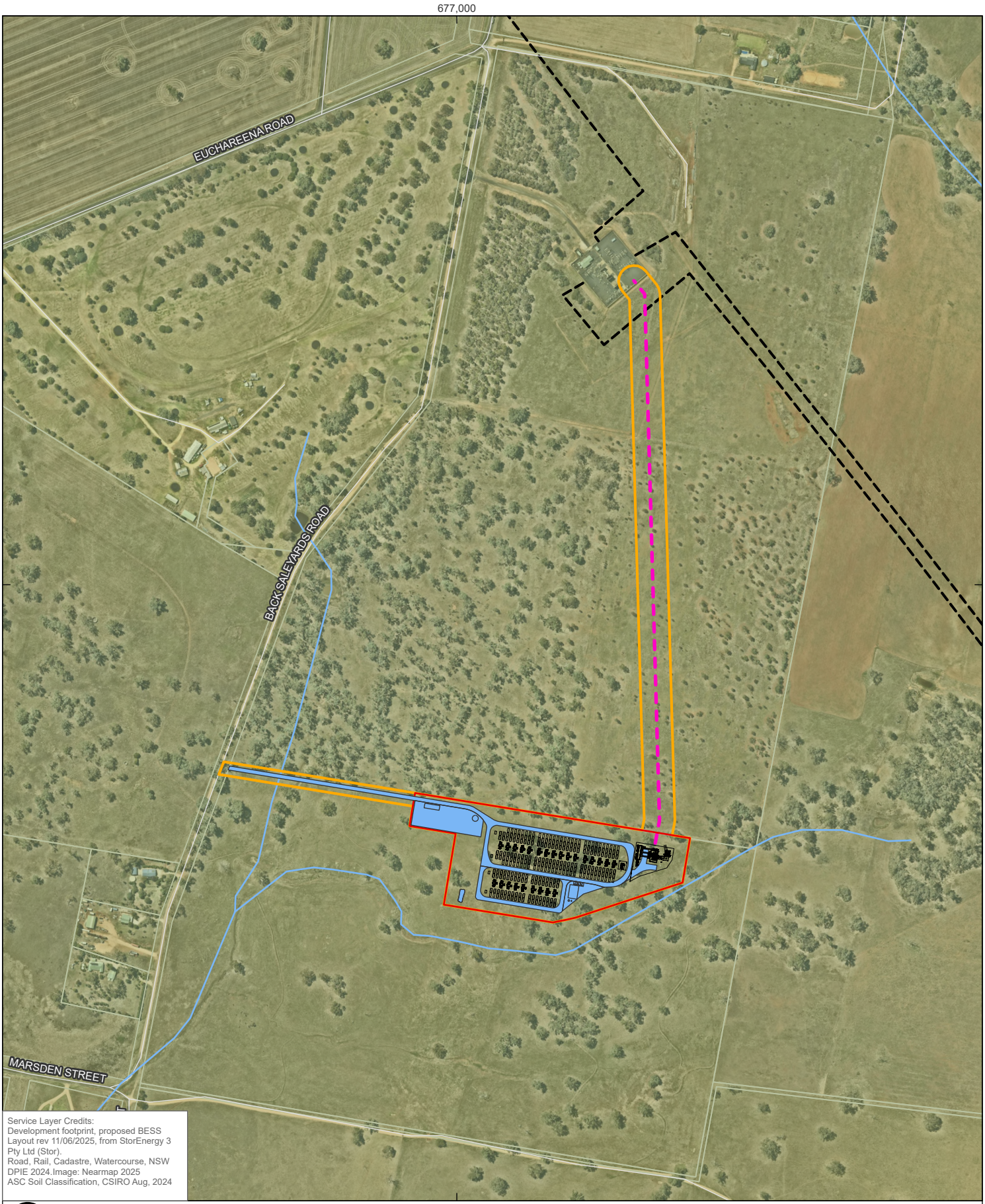
TOPOGRAPHY

SLR

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FIGURE 10

Path: H:\Projects-SLR\620-BNE\620-BNE\620.041615.00001 Stor Energy NSW\06 SLR Data\01 GIS\GIS\NSW_Stor.aprx\620041615_EIS_FXX_Topography



Service Layer Credits:
Development footprint, proposed BESS Layout rev 11/06/2025, from StorEnergy 3 Pty Ltd (Stor).
Road, Rail, Cadastre, Watercourse, NSW DPIE 2024.Image: Nearmap 2025
ASC Soil Classification, CSIRO Aug, 2024

0 100 200 m

Coordinate System:	GDA2020 MGA Zone 55
Scale:	1:7,500 at A4
Project Number:	620.041615
Date Drawn:	06-Aug-2025
Drawn by:	NT

LEGEND

- Watercourse
- Road

Transgrid Line

- 132kV
- Cadastre

Land and Soil Capability

- 3 - Moderate limitations
- Proposed Electricity Transmission Line
- BESS Footprint
- Development Footprint
- BESS Layout

MOLONG BESS

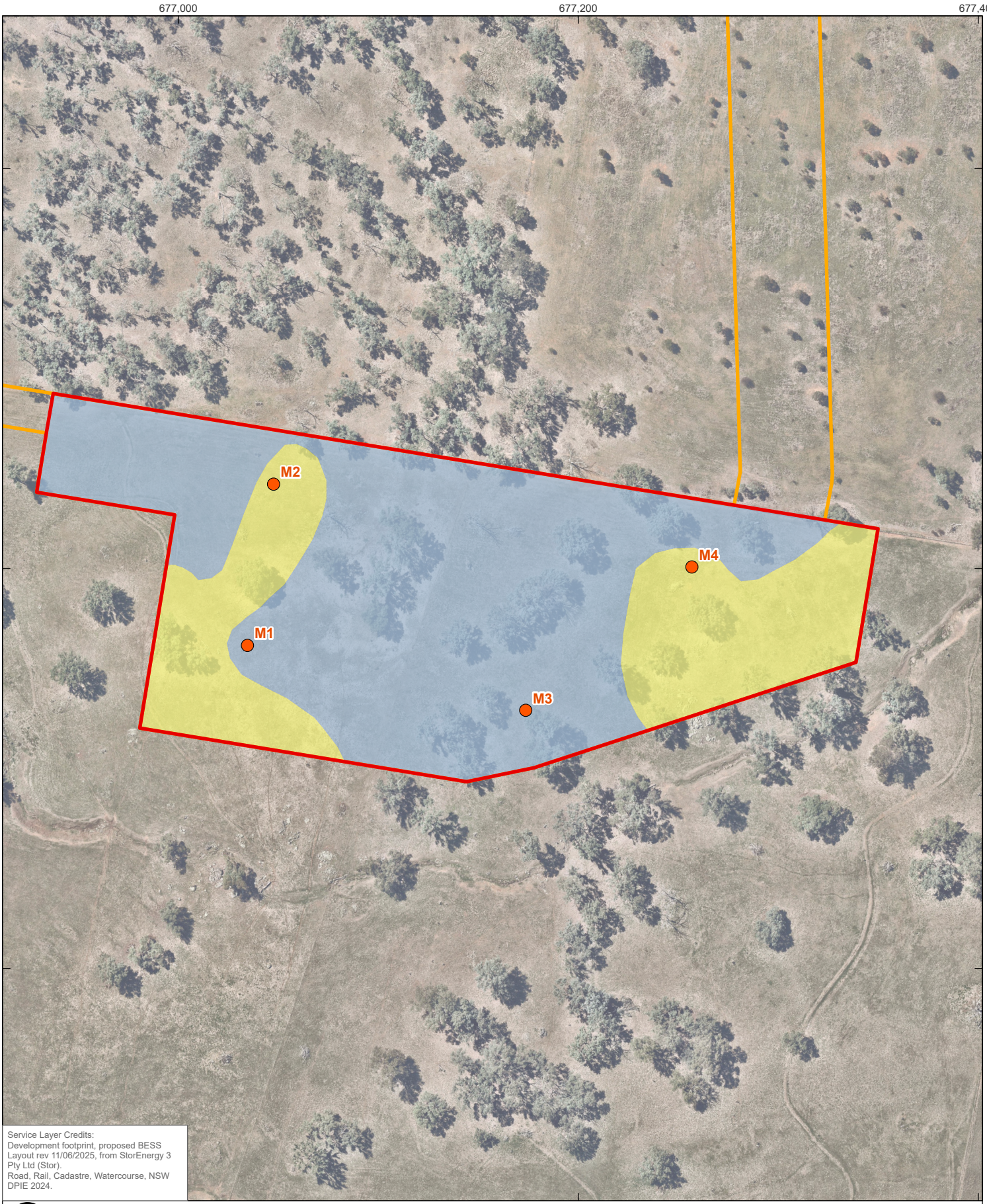
LAND AND SOIL CAPABILITY MAP

SLR

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FIGURE 11

Path: H:\Projects-SLR\620-BNE\620-BNE\620.041615.00001 Stor Energy NSW\06 SLR Data\01 GIS\GIS\NSW_Stor.aprx\620041615_Soil_F09_Land and Soil Capability



Service Layer Credits:
Development footprint, proposed BESS Layout rev 11/06/2025, from StorEnergy 3 Pty Ltd (Stor).
Road, Rail, Cadastre, Watercourse, NSW DPIE 2024.

0 25 50 m

Coordinate System:	GDA2020 MGA Zone 55
Scale:	1:2,500 at A4
Project Number:	620.041615
Date Drawn:	18-Sep-2025
Drawn by:	AS

LEGEND

- Sample Location
- LSC Study Area
- Development Footprint (9.56 ha)

Land and Soil Capability

- Class 3
- Class 4

MOLONG BESS

VERIFIED LAND AND SOIL CAPABILITY CLASSIFICATION

SLR

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FIGURE 12

Path: \\au.slr.local\Corporate\Projects-SLR\620-BNE\620-BNE\620.041615.00001 Stor Energy NSW\06 SLR Data\01 GIS\GIS\NSW_Stor.aprx\620041615_LSC_F05-10_Verified Land and Soil Capability Classification

2.3.5 Groundwater

The Development Footprint is in a mapped Groundwater Vulnerability area under the LEP, refer Figure 13.

The solid geology underlying the site is categorised as Fairbridge Volcanics which comprise interbedded andesitic to dacitic lava flows, volcanic breccias, and volcaniclastic sandstones, with local limestone units likely related to the Reedy Creek or Molong Limestone formations.

Information is available from 18 bores with Standing Water Level (SWL) within 3km of the Project Lots. Recorded SWLs range from approximately 3m to 48m below ground level (mbGL), with an average depth to water of around 15 mbGL. Groundwater levels generally show a trend of shallowing towards surface water features, particularly ephemeral creeks, indicating potential groundwater discharge zones near these drainage lines. Given the highly ephemeral nature of these watercourses, which typically sustain flow only for hours to several days following rainfall events and the generally deep groundwater levels, sustained baseflow contributions are unlikely.

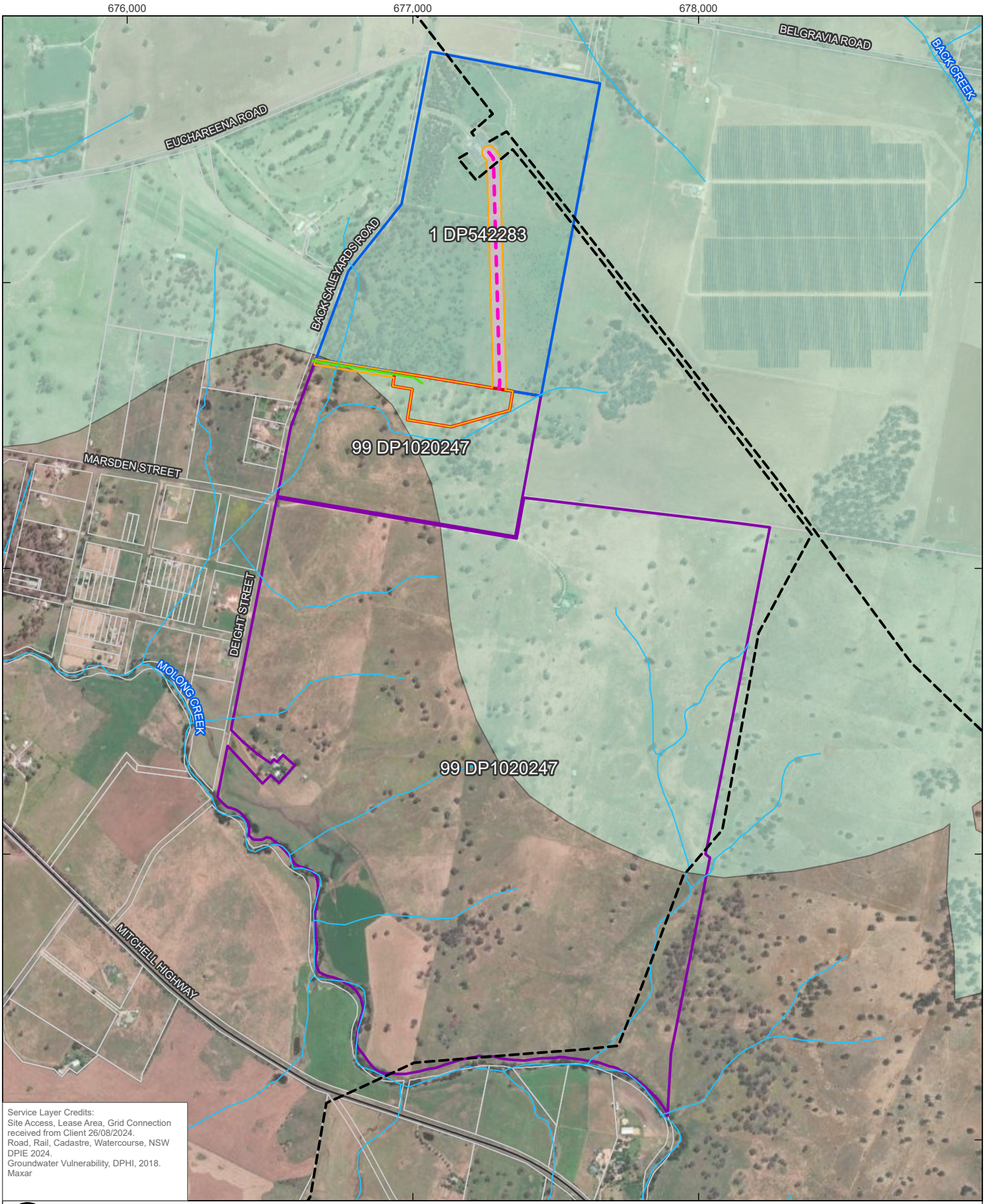
Limited groundwater quality data is available for the Project Lots. Groundwater quality has been derived from bores located within 3 km from the Project Lots. The available samples predominantly indicate a magnesium-bicarbonate water type, consistent with rainfall recharge. Minor magnesium concentrations likely reflect aquifer mineral interactions, while variability in sulfate and calcium, and occasional elevated sodium and chloride, suggest localised soil influence during infiltration. The relatively low Electrical Conductivity (EC) values indicate slightly brackish conditions for bores screened within the Fairbridge Volcanics unit, with little variation observed between varying lithologies (regolith, interbedded limestone, and basalt). Additionally, water quality records reflect a neutral pH.

2.3.6 Contamination

A review of the NSW Environmental Protection Agency (EPA) Contaminated Land Record and the List of Notified Contaminated Sites was undertaken on 26 June 2025, and identified two contaminated sites in the Cabonne LGA. The *Cabonne BP Service Station* located and *Former Gasworks,* both located approximately 2km east of the Project in the Molong Township.

A review of the NSW Department of Regional NSW Naturally Occurring Asbestos (NOA) map was undertaken on 11 June 2025 (SEED 2024). The review indicated that the Project Lots were not on the register and were in an area of known geological unites with low asbestos potential.

Based on this review, there are no known contaminated sites on or near the Project Lots and there is no indication of potential contamination within the Development Footprint.



Service Layer Credits:
Site Access, Lease Area, Grid Connection received from Client 26/08/2024.
Road, Rail, Cadastre, Watercourse, NSW DPIE 2024.
Groundwater Vulnerability, DPHI, 2018.
Maxar

0 250 500 m

Coordinate System:	GDA2020 MGA Zone 55
Scale:	1:17,500 at A4
Project Number:	620.041615
Date Drawn:	28-Aug-2025
Drawn by:	NT

LEGEND

- Watercourse
- Primary Road

Transgrid Line

- 132kV
- Groundwater Vulnerable
- Proposed Electricity Transmission Line
- Proposed Site Access
- Indicative BESS Area
- BESS Site
- Transgrid Substation Site
- Proposed Easement
- Development Footprint

MOLONG BESS

GROUNDWATER VULNERABILITY

SLR

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FIGURE 13

Path: H:\Projects-SLR\620-BNE\620-BNE\620.041615.00001 Stor Energy NSW\06 SLR Data\01 GIS\GIS\NSW_Stor.aprx\620041615_SSD_F13_Groundwater Vulnerability

2.3.7 Biodiversity

The Project Lots lie within the NSW South Western Slopes (IBRA) Region on the lower inland slopes of the Great Dividing Range. This region occupies 10% of NSW and extends from north of Cowra through southern NSW into western Victoria (NPWS, 2003). The region is dominated by sub-humid climate characterised by hot summers with no dry season.

The vegetation in the vicinity is typically composed of Dwyer's Gum on granite, Red Ironbark on sedimentary rocks, Hill Red Gum White Cypress Pine, Red Stringybark in the ranges, Grey Box, Yellow Box, White Cypress Pine, Belah on lower areas, Poplar Box Kurrajong, Wilga, Red Box, in the north, Mallee in the central west, Myall, Rosewood, Yarran on grey clays, Yellow Box, Polar Box, Belah on alluvial loams and River Red Gum or Black Box along streams (NPWS, 2003).

Figure 14 shows native vegetation cover within the assessment area.

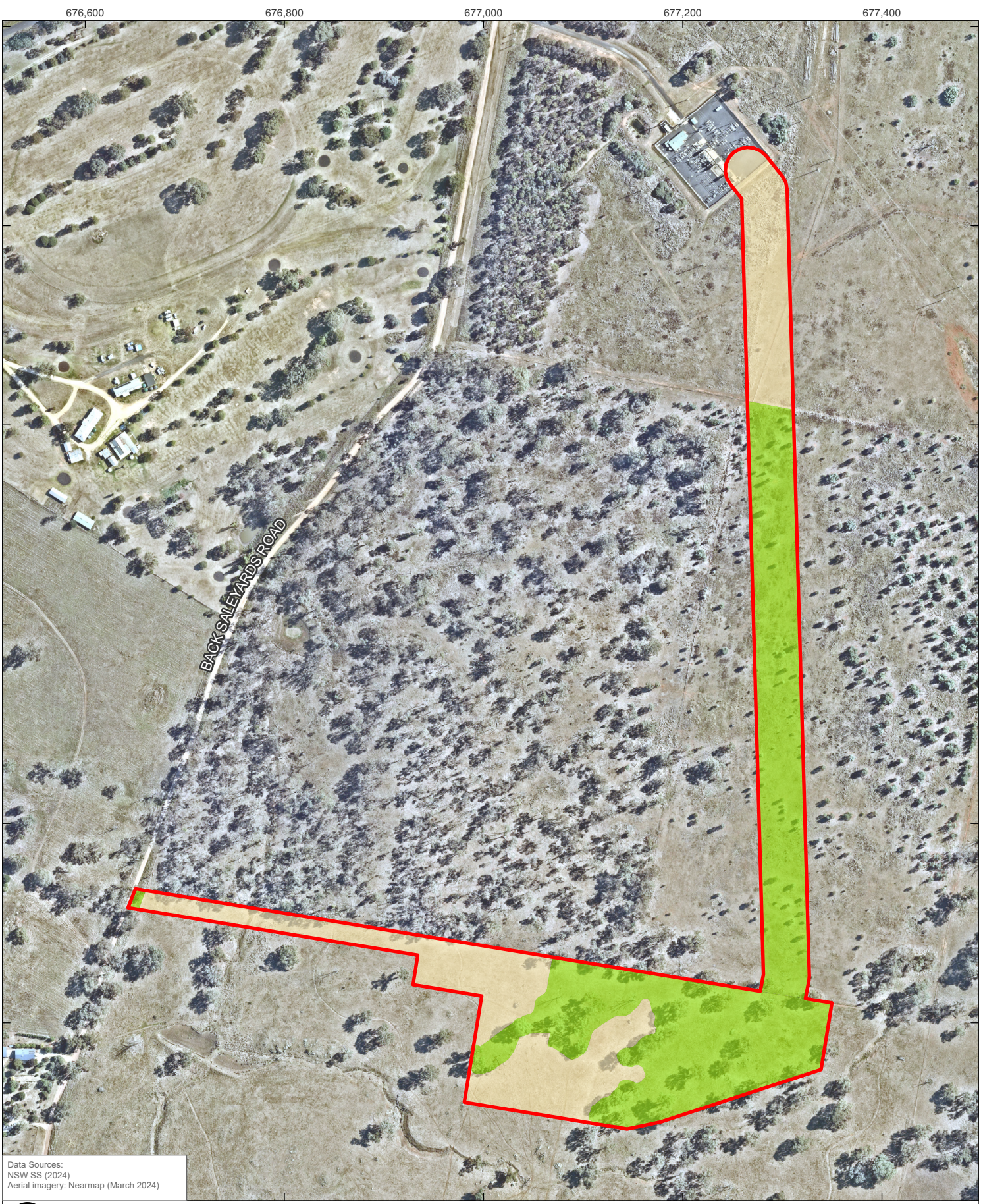
The subject land and assessment area do not contain any karst, caves, crevices, cliffs, rocks and areas of geological significance. There are no areas of outstanding biodiversity value, as identified under the *Biodiversity Conservation Act 2016* (*BC Act*), within the Project Lots and assessment area.

2.3.8 Bushfire Hazard

The Rural Fire Service (RFS) Bushfire Prone Land mapping identifies the Project Lots as bushfire prone land, being identified as Vegetation Category 3, refer to Figure 15. Vegetation Category 3 is considered to be medium bush fire risk vegetation and generally comprises grasslands, freshwater wetlands, semi-arid woodlands, alpine complex and arid shrublands.

2.3.9 Noise

The existing noise environment in the area is typically dominated by infrequent road traffic noise from Back Saleyards Road. SLR conducted background noise monitoring between 13th Nov 2024 to 25th Nov 2024 to establish baseline conditions. The results of this monitoring are included in Chapter 6.0 and the Noise and Vibration Impact Assessment (NVIA) in Appendix K.



Data Sources:
NSW SS (2024)
Aerial imagery: Nearmap (March 2024)

0 50 100 m

Coordinate System:	GDA2020 MGA Zone 55
Scale:	1:5,000 at A4
Project Number:	620.041615
Date Drawn:	08-Jul-2025
Drawn by:	JH

LEGEND

- Subject Land
- Native Vegetation
- Non-native Vegetation / Cleared Land

MOLONG BESS

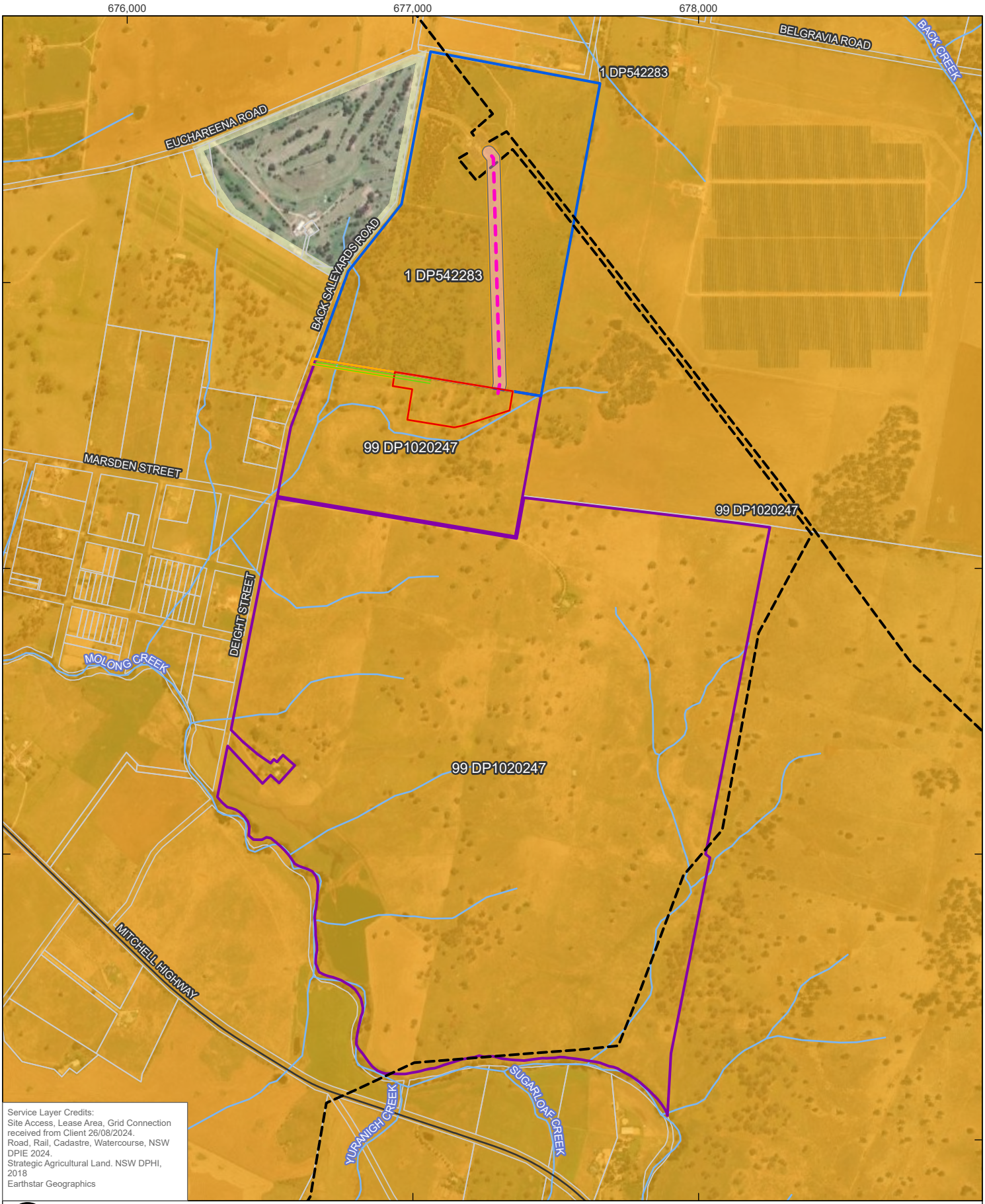
NATIVE VEGETATION EXTENT

SLR

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FIGURE 14

Path: \\au.slr.local\Corporate\Projects-SLR\620-BNE\620-BNE\620.041615.00001 Stor Energy NSW\06 SLR Data\01 GIS\GIS\620041615_StorEnergy_Ecology\620041615_StorEnergy_Ecology.aprx\620041615_BDAR_F07_NativeVegetationExtent



Service Layer Credits:
Site Access, Lease Area, Grid Connection received from Client 26/08/2024.
Road, Rail, Cadastre, Watercourse, NSW DPIE 2024.
Strategic Agricultural Land. NSW DPHI, 2018
Earthstar Geographics

0 250 500 m

Coordinate System:	GDA2020 MGA Zone 55
Scale:	1:17,500 at A4
Project Number:	620.041615
Date Drawn:	28-Aug-2025
Drawn by:	NT

LEGEND

- Watercourse
- Primary Road

Transgrid Line

- 132kV
- 330kV
- Cadastre

Bushfire Prone Land (Non-EPI)

- Vegetation Class 3
- Proposed Electricity Transmission Line
- Proposed Site Access
- Development Footprint (9.56 ha)
- BESS Footprint (5.06 ha)
- Proposed Easement
- Transgrid Substation Site
- BESS Site

MOLONG BESS

BUSHFIRE HAZARD

SLR

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FIGURE 15

Path: H:\Projects-SLR\620-BNE\620-BNE\620.041615.00001 Stor Energy NSW\06 SLR Data\01 GIS\GIS\NSW_Stor.aprx\620041615_SSD_F08_Bushfire Hazard

2.4 Cumulative Impacts

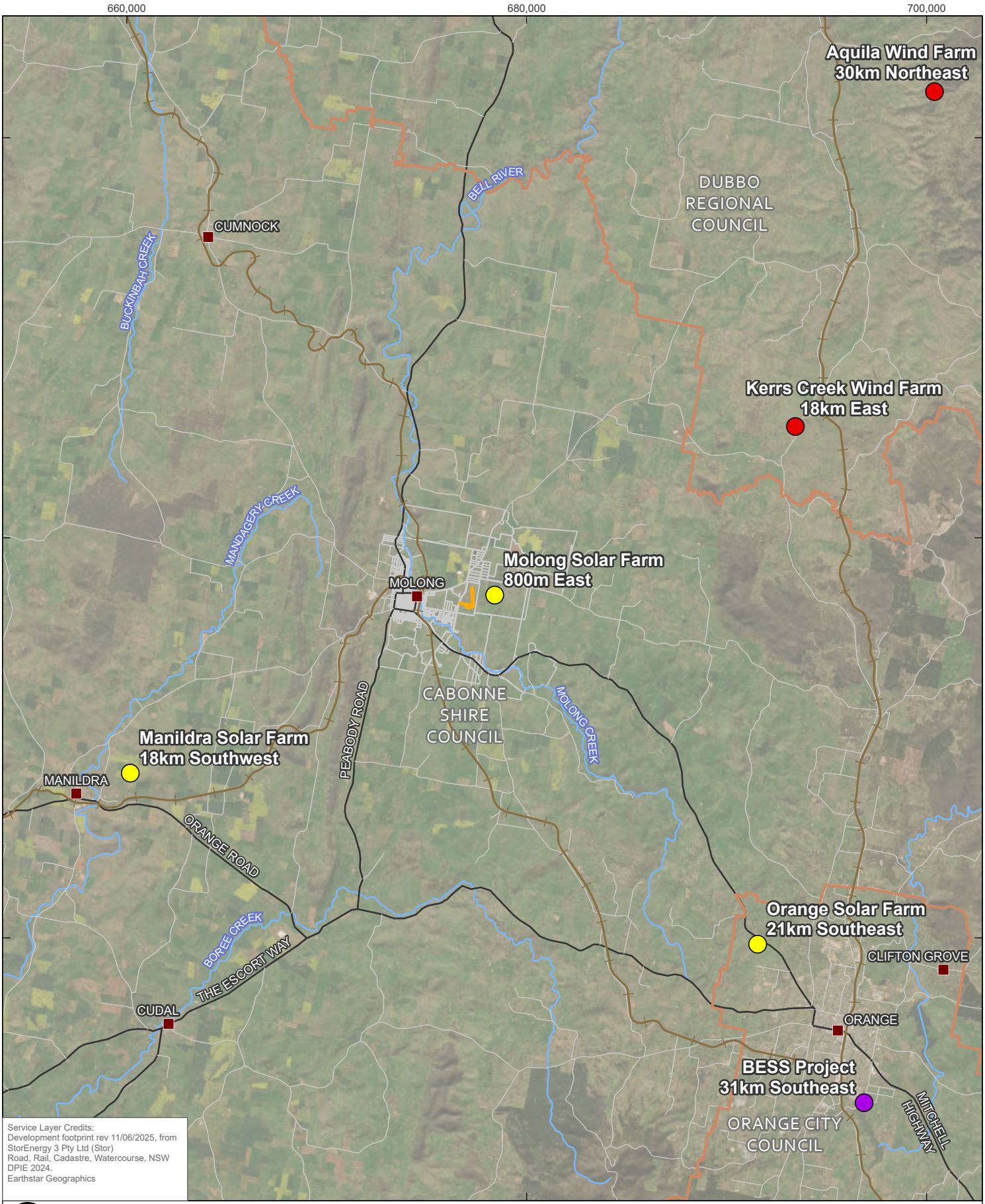
There are a number of projects within the Cabonne LGA and adjoining LGAs (Orange and Dubbo Regional) that have the potential to result in cumulative impacts.

Table 9 below summarises the outcomes of the Cumulative Impact Assessment (CIA) projects identified across the Major Projects website and Council DA tracker that are in proximity to the Project. Figure 16 illustrates these significant projects and their proximity to the Project. Cumulative impacts are discussed further in Chapter 6.0, Section 6.16.

Table 9 Significant Projects in the Cabonne LGA and Surrounds

Project Name	LGA	Project Status	Project Summary	Approximate Distance to Project Lots	Potential CIA
Manildra Solar Farm SSD-9550	Cabonne	Operational: • Operational overlap • No construction overlap	50 MW solar farm	18km southwest	Unlikely
Kerrs Creek Wind Farm SSD-62199230	Dubbo Regional	SEARS received, EIS being prepared: • No information on timing	441 MW wind farm	18km northeast	Potential: • Traffic impacts on road network during construction • Stress on facilities and staff accommodation during construction
Aquila Wind Farm SSD-67667971	Dubbo Regional	SEARS received, EIS being prepared: • No information on timing	300MW wind farm with BESS	30km northeast	Potential: • Traffic impacts on road network during construction • Stress on facilities and staff accommodation during construction
Molong Solar Farm (DA) 2017/155	Cabonne	Operational: • Operational overlap • No construction overlap	25MW solar farm	800m east	Unlikely
Electricity Generation Works (Solar Farm)	Orange	Approved: • Unlikely to have construction overlap	5MW solar farm	21km southeast	Unlikely

Project Name	LGA	Project Status	Project Summary	Approximate Distance to Project Lots	Potential CIA
		• Likely operational overlap			
Electricity Generating Works (solar farm) and BESS	Orange	Lodged: • No information on timing	5MW solar farm	31km southeast	Potential • Stress on facilities and staff accommodation during construction



Service Layer Credits:
Development footprint rev 11/06/2025, from StorEnergy 3 Pty Ltd (Stor)
Road, Rail, Cadastre, Watercourse, NSW DPIE 2024.
Earthstar Geographics

0 5 10 km

Coordinate System:	GDA2020 MGA Zone 55
Scale:	1:250,000 at A4
Project Number:	620.041615
Date Drawn:	29-Jul-2025
Drawn by:	NT

LEGEND

Renewable Energy Projects
- Wind
- Solar
- BESS Project

- Town/City
- Watercourse
- Rail
- Primary Road
- Road
- Cadastre
- Local Government Area
- Development Footprint (9.56 ha)

MOLONG BESS

NEARBY RENEWABLE ENERGY PROJECTS

SLR

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FIGURE 16

Path: H:\Projects-SLR\620-BNE\620-BNE\620.041615.00001 Stor Energy NSW\06 SLR Data\01 GIS\GIS\NSW_Stor.aprx\620041615_EIS_FXX Nearby Renewable Energy Projects

2.5 Agreements

A Voluntary Planning Agreement (VPA) will be put into place with the Stor and Council for monetary contributions at the commencement and during the operational stage of the Project. Ongoing discussion have been had between Stor and Council regarding the VPA and will continue over the course of the project approvals stage.

The VPA is proposed to be based on *Benefit Sharing Guideline – for large-scale renewable energy projects* (DPHI, November 2024).

2.6 Project Alternatives

2.6.1 Alternative Sites

In general terms, BESS facilities require generally large areas of land located preferably adjacent to, or in close vicinity to, an existing substation facility. These characteristics are generally consistent with rural land. As a consequence, there are limited number of suitable locations for such proposals. Other site-specific constraints such as topography, existing use(s) and vehicular access can further reduce the viability of potentially suitable alternative sites for BESS facilities.

Several sites were considered during the site selection process for the Project, with regard made to the following:

- Appropriate zoning of land to facilitate development consent for a BESS.
- Availability of access to the BESS Site via roads capable of allowing truck access.
- Proximity to the existing Transgrid substation to minimise impacts of easements.
- Selection of a construction location that would avoid and/or minimise impacts to high quality native vegetation and protected fauna.
- Area with existing abundance of middle-of-the-day generation and known curtailment issues, and hence the benefit of an energy storage project for the region
- An area that would not result in, or be subject to, potential flood impacts.
- Minimising impacts to surrounding private or public owned land and residential dwellings due to noise and visual amenity concerns.
- Due diligence assessment on risk items, such as soils, hydrology, ecology, that through further assessment have concluded the site is suitable for the BESS use.

2.6.2 Site Considerations

During specialist investigations completed during the Scoping and EIS process, additional design and siting consideration was given to the extent and location of the Development Footprint to avoid and or minimise environmental impacts. These include:

- Realigning the proposed transmission line easement to avoid a patch of woodland that contains five hollow-bearing trees.
- Avoiding interactions with the unnamed first order stream, which runs directly south of the Development Footprint, to minimise impacts on site hydrology, biodiversity and potential cultural heritage features.
- Installing an appropriate method to cross the unnamed first order creek and the proposed access road to avoid blocking fish passage and minimise damage to seasonal riparian vegetation.



- Minimising the visual prominence of the Development Footprint by locating the BESS as close as practicably possible to the Molong Substation, to reduce the extent of overhead transmission lines and towers and maximise setback from public viewpoints (e.g. Back Saleyards Road).

2.6.3 Do Nothing

A 'do-nothing' approach would involve not constructing and operating the BESS. This approach will not support the State and National Government's plans, policies, and strategies identified in Section 2.1, to improve energy affordability, invest in new power sources and grid network infrastructure, and ensure new technologies deliver benefits for customers and work towards Australia's emission reduction targets.

The 'do nothing' option may also avoid potential environmental impacts associated with the construction of the Project; however, it is considered that the benefits of the Project, ensuring appropriate mitigation and management measures are implemented during construction and decommissioning, would significantly outweigh any potential environmental impacts whilst contributing to Ecologically Sustainable Development (ESD).

3.0 Project Description

The Project will involve the development, construction, operation, and eventual decommissioning of a BESS with a capacity of 150 MW/ 730 MWh connecting via overhead transmission line directly to the existing Molong 132/66kV substation operated by Transgrid. A project summary is in Table 10.

The BESS will comprise battery units, inverters, transformers, a substation and ancillary infrastructure all within the indicative BESS area. The battery units will be within individual containers (or enclosures), with each container measuring approximately 6m or 20ft in length with an approximate weight of 43,000kg. The battery units will generally be in a linear arrangement with some minor changes anticipated as detailed design progresses.

The inverters will convert the electricity stored in the battery units from Direct Current (DC) to Alternating Current (AC), and vice versa, that will be directed through a reticulation network of underground 33kV cables within the BESS area and the proposed 33/132kV main transformer and 132kV overhead lines (approximately 900m in length) to the existing Transgrid Molong Substation.

The BESS site will be accessed by a new driveway and crossover from Back Saleyards Road. A concept plan for the proposed access is provided in the TIA and has been designed in accordance with the TfNSW Strategic Design Requirements.

The Project layout is shown in Figure 17.

Table 10 Project Summary

Project Element	Description
Proposed Development – Construction and Operation Summary	The Project will generally involve the following stages/components: • Transport of construction personnel, equipment and materials to and from the Site during construction (dependent on construction schedule), including all associated heavy and light vehicle traffic movements. • Site establishment works including limited vegetation clearing within the Development Footprint, bulk earthworks and a temporary construction compound.

Project Element	Description
	• Road works to formalise a new driveway crossing from Back Saleyards Road and internal site access road for construction purposes and ongoing access. • Construction of hardstand/laydown areas, fencing, internal roads, control room, auxiliary transformer, battery enclosures, and inverter/transformer/switchgear stations (referred to as Power Conversion Stations (PCS)). • Construction of approximately 900m of overhead 132 kV transmission line to facilitate connection to the existing Transgrid's Molong Substation and associated high voltage concrete or steel poles and wiring. • Construction of ancillary works including a parking area, water tank, Operations and Maintenance (O&M) building (including storage structures), stormwater management infrastructure, security lighting and fencing. • The installation of 264 BESS units (maximum) within individual, modular containers, on hardstand footings with a total capacity of 150 MW / 730 MWh. • The installation of 50 inverters on hardstand footings. • Installation of subsurface cabling infrastructure throughout the BESS Footprint. • Commissioning and testing of all installed equipment on the Development Footprint. The BESS may be subject to capacity replenishment and/or capacity augmentation events as necessary to extend storage durations.
Site Access	Access to the Lot 99 is proposed via a new vehicle crossover and driveway from Back Saleyards Road. Back Saleyards Road will be monitored during constructed and maintained in consultation with Council. An internal access road will be established to accommodate construction vehicles and vehicles associated with ongoing maintenance.
Grid Connection	A new overhead transmission line (132 kV) and associated high voltage steel poles will be constructed to connect the BESS to the existing Transgrid Molong 132/66 kV substation north of the BESS Footprint. The transmission line poles will be up to 18 metres (m) in height with a minimum ground clearance of 7.5 m and located within the proposed 45m transmission line easement.
Construction Duration	Construction is anticipated to take approximately 22 months from commencement of construction to end of reliability testing. There will be a peak construction period of two months
Operation Life Expectancy	The operational life will be determined by the evolving nature of the technology, however is anticipated that the lifespan will be approximately 30 years from the Commercial Operation Date (COD).
Decommissioning	The BESS will be decommissioned, and the infrastructure removed, returning the Development Footprint to its original use following the approximate 30 year life expectancy.



3.1 Project Overview

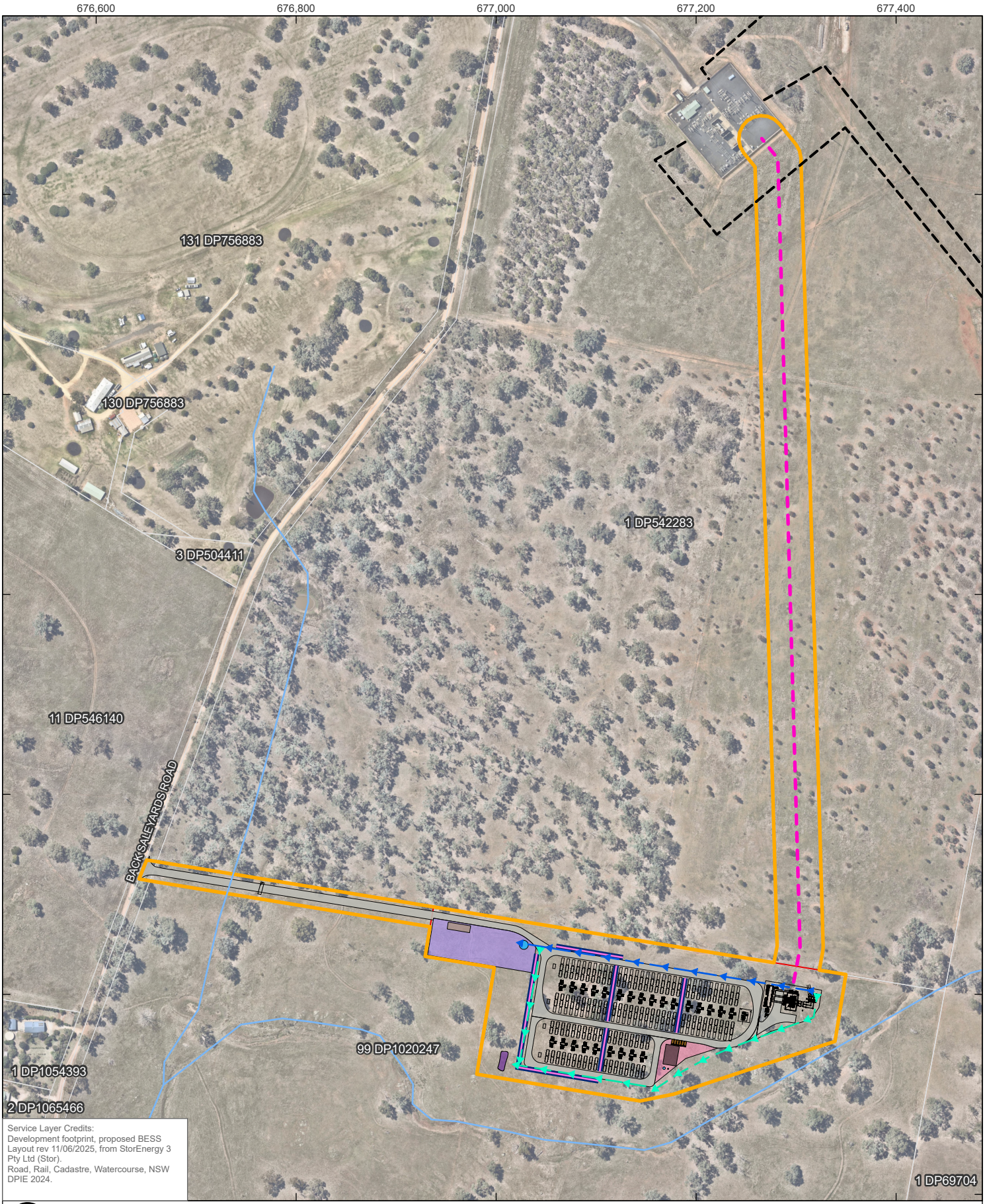
3.1.1 Development Footprint

The ‘Development Footprint’ represents the defined area that will comprise all construction activities, including earthworks and vegetation clearance, the proposed BESS, ancillary, infrastructure, road access and transmission line corridor.

The proposed Development Footprint will be approximately 9.56 Ha, with an estimated 0.58 Ha for the road access, 5.06 Ha for the BESS Footprint, and 3.92 Ha for the transmission line corridor (refer Figure 18).

The new internal access road will be approximately 20m wide connecting Back Saleyards Road to the BESS. The transmission line corridor will connect the BESS to the existing Molong Substation to the north. Details of the transmission line are included in Section 3.1.3. An easement measuring 45m wide is proposed for the final transmission line route and associated poles.

The BESS and ancillary components as detailed in Section 3.1.2 and Section 3.1.5.



Service Layer Credits:
Development footprint, proposed BESS Layout rev 11/06/2025, from StorEnergy 3 Pty Ltd (Stor).
Road, Rail, Cadastre, Watercourse, NSW DPIE 2024.

0 100 200 m

Coordinate System:	GDA2020 MGA Zone 55
Scale:	1:5,000 at A4
Project Number:	620.041615
Date Drawn:	30-Oct-2025
Drawn by:	NT

LEGEND

- Watercourse
- Road

Transgrid Line

- 132kV
- Cadastre
- Proposed Electricity Transmission Line
- Noisewall
- BESS Infrastructure
- Proposed Site Drain
- Proposed Swale Drain
- BESS Footprint (5.06 ha)
- Development Footprint (9.56 ha)
- Car Parking Spaces
- Construction Compound
- Detention Basin
- Internal Road
- Laydown Area
- O&M Building
- Sewerage Holding Tank
- Washdown Bay
- Water Tank
- Culvert

MOLONG BESS

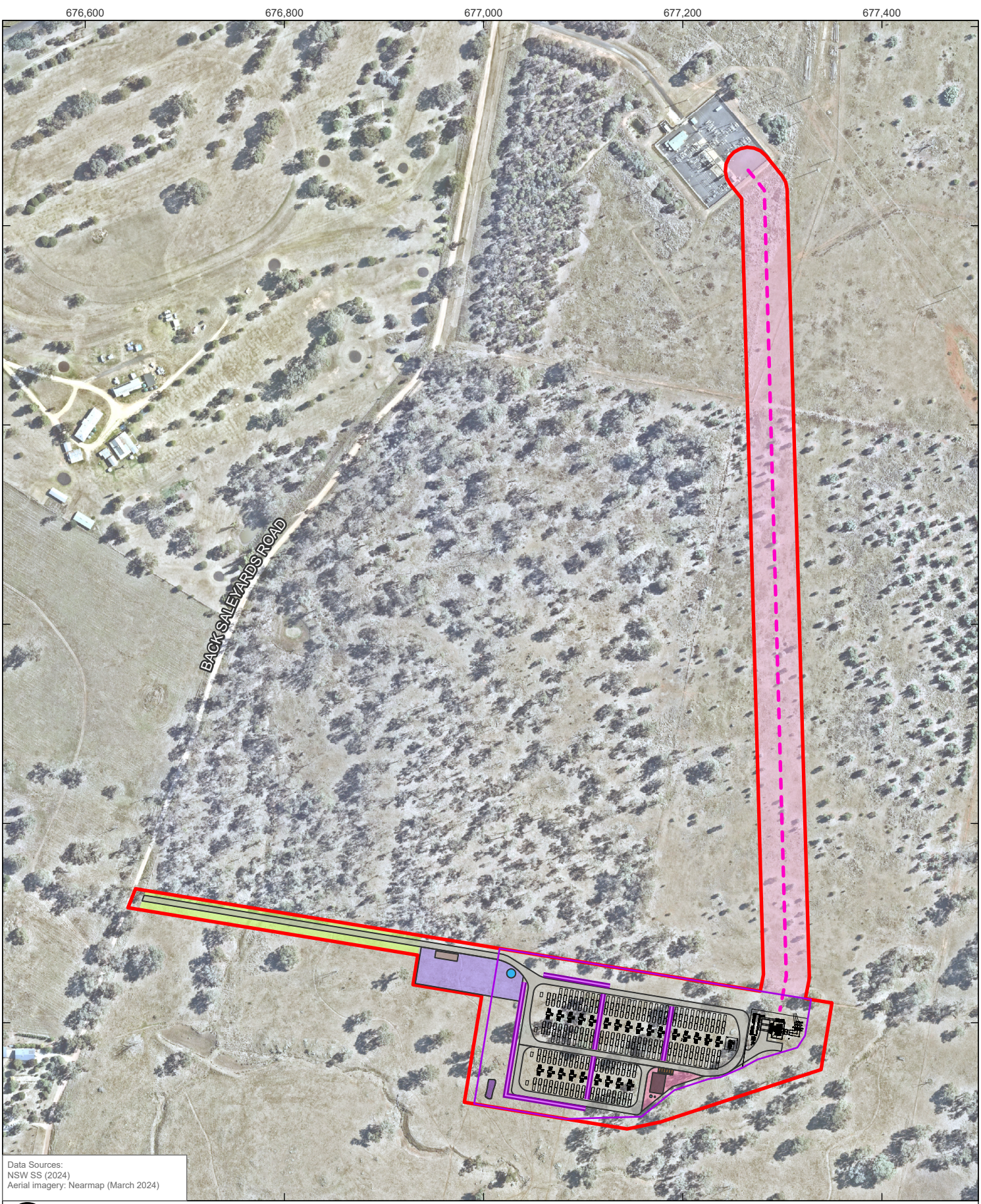
PROJECT LAYOUT

SLR

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FIGURE 17

Path: H:\Projects-SLR\620-BNE\620-BNE\620.041615.00001 Stor Energy NSW\06 SLR Data\01 GIS\GIS\NSW_Stor.aprx\620041615_EIS_FX_Project Layout



Data Sources:
NSW SS (2024)
Aerial imagery: Nearmap (March 2024)

0 50 100 m

Coordinate System:	GDA2020 MGA Zone 55
Scale:	1:5,000 at A4
Project Number:	620.041615
Date Drawn:	07-Jul-2025
Drawn by:	JH

LEGEND

- Subject Land
- Transmission Line Easement
- Access Track Easement
- Proposed Electricity Transmission Line

BESS Features

- Car Parking Spaces
- Construction Compound
- Detention Basin
- Internal Road
- Laydown Area
- O&M Building
- Sewerage Holding Tank
- Washdown Bay
- Water Tank
- Fence line
- BESS Infrastructure
- Noisewall

MOLONG BESS

DEVELOPMENT LAYOUT

SLR

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FIGURE 18

Path: \\au.slr.local\Corporate\Projects-SLR\620-BNE\620-BNE\620.041615.00001 Stor Energy NSW\06 SLR Data\01 GIS\GIS\620041615_StorEnergy_Ecology\620041615_StorEnergy_Ecology.aprx\620041615_BDAR_F03_DevelopmentLayout

3.1.2 BESS Components

The BESS would be capable of discharging up to 150 MW of dispatchable power. By storing energy at times when there is excess supply and discharging at times of high demand, the battery would contribute to the reliability of the electricity system, providing on demand power when it is most needed.

The BESS units are comprised of lithium-iron-phosphate batteries which are specifically selected for fire safety. Each enclosure will have ventilation and air conditioning systems that maintain the equipment within operational temperature limits.

A total of 50 inverters will be located externally to the modular battery enclosures. The inverters are connected to external MV transformers and switchgear, each combination forming a Power Conversion Station (PCS). The batteries and PCSs are connected to each other with undergrounded, rack mounted or cable trenched cables and are fixed to a level development pad.

3D renders of the BESS enclosures and inverters are provided in Figure 19 and Figure 20.

The specifications for the proposed BESS below are detailed in Table 11.

Table 11 BESS Specifications

Specification	Detail
Number of enclosures	Up to 264 battery enclosures (6m container frame).
Dimensions	6m container (6,058 millimetre (mm) x 2,438 mm x 2,891 mm each)
Weight	43,000 kg each
Battery chemistry	Lithium-iron-phosphate
Inverters	50 Inverters (approximately 4,400 Kilovolt-amperes (kVA))
Dimensions	Twin Skid (6,000 mm x 2,240 mm x 2,300 mm) Inverter (3,000 mm x 2,020 mm x 2,300 mm)
Medium Voltage (MV) Transformers	Up to 50 MV inverter transformers and auxiliary supply transformers
Substation	1x180 Megavolt-amperes (MVA) main transformer and associated 132kV and 33 kV switchgear, control and switch room buildings, auxiliary transformers and reactive power plant



Figure 19 Example of a Battery Enclosure (Source: Stor)

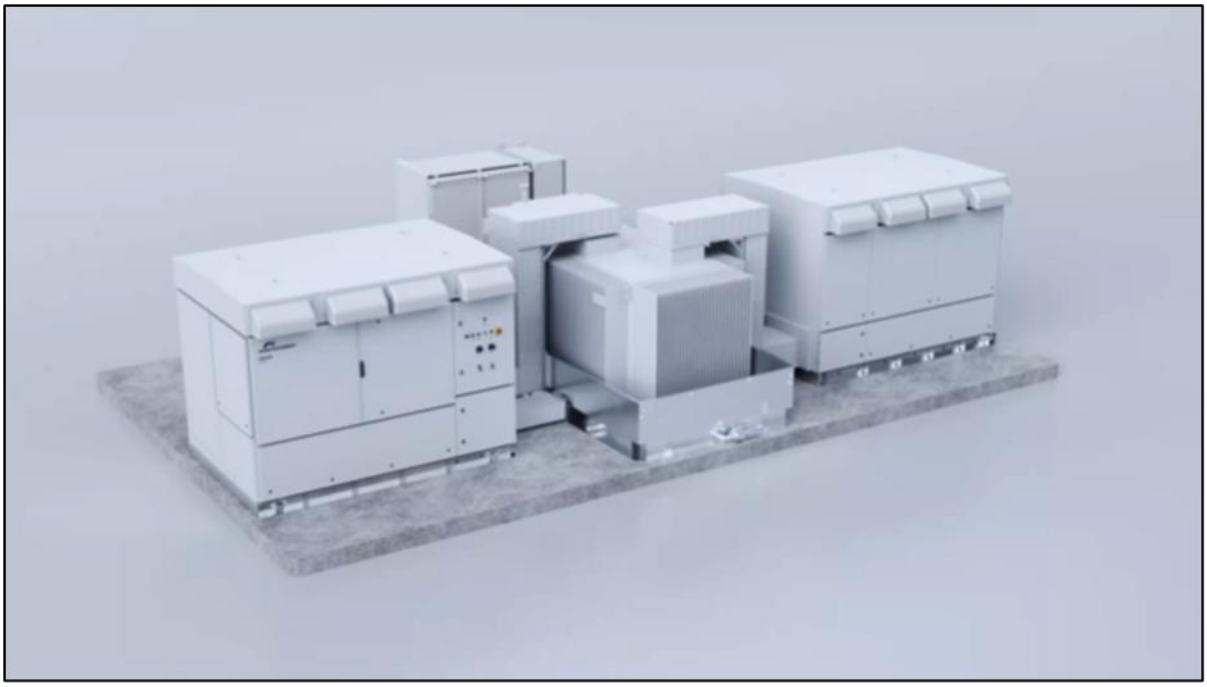


Figure 20 Example of a Power Conversion Station (Source: Stor)

3.1.3 Grid Connection

A new overhead transmission line (132 kV) will be constructed to connect the proposed BESS substation to the existing Transgrid Molong 132/66 kV Substation. The overhead transmission line will be approximately 900m in length.

The transmission line route will run north from the eastern extent of the BESS, before connecting to the Molong Substation (refer to Figure 18 and Appendix B). A 45m wide easement is proposed for the transmission line.

The transmission line poles will be up to 18m in height above ground with a minimum ground clearance of 7.5m, located within the proposed 45m wide transmission line easement. Six to eight transmission line pole structures are proposed to facilitate the route to the Molong Substation, subject to detailed line design. An example of typical transmission line poles and 16m 'landing structures' within the proposed substation are illustrated in Figure 21.



Figure 21 Examples of Transmission lines and poles (Source: Stor)

3.1.4 Construction

Construction of the Project will require heavy vehicles, plant, and equipment for the transportation of components and installation of the components on the site. The Project is likely to require earth-moving equipment for civil and road works, cable trenching equipment, forklifts, and cranes subject to detailed design to install the BESS and complete ancillary works.

3.1.4.1 Construction Phases and Activities

It is anticipated that the construction and commissioning phase will last approximately 22 months from construction start to the end of commissioning activities. The construction period will be 12-14 months with commissioning period comprising 8-12 months, noting there will be overlap between the start of commissioning activities and end of construction. An overview of the key construction phases and estimated durations are included in Table 12.

Table 12 Key Construction Timeframes

Phase	Description	Estimated Duration (Months)
Construction	Mobilisation through to final BESS/PCS installation	12-14
Peak Activity (Works)	Equipment shipments to site, installation, substation and connection/energisation, and commissioning activity.	2 (during construction period)

Phase	Description	Estimated Duration (Months)
Commissioning	Cold/ hot commissioning, hold point testing, performance testing.	8-12
Total	**Construction to end of commissioning**	**22**

The main construction activities will include:

- Transportation of construction personnel, associated heavy and light vehicles, and materials to and from the site on a day-to-day basis, dependent on construction schedule.
- Site establishment works including vegetation clearing within the Development Footprint, bulk earthworks, and a temporary construction compound.
- Road works to formalise internal site access road to accommodate heavy vehicles, including a new driveway crossover. A concept plan for the internal access is provided in the TIA at Appendix L, wand designed in accordance with the TfNSW Strategic Design Guidelines.
- Construction of hardstand, gravel all weather access road and sealed BESS internal roads and curbing.
- Construction of project substation including installation of earthing grid, benching works, footings, transformer bunding, installation of 33kV/132kV main transformer, outdoor switchgear, HV busbar and support structures, overhead gantry structures, auxiliary transformers, harmonic filters, and reactive plant.
- Construction of overhead 132 kV transmission line to facilitate connection of the proposed substation to the the existing Transgrid Molong 132/66kV transmission substation to the north.
- Installation of underground 33kV reticulation cabling, auxiliary transformers, battery enclosures, and inverter & transformer stations.
- Construction of ancillary works including parking areas, water tank, storage structures, stormwater management infrastructure (e.g. bioretention basin), fire water retention solution, security cameras, security lighting, noise walls and fencing.
- Cold and hot commissioning of BESS and substation equipment.
- Hold point testing and Final Acceptance.
- Removal of temporary construction facilities, and rehabilitation of disturbed areas following completion of construction of the Project.

3.1.4.2 Construction Materials

The following materials will be transported to the site to facilitate construction of the Project and ancillary facilities and infrastructure:

- Up to 264 battery enclosures, within modular containers.
- 50 inverters integrated into PCS including inverters, transformers and switchgear.
- Hardstand works materials and equipment.
- Bulk earthworks materials and equipment.
- Retention and/or detention basin engineered linings.
- Concrete foundations and footings.

- Building structures (Operation and Maintenance (O&M) building and storage warehouse and including temporary structures for construction crew and management).
- Noise walls materials.
- Control and 33kV switchrooms, approximately 6m in height, and 132 kV Switchgear.
- 220 kVA backup diesel generator.
- Substation and battery auxiliary transformers.
- Harmonic Filters and reactive power plant.
- Busbar and conductor support structures.
- Lightning protection masts (four 20m in height and 44 10m in height.
- Stock fencing, security fencing, gates, security cameras and lighting.
- Fire Safety System.
- 1 x 150 kilolitre (kL) water storage tank (with state stortz hose fitting) for emergency response purposes.
- 1 x 20kL potable water tank.
- Sewage storage system.
- 132 kV concrete or steel poles.
- Overhead bare wire conductors.
- Integrated earthing systems for the substation and battery areas.
- Low and high voltage DC AC cabling.
- 33/132 kV Main Transformer 7.5m in height from bottom of main tank to top of insulation bushings.
- Transformer bunding and environmental controls for insulation oil.

3.1.4.3 Construction Hours and Personnel

As noted, construction of the Project is anticipated to take approximately 22 months from start of construction to the end of commissioning. During construction, it is anticipated that approximately 70 full time equivalent (FTE) jobs will be required during the peak of site activity. At construction commencement, employment numbers will fluctuate starting with about 23 FTE on site for up to two months. During off peak work periods, staff numbers will reduce to around 29 FTE average. Approximately 20 FTE are required for commissioning periods and two FTE staff frequenting site during ongoing operations.

The workforce will be sourced from the local area where possible, however procurement from the wider region, intrastate and interstate is expected subject to skillset availability.

The following standard construction hours are proposed for the Project:

- Monday to Friday – 7 am to 6 pm.
- Saturday – 8 am to 1 pm.
- Sunday and Public Holidays – No works to be undertaken.



No works are proposed to be undertaken outside of the standard construction hours. In the event this is required, Out of Hours (OOH) approval would be sought, and all works would be undertaken in accordance with the appropriate OOH protocols and approval processes.

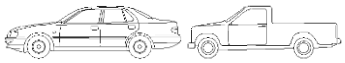
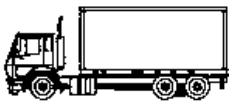
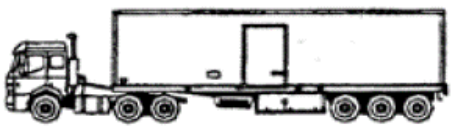
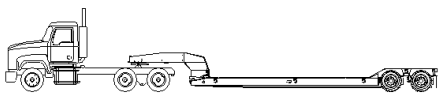
3.1.4.4 Construction Traffic and Equipment

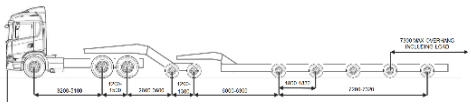
Construction traffic will access the Project from a new access driveway and crossover to be constructed from Back Saleyards Road. The following construction activities are anticipated to generate traffic on the external road network:

- Site Compound establishment and construction vehicle & machinery deliveries.
- Equipment, Materials and Miscellaneous deliveries.
- Workforce transportation.

The construction vehicle fleet will comprise a mixture of 'light', 'heavy', Oversize and Over Mass (OSOM) vehicles to transport workers and materials to the Development Footprint. The anticipated vehicle fleet is shown in Table 13.

Table 13 Project Construction Vehicle Fleet (SLR, Traffic Impact Assessment (TIA), 2025)

Vehicle	Typical Vehicle Profile	GML(t)	Haulage Material / Use
Private Vehicle (B99 design vehicle)		-	Workforce Travel
Concrete Mixer Truck (6.0m3 - 4 or 5 Axle)		16t	Concrete
HRV (12.5m)		6t	Waste Water Fuel, Oil and Hydraulic Fluids, Sewage Various Miscellaneous
Truck and Dog Trailer Combination (20m - 7 Axle)		25t	Quarry Products Aggregates
AV (20m - 6 Axle)		25t	Demountables Inverter Delivery Various Equipment
Low Loader (25m - 5 Axle)		25t	Plant Mobilisation Construction Demobilisation Various Equipment
Class 1 OSOM Prime Mover and Goose-Neck Low Loader with Dolly (Up to 23m)		43t	Battery Units

Vehicle	Typical Vehicle Profile	GML(t)	Haulage Material / Use
Class 1 OSOM 33m prime mover with a 10-axle flatbed trailer with a two-axle dolly		160t	Large Power Transformer

The light vehicle movements are expected to be predominantly for the workforce required to service the development for all phases. These vehicles will originate predominantly from Molong and Orange and comprise utes and small vans. The proposed Light Vehicle Route is shown in Figure 22.

The majority of the core BESS equipment is expected to be transported to the site from the Port of Newcastle whereas the transformer will be transported from the Port of Kembla. OSOM vehicles will be required to transport the transformer, switch room, control room and battery containers (enclosures). The OSOM equipment originating from Port Kembla and Port of Newcastle will follow specific routes tailored for this Project.

Some construction machinery required for the Project may also require OSOM vehicles, mainly due to the width of the equipment. It is anticipated that these vehicles are expected to originate from the local area (from Molong, Orange and surrounds). These OSOM vehicles will likely transport the roller compactors, excavators, graders, dozers, dump trucks and cranes. The OSOM equipment originating from the local area will follow the general National Heavy Vehicle Regulator (NHVR) guidelines

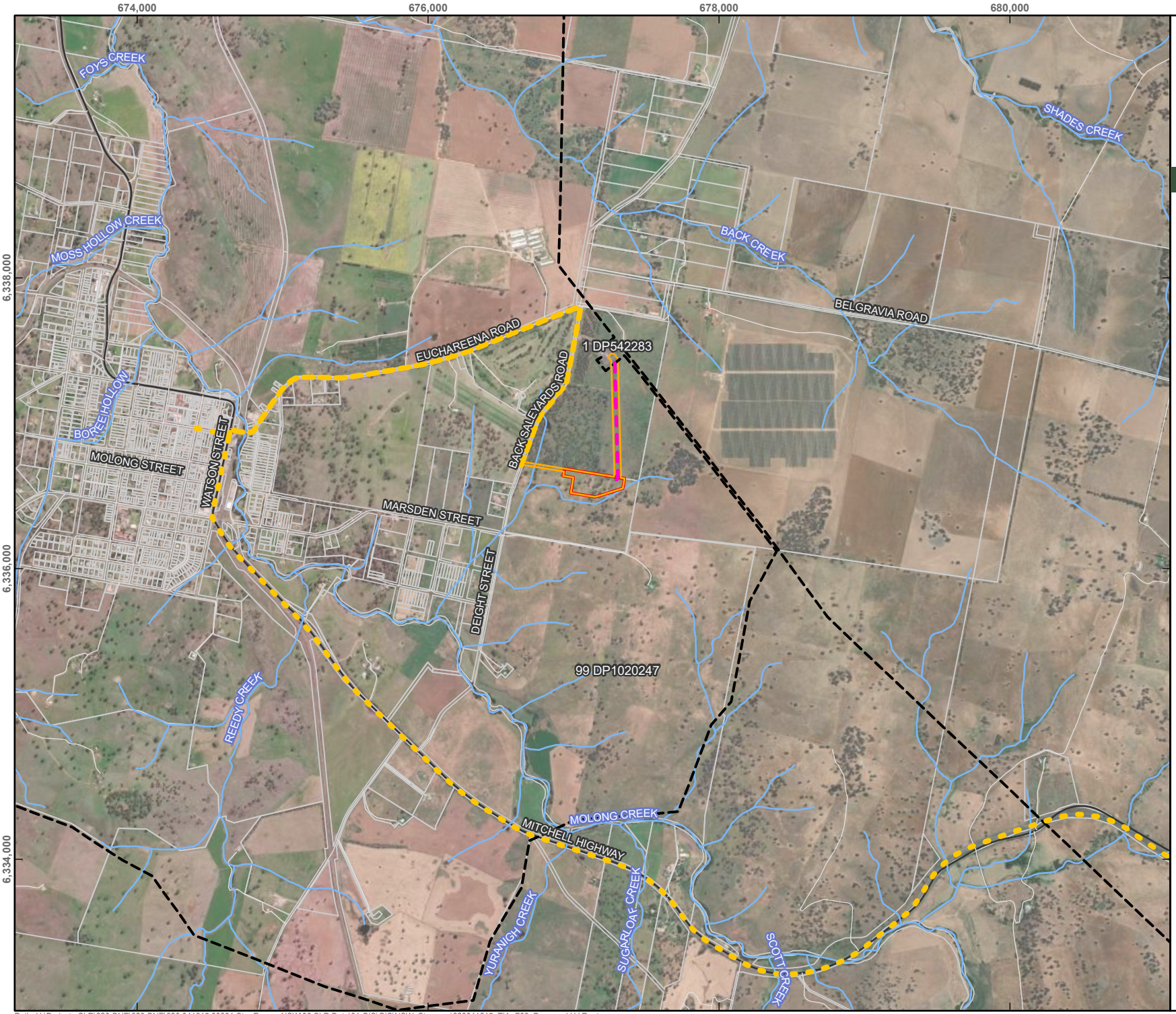
Excluding the transportation of the OSOM items, the largest vehicle that will be utilised for the construction works will be limited to the size of 26m B-Double design vehicles or 25m long goose-neck low loaders (infrequently).

The 20m Articulated Vehicles (AVs), 20m Truck and Dog Trailer Combinations and 12.5m Heavy Rigid Vehicles (HRVs) will be utilised more frequently. The construction fleet will comprise the following heavy vehicles:

- Toyota Coaster type shuttle buses for the workforce (under 4.5t Gross Vehicle Mass – GVM).
- Concrete mixer trucks.
- 12.5m HRVs.
- 20m AVs.
- 20m truck & dog trailer combinations.
- 25m goose-neck low loader.

The proposed Heavy Vehicle Route is shown in Figure 23.

A Construction Traffic Management Plan (CTMP) or equivalent document will be prepared following approval but prior to the substantial commencement of construction activities. The purpose of the CTMP will be to identify any changes to development planning prior to works taking place and the impact of these changes. In addition, the document will detail impact mitigation strategies, including soft strategies such as busing the workforce. The CTMP will also provide operational information such as contact details of the maintenance contractor.



MOLONG BESS

PROPOSED LIGHT VEHICLE ROUTE

FIGURE 22

LEGEND

- Watercourse
- Primary Road
- Road

Transgrid Line

- 132kV
- 330kV
- Proposed Light Vehicle Route
- Proposed Electricity Transmission Line
- BESS Footprint (5.06 ha)
- Development Footprint (9.56 ha)
- Cadastre

Service Layer Credits:
Development footprint, proposed BESS Layout rev 11/06/2025, from StorEnergy 3 Pty Ltd (Stor).
Road, Rail, Cadastre, Watercourse, NSW DPIE 2024.
Earthstar Geographics

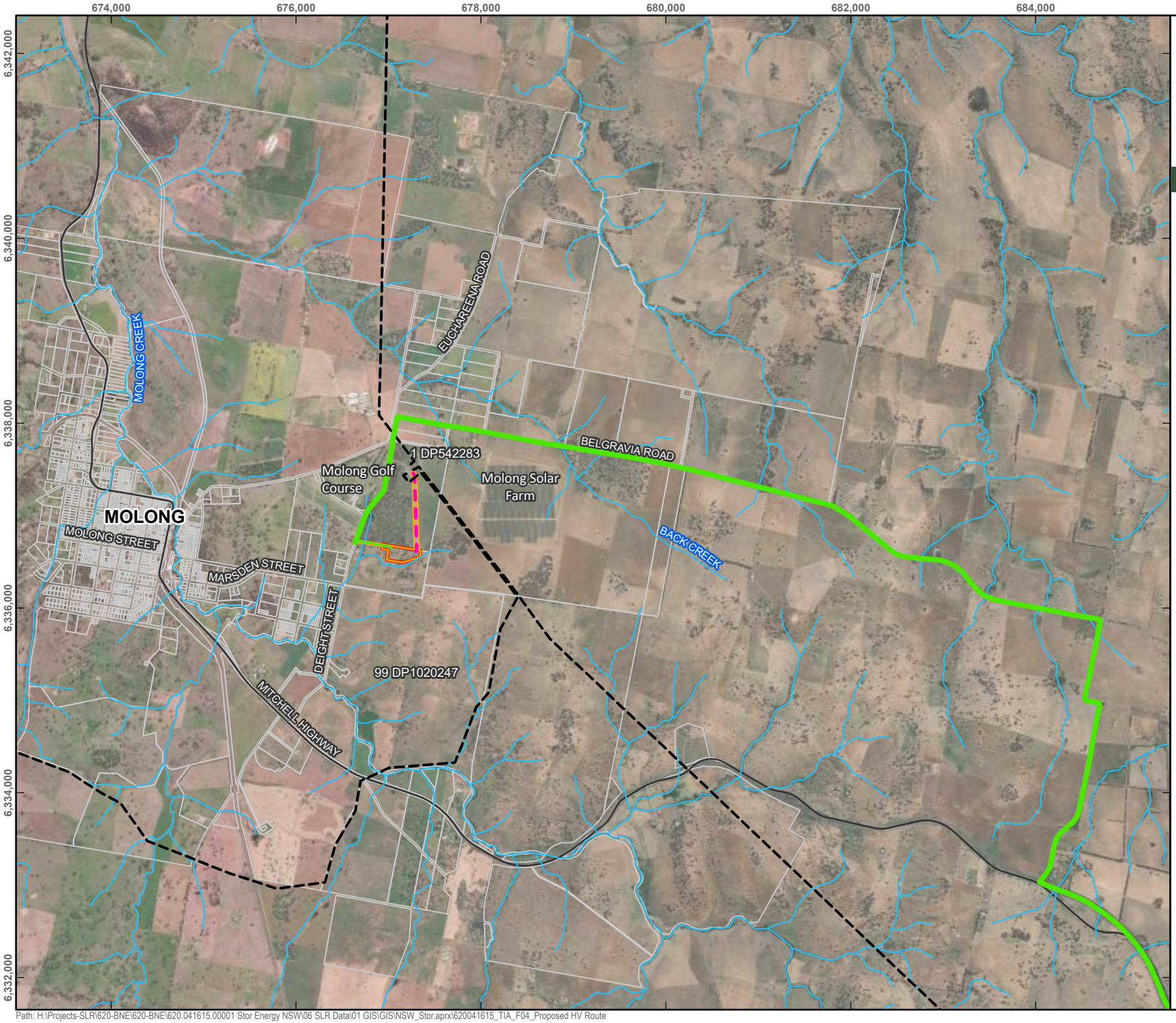
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Coordinate System:	GDA2020 MGA Zone 55
Scale:	1:35,000 at A4
Project Number:	620.041615
Date Drawn:	28-Aug-2025
Drawn by:	JH

SLR

Path: H:\Projects-SLR\620-BNE\620-BNE\620.041615.00001 Stor Energy NSW\06 SLR Data\01 GIS\GIS\NSW_Stor.aprx\620041615_TIA_F03_Proposed LV Route



MOLONG BESS

PROPOSED HEAVY VEHICLE ROUTE

FIGURE 23

LEGEND

- Watercourse
- Primary Road
- Proposed Heavy Vehicle Route

Transgrid Line

- 132kV
- 330kV
- Proposed Electricity Transmission Line
- Proposed Site Access
- BESS Footprint (5.06 ha)
- Development Footprint (9.56 ha)
- Proposed Easement
- Cadastre

Service Layer Credits:
Development footprint, proposed BESS Layout rev 11/06/2025, from StorEnergy 3 Pty Ltd (Stor)..
Road, Rail, Cadastre, Watercourse, NSW DPIE 2024.
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3.1.5 Ancillary Infrastructure

The following ancillary infrastructure will be undertaken in conjunction with the BESS and are detailed below:

- Earthworks
- Stormwater management works
- Temporary construction facilities
- Permanent operating facilities (O&M building/storage warehouse, parking lot, CCTV security system)
- Landscaping
- Stormwater retention pond and contaminated firefighting water retention solution
- Fencing, security systems and Lighting
- Water storage and usage systems
- Noise walls
- Sewage/septic system (e.g. waterless toilet) to be confirmed at detailed design
- Power supply
- Telecommunications
- Waste storage/management.

Earthworks

Earthworks are proposed within the Development Footprint to facilitate the construction of the internal access road, BESS and transmission line corridor. The bulk earthworks are predominantly contained to the area involved with the BESS, to create a stable platform. The earthworks for the BESS ranges from excavation of between 3-3.4m in the eastern extent for the substation, and between 3.3-3.7m of fill in the western extent near the access road. The BESS pad site, at its highest, will be 586m AHD in the northeast and 575.5m AHD at its lowest in the southwest to ensure sufficient clearance during flood events.

Additional works are also proposed for the internal access road, stormwater basin and footings for the transmission line poles.

A site wide Soil and Water Management Plan (SWMP) will be prepared as part of the Construction Environmental Management Plan (CEMP) for the Project. The SWMP will be prepared in accordance with Managing Urban Stormwater: Soils and Construction (Landcom 2004), known as ‘the Blue Book’, and Volume 2A Installation of Services (DECC 2008a).

Stormwater Management Works

A bioretention basin is proposed for on-site stormwater quality and quantity management as part of the Project. Stormwater runoff from the site will be directed to the basin through general site grading and cut-off swales.

A cut-off swale situated on the northern perimeter of the BESS and will divert runoff from the upstream catchment to the west, discharging as overland flow via a nominal culvert under the proposed site access road, thereby bypassing the proposed bioretention basin.

Management of potential Fire Water Runoff

Infrastructure is proposed for the containment and management of any contaminated water runoff in the event of a fire or other event where contamination may be possible. While this would be an unlikely event, it is proposed that a precautionary structure is included in the detailed design. It is anticipated that this infrastructure may share some features with the stormwater management design and will include a means of retention to contain contaminated fire water for removal from site and appropriate disposal.

Temporary Construction Facilities

Temporary facilities (e.g. port-a-com buildings) will be established within the Development Footprint during the construction period to store materials, provide temporary car parking and provide office and break space facilities for site staff.

All facilities will be removed upon the completion of construction works with all permanent administrative and staff activities to occur within the O&M building.

Permanent Operating Facilities (O&M building/storage warehouse and parking lot)

A permanent O&M building is proposed approximately (20m (L) x 13.5 (W) x 5m (H) within the Development Footprint that will be used for ongoing site operations and storage. A small parking lot is also proposed that will be utilised by site staff.

Fencing, Lighting and Security

The BESS will be secured by a chainmesh security fencing, up to 3.1m in height (2.5m chain, with 0.6m barbed wire) and access gates. CCTV will also be in place around the access gate and O&M building.

Motion sensor lighting for the Project will be installed for security. Night lighting will only be used for critical and emergency works purposes.

4-5m high noise walls are proposed in strategic locations in the Development Footprint to minimise operational noise impacts. The exact height and location of the walls will be confirmed at detailed design.

Visual Mitigation Measures

The noise walls will be finished in a muted, non-reflective green tone to ensure they are visually unobtrusive to nearby receptors and surrounding landscape.

Water Use and Firefighting

Water will be required during the construction phase for dust suppression, general construction, and maintenance activities. A permanent potable water tank is proposed with water quality to meet compliance regulations as stipulated within the Australian Drinking Water Guidelines. This water will be brought to the site in water tankers and stored in temporary and permanent onsite water tanks.

During the construction period (14 month period), it is estimated that the total potable water usage for the Project could be in the region of 150,000 L (14 months x 10,600 litres), based on an average of 29 staff being on the site. During the operation period (estimated at 30 years), itis estimated that potable water usage could be in the region of 320,000 L (360 months x 900 L), based upon 2 staff being on site. Due to the variable nature of the non-potable water usage, a total estimate cannot be provided. Notwithstanding, discussions have been undertaken with local water suppliers who have advised they can provide sufficient water supplies during construction and operational phases.

Wastewater during construction will be captured and appropriately removed from site/disposed in accordance with the Council/water authority requirements.

A 150 kL water supply (above-ground water tanks) dedicated for firefighting purposes will be constructed at an early stage of the construction phase and will have the appropriate fittings/connections for local firefighting equipment. This water supply will remain available for firefighting purposes only, during construction and the operation as well as final de-commissioning.

Power Supply

During construction, power supply will be provided by a temporary solution, which will be determined by the contractor and outlined in the CEMP.

Power supplies required for operations shall be provided by the Project substation and associated auxiliary transformers and LV voltage systems.

Telecommunications

Telecommunications will be provided via a combination of local 5G mobile network, point to point wireless communication systems, satellite-based communications and, for operations, overhead optical fibre ground wires mounted on the 132kV transmission poles connecting the Project substation and Transgrid's Molong Substation.

Waste Storage/Management

Waste generated during site preparation and construction is anticipated to comprise various streams including excavation spoil, green waste, construction materials, packaging and general work compound and maintenance waste.

Construction waste will be removed by the contractor during construction. The contractor will be responsible for removing waste during the construction period with most of the waste streams being typical and managed through well-established methods. To minimize environmental impacts, proper storage, handling, and waste management will be implemented.

Opportunities for reuse and recycling of key waste materials will be identified and documented in the project's CEMP and Operational Environmental Management Plan (OEMP).

3.1.6 Operation

3.1.6.1 Operation Activities and Equipment

The operation of the Project would involve, but not be limited, to the following general activities:

- Maintenance and management of equipment, site buildings, and landscaping.
- General administrative activities.
- Receipt of equipment or goods.
- Waste removal from maintenance and administration activities.

Minimal plant and equipment will be required for operation of the facility, primarily for staff access and maintenance vehicles.

3.1.6.2 Operational Hours and Personnel

The Project is proposed to self-operate 24 hours a day 7 days a week with minimal onsite oversite by authorised staff. The facility is otherwise restricted to the public.

Emergency responses and maintenance activities may be required to be undertaken out of hours. During operation, it is anticipated that two FTE jobs will be required to undertake planned and unplanned maintenance activities.

3.1.6.3 Capacity Replenishment and Augmentation

The facility may be subject to capacity replenishment and/or capacity augmentation events to extend storage durations at a planned frequency throughout its operating life (i.e. year 8, 15, etc.).

Development approval is being sought for a targeted lifetime 4 hour storage duration, with some initial oversizing (refer to the MWh starting capacity provided in Section 3.1). However, subject to the final investment decision, the initially constructed and delivered energy capacity may be smaller, e.g. 2 hour. Consequently, it is anticipated that discrete repower events may be required either as a one-off augmentation event or periodically to replenish capacity as battery enclosures degrade.

During capacity replenishment and augmentation events, it is anticipated that heavy vehicles, including OSOM vehicles for battery enclosure deliveries, small/light utility vehicles and cranes will be required.

3.1.6.4 Operational Waste Management

Waste generated during the operational phase of the BESS will come from on-site staff and maintenance activities and comprise a mixture of recyclable and non-recyclable materials. All batteries associated modules and containers are expected to last the full project design life and be recycled, in bulk, as part of the decommissioning phase. Should a lithium-ion battery become defective, the module will be removed from site and repaired or recycled by the battery supplier as part of the ongoing maintenance agreement.

For the most part, minor quantities of waste are expected to be generated during the operation of the proposed BESS. However, for BESS capacity augmentation projects or other major maintenance activities, any substantial packaging or other waste will be removed and recycled by accredited contractors. As general, day-to-day, waste will be taken by staff when they leave the project area, no dedicated waste storage area is required or proposed.

3.1.6.5 Wash Down Bay

A wash down bay is proposed near the western edge of the BESS Footprint. The wash down bay will be used during construction and operation to prevent the tracking of weeds and pathogens to and from the Project.

3.1.7 Decommissioning and Rehabilitation

The Project is proposed to be decommissioned and the infrastructure removed following the End of Life (EOL) of the BESS, with works required to return the site as close as possible to the original state and use. ‘Repowering’ will be considered towards the end of operational life where a separate DA may be lodged to renew the Project, albeit with upgraded technology. Any repowering and associated DA would require new project agreements be considered in consultation with all relevant stakeholders and the legislative requirements at that time. It is anticipated that battery recycling infrastructure will be become more abundant in Australia over the Project life cycle.

The operational life of the Project will be determined by the evolving nature of the technology, however, is anticipated that the lifespan will be approximately 30 years from the commercial operations date (COD).

The standard construction hours and heavy vehicles, plant, and equipment required for the construction of the Project would also apply to the decommissioning phase, albeit on a reduced scale.

3.1.8 Easements

A 45m wide easement is proposed for the transmission line route and associated poles. Vegetation located within this corridor will be managed in accordance with the Electricity Supply (Safety and Network Management) Regulation 2014 (NSW).

3.1.9 Shared Benefits, Contributions and Agreements

Stor is committed to complying with the *NSW Benefit Sharing Guideline 2024*.

Stor has consulted with the Council, community and other stakeholders to determine the best use of the funds and most suitable mechanism for distribution. The monetary commitment will be in line with the specification outlined in the guidelines with the majority of the value being directed to a Voluntary Planning Agreement (VPA) being prepared in conjunction with Cabonne Shire Council.

Stor is in the process of sending an official VPA letter of offer and proposed Terms of Reference to the Council based on previous discussions, Council guidance and the results of the Stor led benefit sharing survey.

In addition to the VPA, a smaller amount has been set aside by Stor to allow Traditional Owners and near neighbour specific initiatives, which are under development.

4.0 Statutory Context

This chapter describes the statutory context and the planning approval process for the Project as well as other relevant environmental and statutory planning requirements. This section is to be read in conjunction with the full assessment of relevant legislation and the applicable provisions provided within the Statutory Compliance Table at Appendix C.

4.1 Power to Grant Approval

The *EP&A Act* and the EP&A Regulation form the statutory framework for planning approvals and environmental assessment in NSW. Implementation of the *EP&A Act* is the responsibility of the Minister for Planning and Public Spaces, State government agencies, and local government authorities. The relevant approval pathway, consent authority, and application requirements have been discussed in the following sections.

4.1.1 Approval Pathway

The *EP&A Act* dictates that the applicable approval pathway for the proposed development is through the SSD process. The proposed development will require SSD Approval under Part 4 of the *EP&A Act*, as per Clause 4.36.

The Project triggers SSD through Schedule 1 of the Planning Systems SEPP.

> *20 Electricity generating works and heat or co-generation*
>
> *Development for the purpose of electricity generating works or heat or their co-generation (using any energy source, including gas, coal, biofuel, distillate, waste, hydro, wave, solar or wind power) that—*
>
> *(a) has an estimated development cost of more than $30 million, or*

(b) has an estimated development cost of more than $10 million and is located in an environmentally sensitive area of State significance.

As the EDC exceed $30 million, the Project is required to be assessed as SSD. An EDC report is provided at Appendix D.

4.1.2 Consent Authority

The Minister for Planning and Public Spaces will be the consent authority for the Project in accordance with Section 4.5 of the *EP&A Act*. However, the Independent Planning Commission (IPC) pursuant to Clause 2.7 of the Planning Systems SEPP may be the consent authority in some circumstances. The requirement for the IPC to be the determining authority is to be confirmed following the completion of the EIS public exhibition.

4.1.3 State Significant Development Application

In accordance with Section 4.12 of the *EP&A Act*, a SSD application must be accompanied by an EIS. The EIS must be prepared in accordance with Schedule 2 of the EP&A Regulation. Schedule 2 of the EP&A Regulation provides the framework by which an application is made to obtain assessment requirements to inform the preparation of an EIS and the requirement for consultation with relevant public authorities. Schedule 2 also provides form and content which must be included within an EIS.

To inform the content of the EIS, a request for SEARs from the Secretary DPHI is required. The SEARS specify the issues that must be addressed in the EIS. The SEARs for the Project were issued by DPHI on 26 March 2025 and is detailed at Appendix A, with reference to compliance within the EIS and specialist studies.

4.2 Permissibility

The Project is defined under the NSW land use planning definitions as '*electricity generating works'*. Pursuant to the Cabonne Local Environmental Plan (LEP) 2012, the Project Lots and Back Saleyards Road are zoned RU1 Primary Production as illustrated on the LEP zoning map extract in Figure 24.

Electricity generating works are a prohibited use on land zoned RU1. As such, all works associated with the BESS (including any access works from Back Saleyards Road) are proposed in accordance with the provisions of State Environmental Planning Policy (Transport and Infrastructure) 2021 (Transport and Infrastructure SEPP). Part 2.3 (Development controls), Division 4 (Electricity generation works or solar energy systems), Clause 2.36 of the Transport and Infrastructure SEPP states that:

> *Development for the purpose of electricity generating works may be carried out by any person with consent on the following land—*
>
> *(a) in the case of electricity generating works comprising a building or place used for the purpose of making or generating electricity using waves, tides or aquatic thermal as the relevant fuel source—on any land,*
>
> *(b) in any other case—any land in a prescribed non-residential zone.*

The RU1 Primary Production zone is listed as a prescribed non-residential zone and therefore permissibility for the Project can be established under the Transport and Infrastructure SEPP.

4.2.1 Pre-Conditions to Exercising the Power to Grant Approval

4.2.1.1 Project Approvals

This section provides an overview of other approvals required to carry out the Project. Approvals required for the Project are identified in Table 14.

Table 14 Project approvals

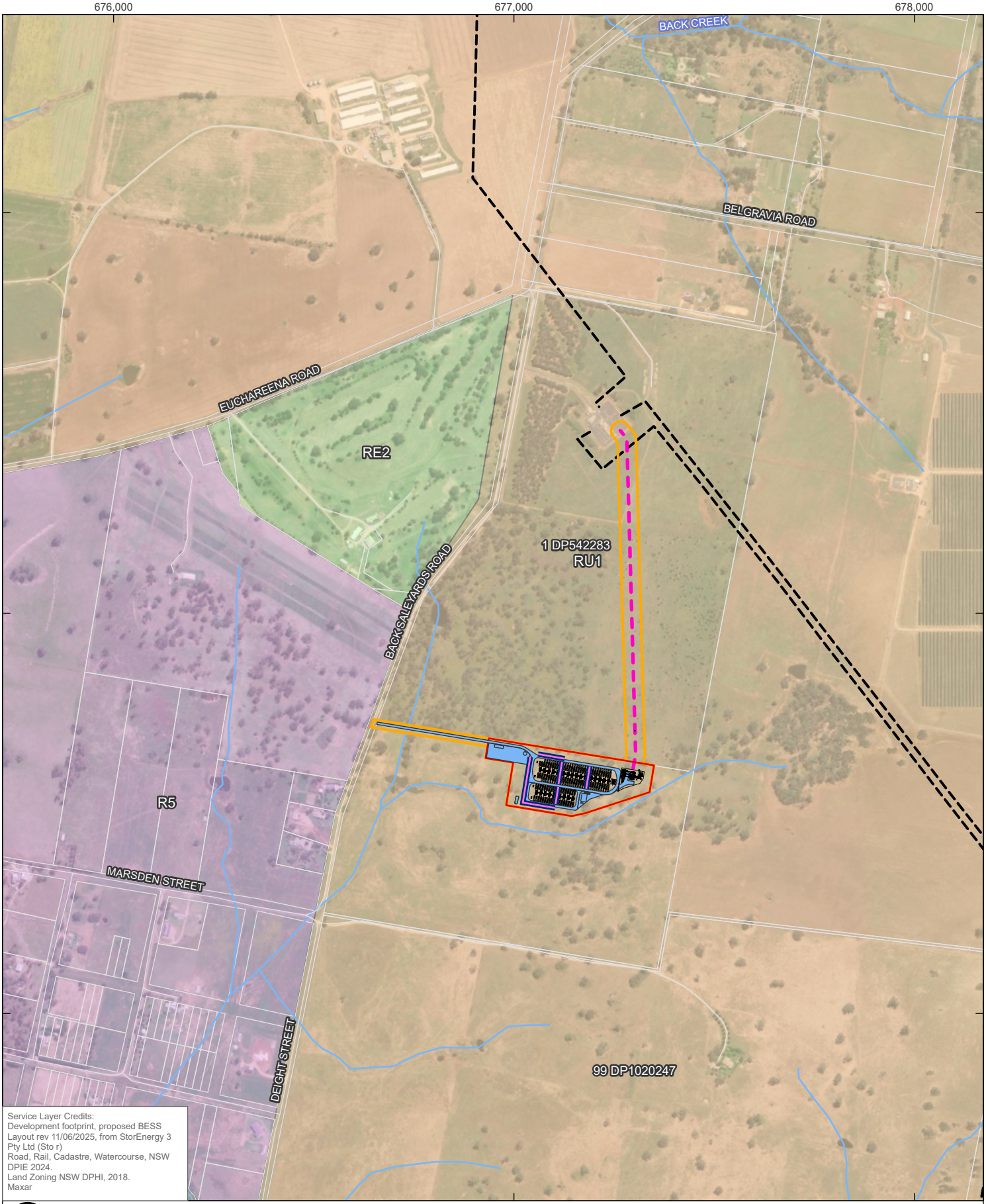
Legislation	Permit/Approval	Authority
EP&A Act	Development Approval	DPHI
Environment Protection and Biodiversity Conservation Act 1999	Environmental Approval if required	Commonwealth Department of Climate Change, Energy, the Environment and Water (DCCEEW)
Roads Act 1993	Section 138 Approval	Cabonne Shire Council

4.3 Commonwealth Considerations

4.3.1 Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act)

The *Environmental Protection and Biodiversity Conservation Act 1999* (*EPBC Act*) is the Australian Government's central piece of environmental legislation. This act provides a legal framework to protect and manage nationally and internationally important flora, fauna, ecological communities and heritage places – defined as matters of national environmental significance (MNES).

The nine MNES to which the *EPBC Act* applies and findings of the desktop assessment are included in Table 15.



Service Layer Credits:
Development footprint, proposed BESS Layout rev 11/06/2025, from StorEnergy 3 Pty Ltd (Sto r)
Road, Rail, Cadastre, Watercourse, NSW DPIE 2024.
Land Zoning NSW DPHI, 2018.
Maxar

0 250 500 m

Coordinate System:	GDA2020 MGA Zone 55
Scale:	1:12,500 at A4
Project Number:	620.041615
Date Drawn:	28-Jul-2025
Drawn by:	NT

LEGEND

Land Use Zoning
- R5 - Large Lot Residential
- RE2 - Private Recreational
- RU1 - Primary Production
- SP2 - Classified Road

- Watercourse
- Road

Transgrid Line
- 132kV
- Cadastre
- Proposed Electricity Transmission Line

- Noisewall
- BESS Footprint (5.06 ha)
- Development Footprint (9.56 ha)
- BESS Layout

MOLONG BESS

LAND ZONING MAP

SLR

DISCLAIMER: All information within this document may be based on external sources. SLR Consulting Pty Ltd makes no warranty regarding the data's accuracy or reliability for any purpose.

FIGURE 24

Path: H:\Projects-SLR\620-BNE\620-BNE\620.041615.00001 Stor Energy NSW\06 SLR Data\01 GIS\GIS\NSW_Stor.aprx\620041615_EIS_FXX Land Zoning Map

Table 15 Results of MNES search

Matter of National Environmental Significance	Response
World heritage properties	There are no world heritage properties listed within proximity of the Development Footprint.
National heritage places	There are no national heritage places listed within proximity of the Development Footprint.
Wetlands of national importance	There are no Ramsar Wetlands within close proximity to the Development Footprint.
Great Barrier Reef marine park	The Development Footprint is not located within proximity to the Commonwealth marine area.
Commonwealth marine park	The Project Lots are not located either within or adjacent to the Commonwealth marine area.
Listed threatened ecological communities (TEC)	Three *EPBC Act* listed TECs were associated with the PCTs present within the Development Footprint.
Listed threatened species Listed migratory species	A total of 39 listed threatened species and 8 migratory species listed under the *EPBC Act* have habitats which may occur within the locality, none of which have been historically recorded within the Development Footprint.

Under the *EPBC Act*, an action will require approval from the Minister for the Environment and Water (the Minister) if the action has, will have, or is likely to have, a significant impact on a MNES.

An EPBC referral application has been lodged with the Commonwealth DCCEEW regarding potential impacts on three Listed TEC; the Superb Parrot, Grey-headed Flying Fox and Pink-tailed Legless Lizard.

The EPBC referral and BDAR submitted with this EIS confirms that there are unlikely to be significant impacts on any TEC, MNES or Commonwealth land.

4.3.2 Native Title Act 1993

The *Native Title Act 1993* recognises the interests and rights Aboriginal people have to land and aims to provide recognition and protection of common law native title rights. A search of the Register of Native Title Claims (4 March 2025) showed no claim at the Project Lots or within the LGA.

4.3.2.1 Pre-Conditions to Grant Development Consent

The items provided within Table 16 are pre-conditions in exercising power to grant approval for the development.

Table 16 Pre-conditions to grant development consent

Pre-Condition	Assessment
Environmental Planning and Assessment Regulation 2021	
24 Content of development applications *(1) A development application must—* *(a) be in the approved form, and* *(b) contain all the information and documents required by—*	This application is accompanied by an EIS prepared in accordance with the relevant Guideline to ensure it is in the correct form.

Pre-Condition	Assessment
(i) the approved form, and *(ii) the Act or this Regulation, and* *(c) be submitted on the NSW planning portal.*	The application will be submitted via the NSW Major Projects Portal as it is SSD.
190 Form of environmental impact statement *(1) An environmental impact statement must contain the following information—* *(a) the name, address and professional qualifications of the person who prepared the statement,* *(b) the name and address of the responsible person,* *(c) the address of the land—* *(i) to which the development application relates, or* *(ii) on which the activity or infrastructure to which the statement relates will be carried out,* *(d) a description of the development, activity or infrastructure,* *(e) an assessment by the person who prepared the statement of the environmental impact of the development, activity or infrastructure, dealing with the matters referred to in this Division.*	All relevant information stipulated in Section 190 has been included within this application package.
(2) The person preparing the statement must have regard to— *(a) for State significant development—the State Significant Development Guidelines, or* *(b) for State significant infrastructure—the State Significant Infrastructure Guidelines.*	The EIS has been prepared in accordance with the SSD Guidelines.
(3) An environmental impact statement must also contain a declaration by a relevant person that— *(a) the statement has been prepared in accordance with this Regulation, and* *(b) the statement contains all available information that is relevant to the environmental assessment of the development, activity or infrastructure, and* *(c) the information contained in the statement is not false or misleading, and* *(d) for State significant development or State significant infrastructure—the statement contains the information required under the Registered Environmental Assessment Practitioner Guidelines.*	A declaration by a REAP has been included with the EIS confirming the required information has been included with the application (refer to Executive Summary of EIS).
192 Content of environmental impact statement *(1) An environmental impact statement must contain the following—* *(a) a summary of the environmental impact statement,* *(b) a statement of the objectives of the development, activity or infrastructure,* *(c) an analysis of feasible alternatives to the carrying out of the development, activity or infrastructure, considering its objectives, including the consequences of not carrying out the development, activity or infrastructure,*	This EIS has been prepared in accordance with the requirements under Clause 192 and the relevant Guidelines.

Pre-Condition	Assessment
(d) an analysis of the development, activity or infrastructure, including— *(i) a full description of the development, activity or infrastructure, and* *(ii) a general description of the environment likely to be affected by the development, activity or infrastructure and a detailed description of the aspects of the environment that are likely to be significantly affected, and* *(iii) the likely impact on the environment of the development, activity or infrastructure, and* *(iv) a full description of the measures to mitigate adverse effects of the development, activity or infrastructure on the environment, and* *(v) a list of the approvals that must be obtained under another Act or law before the development, activity or infrastructure may lawfully be carried out,* *(e) a compilation, in a single section of the environmental impact statement, of the measures referred to in paragraph (d)(iv),* *(f) the reasons justifying the carrying out of the development, activity or infrastructure, considering biophysical, economic and social factors, including the principles of ecologically sustainable development set out in section 193.*	
Biodiversity Conservation Act 2016	
7.14 State significant development or infrastructure *(2) The Minister for Planning, when determining in accordance with the Environmental Planning and Assessment Act 1979 any such application, is to take into consideration under that Act the likely impact of the proposed development on biodiversity values as assessed in the biodiversity development assessment report. The Minister for Planning may (but is not required to) further consider under that Act the likely impact of the proposed development on biodiversity values.*	Appendix F & Section 6.1 (EIS)
State Environmental Planning Policy (Transport and Infrastructure) 2021	
2.48 Determination of development applications—other development *(2) Before determining a development application (or an application for modification of a consent) for development to which this section applies, the consent authority must—* *(a) give written notice to the electricity supply authority for the area in which the development is to be carried out, inviting comments about potential safety risks, and* *(b) take into consideration any response to the notice that is received within 21 days after the notice is given.*	The application is to be referred to TransGrid for comment as the relevant and impacted electricity supply authority.
State Environmental Planning Policy (Resilience and Hazards) 2021	
4.6 Contamination and remediation to be considered in determining development application	Sections 2.3.7 and 6.15 (EIS)

Pre-Condition	Assessment
(1) A consent authority must not consent to the carrying out of any development on land unless— *(a) it has considered whether the land is contaminated, and* *(b) if the land is contaminated, it is satisfied that the land is suitable in its contaminated state (or will be suitable, after remediation) for the purpose for which the development is proposed to be carried out, and* *(c) if the land requires remediation to be made suitable for the purpose for which the development is proposed to be carried out, it is satisfied that the land will be remediated before the land is used for that purpose.* *(2) Before determining an application for consent to carry out development that would involve a change of use on any of the land specified in subsection (4), the consent authority must consider a report specifying the findings of a preliminary investigation of the land concerned carried out in accordance with the contaminated land planning guidelines.*	

4.3.2.2 Mandatory Matters for Consideration

The matters which a consent authority must consider prior to a determination are addressed in Table 17.

Table 17 Mandatory matters for consideration

Matter	Relevant EIS Section
Environmental Planning and Assessment Act 1979	
1.3 Objects of Act (cf previous s 5) *The objects of this Act are as follows—* *(a) 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,* *(b) to facilitate ecologically sustainable development by integrating relevant economic, environmental and social considerations in decision-making about environmental planning and assessment,* *(c) to promote the orderly and economic use and development of land,* *(d) to promote the delivery and maintenance of affordable housing,* *(e) to protect the environment, including the conservation of threatened and other species of native animals and plants, ecological communities and their habitats,* *(f) to promote the sustainable management of built and cultural heritage (including Aboriginal cultural heritage),* *(g) to promote good design and amenity of the built environment,* *(h) to promote the proper construction and maintenance of buildings, including the protection of the health and safety of their occupants,* *(i) to promote the sharing of the responsibility for environmental planning and assessment between the different levels of government in the State,* *(j) to provide increased opportunity for community participation in environmental planning and assessment.*	Appendix C

Matter	Relevant EIS Section
4.15 Evaluation	
(1) ***Matters for consideration—general***	
In determining a development application, a consent authority is to take into consideration such of the following matters as are of relevance to the development the subject of the development application—	
(a) the provisions of—	
(i) any environmental planning instrument, and	Appendix Cand Chapter 4.0 (EIS)
(ii) any proposed instrument that is or has been the subject of public consultation under this Act and that has been notified to the consent authority (unless the Planning Secretary has notified the consent authority that the making of the proposed instrument has been deferred indefinitely or has not been approved), and	
(iii) any development control plan, and	Chapter 6.0 (EIS)
(iiia) any planning agreement that has been entered into under section 7.4, or any draft planning agreement that a developer has offered to enter into under section 7.4, and	Chapter 2.0 and 3.0 (EIS)
(iv) the regulations (to the extent that they prescribe matters for the purposes of this paragraph),	
(b) the likely impacts of that development, including environmental impacts on both the natural and built environments, and social and economic impacts in the locality,	Appendix C and Chapter 4.0 (EIS)
(c) the suitability of the site for the development,	Chapter 6.0 (EIS)
(d) any submissions made in accordance with this Act or the regulations,	Chapter 6.0 and 7.0 (EIS)
(e) the public interest.	Submissions response during assessment
	Section 7.11(EIS)
State Environmental Planning Policy (Resilience and Hazards) 2021	
3.12 Matters for consideration by consent authorities	Appendix N (Hazards and Risk Assessment)
In determining an application to carry out development to which this Part applies, the consent authority must consider (in addition to any other matters specified in the Act or in an environmental planning instrument applying to the development)—	Section 6.10 (EIS)
(a) current circulars or guidelines published by the Department of Planning relating to hazardous or offensive development, and	
(b) whether any public authority should be consulted concerning any environmental and land use safety requirements with which the development should comply, and	
(c) in the case of development for the purpose of a potentially hazardous industry—a preliminary hazard analysis prepared by or on behalf of the applicant, and	
(d) any feasible alternatives to the carrying out of the development and the reasons for choosing the development the subject of the application (including any feasible alternatives for the location of the	

Matter	Relevant EIS Section
development and the reasons for choosing the location the subject of the application), and *(e) any likely future use of the land surrounding the development.*	
State Environmental Planning Policy (Biodiversity and Conservation) 2021	
Chapter 3 Koala Habitat Protection 2020 *(1) Before a council may grant consent to a development application for consent to carry out development on land to which this Part applies, the council must be satisfied as to whether or not the land is a potential koala habitat.* *(2) The council may be satisfied as to whether or not land is a potential koala habitat only on information obtained by it, or by the applicant, from a person who is qualified and experienced in tree identification.* *(3) If the council is satisfied—* *(a) that the land is not a potential koala habitat, it is not prevented, because of this Chapter, from granting consent to the development application, or* *(b) that the land is a potential koala habitat, it must comply with section 3.7.*	Appendix C Appendix F (BDAR) Section 6.1 (EIS)
Cabonne Local Environmental Plan 2012	
2.3 Zone objectives and Land Use Table *(2) The consent authority must have regard to the objectives for development in a zone when determining a development application in respect of land within the zone.*	Appendix C
5.10 Heritage conservation *(1) Objectives The objectives of this clause are as follows—* *(a) to conserve the environmental heritage of Cabonne* *(b) to conserve the heritage significance of heritage items and heritage conservation areas, including associated fabric, settings and views,* *(c) to conserve archaeological sites,* *(d) to conserve Aboriginal objects and Aboriginal places of heritage significance.* *5) Heritage assessment The consent authority may, before granting consent to any development—* *(a) on land on which a heritage item is located, or* *(b) on land that is within a heritage conservation area, or* *(c) on land that is within the vicinity of land referred to in paragraph (a) or (b),* *require a heritage management document to be prepared that assesses the extent to which the carrying out of the proposed development would affect the heritage significance of the heritage item or heritage conservation area concerned.* *6) Heritage conservation management plans* *The consent authority may require, after considering the heritage significance of a heritage item and the extent of change proposed to it, the submission of a heritage conservation management plan before granting consent under this clause.* *(7) Archaeological sites*	Appendix C Appendix G (ACHAR) Section 6.2 and 6.3 (EIS)

Matter	Relevant EIS Section
The consent authority must, before granting consent under this clause to the carrying out of development on an archaeological site (other than land listed on the State Heritage Register or to which an interim heritage order under the Heritage Act 1977 applies)— *(a) notify the Heritage Council of its intention to grant consent, and* *(b) take into consideration any response received from the Heritage Council within 28 days after the notice is sent.* *(8) Aboriginal places of heritage significance* *The consent authority must, before granting consent under this clause to the carrying out of development in an Aboriginal place of heritage significance—* *(a) consider the effect of the proposed development on the heritage significance of the place and any Aboriginal object known or reasonably likely to be located at the place by means of an adequate investigation and assessment (which may involve consideration of a heritage impact statement), and* *(b) notify the local Aboriginal communities, in writing or in such other manner as may be appropriate, about the application and take into consideration any response received within 28 days after the notice is sent.*	
5.21 Flood planning *(1) The objectives of this clause are as follows—* *(a) to minimise the flood risk to life and property associated with the use of land,* *(b) to allow development on land that is compatible with the flood function and behaviour on the land, taking into account projected changes as a result of climate change,* *(c) to avoid adverse or cumulative impacts on flood behaviour and the environment,* *(d) to enable the safe occupation and efficient evacuation of people in the event of a flood.* *(2) Development consent must not be granted to development on land the consent authority considers to be within the flood planning area unless the consent authority is satisfied the development—* *(a) is compatible with the flood function and behaviour on the land, and* *(b) will not adversely affect flood behaviour in a way that results in detrimental increases in the potential flood affectation of other development or properties, and* *(c) will not adversely affect the safe occupation and efficient evacuation of people or exceed the capacity of existing evacuation routes for the surrounding area in the event of a flood, and* *(d) incorporates appropriate measures to manage risk to life in the event of a flood, and* *(e) will not adversely affect the environment or cause avoidable erosion, siltation, destruction of riparian vegetation or a reduction in the stability of river banks or watercourses.* *(3) In deciding whether to grant development consent on land to which this clause applies, the consent authority must consider the following matters—*	Appendix M (Flood Impact Assessment (FIA)) Section 6.8 (EIS)

Matter	Relevant EIS Section
(a) the impact of the development on projected changes to flood behaviour as a result of climate change, *(b) the intended design and scale of buildings resulting from the development,* *(c) whether the development incorporates measures to minimise the risk to life and ensure the safe evacuation of people in the event of a flood,* *(d) the potential to modify, relocate or remove buildings resulting from development if the surrounding area is impacted by flooding or coastal erosion.* *(4) A word or expression used in this clause has the same meaning as it has in the Considering Flooding in Land Use Planning Guideline unless it is otherwise defined in this clause.* *(5) In this clause—* *Considering Flooding in Land Use Planning Guideline means the Considering Flooding in Land Use Planning Guideline published on the Department's website on 14 July 2021.* *flood planning area has the same meaning as it has in the Flood Risk Management Manual.* *Flood Risk Management Manual means the Flood Risk Management Manual, ISBN 978-1-923076-17-4, published by the NSW Government in June 2023.*	
6.2 Stormwater *(1) The objective of this clause is to minimise the impacts of urban stormwater on land to which this clause applies and on adjoining properties, native bushland and receiving waters.* *(2) This clause applies to land in Zone RU5 Village and all land in residential and employment zones.* *(3) Development consent must not be granted to development on land to which this clause applies unless the consent authority is satisfied that the development—* *(a) is designed to maximise the use of water permeable surfaces on the land having regard to the soil characteristics affecting on-site infiltration of water, and* *(b) includes, if practicable, on-site stormwater retention for use as an alternative supply to mains water, groundwater or river water, and* *(c) avoids any significant adverse impacts of stormwater runoff on adjoining properties, native bushland and receiving waters, or if that impact cannot be reasonably avoided, minimises and mitigates the impact*	Appendix M (FIA) & Appendix V (Surface and Groundwater Impact Assessment (SGIA))
6.3 Terrestrial biodiversity *(1) The objective of this clause is to maintain terrestrial biodiversity by—* *(a) protecting native fauna and flora, and* *(b) protecting the ecological processes necessary for their continued existence, and* *(c) encouraging the conservation and recovery of native fauna and flora and their habitats.* *(2) This clause applies to land identified as "Biodiversity" on the Terrestrial Biodiversity Map.*	Appendix C. & Appendix F (BDAR) Section 6.1 of (EIS)

Matter	Relevant EIS Section
(3) Before determining a development application for development on land to which this clause applies, the consent authority must consider— *(a) whether the development is likely to have—* *(i) any adverse impact on the condition, ecological value and significance of the fauna and flora on the land, and* *(ii) any adverse impact on the importance of the vegetation on the land to the habitat and survival of native fauna, and* *(iii) any potential to fragment, disturb or diminish the biodiversity structure, function and composition of the land, and* *(iv) any adverse impact on the habitat elements providing connectivity on the land, and* *(b) any appropriate measures proposed to avoid, minimise or mitigate the impacts of the development.* *(4) Development consent must not be granted to development on land to which this clause applies unless the consent authority is satisfied that—* *(a) the development is designed, sited and will be managed to avoid any significant adverse environmental impact, or* *(b) if that impact cannot be reasonably avoided by adopting feasible alternatives—the development is designed, sited and will be managed to minimise that impact, or* *(c) if that impact cannot be minimised—the development will be managed to mitigate that impact.*	
6.4 Groundwater Vulnerability *(1) The objectives of this clause are as follows—* *(a) to maintain the hydrological functions of key groundwater systems,* *(b) to protect vulnerable groundwater resources from depletion and contamination as a result of development.* *(2) This clause applies to land identified as "Groundwater vulnerable" on the* Groundwater Vulnerability Map*.* *(3) Before determining a development application for development on land to which this clause applies, the consent authority must consider the following—* *(a) the likelihood of groundwater contamination from the development (including from any on-site storage or disposal of solid or liquid waste and chemicals),* *(b) any adverse impacts the development may have on groundwater dependent ecosystems,* *(c) the cumulative impact the development may have on groundwater (including impacts on nearby groundwater extraction for a potable water supply or stock water supply),* *(d) any appropriate measures proposed to avoid, minimise or mitigate the impacts of the development.* *(4) Development consent must not be granted to development on land to which this clause applies unless the consent authority is satisfied that—* *(a) the development is designed, sited and will be managed to avoid any significant adverse environmental impact, or*	Appendix V (Surface and Groundwater Resources Assessment (SGIA)) Section 6.8 (EIS)

Matter	Relevant EIS Section
(b) if that impact cannot be reasonably avoided—the development is designed, sited and will be managed to minimise that impact, or *(c) if that impact cannot be minimised—the development will be managed to mitigate that impact.*	
6.6 Riparian land and watercourses *(1) The objective of this clause is to protect and maintain the following—* *(a) water quality within watercourses,* *(b) the stability of the bed and banks of watercourses,* *(c) aquatic and riparian habitats,* *(d) ecological processes within watercourses and riparian areas.* *(2) This clause applies to all of the following—* *(a) land identified as "Watercourse" on the Riparian Lands and Watercourses Map,* *(b) all land that is within 40 metres of the top of the bank of each watercourse on land identified as "Watercourse" on that map.* *(3) Before determining a development application for development on land to which this clause applies, the consent authority must consider—* *(a) whether or not the development is likely to have any adverse impact on the following—* *(i) the water quality and flows within the watercourse,* *(ii) aquatic and riparian species, habitats and ecosystems of the watercourse,* *(iii) the stability of the bed and banks of the watercourse,* *(iv) the free passage of fish and other aquatic organisms within or along the watercourse,* *(v) any future rehabilitation of the watercourse and riparian areas, and* *(b) whether or not the development is likely to increase water extraction from the watercourse, and* *(c) any appropriate measures proposed to avoid, minimise or mitigate the impacts of the development.* *(4) Development consent must not be granted to development on land to which this clause applies unless the consent authority is satisfied that—* *(a) the development is designed, sited and will be managed to avoid any significant adverse environmental impact, or* *(b) if that impact cannot be reasonably avoided—the development is designed, sited and will be managed to minimise that impact, or* *(c) if that impact cannot be minimised—the development will be managed to mitigate that impact.*	Appendix C
6.5 Drinking water catchments *(1) The objective of this clause is to protect drinking water catchments by minimising the adverse impacts of development on the quality and quantity of water entering drinking water storages.*	Appendix C, noting the site is not in a mapped drinking water catchment

Matter	Relevant EIS Section
(2) This clause applies to land identified as "Drinking water catchment" on the Drinking Water Catchment Map*.* *(3) Before determining a development application for development on land to which this clause applies, the consent authority must consider the following—* *(a) whether or not the development is likely to have any adverse impact on the quality and quantity of water entering the drinking water storage, having regard to the following—* *(i) the distance between the development and any waterway that feeds into the drinking water storage,* *(ii) the on-site use, storage and disposal of any chemicals on the land,* *(iii) the treatment, storage and disposal of waste water and solid waste generated or used by the development,* *(b) any appropriate measures proposed to avoid, minimise or mitigate the impacts of the development.* *(4) Development consent must not be granted to development on land to which this clause applies unless the consent authority is satisfied that—* *(a) the development is designed, sited and will be managed to avoid any significant adverse impact on water quality and flows, or* *(b) if that impact cannot be reasonably avoided—the development is designed, sited and will be managed to minimise that impact, or* *(c) if that impact cannot be minimised—the development will be managed to mitigate that impact*	
6.8 Essential services *Development consent must not be granted to development unless the consent authority is satisfied that any of the following services that are essential for the development are available or that adequate arrangements have been made to make them available when required—* *(a) the supply of water,* *(b) the supply of electricity,* *(c) the disposal and management of sewage,* *(d) stormwater drainage or on-site conservation,* *(e) suitable vehicular access.*	Appendix C

4.4 Other State and Local Considerations

Table 18 is a consideration of other NSW legislation and planning instruments which may have relevance to the Project, including approvals that are not required under Section 4.41 of the *EP&A Act*, or authorisations that cannot be refused under Section 4.42 of the *EP&A Act*, for SSD.

Table 18 Other State Legislation

NSW Legislation	Requirement
Coal Mine Subsidence Compensation Act 2017	The Project Area is not mapped within a coal mine subsidence area, therefore there are no requirements in accordance with this legislation.
Contaminated Land Management Act 1997	A review of the NSW EPA Contaminated Land Record and the List of Notified Contaminated Sites (as of 10 June 2025) was undertaken on 26 June 2025 and identified two contaminated sites in the Cabonne LGA. The *Cabonne BP Service Station* located and *Former Gasworks,* both located approximately 2km east of the Project Area in the Molong Township. A review of the NSW Department of Regional NSW Naturally Occurring Asbestos (NOA) map, hosted on the Sharing and Enabling Environmental Data (SEED) was undertaken on 11 June 2025. The review indicated that the Project Lots were not on the register and was in an area of known geological unites with low asbestos potential. Based on this review, there are no known contaminated sites on or near the Project and, based on a desktop investigation and Project Lots' inspection, there is no indication that the Development Footprint would be contaminated.
Fisheries Management Act 1994 (FM Act)	The *FM Act* aims to conserve, develop, and share the fishery resources of the State for the benefit of the present and future generations. The Development Footprint is not in the vicinity of any mapped key fish habitat (KFH) and the Project does not require an approval under the *FM Act*.
Heritage Act 1977	The Project would not impact on any local or State heritage items, as no listed items are in close proximity to the Project. An approval under Part 4, or an excavation permit under section 139, of this Act is not required for SSD.
Local Land Services Act 2013 (LLS Act)	The *LLS Act* regulates the clearing of native vegetation on rural land in NSW but only when the activity is permitted without Council consent. There are two broad categories of land under the *LLS Act*; Category 1 (Exempt) land and Category 2 (Regulated, Vulnerable or Sensitive) land. Based on the detailed vegetation surveys undertaken and the occurrence of threatened ecological communities within the Development Footprint, the Native Vegetation Regulatory map does not apply with the proposed vegetation clearance not needing approval under the *LLS Act*.
Mining Act 1992	The Project does not involve the extraction of mineral resources. There is a mineral exploration and mining title over the Project Lots, EL6391 – Golden Cross Operations Pty Ltd, which expired on 23 August 2025. A letter was issued to Golden Cross Operations Pty Ltd on 15 April 2025 and a follow up phone conversation and email was sent on 22 September 2025. No response has been received.
National Parks and Wildlife Act 1974 (NPW Act)	In accordance with Section 86(1) of the *NPW Act*, it is an offence to harm or desecrate a known Aboriginal object, whilst it is also an offence to harm an Aboriginal object under Section 86(2). Similarly, Section 86(4) states that a person must not harm or desecrate an Aboriginal place. Virtus Heritage have undertaken an ACHAR, refer to Appendix G. An Aboriginal Heritage Impact Permit (AHIP) under section 90 of this Act is not required for SSD



NSW Legislation	Requirement
Biodiversity Conservation Act 2016 (BC Act)	The NSW biodiversity conservation legislation establishes a framework for assessing and offsetting biodiversity impacts for applicable development in NSW. Section 7.9 of the *BC Act* requires that an SSD application be accompanied by a Biodiversity Development Assessment Report (BDAR) unless the Project is not likely to have any significant impact of biodiversity values. A BDAR Assessment has been provided at Appendix F, with discussion provided within the EIS within Section 6.1.
Petroleum (Onshore) Act 1991	The Project does not involve the extraction of petroleum resources, therefore this legislation does not apply.
Protection of the Environment Operations Act 1997 (POEO Act)	Per Schedule 1, the Project does not involve the generation of electricity. The Project stores and releases electricity that has already been generated. As such, Clause 17 does not apply to the Project, and an Environmental Protection Licence (EPL) is not required.
Roads Act 1993	An approval under s138 from Council will be required for all works within Back Saleyards Road or any other public road.
Rural Fires Act 1997	The Development Footprint is mapped within bushfire prone land. A Bushfire Risk assessment will be undertaken at Appendix S. A bushfire safety authority under section 100B of the Rural Fires Act 1997 (NSW) is not required as it is not identified as a *special fire protection purpose*.
Water Management Act 2000 (WM Act)	The *WM Act* aims to provide for the sustainable and integrated management of the water sources of the State for the benefit of both present and future generations. If a 'Controlled Activity' is to occur within 40 m of the 'high bank' of 'waterfront land', a Controlled Activity approval under Clause 91 of the *WM Act* is required from the National Resources Access Regulator (NRAR). However, as the Project is classified as an SSD under Part 4 of the EP&A Act, approvals under section 91 (controlled activity) of the W*M Act* are not required. Notwithstanding, impacts to watercourses have been considered in this EIS.
Cabonne Development Control Plans (DCP)	As the Project is classed as SSD, it is not subject to the provisions of the DCP. Notwithstanding, the Project has considered the relevant requirements of the DCP.

5.0 Community and Stakeholder Engagement

This chapter provides a description of the consultation undertaken with the local community and key stakeholders.

Consultation and engagement was undertaken during the scoping stage of the Project and preparation of the EIS with the community, Aboriginal groups and government agencies. The below discussion summarises the details provided within the Engagement Summary Report (ENS) (Appendix R), Aboriginal Cultural Heritage Assessment Report (ACHAR) (Appendix G), and throughout other technical assessments where relevant.

All meetings have been recorded by minutes, and feedback is shared across the Project team with relevant technical specialists, to inform the Project development. Feedback has been entered into a database for review and consideration during the preparation of the EIS phase.

5.1 Aboriginal Consultation

An ACHAR prepared in accordance with the *Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales (DECCW 2010)* has been prepared by Virtus Heritage, attached at Appendix G.

Preparation of the ACHAR included consultation with Registered Aboriginal Parties (RAP) and was undertaken in accordance with the document titled *Aboriginal Cultural Heritage Consultation requirements for Proponents (DECCW 2010*). During this process, an expression of interest (EOI) was sent to Aboriginal knowledge holders, together with a notice within the local newspaper inviting them to become a RAP. As a result of the EOI and public notice, a total of five Aboriginal representatives nominated to become RAPs for the project.

Stage 1 of the ACHAR process involved details of the project and assessment methodology being provided to the RAPs, and opportunities for feedback provided. Additional opportunities for feedback were also provided during fieldwork.

Feedback from the Aboriginal consultation has been incorporated into the assessment of significance and the development of heritage management and mitigation strategies for the Project.

The list of RAPs consulted for the project are summarised in Table 19.

Table 19 List of RAPs consulted (Virtus, ACHAR, 2025)

Organisation / Individual	Representative
Girragirra Murun Aboriginal Corporation (GMAC)	1
Wingarra Wilay Aboriginal Corporation (WWAC)	1
Mirrabee	1
Wellington Valley Wiradjuri Aboriginal Corporation (WVWAC)	1
Orange Local Aboriginal Land Council (OLALC)	1

Stage 2 consisted of presentation of information about the Project, where all RAPs were provided with information outlining the proposed works, including information relating to proposed impacts as well as the Project's methodology. Copies of all correspondence relating to the provision of project information to RAPs are located in the appendices of the ACHAR (Virtus, 2025) at Appendix G.

Stage 3 of the ACHAR process involved the gathering of information about cultural significance, by providing each Aboriginal stakeholder with a copy of the Project methodology which outlined the proposed assessment process that would be used in the completion of the Project. Aboriginal stakeholders were provided with 28 days to review and provide feedback on this methodology.

Of the five registered stakeholders, one replied in support of the methodology, and one replied acknowledging the email.

A site meeting was held on Wednesday 18 December 2024 in Molong with representatives from the Orange LALC, SLR Consulting, Virtus Heritage, and the Orange Rural Fire Service (RFS). The purpose of the meeting was to discuss site preparation, cultural heritage considerations, and bushfire risk management as part of the Project.

Site surveys were undertaken by Virtus Heritage in collaboration with the RAPs to assess the cultural heritage significance of the Project Lots. Surveys were undertaken on 16 April 2025, 17 April 2025 and 1 May 2025.

The attendees of the 16 April 2025 survey were:

- Archaeologist, Virtus Heritage.
- Project Manager, Stor.
- Registered Aboriginal Parties:
  - Girragirra Murun Aboriginal Corporation (GMAC) – 1 attendee.
  - Wingarra Wilay Aboriginal Corporation (WWAC) – 1 attendee.
  - Mirrabee – 1 attendee.

The attendees of the 17 April 2025 survey were:

- Archaeologist, Virtus Heritage.
- Project Manager, Stor.
- Registered Aboriginal Parties:
  - Wellington Valley Wiradjuri Aboriginal Corporation (WVWAC) – 1 attendee.

The attendees of the 1 May 2025 survey were:

- Project Manager, Stor.
- Registered Aboriginal Parties:
  - Orange Local Aboriginal Land Council (OLALC) – 1 attendee.

The survey aimed to identify and assess any potential Aboriginal archaeological sites and/or cultural heritage constraints within the project area. As a result of these site inspections, previously unknown Aboriginal sites were identified and recorded during the surveys. These items are discussed further in the ACHAR at Appendix G and Section 6.2 of this EIS. As a result of the survey findings, ACHAR outcomes and subsequent Archaeological Assessment (AA) (Virtus Heritage, 2025) and Archaeological Research Design and Methodology (ARDM) (Virtus Heritage, 2025) were prepared (Appendix G).

The final stage of the consultation process included the review of the draft ACHAR, draft AA and draft ARDM by the RAPs.

Ongoing consultation and engagement will be undertaken through all future stages of the project.

5.2 Community Consultation

A Community and Stakeholder Engagement Plan (CSEP) was prepared as part of the Scoping Phase to identify stakeholders and outline the appropriate associated engagement procedures and processes required for the successful delivery of the Project. The CSEP was prepared in the early Project stage and outlines tailored actions including controls, mitigations, key messages, communication methods and engagement frequency.

All engagement has been undertaken in accordance with *Undertaking Engagement Guidelines for State Significant Projects* (DPHI, March 2024).

5.2.1 Communication channels

A variety of communication channels were employed to inform stakeholders about the key drivers and benefits of the Molong Battery Project, as well as to promote the upcoming engagement activities. These tools ensured a comprehensive outreach strategy tailored to



the Molong community and key stakeholders. The communication tools and activities are outlined in Table 20.

Table 20 Communication Tools (SLR, ENS, 2025)

Tool	Activity description
Targeted traditional mailout	Near neighbours to the project site were identified and contacted through a direct mailout. Letters invited recipients to call the dedicated project telephone line or email to schedule a meeting with the project team. A total of 8 letters were sent via priority Australia Post delivery, with 0 letters returned.
Newspaper advertisement campaign	Advertisements were placed in the Molong Express newspaper on Saturdays 7 June and 21 June 2025. The campaign included a print advertisement, which aimed to raise awareness of the Project and promote the community drop-in session to a broad audience.
Dedicated project phone line	A dedicated phone line, 1800 920 060, was established to provide stakeholders with direct access to the project information and support. The phone number was prominently included in all printed and digital communication to encourage queries and feedback.
Dedicated project email address	A dedicated email address, information@molong-battery.com.au, was created to facilitate stakeholder communication. This email was included in all printed materials and managed by the project team to ensure timely responses to enquiries.
Online SIA survey	An online SIA survey was launched to collect feedback and understand community concerns about the project. A QR code was included on the project's technical factsheet allowing stakeholders to easily access the survey via their mobile devices.
Online Community Benefits Fund survey	An online Community Benefits Fund survey (see Consultation Report, Appendix R) was launched to collect feedback and understand how the community would like to see community benefit funds distributed. A QR code was included on a Community Benefits Fund Poster allowing stakeholders to easily access the survey via their mobile devices.
Project database	To expand community engagement, stakeholders were encouraged to sign up for project updates via the project website. This facilitated ongoing communication awareness.
Project website	A dedicated Project website (https://molong-battery.com.au/) was created to host up-to-date information about the Project and to promote the engagement period. The webpage also provided stakeholders with the opportunity to sign up for the project updates and access key materials.
Project collateral	Informational materials were developed to support the in-person engagement sessions and to inform the community about the Project. Key collateral included Consultation Report (See Consultation Report, Appendix R): • **Project Overview Factsheet** A concise overview of the Project, highlighting its objectives, key messages, potential benefits, and timeline. It served as an accessible reference for community members to understand the Project's purpose. • **Project Technical Factsheet** A concise overview of the draft technical reports prepared to support the project's EIS submission. The factsheet outlined key findings, assessment areas, and potential impacts, providing community members with a clear summary of the technical basis for the project. It also included a QR code linking to the online SIA survey to encourage participation and support feedback collection.

Tool	Activity description
	• **Project Poster** A visual summary outlining the project's purpose, a brief description of the proposed battery development, and a clear overview of the approvals process. The poster included contact details for the project, both email and phone, encouraging community members to reach out to the project team for further information or to ask questions. Designed for display at the community pop-up event and local venues. • **Project Map** A detailed visual representation of the Project site, including the location of the BESS and its proximity to near neighbours on Deight Street and Back Saleyards Road. • **Social media tile posters** Key aspects of the project were visually communicated and displayed in a clear and accessible format on A3 posters adapted from social media tiles. These included simplified messages about the Project's purpose, potential benefits, and opportunities for community input. Designed for visibility and ease of understanding, they reinforced key information presented online and supported consistent messaging across engagement channels. • **Approvals Timeline Poster** A poster illustrating the project's approvals process and indicative timeline, outlining key milestones from the planning and assessment phase of the project. • **Community Benefits Fund Survey** A QR code linking to the Community Benefits Fund survey was provided to gather input from residents on how potential community funding associated with the project could be best directed. The survey invited community members to identify local priorities, suggest initiatives, and help shape the development of a benefits framework that reflects the needs and values of the Molong community. • **LVIA Photomontage** A set of photomontages prepared as part of the Landscape and Visual Impact Assessment (LVIA) were presented on A3 posters. These visual simulations showed how the project would appear from key public viewpoints once constructed. They provided community members with a realistic impression of visual changes to the local landscape and supported informed feedback during consultation.

5.2.2 Engagement opportunities

Opportunities for face-to-face engagement were actively promoted to provide community members and key stakeholders with direct access to the project team.

These interactions were designed to foster open communication, address concerns, and gather valuable feedback. The activities are outlined in Table 21.

Table 21 Engagement Opportunities (SLR, Consultation Report, 2025)

Tool	Activity description
Targeted traditional mailout	Near neighbours to the Project Lots were identified and contacted through a direct mailout. Letters invited recipients to call the dedicated project telephone line or email to schedule a meeting with the project team. A total of 8 letters were sent via priority Australia Post delivery, with 0 letters returned.



Tool	Activity description
Near neighbour door knocking	Near neighbour door knocking was conducted ahead of the community pop-up event and drop-in sessions to introduce Stor and provide introductory information about the Molong Battery Project and its potential impact on nearby properties during construction and operation. During these interactions, communication materials were distributed to facilitate discussions and address any questions or concerns raised by property owners and residents.
Pop-up event	A community pop-up event was held on Friday 21 March 2025, at the Molong Street Stall from 10am to 11am. This high-traffic public location was chosen to maximise visibility and accessibility to the local community. The event provided high-level information about the Project, while introducing Stor to the local community. Project collateral was distributed at the event.
Drop-in event	Two community drop-in sessions were held on Monday 23 June 2025, from 10am to 1pm and 4pm to 7pm at the Cabonne Community Centre, Bank Street, Molong. Community members were invited to learn more about the Project and the subsequent technical reports. This event allowed attendees to engage directly with Project representatives from both Stor and SLR, ask questions in a one-on-one or small group setting, and provide feedback to the SIA and Community Benefit Fund surveys available. Project collateral was distributed at the event including the Project Overview Factsheet and Technical Factsheet.
Stakeholder meetings	Face-to-face meetings were conducted with the RFS and Cabonne Council officers, Molong Advancement Group, Orange LALC, Transport for NSW (TfNSW), RFS Canobolas Zone (headquarters in Orange), State Member for Orange, Molong Advancement Group. These meetings provided an opportunity to introduce the project, address enquiries, and gain a deeper understanding of key areas of interest and concerns associated with the Molong region.
Site meetings	A site meeting was held on Wednesday 18 December 2024 in Molong with representatives from the Orange LALC, SLR Consulting, Virtus Heritage, and the Orange Rural Fire Service (RFS). The purpose of the meeting was to discuss site preparation, cultural heritage considerations, and bushfire risk management as part of the Molong Battery Project.
Phone call and email	Local businesses, services providers and community organisations were contacted by phone and email to introduce the Project, explain the purpose of the SIA and to invited operators to complete industry specific surveys.
Online SIA surveys	An online SIA survey was launched to collect feedback and understand community concerns about the project. A QR code was included on the project's technical factsheet allowing stakeholders to easily access the survey via their mobile devices. Six survey responses were received during the SIA consultation period. One response was received to the survey for real estate agents. No responses were received from accommodations providers or other businesses and service providers. A separate survey was launched to collect feedback to inform community benefit sharing arrangements. This survey has received 23 responses at the time of writing.

5.2.3 Engagement Outcomes

The outcomes of the engagement opportunities are summarised below.

5.2.3.1 Door knocking with near neighbours

Door knocking was conducted on Tuesday 10 December 2024 and Friday 21 March 2025, targeting residents along Deight Street and Back Saleyards Road. A total of eight residents were reached. Project Overview factsheets were distributed to provide accessible information about the Molong Battery Project and to encourage participation in the community feedback process.

Overall, near neighbours appeared largely neutral toward the project. However, one neighbour queried a number of matters including:

- Potential health effects associated with the battery project, specifically referring to any potential radiation exposure.
- The structure of the proponent organisation and who ultimately holds responsibility for the development and its long-term impacts.
- What Stor stands to gain from locating the project in Molong, including how much profit is expected to be generated.

5.2.3.2 Pop-up event

A community pop-up event was held on Friday 21 March 2025, at the Molong Street Stall from 10am to 11am. The event was designed as a casual and accessible engagement opportunity, encouraging Molong residents to stop by at their convenience and learn more about the Project.

The project team hosted an information stall featuring printed factsheets and project posters. Representatives from SLR Consulting were present to provide information about the project, introduce the proponent to the community, respond to questions, and collect feedback on local perceptions and concerns

A total of five people engaged with the team during the event and discussions predominantly aligned with the following themes:

- General interest and queries about the Project.
- How the project may support ‘off-grid’ living.
- Concerns around battery fires.

5.2.3.3 Community drop-in session

Two community drop-in sessions were held on Monday 23 June 2028, at the Cabonne Community Centre on Bank Street, Molong from 10am to 1pm and 4pm to 7pm. A total of eight people attended one of the sessions.

The sessions provided a valuable opportunity for stakeholders to engage in meaningful dialogue with the Project team. Attendees were able to voice their concerns, ask detailed questions, and receive comprehensive information about the Molong Battery Project. This open engagement approach helped to foster transparency, build trust, and strengthen relationships within the local community.

During the session, attendees raised a range of matters, which are summarised as follows:

- High level of enthusiasm and support for the Project, recognising its potential to bring economic, environmental, and social benefits to the region.
- Active involvement in the delivery and success of the Project including technical assistance, product supply, support with future procurement processes, community



volunteering, environmental restoration, and cultural initiatives. Some participants also flagged the potential for local businesses to contribute to site preparation and environmental management activities.

- Clear interest in ensuring the Project delivers lasting value to the local area beyond its technical function, particularly through initiatives that reflect community character and priorities. These may include investment in flood-damaged community facilities, completion of public art installations, and ongoing support for local arts and heritage projects.
- Attendees demonstrated strong local knowledge of the Project Area and surrounding environment including nearby vegetation types, past environmental rehabilitation efforts, and the suitability of land for infrastructure and development.
- Technical queries relating to voltage levels and grid connection, equipment configuration, operational lifespan of the battery systems, and end-of-life waste management. Concerns were also raised about potential wildlife impacts, particularly the presence of kangaroos on and around the site. Project representatives provided clarification and assurance, including information about compliance with recycling regulations and environmental mitigation measures.
- Interest in understanding the operational lifespan of the battery infrastructure and the processes in place for managing battery components at end-of-life. The Project team members confirmed that all battery components would be subject to stringent disposal and recycling processes in line with state and federal environmental regulations.
- The potential for the Molong Battery to complement and strengthen the region's growing energy landscape. There was discussion of nearby wind, solar, and transmission projects, with attendees recognising the strategic value of the battery in supporting grid stability and improving energy storage capacity.
- Desire to remain engaged and informed throughout the construction and operation of the project. Suggested actions included invitations to site walkovers once safe access is established, updates on the project's approval status and construction timeline, and continued consultation on community benefit opportunities.

5.2.3.4 Engagement Outcomes Summary

The engagement activities for the Molong Battery Project did not reach a large number of stakeholders, which is consistent with expectations for a regional project in the early planning stages. However, those who did engage with the project team generally expressed neutral to positive sentiment.

Participants demonstrated a willingness to listen, ask questions, and consider the project's potential impacts and benefits. Community members sought general information about the project, with some indicating interest in staying informed or participating in future opportunities. There was support for the role of the project in advancing energy reliability in the region and delivering benefits, particularly in the context of other energy infrastructure in the area.

While a small number of concerns were raised, these related to potential health impacts, environmental management, and how project ownership and financial benefit would be distributed. These concerns were constructive in nature and reflected a desire for transparency and accountability. Suggestions for community benefit initiatives were thoughtful and locally grounded, indicating a strong interest in seeing lasting value delivered to Molong.

5.3 Online engagement interactions

5.3.1 Online SIA and Community Benefits surveys

Online SIA and Community benefit surveys were developed to gather community input and identify key concerns and invite feedback to be considered in the preparation of the SSD application for the Project.

The surveys were open from Monday 23 June 2025 to Sunday 13 July 2025 and aimed to collect feedback on the potential social impacts (both positive and negative) and community benefit opportunities for the Project. The purpose of the surveys was to incorporate community perspectives into the Project's planning process, address any concerns, and identify areas requiring targeted mitigation to ensure alignment with local expectations and maximise opportunities for community benefits.

Feedback captured from the surveys, along with proposed mitigation measures, are captured as part of the Project's Social Impact Assessment (refer Appendix O).

5.4 Host landholder

Ongoing discussion have been held with the host landowner via phone, email and face to face meeting throughout the duration of the planning and development process. Legal lease agreements are in place with the landowner and Stor and include the required mitigation measures such as noise wall, APZ management and noise impacts.

The landowner/s have provided consent for the Project.

5.5 Neighbours impacted by Construction Noise

The Noise and Vibration Impact Assessment (NVIA) (Appendix K) identifies exceedances in Project construction noise levels that may impact neighbours during certain construction activities (e.g. vegetation removal). A further letter drop has been undertaken to advise these neighbours of potential noisy activities, the duration and how the noise will be managed. To date, only one response has been received and this neighbour has raised concerns with operational noise. It is noted that there will be no exceedances in operational noise standards to any neighbour.

These neighbours will be informed prior to the commencement of construction and certain noisy activities to minimise potential impacts, noting that the exceedances will only occur over a short period and not over the entire construction duration.

5.6 Agency Consultation

During the preparation of the EIS discussions were held with several government and private agencies, detailed in Table 22.

Table 22 Agency Discussion During EIS Preparations

Stakeholder	Correspondence	Concerns Raised and Response
DPHI	A meeting was held with DPHI on 16/01/2025 to introduce the project. A subsequent meeting was held on 13/02/2025 to discuss matters pertaining to the preparation of the EIS,	No specific concerns were raised by DPHI that required any design changes to the Project. All matters relating to engagement, preparation of the



Stakeholder	Correspondence	Concerns Raised and Response
	engagement, project terminology and applicant details. SEARs were issued on 26/03/2025. Discussions and feedback from DPHI aligned with the issued SEARs. Ongoing consultation has been occurring during the preparation of the EIS, to discuss lodgement requirements.	EIS, technical requirements and Project terminology have been addressed in this EIS and supporting information
TfNSW	Preliminary engagement was undertaken with TfNSW with details of the Project provided via email on 4 December 2024. The intent of preliminary engagement was to introduce the Project to TfNSW, to facilitate consultation on any key design or assessment considerations. Further engagement was undertaken with TfNSW with details of the Project provided via a letter and email on 4 December 2024. A response was received on 16 December 2024, which align with the matters contained in the SEARS issued 26/03/2025. An online meeting was held with TfNSW on 9/07/2025 to discuss the current traffic analysis outcomes and confirm lodgement requirements. These matters requested for consideration from TfNSW have been addressed in the TIA at Appendix L	No specific concerns were raised by TfNSW that required any design changes to the Project. All matters discussed during correspondence (e.g. Compliance with National Heay Regulator Guidelines (NVHR)) have been addressed in the TIA.
Transgrid	The BESS will connect to the existing Transgrid substation via transmission line. Stor have undertaken a pre-enquiry engagement with Transgrid's connection teams in September 2023, again in June 2024 and since established regular meeting schedule. Following preliminary engagement, a formal Connection Enquiry process was lodged with Transgrid in July 2024 in accordance with the requirements of Chapter 5 the National Electricity Rules (NER). Following the receipt of Transgrid's response to the Connection Enquiry, a Connection Process Agreement was entered into with Transgrid.	Technical aspects and requirements, route selection and connection location details have been discussed with Transgrid. The current design is expected to meet all the requirements. Transgrid have provided owners consent to establish the easement and transmission line on Lot 1.
NSW RFS	Preliminary engagement was undertaken with NSW RFS with details of the Project provided via email on 4 December 2024. A meeting between Stor-Energy, SLR Consulting and representatives of the Canobolas Orange RFS was held on 9 December 2024 at the Orange RFS office. The purpose of the meeting was to introduce the Molong Battery Project, discuss fire safety considerations, and explore opportunities for early RFS involvement in the design and planning stages of the project.	The OLALC and RFS sought clarification on the firefighting infrastructure that will be in place to manage/extinguish any fires. These matters were discussed during the site meeting and have been incorporated into the Project including a dedicated 150 kL firefighting tank, suitable Asset Protection Zones (APZs) and use of non-combustible materials for the noise walls.

Stakeholder	Correspondence	Concerns Raised and Response
	A site meeting was also held on Wednesday 18 December 2024 in Molong with representatives from the Orange LALC, SLR Consulting, Virtus Heritage, and the Orange Rural RFS. The purpose of the meeting was to discuss site preparation, cultural heritage considerations, and bushfire risk management as part of the Molong Battery Project. Stor has also continued discussion with the local branch and state planning office around the details of the project during 2025.	
Golden Cross Operations Pty Ltd	There is a mineral exploration and mining title over the site, EL6391 – Golden Cross Operations Pty Ltd, which expired on 10 March 2025. A letter was issued to Golden Cross Operations Pty Ltd on 15 April 2025 and no response was received. A follow up phone conversation and email was sent to Golden Cross Operations Pty Ltd on 22 September 2025 and no response has been received.	No response.
Water NSW	Preliminary engagement was undertaken with Water NSW with details of the Project provided via email on 4 December 2024. A response was received 12 December 2024 advising the Project Area is not located near any Water NSW land or assets.	No concerns were raised in initial correspondence with no response or design changes required.
Fire and Rescue NSW (FRNSW)	Preliminary engagement was undertaken with NSW RFS with details of the Project provided via email on 4 December 2024. A response was received 17 December 2024 advising that comments would be provided via the SEARs process.	No concerns were raised in initial correspondence with no response or design changes required.
Cabonne Shire Council	Preliminary engagement was undertaken with Council, with details of the Project provided via email on 4 December 2024. On 12 December 2024, Stor and SLR met Council online for an initial project introduction. Key points discussed included adjacent developments, renewables context including other proposals in the area, site history and constraints, infrastructure context and community considerations, including project legacy and community benefits. On 13 February 2025, Stor and SLR met online with Council to provide an update on the project and discuss infrastructure and traffic related issues relating to the Project, including access routes and heavy vehicle movements On 13 May 2025 Stor presented in person a project update and answered queries in a monthly workshop for Cabonne Council Councillors.	No specific concerns were raised by Council that required any design changes to the Project. Council has requested the 'Golf Course Heights Estate' subdivision plans be considered in the EIS (e.g. noise, visual), which has been included in assessments. Both light and heavy vehicle routes were discussed and proposed in consultation with Council. All matters discussed have been addressed in the EIS and supporting technical assessments. Notably, Stor is in the process of sending an official VPA letter of offer and proposed Terms of Reference to the Council based on previous

Stakeholder	Correspondence	Concerns Raised and Response
	Benefit sharing model has been developed based on these meetings and engagement with the community, and a proposal of guiding principles and an offer was made in August 2025 to the Council. Currently working on details.	discussions, Council guidance and the results of the Stor led benefit sharing survey. Council has requested local emergency services to be briefed about the Project as the local services run with limited resources. Stor representatives have since introduced the Project, and the process of emergency planning, to Local Emergency Management Committee and to the crew based at Molong fire station. No major concerns were raised, and Stor intends to keep working closely with the local emergency services as the topic is of interest to the local community.
Service Providers	In response to Council's advice regarding bulk water supply for the Project, Stor reached out to a local supplier in June 2025 who confirmed they can supply water for the Project. In addition, Stor have undertaken discussions with contractors for waste management in the area who have advised the can provide sort and dispose of the Project waste at suitable licensed facilities.	No concerns were raised in initial correspondence with no response or design changes required.
Essential Energy	Essential Energy was contacted in June/July 2025 in relation to the 66kV transmission line adjacent to the Molong Substation. Essential Energy advised that the asset was owned by Transgrid and recommended consultation with Transgrid. Essential Energy raised no further concerns regarding the development. Transgrid consultation was subsequently undertaken and no issues or concerns with the proposed line crossing were identified with specific details required to be worked through during the detailed design phase.	No concerns were raised in initial correspondence with no response or design changes required.

5.7 Accommodation Providers

The Project will require on average 29 staff on-site during the construction period (22 months in total) with a short peak of 70 staff needed over a two-month period. Only two staff are needed during the operational period. It is estimated that approximately 40-50% of the workforce will reside in the region and will not require accommodation. However, conservatively, it is estimated that 70% will require accommodation, resulting in 50 beds needed during the peak construction period and 15-20 needed during remainder of the construction period.

An online search for accommodation providers in the area (Booking.com and AirBnB) indicates an abundance of accommodation providers in Molong, Orange and the immediate



surroundings including houses, hotels, cottages and serviced apartments. Acknowledging the construction (and peak) period is still to be confirmed, the searches indicate sufficient availability to accommodate the workforce at all times.

Conversations have been undertaken with both Cabonne Council and Orange Council who have raised no specific concerns regarding any accommodation constraints.

5.8 Amendment of the Project in Response to Matters Raised

The feedback received during consultation did not necessitate any specific design changes to the Project. There was a clear interest by the community in ensuring that the Project delivers lasting value to the local area beyond its technical function, particularly through initiatives that reflect community character and priorities, through the Community Benefit scheme. Actions and recommendations to address the matters raised by the community are detailed in Table 23.

The meetings and feedback received from the OLALC and RFS were valuable in informing design considerations regarding fire risk and water supply, all of which have been incorporated into the Project design.

5.9 Ongoing and Future Engagement

Table 23 below provide a summary of the suggested ongoing engagement and recommendations to be undertaken by Stor to keep relevant stakeholders and the wider community informed about the project during the final planning stages, construction and ongoing operations.

Formal notification of the project will be undertaken by DPHI during the assessment period for the SSD, with the proponent committed to responding to all relevant issues and queries arising during this period through DPHIs formal response to submissions process.

During construction, consultation and engagement will be undertaken with relevant parties in accordance with the CSEP and will include notification of the commencement of works and consultation on works with the potential for impact on nearby receivers. The Proponent and their contractors will continue to engage and work with all relevant agencies and authorities to meet all regulatory requirements and ensure compliance with conditions of consent.

As the Project progresses, refinement of this document and the tools located within the engagement strategy may be required to ensure the ongoing effectiveness of engagement measures proposed.

A summary of the key actions and recommendations to guide future engagement for the Molong Battery Project is provided in Table 23. This table categorises key themes identified during the engagement process alongside actionable steps and recommendations to address them effectively.

Table 23 Key actions and recommendations (SLR, Engagement Report, 2025)

Key themes	Actions and recommendations
Health and safety concerns	• Develop an easy to understand factsheet addressing battery safety, fire risks, and electromagnetic radiation. • Continue engagement with the RFS and Fire and Rescue and involve them in future community briefings. • Reassure stakeholders through transparent emergency response planning and keeping local emergency services informed on the Project.

Key themes	Actions and recommendations
Project ownership and accountability	• Include information on Stor-Energy's ownership structure, and any company policies or strategies in place • Share an overview of project's delivery plans Clearly identify key project partners and roles across the project lifecycle.
Battery lifespan and end of life management	• Provide accessible information about battery lifespan and replacement timelines. • Explain end-of-life recycling processes and compliance with waste regulations. • Host a community information session focused on lifecycle and sustainability.
Integration with regional energy infrastructure	• Develop visual materials that demonstrate how the battery supports the regional energy network.
Community benefit opportunities	• Co-design the Community Benefits Fund with input from residents and Council. • Establish transparent funding criteria and governance mechanisms. • Communicate how community suggestions have shaped funding priorities.
Local procurement	• Maintain regular project updates via website, email, and community notices. • Share milestone announcements and progress against the approval's timeline. • Offer guided site visits or virtual tours when safe and appropriate.
Environmental and land use considerations	• Provide updates on environmental assessments and mitigation strategies. • Incorporate local ecological knowledge into project design and rehabilitation. • Share how feedback has informed environmental planning decisions.

6.0 Assessment of Impacts

This chapter provides a detailed assessment of the key environmental issues and recommended mitigation measures for the Project and addresses the requirements of the SEARs and outlines the mitigation measures proposed to address any potential impacts. The below discussion provides a summary of the specialist studies prepared, which are appended to the EIS.

The following key issues were identified in the EIS Scoping Study and in the SEARs for detailed assessment:

- Biodiversity
- Aboriginal Cultural Heritage
- Historic Heritage
- Land Use Conflict
- Landscape Character and Visual Impact
- Noise and Vibration
- Traffic and Transport
- Land and Soils
- Hydrology, Surface Water, Ground Water and Flooding
- Air Quality
- Bushfire
- Hazards and Risk
- Social Impact
- Economic Impact
- Waste Management

The identified key issues have been the subject of specialists studies and consideration in the sections below.

6.1 Biodiversity

This section presents the findings of a Biodiversity Development Assessment Report (BDAR) (SLR, 2025) prepared in response to the SEARs, refer to Appendix F. The BDAR includes a detailed analysis of the existing environment and proposed operation and construction and outlines the methodology and criteria utilised to form an assessment of the Project.

6.1.1 Existing Environment

The Project lies within the NSW South Western Slopes IBRA Region on the lower inland slopes of the Great Dividing Range. This region occupies 10% of NSW and extends from north of Cowra through southern NSW into western Victoria (NPWS, 2003). The region is dominated by sub-humid climate characterised by hot summers with no dry season.

The Project lie wholly within the Upper Slopes (Inland Slopes) IBRA Subregion. This subregion is characterised by Ordovician to Devonian folded and faulted sedimentary sequences with inter-bedded volcanic rocks and large areas of intrusive granites. Soils are shallow stony soils on steep slopes, texture contrast soils grading from red subsoils on upper slopes to yellow subsoils on lower slopes. Alluvial sands, loams and clays, with extensive red-brown earths on undulating plains and more extensive grey clays on alluvium.

According to NPWS (2003), the vegetation is typically composed of Dwyer's Gum on granite, Red Ironbark on sedimentary rocks, Hill Red Gum White Cypress Pine, Red Stringybark in the ranges, Grey Box, Yellow Box, White Cypress Pine, Belah on lower areas, Poplar Box Kurrajong, Wilga, Red Box, in the north, Mallee in the central west, Myall, Rosewood, Yarran on grey clays, Yellow Box, Polar Box, Belah on alluvial loams and River Red Gum or Black Box along streams.

An unnamed first order ephemeral creek is located within Lot 99, with a portion of an unnamed creek intercepting with the proposed access track in the southwestern corner. The unnamed creek is a tributary to Molong Creek, which is located approximately 1.4 km south of the Development Footprint. During surveys in 2024 and 2025, the unnamed creek has been dry.

The Project is located in the Mullion Slopes NSW (Mitchell) landscape. The Mullion Slopes landscapes generally occur between elevation of 500 to 830 m, local relief of 200 m. This landscape is characterised by open forest to woodland containing White Gum, Brittle Gum, Broad-leaved Peppermint, Red Box, Mountain Grey Gum, White Box with Yellow Box on lower slopes and River Oak along the streams.

A review of the available wildlife corridor mapping on the SEED portal (NSW DCCEEW 2025c) indicates that there is no mapped wildlife corridor associated with the Project Lots. An examination of aerial imagery and regional vegetation mapping (NSW DCCEEW 2022) for the assessment area suggest that the vegetation and habitats within the subject land are generally connected to vegetation and habitats in the broader landscape. In some areas, fragmented paddock trees form the main extent of habitat connectivity. The vegetation within the Project Lots is likely to aid wildlife movements in an east-west and north-south direction.

The 'assessment area' considered in the BDAR is the area of land within the 1,500m buffer zone surrounding the Development Footprint. The assessment area covers a total of approximately 1,143 Ha.

6.1.1.1 Surveys Undertaken

A detailed overview of the fieldworks surveys undertaken to inform the biodiversity assessment is outlined in the BDAR at Appendix F. The survey efforts included:

- Three rounds of field surveys were undertaken between November 2024 and February 2025 to identify landscape features.
- Three field surveys were undertaken to assess the extent and condition of native vegetation cover on the Development Footprint between November 2024 and February 2025. Regional vegetation mapping (NSW DCCEEW, 2024) and a review of aerial imagery (Nearmap, 2025) were used to confirm the native vegetation cover in the assessment area.
- Plot-based vegetation surveys in accordance with Biodiversity Assessment Method (BAM). Subsection 4.2.1 were undertaken by SLR in November 2024, and in January and February 2025.
- Vegetation integrity survey (Subsection 4.5.1) in accordance with BAM Subsection 4.3.4. The number of vegetation integrity plots sampled in each vegetation zone was determined in accordance with Table 3 of the BAM. Within the Development Footprint, eight 20m by 50m (1,000m²) plot/transects ('BAM plot') containing 20m by 20m (400m^2) floristic plots were established and sampled. Four plots were in a zone containing low condition vegetation, and four plots were in a zone containing regrowth condition vegetation.
- In November 2024, SLR ecologists conducted a targeted threatened flora parallel field traverse in accordance with the *NSW Survey Guide for the BAM – Surveying threatened plants and their habitat* (BAM Guide) (DPIE, 2020c) to detect presence of candidate species including Silky Swainson-pea, Small Purple Pea, Eyebrights, Tumut Grevillea and Ausfeld's Wattle.
- In January 2025, SLR ecologists conducted a targeted threatened flora parallel field traverse in accordance with the BAM Guide to detect presence of candidate species including Eyebrights (*Euphrasia arguta*) and Small Scurf Pea (*Cullen parvum).*
- Field surveys to assess habitat constraints and microhabitats were undertaken in November 2024. A second round of habitat assessment surveys was completed in January 2025 to verify habitats and condition. Specific habitat assessment survey techniques for threatened species of fauna include:
    - Mapping of hollow-bearing trees.
    - Surveys of the subject land for the following habitat features: site condition, vegetation structure, presence of stock, evidence of feral animals, evidence of human disturbance, evidence of erosion, fire history, nectar or fruit resources and perch sites, proximity to water, evidence of fauna occupation, dominant canopy species and cover, dominant mid-storey species and cover, dominant ground species and cover, percent cover (of weeds, bare ground, leaf litter, rock cover), evidence of seedling recruitment, hollow resources, wetlands with emergent vegetation, cliffs or caves.
    - Identification of Koala (*Phascolarctos cinereus*) feed trees.
    - Opportunistic and incidental observations of fauna species during field surveys, including opportunistic observation of fauna activity such as scats, tracks, burrows, or other traces.
    - Inspection of human-made structures as potential bat roost sites.



- Surveys undertaken by SLR to target threatened species of fauna include:
  - In November 2024, three 30-minute dawn bird surveys conducted by two SLR ecologists (three person-hours total) in accordance with *Threatened Biodiversity Survey and Assessment Guidelines for Developments and Activities - Draft* (TBSA Guidelines) (DEC, 2004) to detect presence of candidate bird species, including Superb Parrot (*Polytelis swainsonii*) and eastern subspecies of the Grey-crowned Babbler (*Pomatostomus temporalis temporalis*).
  - In November 2024, two Spot Assessment Technique (SAT) surveys were conducted in accordance with the *Koala (Phascolarctos cinereus) Biodiversity Assessment Method Survey Guide* (DPE, 2022a) to detect the presence of the Koala.
  - In November 2024, an area search survey was conducted by two SLR ecologists in accordance with the Threatened Biodiversity Data Collection (TBDC) to detect the presence of Key's Matchstick Grasshopper (*Keyacris scurra*).
  - In November 2024, SLR ecologists conducted a parallel field traverse in accordance with the guidelines in *Significant impact guidelines for the critically endangered Golden Sun Moth (Synemon plana)* (CoA, 2009) to detect the presence of host foods and/or presence of pupal casings.
  - In November 2024 and January 2025, a total of three 1-hour spotlighting surveys were conducted by two SLR ecologists in accordance with TBSA Guidelines to detect presence of candidate arboreal mammals, including Koala and Squirrel Glider (*Petaurus norfolcensis*).
  - In November 2024, one 15-minute call-playback survey in accordance with DEC (2004) to detect presence of, Bush-stone Curlew (*Burhinus grallarius*).
  - In January and February 2025, a total of four nights of harp trapping (two traps used) was completed in accordance with *Species credit threatened bats and their habitats NSW survey guide for the Biodiversity Assessment Method'* (DPIE 2021a) to detect the presence of Large Bent-winged Bat (*Miniopterus orianae oceanensis*).
  - In January and February 2025, a total of 12 baited camera traps were deployed for 29 nights in accordance with the methods listed in the TBDC for Brush-tailed Phascogale (*Phascogale tapoatafa*). Universal bait (i.e. mixture of rolled oats, peanut butter and honey) was positioned in a cannister at a minimum of 1 m distance from the camera. Bait was replenished on one occasion approximately 2-weeks following the initial camera deployment.

In addition to the first round of surveys completed, further surveys to determine breeding status were conducted for Superb Parrot including:

- In January 2025, two SLR ecologists completed a Habitat/Resource Targeted Survey on all hollows within the development footprint for approximately one-hour prior and post sunset in accordance with the '*Survey guidelines for Australia's threatened birds – Superb Parrot'* methodology (DEHWA 2010).

In accordance with BAM Subsection 5.2.4, candidate flora species listed in Table 24 are determined to be present within the subject land based on:

- Assumed presence within the subject land.
- An important habitat map (for dual credit species).
- Targeted threatened species surveys.

- An expert report.

For the candidate fauna species listed in Table 25, presence was determined via assumed presence, important habitat map or expert report. No expert reports were employed for the current assessment and no species were deemed present on the basis of the important habitat map.

Table 24 Determining the presence of candidate flora species credit species on the subject land

Common name	Scientific name	Listing status		Method used to determine presence	Present?	Further assessment required? (BAM Subsections 5.2.5 and 5.2.6)
		BC Act	EPBC Act			
Ausfeld's Wattle	*Acacia ausfeldii*	V	-	Targeted threatened species survey	No	No
Silky Swainson-pea	*Swainsona sericea*	V	-	Targeted threatened species survey	No	No
Small Purple-pea	*Swainsona recta*	E	E	Targeted threatened species survey	No	No
Small Scurf-pea	*Cullen parvum*	E	-	Targeted threatened species survey	No	No
Tarengo Leek Orchid	*Prasophyllum petilum*	E	E	Targeted threatened species survey	No	No
-	*Euphrasia arguta*	CE	CE	Targeted threatened species survey	No	No

Table 25 Determining the presence of candidate fauna species credit species on the subject land

Common name	Scientific name	Listing status		Method used to determine presence	Present?	Further assessment required? (BAM Subsections 5.2.5 and 5.2.6)
		BC Act	EPBC Act			
Brush-tailed Phascogale	*Phascogale tapoatafa*	V	-	Targeted threatened species survey	No	No
Bush Stone-curlew	*Burhinus grallarius*	E	-	Targeted threatened species survey	No	No
Eastern Pygmy-possum	*Cercartetus nanus*	V	-	Targeted threatened species survey	No	No

Common name	Scientific name	Listing status		Method used to determine presence	Present?	Further assessment required? (BAM Subsections 5.2.5 and 5.2.6)
		BC Act	EPBC Act			
Gang-gang Cockatoo	*Callocephalon fimbriatum*	E	E	Targeted threatened species survey	No	No
Key's Matchstick Grasshopper	*Keyacris scurra*	E	-	Targeted threatened species survey	No	No
Koala	*Phascolarctos cinereus*	E	E	Targeted threatened species survey	No	No
Little Eagle	*Hieraaetus morphnoides*	V	-	Targeted threatened species survey	No	No
Pink-tailed Legless Lizard	*Aprasia parapulchella*	V	V	Assumed Present	Yes (assumed)	No
Squirrel Glider	*Petaurus norfolcensis*	V	-	Targeted threatened species survey	No	No
Superb Parrot	*Polytelis swainsonii*	V	V	Targeted threatened species survey	Yes	No
White-bellied Sea-Eagle	*Haliaeetus leucogaster*	V	-	Targeted threatened species survey	No	No

6.1.1.2 Biodiversity Features

The Development Footprint is approximately 9.56 Ha and the native vegetation extent within the Development Footprint is approximately 5.89 Ha or 61%. Native vegetation extent is mapped in Figure 25.

Vegetation within the Development Footprint has been assessed as aligning with the Plant Community Types (PCTs) described within Table 26 and with extent shown in Figure 26.

Table 26 PCTs identified within the Development Footprint

PCT ID	PCT name	Subject land area (ha)
PCT 277	Blakely's Red Gum - Yellow Box grassy tall woodland of the NSW South Western Slopes Bioregion	5.89
PCT 0	Non-native vegetation	3.67
Total area		**9.56**

The PCT found on the site is PCT 277 Blakely's Red Gum – Yellow Box Grassy Tall Woodland, which comprised 5.89 Ha of the subject land area. A detailed description of this PCT is provided in Section 4.2 of the BDAR at Appendix F.

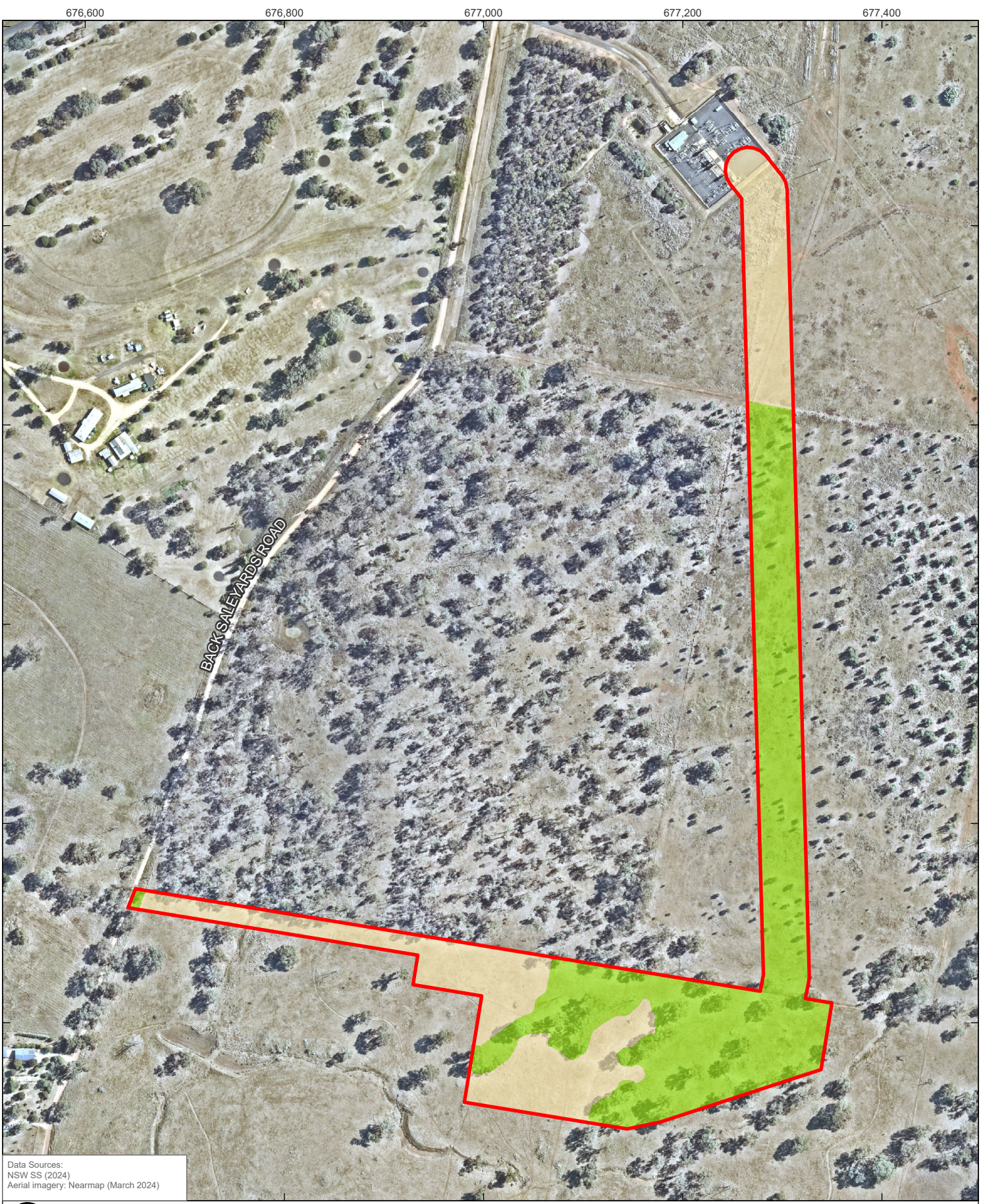
Two condition states have been mapped for PCT 277 within the Development Footprint:

- Low, being areas that contain a mature canopy with a degraded understorey (see Photo 3).
- Regrowth, being areas of regrowth, with a degraded understorey (see Photo 4).

PCT 277 is associated with a Threatened Ecological Community (TEC) within the BioNet Vegetation Classification, being *White Box-Yellow Box- Blakely's Red Gum Grassy Woodland and Derived Native Grassland in the NSW North Coast, New England Tableland, Nandewar, Brigalow Belt South, Sydney Basin, South Eastern Highlands, NSW South Western Slopes, South East Corner and Riverina Bioregions* (hereby referred to as 'Box Gum Woodland'). All 'PCT 277 Low' and 'PCT 277 Regrowth' areas across the Development Footprint are considered to meet the definition of this TEC.

PCT 277 is also associated with an Ecological Community (EC) listed under the *EPBC Act*. Due to the lack of native species cover and abundance in the ground layer, the vegetation within the Development Footprint does not meet the key diagnostic criteria for the listing of Box Gum Grassy Woodland under the *EPBC Act*.

Species polygons for relevant candidate species, namely the Superb Parrot and Pink-tailed Legless Lizard are shown in Figure 27. Species polygons are based on the methods identified in the threatened biodiversity data collection and the results are summarised in Table 27 and Table 28.



Data Sources:
NSW SS (2024)
Aerial imagery: Nearmap (March 2024)

0 50 100 m

Coordinate System:	GDA2020 MGA Zone 55
Scale:	1:5,000 at A4
Project Number:	620.041615
Date Drawn:	08-Jul-2025
Drawn by:	JH

LEGEND

- Subject Land
- Native Vegetation
- Non-native Vegetation / Cleared Land

MOLONG BESS

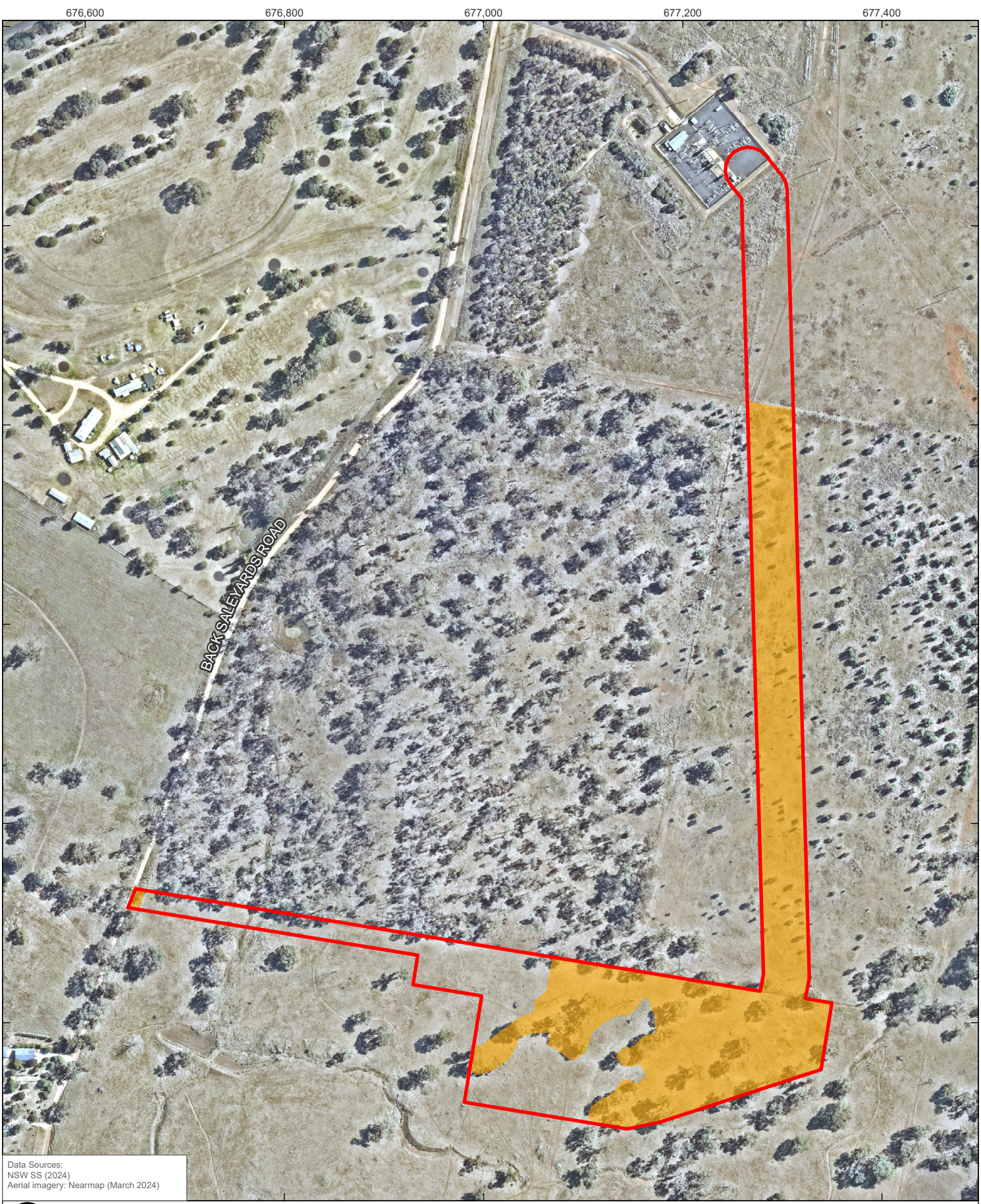
NATIVE VEGETATION EXTENT

SLR

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FIGURE 25

Path: \\au.slr.local\Corporate\Projects-SLR\620-BNE\620-BNE\620.041615.00001 Stor Energy NSW\06 SLR Data\01 GIS\GIS\620041615_StorEnergy_Ecology\620041615_StorEnergy_Ecology.aprx\620041615_BDAR_F07_NativeVegetationExtent



Data Sources:
NSW SS (2024)
Aerial imagery: Nearmap (March 2024)

0 50 100 m

Coordinate System:	GDA2020 MGA Zone 55
Scale:	1:5,000 at A4
Project Number:	620.041615
Date Drawn:	08-Jul-2025
Drawn by:	JH

LEGEND

Subject Land

Threatened Ecological Community

Box Gum Woodland (CEEC, BC Act)

MOLONG BESS

THREATENED ECOLOGICAL COMMUNITIES AND ECOLOGICAL COMMUNITIES

SLR

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FIGURE 26

Path: \\au.slr.local\Corporate\Projects-SLR\620-BNE\620-BNE\620.041615.00001 Stor Energy NSW\06 SLR Data\01 GIS\GIS\620041615_StorEnergy_Ecology\620041615_StorEnergy_Ecology.aprx\620041615_BDAR_F09_TECs



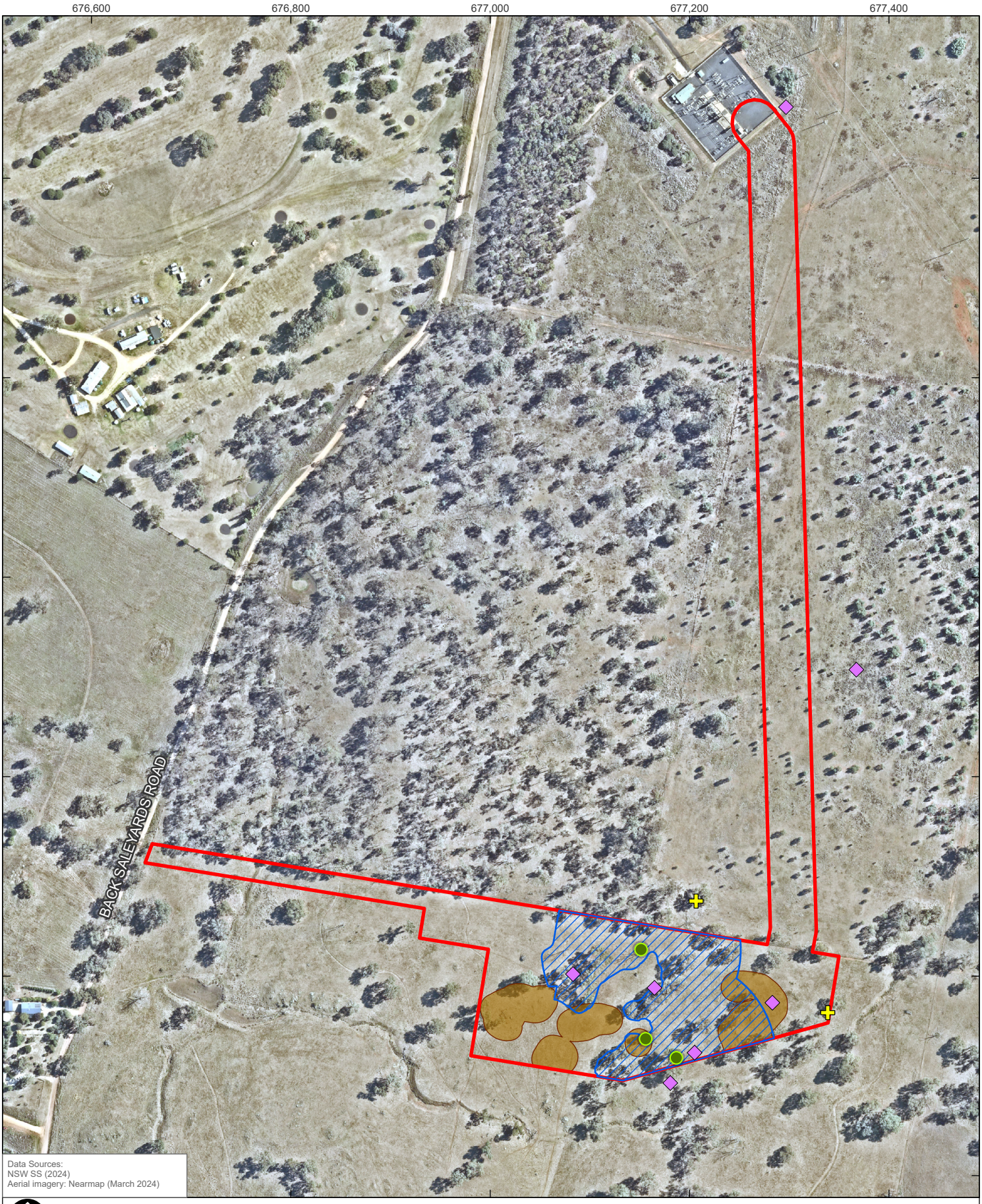
Photo 3 PCT 277 Low condition state (SLR, BDAR, 2025)



Photo 4 PCT 277 Regrowth condition state (SLR, BDAR, 2025)

Table 27 Results for present species (recorded within the Project Lots) (SLR, BDAR, 2025)

Common name	**Scientific name**	**Biodiversity risk weighting** (BAM-C & TBDC*)	**SAII entity**** (BAM-C & TBDC)	**Habitat constraints / microhabitats present on the subject land / vegetation zone**	**Abundance – No. individual plants present on subject land** (flora with unit of measure of count)	**Extent (ha) of suitable habitat present on site** (flora or fauna with unit of measure of area)	**TBDC species specific recommendations e.g. buffers, general comments** (where relevant)	**Habitat condition** (vegetation integrity (VI) score for each vegetation zone in the polygon – area species only)
Superb Parrot	*Polytelis swainsonii*	High (2)	No	PCT 277 Low includes four hollow bearing trees with the potential to be used for breeding in the future. As Superb Parrot was recorded 15 times within the subject land, it is considered breeding habitat.	N/A	2.27	Species polygon should be established by providing a circular buffer with a 100m radius around the nest tree.	PCT 277 Low has a VI of 17.4 and includes 2.27 Ha of breeding habitat.
Pink-tailed Legless Lizard	*Aprasia parapulchella*	High (2)	No	Suitable habitat is rocky areas (or within 50 m of rocky areas) located within PCTs associated with the species in the TBDC.	Assumed present	1.11	Map the species polygon to the full extent (rocky habitat with a 10m buffer) of all suitable habitat on the subject land.	PCT 277 Low has a VI of 17.4 and includes 1.11 Ha of suitable habitat.



Data Sources:
NSW SS (2024)
Aerial imagery: Nearmap (March 2024)

0 50 100 m

Coordinate System:	GDA2020 MGA Zone 55
Scale:	1:5,000 at A4
Project Number:	620.041615
Date Drawn:	20-May-2025
Drawn by:	JH

LEGEND

- Subject Land
- Habitat Tree
- Grey-headed Flying-fox Sighting
- Superb Parrot Sighting

Species Polygon

- Pink-tailed Legless Lizard
- Superb Parrot

MOLONG BESS

CANDIDATE SPECIES CREDIT SPECIES RECORDS AND SPECIES POLYGONS

SLR

DISCLAIMER: All information within this document may be based on external sources. SLR Consulting Pty Ltd makes no warranty regarding the data's accuracy or reliability for any purpose.

FIGURE 27

Path: \\au.slr.local\Corporate\Projects-SLR\620-BNE\620-BNE\620.041615.00001 Stor Energy NSW\06 SLR Data\01 GIS\GIS\620041615_StorEnergy_Ecology\620041615_StorEnergy_Ecology.aprx\620041615_BDAR_F11_SpeciesCredits

Table 28 Results for EPBC Act listed species present (recorded within the Development Footprint (SLR, BDAR, 2025)

Common name	Scientific name	Abundance – No. individual plants present on subject land (flora with unit of measure as count)	Extent (Ha) of suitable habitat present on site (flora or fauna with unit of measure as area)
Superb Parrot	*Polytelis swainsonii*	N/A	2.27
Pink-tailed Legless Lizard	*Aprasia parapulchella*	N/A	1.11

There are no areas of outstanding biodiversity value, as identified under the BC Act, within the Development Footprint and assessment area.

Areas that are not native vegetation are indicated on Figure 25 and include cleared land, being mown areas or maintained pasture (Photo 5). Majority of these areas have been excluded by regional mapping (NSW DCCEEW, 2022) and have been verified and updated by SLR in 2024 and 2025.

The Development Footprint and assessment area do not contain any karst, caves, crevices, or cliffs. Some areas of partially buried rocks do occur within the Development Footprint (Photo 6).



Photo 5 Cleared area adjacent to the existing TransGrid substation (SLR, BDAR, 2025)



Photo 6 Rocky habitat within the Development Footprint (SLR, BDAR, 2025)

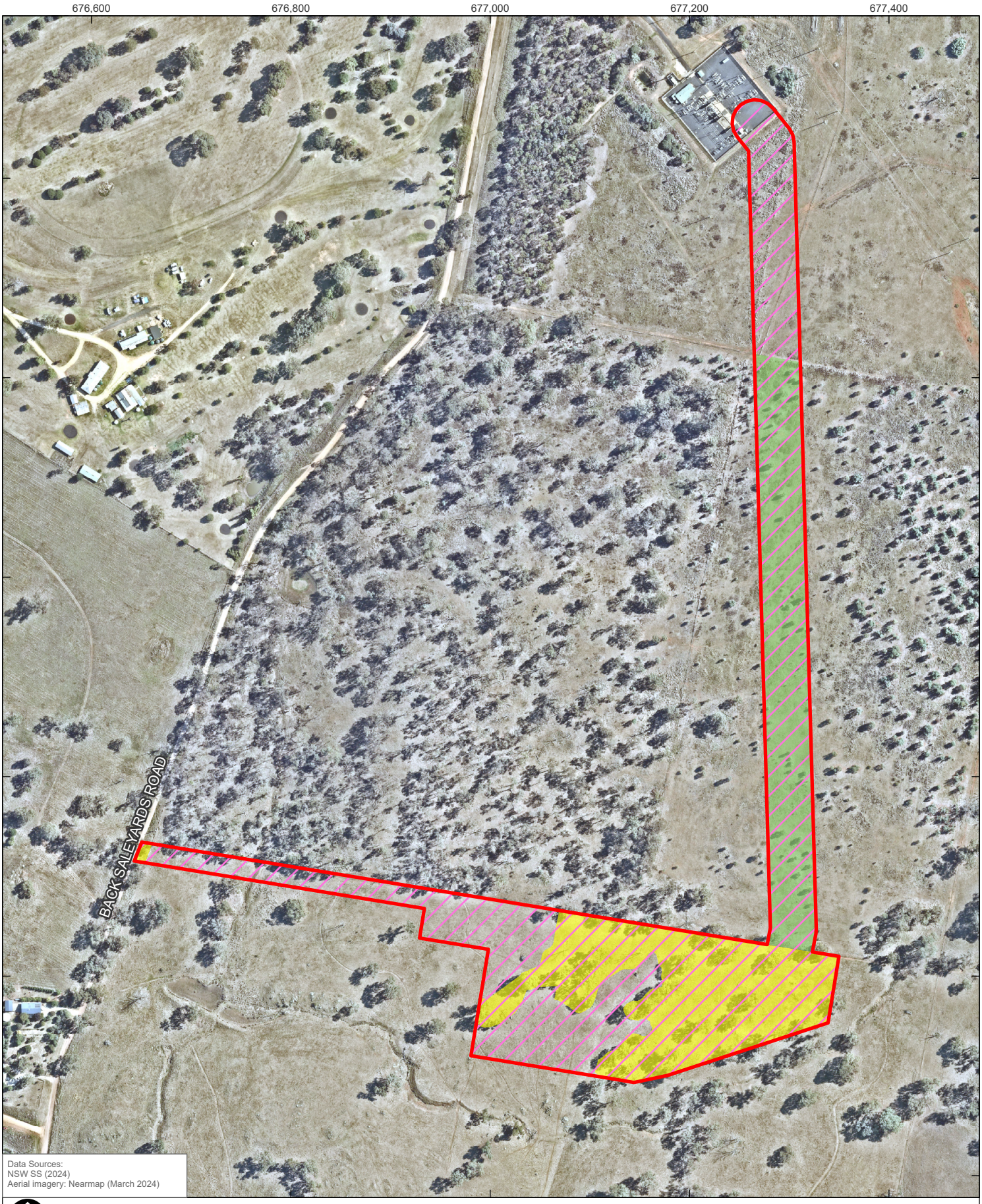
6.1.2 Construction and Operation Impact Assessment

Impacts likely to occur on the Development Footprint after steps are taken to avoid and minimise impacts, are identified in Table 29.

Table 29 Summary of Residual Direct Impacts (SLR, BDAR, 2025)

Direct impact (Describe the impact on PCT/TEC/EC or threatened species and their habitat)	BC Act status	EPBC Act status	SAII entity	Project phase/timing of impact	Extent (Ha)
Clearing of PCT 277 and associated TEC - White Box-Yellow Box- Blakely's Red Gum Grassy Woodland and Derived Native Grassland	Critically endangered	n/a	Yes	Construction	5.89
Clearing of Superb Parrot breeding habitat	Vulnerable	Vulnerable	No	Construction	2.27
Clearing of potential Pink-tailed Legless Lizard Habitat	Vulnerable	Vulnerable	No	Construction	1.11

Table 30 summarises the residual indirect impacts (likely to occur on native vegetation, threatened entities and their habitat beyond the Development Footprint).



Data Sources:
NSW SS (2024)
Aerial imagery: Nearmap (March 2024)

0 50 100 m

Coordinate System:	GDA2020 MGA Zone 55
Scale:	1:5,000 at A4
Project Number:	620.041615
Date Drawn:	08-Jul-2025
Drawn by:	JH

LEGEND

- Subject Land
- Development Footprint

Vegetation Zone

- PCT 277 Low (VZ1)
- PCT 277 Regrowth (VZ2)

MOLONG BESS

FINAL IMPACTS LIKELY TO OCCUR ON THE SUBJECT LAND

SLR

DISCLAIMER: All information within this document may be based on external sources. SLR Consulting Pty Ltd makes no warranty regarding the data's accuracy or reliability for any purpose.

FIGURE 28

Path: \\au.slr.local\Corporate\Projects-SLR\620-BNE\620-BNE\620.041615.00001 Stor Energy NSW\06 SLR Data\01 GIS\GIS\620041615_StorEnergy_Ecology\620041615_StorEnergy_Ecology.aprx\620041615_BDAR_F14_FinalImpacts

Table 30 Summary of Residual Indirect Impacts (SLR, BDAR, 2025)

Indirect impact (Describe impact, e.g. transport of weeds and pathogens form the site to adjacent vegetation)	**Impacted entities** (PCT/threatened entity and their habitats and where relevant, EPBC Act listing)	**Extent** (Ha or zone reference	**Frequency**	**Duration**	**Project phase/ timing of impact**	**Likelihood and consequences**
2a. Inadvertent impacts on adjacent habitat or vegetation	Native vegetation and associated general fauna habitats	5-10 m from edge of BESS footprint, access track and transmission line	Daily for the duration of construction (6 months to 2 years). Sporadically during operation.	Long-term	Construction and operation	Low likelihood of occurring provided exclusion fencing is in place prior to construction. Disturbance and damage to adjacent vegetation and disturbance to resident fauna; reduction in quality of adjacent vegetation and habitats
2b. Reduced viability of adjacent habitat due to edge effects	Native vegetation and associated general fauna habitats	5-10 m from edge of BESS footprint, access track and transmission line	Daily for the duration of construction (6m to 2yr). Sporadically during operation.	Long-term	Construction and operation	Low likelihood of occurring; could impact condition of retained vegetation and habitats
2c. Reduced viability of adjacent habitat due to noise, dust or light spill	Native vegetation and associated general fauna habitats	5-10 m from edge of BESS footprint, access track and transmission line	Daily for the duration of construction and operation.	Long-term	Construction and operation	Dust likely to be deposited in vegetation adjacent to access roads, extending over approximately 5-10 m. Moderate likelihood of occurring; could reduce quality of habitats for foraging and breeding activities of local or resident fauna. Note: no night works are proposed, so light spill is not a relevant impact on adjacent habitats.

Indirect impact (Describe impact, e.g. transport of weeds and pathogens form the site to adjacent vegetation)	**Impacted entities** (PCT/threatened entity and their habitats and where relevant, EPBC Act listing)	**Extent** (Ha or zone reference	**Frequency**	**Duration**	**Project phase/ timing of impact**	**Likelihood and consequences**
2d. Transportation of weeds and pathogens from the site to adjacent vegetation	Native vegetation and associated general fauna habitats	All areas of adjoining vegetation	Monthly	Long-term	Construction and operation	Moderate likelihood of occurring and could result in a reduction in native flora diversity and increase in cover and diversity of weeds (including high threat weeds, HTWs), and function of the adjacent vegetation.
2e. Increased risk of starvation or exposure, and loss of shade or shelter	Local hollow dependent fauna, mainly arboreal mammals, bats and birds displaced by clearing works	3.05 Ha	One off	Short term	Construction	Low likelihood Tree removal could result in temporary reduction in availability of foraging habitat, but unlikely to cause starvation in local fauna populations due to the abundance of alternative habitat features adjacent to the subject land.
2f. Loss of breeding habitat	Local hollow dependent fauna, mainly arboreal mammals, bats and birds displaced by clearing works	3.05 Ha	One off	Short term	Construction	Low likelihood Noise and activity from BESS operations could disrupt breeding activity adjacent to active work areas, but unlikely to cause loss of breeding habitat.

Indirect impact considered not applicable in the BDAR include:

- Trampling of threatened flora species
- Inhibition of nitrogen fixation and increased soil salinity
- Fertiliser drift
- Rubbish dumping
- Wood collection
- Removal and disturbance of rocks, including bush rock
- Increase in predators
- Increase in pest animal populations
- Changed fire regimes
- Disturbance to specialist breeding and foraging habitat (e.g. beach nesting for shorebirds).

The Development Footprint will potentially interrupt habitat connectivity for potential threatened arboreal mammals. Following the construction phase, arboreal species can likely access adjacent vegetation from the retained corridors directly south and west of the Development Footprint and vegetation within the Back Saleyards Road corridor.

Short term disruption of habitat connectivity for potential threatened arboreal mammals could result in reduced foraging and breeding successes. As surveys did not detect the presence of threatened arboreal mammals, no mitigation measures are recommended in the BDAR. Sufficient alternative habitat connectivity is available to the south and west of the Development Footprint which allows for comparable mature canopy trees providing similar connective corridors.

6.1.2.1 Aquatic Ecosystems

Molong Creek is identified as ‘Key Fish Habitat’, however is separated from the Development Footprint by approximately 1.2km (refer Figure 9). Accordingly, the proposal will not have any direct impacts on the KFH, and therefore no impacts will result to listed aquatic threatened species, populations or ecological communities and riparian vegetation adjacent to Molong Creek.

Within the Development Footprint, the design has been positioned to avoid interactions with an unnamed first order stream, which runs south of the proposed BESS area. No works are proposed within 40 metres of this unnamed first order stream, and it is not identified as key fish habitat.

The current proposed location will include a minor interaction with a second unnamed watercourse, that is not identified as key fish habitat and was recorded as dry during November 2024 and February 2025. Given works are proposed within 40 of this watercourse, consideration of the Guidelines for Controlled Activities on Waterfront Land has been undertaken. Where the site access crosses over the watercourse, the manner will be in accordance with the’ Controlled activities – Guidelines for watercourse crossings on waterfront land’ (DPE, 2022), to ensure that the project design will include measures to minimise any modifications to flow and the watercourse. Given that the watercourse is intermittent and often dry, no impacts to fish habitat will result from the Project.

Given the surrounding topography and land use, stormwater runoff across the site drains via diffuse overland flow toward the broader urban stormwater system in Molong. There are no

drainage lines that pass through the BESS site and any stormwater runoff generated by the increase in hardstand will be treated on site by the stormwater basin. Discharge from the stormwater basin will be at the southwestern end of the BESS site, on the western side of the proposed basin.

Potential impacts of the Project on water bodies include erosion, sedimentation, pollution, increased phosphorous in soils, weed invasion and changes to native species composition. Erosion, sediment and weed control measures are recommended to be included in the CEMP, to ensure any temporary effects on watercourses and associated aquatic species are suitably mitigated. Furthermore, permanent stormwater measures will be in placed to ensure minimal impacts during operation

6.1.2.2 Serious and Irreversible Impacts

Entities at risk of an SAII that are relevant to the Project include:

- *White Box - Yellow Box - Blakely's Red Gum Grassy Woodland and Derived Native Grassland in the NSW North Coast, New England Tableland, Nandewar, Brigalow Belt South, Sydney Basin, South Eastern Highlands, NSW South Western Slopes, South East Corner and Riverina Bioregions.*

The Project was subject to an iterative design process which included the adjustment of the layout and width of the transmission line to reduce impacts to TEC White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland, and retaining a patch of mature trees, some of which contained hollows.

The retirement of biodiversity credits may be used with other conservation measures to mitigate prescribed impacts or the indirect impacts of a proposal on areas of native vegetation, TECs and/or threatened species, or their habitat adjacent to the Development Footprint.

Based on the minimal amount of TEC clearing, and low condition of vegetation, the BDAR concludes that the impacts as a result of the Project, following the implementation of recommended mitigation, are considered not likely to cause a serious and irreversible impact.

6.1.3 Mitigation and Management Measures

6.1.3.1 Offsetting Requirements

Table 31 identifies impacts that require an offset (as per BAM Subsection 9.2.1(1.)). Thresholds for assessment and offsetting impacts are identified in Figure 28.

Table 31 Impacts that require an offset – ecosystem credits (SLR, BDAR, 2025)

Vegetation zone	PCT name	TEC	Impact area (Ha)	Current VI score	Future VI score	Change in VI score	Biodiversity risk weighting	Number of ecosystem credits required
PCT 277 Low	277	Yes	3.16	17.4	0	-17.4	High	34
PCT 277 Regrowth	277	Yes	2.73	28.7	0	-28.7	High	49
							Total credits	**83**

6.1.4 Impacts on threatened species and their habitat (species credits)

Table 32 identifies impacts on threatened species (species credits) that require an offset (as per BAM Subsection 9.2.2(2)).

Table 32 Impacts that require an offset – species credits (SLR, BDAR, 2025)

Common name	Scientific name	BC Act status	EPBC Act status	Loss of habitat (Ha) or individuals	Biodiversity risk weighting	Number of species credits required
Superb Parrot	*Polytelis swainsonii*	Vulnerable	Vulnerable	2.27	High	20
Pink-tailed Legless Lizard	*Aprasia parapulchella*	Vulnerable	Vulnerable	1.11	High	10
					Total credits	**30**

6.1.4.1 Impacts that do not need further assessment

Table 33 identifies impacts that do not need further assessment for ecosystem credits (as per BAM Section 9.3(1-2.)

Table 33 Impacts that do not need further assessment for ecosystem credits

Impact	Location within subject land	Justification why no further assessment is required
Cleared Land	Adjacent to the substation and adjacent to the proposed access track easement.	No native vegetation or habitats for threatened species present

6.1.4.2 Further Mitigation Measures

- ECO1 – A Flora and Fauna Management Plan (FFMP) will be prepared prior to the commencement of any clearing or substantive site works. The FFMP will incorporate the recommendations of the BDAR, including:
  - Whereby Superb Parrot breeding is identified within the development footprint, clearing should be avoided during breeding season (i.e Sept-Jan). An ecologist must complete thorough pre-clearance checks, including the inspection of hollow-bearing trees prior to felling. Further details to be included in FMMP.
  - Instigating clearing protocols, including pre-clearing surveys, daily surveys and staged clearing, and using a trained ecologist or licensed wildlife handler during clearing events.
  - Relocating habitat features (e.g. fallen timber, hollow logs) from the development or clearing site, to adjacent retained vegetation.
  - Hollow-bearing trees to be removed one at a time, with a fauna spotter-catcher or suitably qualified ecologist on site during clearing works to complete daily wildlife capture as required
  - Using light shields, or daily/seasonal timing of construction and operational activities to reduce impacts of light spill.



- Erecting temporary fencing of the construction area, and along the proposed access track to temporarily restrict movement into active work site from adjacent intact vegetation.
- Washing all machinery down prior to site entry and exit.
- Training staff and conducting site briefings to communicate environmental features to be protected and measures to be implemented.
- Providing for the ecological restoration, rehabilitation and/or ongoing maintenance of retained native vegetation habitat on, or adjacent to, the development or clearing site.
- Using sediment barriers or sedimentation ponds to control the quality of water released from the site into the receiving environment.

6.1.5 Concluding Remarks

The BDAR has identified that the Project will likely involve the following impacts on biodiversity:

- Direct clearing of native vegetation and removal of threatened species habitat.
- Indirect impacts on patches of grassy woodland adjacent to the works area (including Box Gum Woodland TEC.
- Prescribed impacts, being potential impacts on habitat corridors and hydrological processes.
- Impacts on one SAII entity, being Box Gum Woodland TEC.

Mitigation measures including clearing protocols, construction management measures (e.g. protective fencing, light shields) and rehabilitation, will be employed to ensure any residual impacts are minimised. Measures to avoid and minimise impacts, including retaining threatened species and TECs and their habitats, will be undertaken where possible.

Biodiversity offsets are required under the BAM for the permanent removal of 5.89 Ha of native vegetation. A total of 83 ecosystem credits is required to offset the loss of native vegetation with 30 species credits required to offset the loss of threatened species habitat, comprising 10 credits for the Pink-tailed Legless Lizard and 20 credits for the Superb Parrot. On this basis, any impacts on biodiversity will be adequately mitigated.

6.2 Aboriginal Cultural Heritage Assessment

This section presents the findings of the Aboriginal Cultural Heritage Assessment (ACHA) (Virtus Heritage, 2025) prepared in response to the SEARs, refer to Appendix G. The ACHAR includes a detailed analysis of the existing environment and proposed operation and construction and outlines the methodology and criteria utilised to form an assessment of the Project. As a result of the outcomes of the ACHAR, Virtus subsequently prepared an Archaeological Assessment (AA) and Archaeological Research Design and Methodology (ARDM) at Appendix G.

The ACHA, AA and ARDM were undertaken in accordance with the *Guide to Investigation, Assessing and Reporting on Aboriginal Cultural Heritage in NSW* (OEH, 2011) and the Code of Practice for the *Archaeological Investigation of Aboriginal Objects in NSW* (DECCW,2010) and the *Aboriginal Cultural Heritage Consultation Requirements for Proponents* (DECCW, 2010).

6.2.1 Existing Environment

The Project Lots are within the traditional lands of the Wiradjuri people, a large language group of inter-related tribes that cover a large portion of central NSW, stretching from the Murray River in the south, to Lithgow and Dubbo in the north. The land is currently largely rural and one that retains material evidence of past activity that goes back thousands of years to Aboriginal life before British colonisation. Following from colonial settlers taking up land in the region, Molong was successful as a pastoral landscape with copper mining nearby and possibly the gold workings at Ophir which may have also left a mark.

The Project Lots are situated within the Molong soil landscape, which is predominantly comprised of Euchrozems, non-calcic brown soils and yellow podzolic soils. The Project Lots is atop the Cargo Andesite geological unit. Andesite is known for its strength and durability. The Project Lots have been mostly cleared of the native vegetation that was once present and is currently occupied predominantly by a contemporary vegetation landscape of grass for sheep grazing. The Project Lots are situated on a gentle slope that has undergone significant modifications to the topography due to generational agricultural use.

The Project Lots are located in a landscape which was heavily utilised by Aboriginal people, and despite some urban development, evidence of this occupation can still be seen today. A search of the Aboriginal Heritage Information Management System (AHIMS) register and database identified 44 recorded AHIMS sites within Latitude, Longitude: -33.16767, 148.7894 to -33.0238, 149.0366, none of which were identified within the Project Lots.

Archaeological research within the Molong region indicates that, although there have been extensive disturbances from agricultural activity, there is still potential for Aboriginal heritage to remain. Areas within 200m of water sources contain the highest potential for archaeological materials to be identified, with quartz artefact sites and Potential Archaeological Deposits (PAD) being the most common site types. Additionally, there is potential for isolated artefacts to be identified in heavily modified soils depending on the extent of depth from previous impacts and land use history.

6.2.2 Surveys

Site surveys were undertaken by Virtus Heritage in collaboration with Registered Aboriginal Parties (RAPs) to assess the cultural heritage significance of the Project Lots. Surveys were undertaken on 16 April 2025, 17 April 2025 and 1 May 2025.

The attendees of the 16 April 2025 survey were:

- Archaeologist, Virtus Heritage.
- Registered Aboriginal Parties:
  - Girragirra Murun Aboriginal Corporation (GMAC) – 1 attendee.
  - Wongarra Wilay Aboriginal Corporation (WWAC) – 1 attendee.
  - Mirrabee – 1 attendee.

The attendees of the 17 April 2025 survey were:

- Archaeologist, Virtus Heritage.
- Registered Aboriginal Parties:
  - Wellington Valley Wiradjuri Aboriginal Corporation (WVWAC) – 1 attendee.

The attendees of the 1 May 2025 survey were:

- Archaeologist, Virtus Heritage.



- Registered Aboriginal Parties:
  - Orange Local Aboriginal Land Council (OLALC) – 1 attendee.

The survey aimed to identify and assess any potential Aboriginal archaeological sites and/or cultural heritage constraints within the Project Lots.

6.2.2.1 Findings

The surveys identified and recorded seven previously unknown Aboriginal sites, including three 'scarred trees' ('SCT') and other various artefacts as described below and shown in Figure 29.

SCT1 (AHIMS # TBD) – Scarred Tree

The tree is a mature *Eucalyptus melliodora* species (Box) and has a long elliptical shaped scar, north, north-east facing. The tree is alive and has good canopy and foliage. It is in a location heavily disturbed by generational agricultural use and accelerating erosion from this land use over decades.

The tree is located in the Project Lots but is approximately 50m east of the Development Footprint.

SCT2 (AHIMS # TBD) – Scarred Tree

The tree is a mature *Eucalyptus melliodora* species (Box) and has a long elliptical shaped scar, southwest facing. The tree is alive and has good canopy and foliage.

The tree is not located in the Project Lots and is located approximately 50m north the proposed access handle of the Development Footprint.

SCT3 (AHIMS # TBD) – Scarred Tree

The tree is a mature *Eucalyptus melliodora* species (Box) and has a long elliptical shaped scar, in the central section of the tree where the tree branches out and is east facing. It is situated on the eastern fence line of Back Saleyards Road, close to the existing Transgrid Molong Substation. The site is approximately 300m northwest of the Development Footprint.

Molong IF (AHIMS # 44-1-0190) – Broken Hammerstone

The site is an isolated find along an existing fence line. The isolated find is a broken hammer stone of and is a red – brown quartzite 10.5cm length x 4cm width x 4cm thickness.

It is a location heavily disturbed by vehicle use, generational agricultural use, the construction of fence line and erosion. The site is approximately 250m west of Development Footprint and 90 metres distance from the first order channel of south-trending unnamed ephemeral creek.

Molong Grinding Stone (AHIMS # 44-1-0191) – Grinding Stone

The grinding stone is located at a slightly elevated point of a grazing paddock within the proposed Development Footprint. The isolated find is a grinding stone with evidence of pitting and some patina and is a red – orange weathered basalt 8cm length x 14cm width x11cm thick.

Molong IF2 (AHIMS # 44-1-0192) – Isolated basalt core

The site is an isolated basalt core is located along an existing fence line and within the Development Footprint. The core displays negative flake scars on multiple sides including

ventral and dorsal surfaces. The site is within a small, eroded exposure in a gently undulating slope disturbed by generational agricultural use including sheep, vegetation removal, sheep grazing, erosion.

Molong Artefact Scatter 1 (AS1) (AHIMS # TBD) – Artefact Scatter

The scatter is exposed within both highly erosional banks in an ephemeral tributary of Molong Creek approximately 20m east of the Development Footprint.

The scatter includes four artefacts including a red heat-treated quartzite flake, two yellow with green metamorphic mineral veins (likely amphibolite and chlorite) heat treated broken flakes (medial fragments) and a greywacke broken flake. The artefacts found are likely to be not in situ. The scatter is approximately 20 metres by 15 metres and is on both sides of the banks.

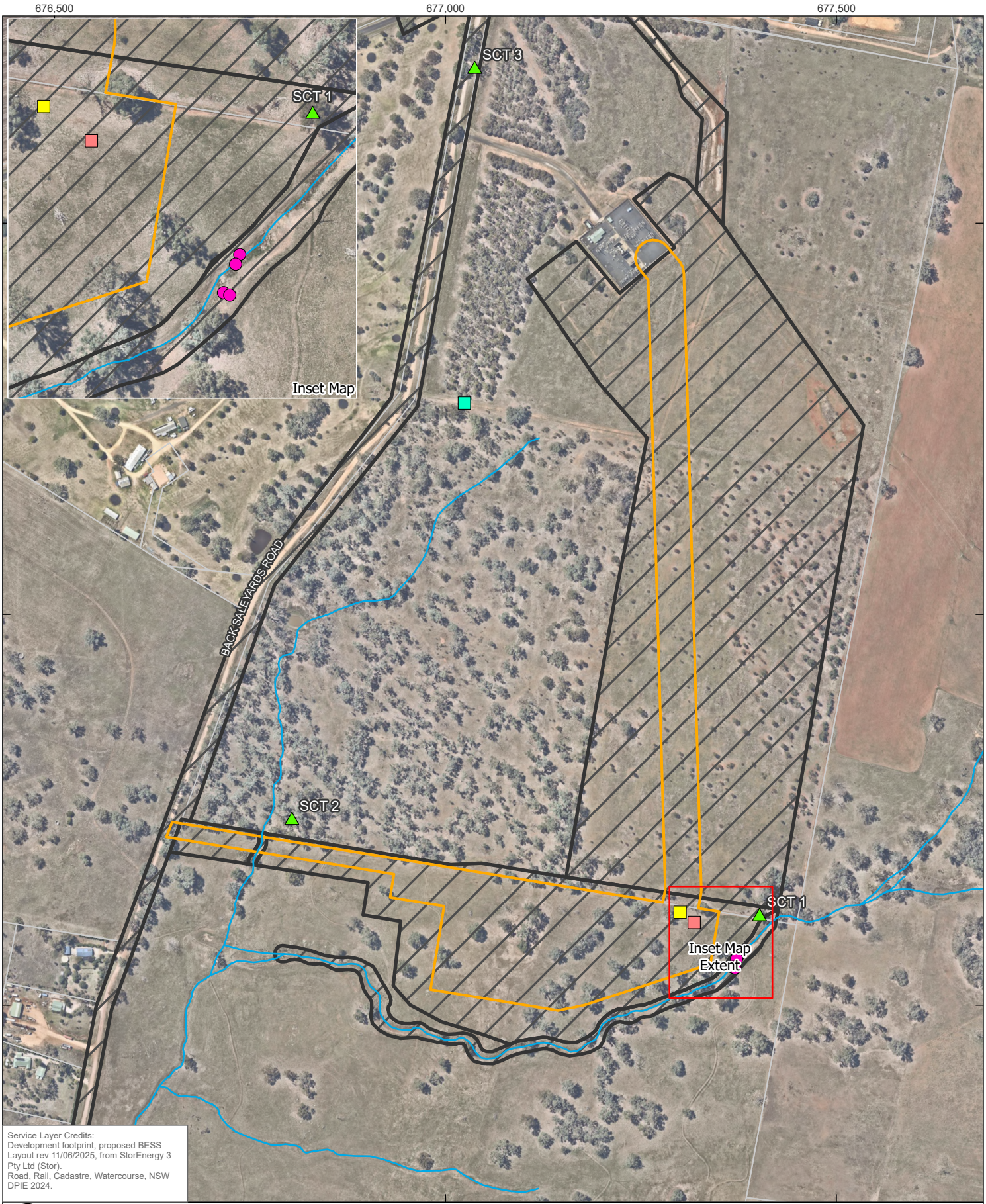
6.2.3 Construction Impact Assessment

The Project requires ground disturbance that may disturb archaeological items, specifically the '*Isolated Basalt Core*' and '*Grinding Stone'* which are within the Development Footprint and 'Artefact Scatter' which is located approximately 20m east of the Development Footprint. All these areas are considered areas of moderate archaeological potential.

Archaeological mitigation is therefore proposed which includes detailed recording and surface collection in accordance with *NSW Office of Environment and Heritage's (OEH) Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales (2010).* These mitigation measures are set out in Section 6.2.5.

There are three recorded potential scarred trees with cultural evidence of modification recorded in the ACHA study area, none of which are located within the Development Footprint. Notwithstanding, the conservation and management of the scarred trees will be undertaken in consultation with the RAPs with input from a qualified arborist with experience in the management of scarred trees. This input will include consideration of appropriate exclusion zones and signage to protect the scarred trees. If harm cannot be avoided to the scarred trees, consultation with the RAPs will be undertaken on options for their salvage, if possible, or relocation.

One recorded site, the '*Broken Hammerstone'*, is outside the Project Lots and Development Footprint and will not be harmed by this Project.



Service Layer Credits:
Development footprint, proposed BESS Layout rev 11/06/2025, from StorEnergy 3 Pty Ltd (Stor).
Road, Rail, Cadastre, Watercourse, NSW DPIE 2024.

0 125 250 m

Coordinate System:	GDA2020 MGA Zone 55
Scale:	1:6,400 at A4
Project Number:	620.041615
Date Drawn:	29-Jul-2025
Drawn by:	NT

LEGEND

- Ephemeral Creek (LiDAR)
- Development Footprint (9.56 ha)
- Cadastre
- Potential Scarred Tree
- Artefact Scatter AS1

Identified Site

- Broken Hammerstone
- Molong IF2(Isolated Basalt Core)
- Molong Grinding Stone
- Survey Area

MOLONG BESS

CULTURAL HERITAGE SURVEY AREA AND IDENTIFIED SITES

SLR

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FIGURE 29

Path: H:\Projects-SLR\620-BNE\620-BNE\620.041615.00001 Stor Energy NSW\06 SLR Data\01 GIS\GIS\NSW_Stor.aprx\620041615_Virtus_F0X_Survey

6.2.4 Operational and Decommissioning Impact Assessment

Since no ongoing physical or earthworks are required in the operation phase, there are no anticipated impacts on Aboriginal cultural heritage. No additional impacts are anticipated during decommissioning works.

6.2.5 Mitigation and Management Measures

- ACH1 - Prior to the commencement of construction works, the further investigations recommended by the ACHAR will be undertaken.
- ACH2 – Prior to the commencement of construction works, an Aboriginal Cultural Heritage Management Plan (ACHMP) will be prepared and submitted to the DPHI for approval. The ACHMP should include:
    - Roles and responsibilities for undertaking actions for ‘In situ’ management of potential scarred trees, SCT1, SCT2 and SCT3 with conservation and management recommendations prepared by an arborist.
    - Include protocols for continued consultation with RAPs throughout the remainder of the project, as outlined in the ACHAR.
    - Detail descriptions and methods to avoid any inadvertent impacts to known Aboriginal objects and/or sites and areas of archaeological potential outside of the construction activities (for example, potential scarred tree, SCT2 and Molong Broken Hammerstone). The methods will address the matters outlined in the ACHAR.
    - Procedures for undertaking further Aboriginal cultural heritage assessment, investigation and mitigation of any areas of the project that have changed following completion of the ACHA and/or during the final design and construction phases of the project.
    - Processes for reviewing, monitoring and updating the ACHMP as the project progresses, including incorporating any mitigation measures identified in the ACHA being prepared and in accordance with the requirements of any future project approval conditions.
- ACH3 - The Construction Environment Management Plan (CEMP), shall incorporate key elements of the ACHMP and incorporate Cultural Awareness Training and Heritage Induction that includes:
    - An Unexpected Finds Procedure for Aboriginal Objects.
    - Unexpected Human Remains Procedure
    - A briefing on the possible identification of Aboriginal sites and objects during construction, including mapped heritage exclusion zones and briefed on their responsibility according to the provisions of the NPW Act 1974, in the event that unknown objects are uncovered during proposed works.
    - The contact phone numbers of Heritage NSW regional archaeologist, EnviroLine 131 555, and Orange LALC.
    - The relevant contact phone number of the Environmental Officer / Site Supervisor responsible for this project in case unknown objects are uncovered during excavation.
    - The penalties for moving Aboriginal objects needs to be made clear and given due consideration.



  - An outline of the types of unexpected heritage objects and their legal protection.
  - Registered Aboriginal Parties should be provided the opportunity to input into or deliver cultural awareness training and heritage inductions by the general works contractor as noted earlier.
- ACH4 – Copies of the ACHMP, updated site cards and any SSD consent conditions shall be provided to other land users of the project area (e.g. Transgrid).

6.2.6 Concluding Remarks

The ACHAR has identified seven Aboriginal sites within or adjacent to the Development Footprint.

There are three recorded potential scarred trees with cultural evidence of modification recorded in this assessment. Potential Scarred Tree 1 and Potential Scarred Tree 3 are within the Development Footprint but can be managed and conserved in situ for this Project. Potential Scarred Tree 2 is outside the Development Footprint and will not be harmed by this Project. Therefore, all three trees have opportunities for conservation.

There are four sites with Aboriginal stone tools recorded within their locations. Three sites AHIMS 44-1-0191 Molong Grinding Stone, 44-1-0192 Molong IF2 Molong Artefact Scatter 1 are within the Development Footprint (including of which two of those three recorded sites are also within the Development Footprint) within highly erosional and disturbed landscape contexts. One recorded site, 44-1-0190 Molong IF -Broken Hammerstone is outside the Development Footprint and will not be harmed by this project.

Mitigation and consideration of impacts is provided in ACHAR. Comprehensive management and mitigation measures will be employed to ensure all known and unknown features are suitably protected, including:

- Preparation of an Aboriginal Cultural Heritage Management Plan (ACHMP).
- Unexpected Finds Protocol.
- Cultural inductions and monitoring during initial ground disturbance.

Ongoing consultation with Registered Aboriginal Parties and implementation of protective management strategies will ensure respectful treatment of cultural heritage throughout the development.

6.3 Historic Heritage

This section includes an analysis of the existing environment as it relates to historic heritage and details how the proposed operation and construction of the Project may impact historic heritage values. This assessment has been prepared with regard to the *Guidelines for preparing statement of heritage impact* (DPHI, 2023).

6.3.1 Existing Environment, Methodology and Assessment

As detailed in Section 2.2.2, the Project Lots are neither heritage-listed nor within a designated heritage conservation area. However, several heritage items are located in the broader vicinity of the Project.

Table 34 details the nearby heritage items, their significance, their distance from the Development Footprint and includes an assessment with regard to the following matters as per the guidelines for development near or adjacent to heritage features:



- *Will the proposed works affect the heritage significance of the adjacent heritage item or the heritage conservation area?*
- *Will the proposed works affect views to, and from, the heritage item? If yes, how will the impact be mitigated?*
- *Will the proposed works impact on the integrity or the streetscape of the heritage conservation area?*

The Landscape and Visual Impact Assessment (LVIA), at Appendix J, has assessed the visual impacts from specific ‘viewpoints’ (VP). The closest viewpoint to each heritage item is also included in Table 34. In addition, a viewshed analysis has been undertaken from each heritage item.

Table 34 Heritage Items and Assessment

Item	Statement of Significance	Distance from Development Footprint	Closest LVIA Viewpoint(s)	Assessment
Gamboola Cabonne Homestead (I198)	'*Large well known significant country home with a distinctive tower dominating its elevation from the road.'*	1.4km south	VP14	As noted, this site is separated from the heritage item by over a kilometre, and in this regard the LVIA assessed the overall visual impact from this general location as Low. The Project will be completely screened from this item by the existing landform and vegetation and sufficiently separated to the extent there will be minimal impacts on this item's significance
Gamboola Homestead, Woolshed & Historic Wire Fence (I202)	*'A fine example of one of the grandest homesteads in the Cabonne shire, constructed in the Edwardian architectural style, with a tower included as an unusual and interesting architectural folly. It remains largely intact with original features throughout the interiors.* *The intact original outbuildings include woolshed and stables, pump house, worker's cottage, boiler house and meat safe are significant as evidence of the historic agricultural use of the property...'*	1.2km southeast	VP2	As noted, this site is separated from the heritage item by over a kilometre, and in this regard the LVIA assessed the overall visual impact from this general location as Low. The Project will be completely screened from this item by the existing landform and vegetation and sufficiently separated to the extent there will be minimal impacts on this item's significance
'House' 11 Marsden Street, Molong (I198) (28 Marsden Street)	*Classic 19th century residence in East Molong contributing to streetscape. One of a number of similar brick houses with brick corbelling at soffit level. High pitched iron clad roof and bull nosed verandah to front and return.*	1.7km southwest	VP2	As noted, this site is separated from the heritage item by over a kilometre, and in this regard the LVIA assessed the overall visual impact from this general location as Low. The Project will be completely screened from this item by the existing landform and vegetation and sufficiently separated to the extent there will be minimal impacts on this item's significance



Item	Statement of Significance	Distance from Development Footprint	Closest LVIA Viewpoint(s)	Assessment
House' 2 Betts Street, Molong (I183)	*Victorian villa, built by Pedro Kinna, c.1887, and in 1957 owned by Mr Dick Starr, a member of the legal fraternity, alderman and Mayor of Molong. S. Double brick single storey with iron roof in Victorian 'Gothic' style with detached iron clad verandah. Bay window to asymmetrical gable and side elevation. 2 brick chimneys. A pair with next door house.*	1.6km west	VP1	As noted, this site is separated from the heritage item by over a kilometre, and in this regard the LVIA assessed the overall visual impact from this general location as Low. The Project will be completely screened from this item by the existing landform and vegetation and sufficiently separated to the extent there will be minimal impacts on this item's significance.
'House' 11 Euchareena Road, Molong (I192)	*Victorian villa, built by Pedro Kinna, stuccoed, galvanised iron roofs, cast iron palisade fence, cast iron trim to verandahs, c1887. Double brick single storey with iron roof in Victorian 'Gothic' style with detached iron clad verandah. Bay window to asymmetrical gable and side elevation. 2 brick chimneys. Set well back on lot from front boundary metal palisade fence, which is on masonry plinth and has gate piers. Pair with Cole House.*	1.6km west	VP1	As noted, this site is separated from the heritage item by over a kilometre, and in this regard the Project will be completely screened from this item by the existing landform and vegetation and sufficiently separated to the extent there will be minimal impacts on this item's significance.
Yuranighs Grave (#I217	*Yuranighs grave is an excellent example of culture contact. The presence of carved trees around the grave demonstrates commemoration by Aboriginal people while the inscribed headstone indicates the honour bestowed on Yuranigh by Major Mitchell, to whom he acted as guide on his famous last north west exploratory venture. The carved trees are also, as far as is known, the longest remaining, number of carved trees around a grave*	3.2km south	VP15	As indicated in the view shed analysis, there may be some obscured glimpses of the BESS to this heritage item. However, based on the ground truthing undertaken as part of the site inspection for the LVIA, it was determined unlikely that the Project would be visible in reality. Due to the large distance to the Project from this heritage item, and the existence of dispersed vegetation, no significant impacts if any, are considered likely.



6.3.2 Concluding Remarks

Overall, the Project does not involve any physical alteration to any heritage items or associated alteration to their fabric or spatial arrangement. The Project will be sufficiently screened and or separated from all historical heritage items to the extent that any impacts on their significance will be neutral.

An unexpected heritage find protocol will be implemented during construction works.

6.3.3 Mitigation and Management Measures

- HER1 – In the unlikely event of an unanticipated heritage object (relic) being identified during the construction of the BESS, all works must cease, and an appropriately qualified heritage consultant should be engaged to assess the find and provide management advice for the relic.

6.4 Land Use Conflict Risk Assessment

This section discusses the Land Use Conflict Assessment (LUCRA) findings, prepared Premise at Appendix I. The LUCRA identifies and assesses the likelihood of land use conflicts arising between neighbouring land uses, where one use may be seen to impact the rights, values, or amenity of another. This process supports the development of appropriate risk reduction and management strategies to help minimise or prevent such conflicts. The LUCRA has been prepared in accordance with the *Land Use Conflict Risk Assessment Guide (DPHI, 2011).*

6.4.1 Existing Environment

The Project Lots are zoned RU1 – Primary Production under the LEP. This zoning is intended to support sustainable primary industry, encourage diversity in agricultural practices, protect valuable resource lands, and minimise conflict between different land uses. Figure 24 (Chapter 4.0) shows the land use zones within 2km of the Development Footprint which include:

- RU1 Primary Production
- RE2 Private Recreation
- SP2 Infrastructure (Classified Road)
- R5 Large Lot Residential.

The Project Lots are currently used for agricultural purposes and supports a rotation grazing system between ewes and cattle, with a typical rotation including approximately 900 ewes and a few steers. The land surrounding the Project Lots is characterised by a mixture of different land uses including predominantly rural land lots to the east, north and south with recreational and rural residential properties to the west.

Recreational activities comprising the Molong Showground and Golf Course are located west of Lot 1. Moving south along the western boundary of the Project Lots, this area is zoned R5 Large Lot residential under the LEP and will therefore likely contain large residential lots generally 4,000m^2 in size in the future. Currently, this land is predominantly rural in nature with a mixture of grazing activities and rural residential dwellings. The Molong Solar Farm also sits approximately 450m northeast of the Project Lots.

The Project Lots is located within a gently undulating agricultural landscape with small intermittent watercourses that generally feed into the Molong Creek adjacent to the southern site boundary. Beyond Molong Creek is rural grazing land and the Mitchell Highway. West

and north of the site is predominantly rural land with grazing and other agricultural activities as well as rural dwellings.

The Project Lots are classified by the NSW DPE eSPADE mapping as having '*moderate limitations'* and is rated as Land & Soil Capability Class 3. Class 3 land has agricultural limitations that must be managed to prevent soil and land degradation. However, the limitations can be overcome by a range of widely available and readily implemented land management practices.

6.4.2 LUCRA Methodology

Land use conflicts occurs when land uses or activities are incompatible with the views, expectations or values of the surrounding community and are near each other. The conflicts most often occur due to different expectations and aspirations of landholders, as well as a lack of understanding of agriculture practices and poor land management. Land use conflicts can potentially constrain legal farming operations and reduce the feasibility of investment in agricultural operations.

A risk ranking of potential land use conflicts is considered in the LUCRA, and is based on probability and consequence, and a revised risk ranking is determined based on implementation of identified management strategies.

A risk ranking of 25 is the highest magnitude of risk; a highly likely, very serious event. A rank of 1 represents the lowest magnitude or risk an almost impossible, very low consequence event.

Risk Rankings have been categorised in terms of their probability and consequence as follows:

- Low Risk, risk ranking between 1 and 10.
- Moderate Risk, risk ranking between 11 and 19.
- High Risk, risk ranking between 20 and 25.

The LUCRA aims to reduce the risk of each identified land use conflict to a score of 10 or below by implementing tailored management strategies and setting performance monitoring targets. These strategies are designed to minimise the likelihood and impact of conflicts, while the monitoring targets ensure their effectiveness is measured and maintained.

6.4.3 Construction, Operational and Decommissioning Impacts

A total of 34 potential land use conflicts have been identified in the LUCRA (SLR, 2025). The initial risk ranking evaluates the likelihood and consequence of potential land use conflicts without the implementation of management strategies. The assessment identified in the initial risk evaluation, which were broken down into 18 low risk, 10 moderate risk and 6 high use conflicts. The initial high risk land use conflict primarily relates to potential noise and construction traffic impacts as well fire risk and hazard safety.

The revised risk ranking for all identified land use conflicts has been reduced to a value of less than 11, which is consistent with the LUCRA objective to lower the revised risk ranking to 10 or below.

The risk assessment in Table 35 below provides a summary of the LUCRA assessment, that identifies and evaluates potential land use conflicts associated with the proposed development.

The full suite of mitigation measures is outlined within the relevant specialist consultant reports which support the EIS.

Table 35 Risk Assessment (SLR, LUCRA, 2025)

Activity	Identified Potential Conflict	Initial Risk Ranking	Revised Risk Ranking
Visual Amenity	Visibility of construction activities from neighbouring properties and the road network	8	5
	Visibility of project infrastructure from residences and the road network	8	5
	Visibility of project during night hours from security lighting	5	2
Agricultural land and productivity	Removal of agricultural land	11	2
	Reduced agricultural productivity of land during operation and construction	4	2
	Impacts of construction on livestock behaviour	5	2
	Biosecurity impacts	10	3
Livestock management	Livestock entering BESS area or construction roads, and becoming injured.	4	2
	Livestock entering BESS area or construction roads, and causing damage or outages.	13	6
Proximity to Town Centre	Impacts of traffic during construction.	17	8
Water quality	Impacts of construction activities on water quality	8	5
	Impacts of ongoing operation on water quality, including potential for run off, sediment or contaminant impacts off site.	4	2
Flooding	Risk of additional flooding to adjoining land	5	1
Air quality	Dust generation during construction activities	12	8
	Dust generation during ongoing operation	8	8
Noise	Impacts of construction noise and vibration on residents	20	8
	Impacts of operational noise on residents	2	1
Safety	Exposure of residents to hazardous events or substances	22	6
	BESS explosion and/or thermal runaway reaction	22	10

Activity	Identified Potential Conflict	Initial Risk Ranking	Revised Risk Ranking
	Impact of fires, should they spread to adjoining land	22	10
Security	Change in land use resulting in increased activity on site during the projects construction period and potential theft or vandalism at neighbouring properties	9	5
	Change in land use resulting in vandalism and theft of project infrastructure and construction materials	8	5
Traffic	Impacts of construction traffic (including heavy vehicles) on the function and efficiency of the road network	23	8
	Impacts of construction traffic (including heavy vehicles) on agricultural/livestock or local transport activities	21	8
	Impacts of construction traffic on wildlife	13	5
	Impact of operational traffic on the function and efficiency of the road network	1	1
Weeds and pest management	Introduction and increased distribution of weeds during construction as a result of increased vehicle and pedestrian movements	12	5
	Impacts of any weed control measures to adjoining land.	9	5
Waste	Increased waste production during construction	12	7
	Risk of waste to adjoining properties, or pest and vermin from poor management. .	8	1
Social	Increased demand on local services and accommodation from construction phase	13	8
	Impacts on local and regional employment	5	5
Infrastructure	Risk to damage of existing infrastructure as a result of the construction phase.	13	8
Decommissioning	Ability to restore site to be used agriculturally	13	5

Following implementation of the mitigation measures which included the development and implementation of a CEMP and OEMP, all identified conflicts are reduced to a low-risk rating. It is therefore concluded that the Project will generally be compatible and not conflict with surrounding land uses.

6.4.4 Mitigation and Management Measures

- LUC1 – The following management plans will be prepared, and will provide documented requirements for performance measures and monitoring during each stage of the project. Performance will also be monitored through the outcomes of consultation during all phases of the project. Monitoring community feedback and concerns are key to assessing the performance of management strategies:
  - Construction Environmental Management Plan (CEMP).
  - Operational Environmental Management Plan (OEMP).
  - Decommissioning Management Plan (DMP).
  - Any other management plan specified in the EIS or conditions of consent.

6.4.5 Concluding Remarks

The LUCRA identified 34 potential conflicts in the initial risk evaluation. Following implementation of the mitigation measures which include the development and implementation of various management plans (e.g. CEMP and OEMP), all identified conflicts are reduced to a low-risk rating. It is therefore concluded that the Project will generally be compatible and not conflict with surrounding land uses.

6.5 Landscape and Visual Impact Assessment

This section presents the findings of the Landscape and Visual Impact Assessment (LVIA) (SLR Consulting, 2025), refer to Appendix J. The LVIA includes baseline condition studies, viewshed analysis, and photomontage simulation to evaluate the scale and nature of visual change. The report includes identification of landscape character zones (LCZs), key visual receptors, and proposed mitigation measures to manage residual impacts.

The LVIA has been prepared in accordance with the *Large Scale Solar Energy Guidelines* (DPE, 2022) and the Guideline for *Landscape and Visual Impact Assessment 3rd Edition* (Landscape Institute 2013).

6.5.1 Existing Environment

Molong exemplifies a rural Australian town with an historical urban centre featuring colonial architecture. The majority of the parks and recreational spaces of the town are located along Molong Creek which is situated east of the township. Vegetation within the township comprises of established mature exotic tree species occurring along roadsides and in private allotments. The area surrounding the township is a picturesque rural setting with undulating farmland, bounded by the Macquarie Range to the west.

A 635-lot residential subdivision, Golf Course Heights Estate, will be developed adjacent to Lot 99 on the western side of Back Saleyards Road. The subdivision covers an area of 118 ha and would transform the rural and agricultural lots between the Golf Course and Molong township into a residential area.

Yuranighs Aboriginal Grave Historic Site is a significant heritage site located just 4 km south of Molong. The gravesite of Yuranigh, Sir Thomas Mitchell's Aboriginal assistant, is the only known site in Australia where Aboriginal and European burial practices coexist. Viewpoint 15



has been taken from along Yuranigh Road, close to the entry to the historic site to illustrate the Project's potential visual impact.

The surrounding area also includes several historic heritage features (refer Section 6.3.1) including the Gamboola Homestead which is located in a prominent position between the Mitchell Highway and the Molong Creek. The Gamboola Cabonne is a large rural residence in the Edwardian style, with a distinctive tower along the Mitchell Highway may be used to infer the potential visual impact of the Project from the Gamboola Homestead.

6.5.1.1 Study Area and Landscape Character Zones (LCZ)

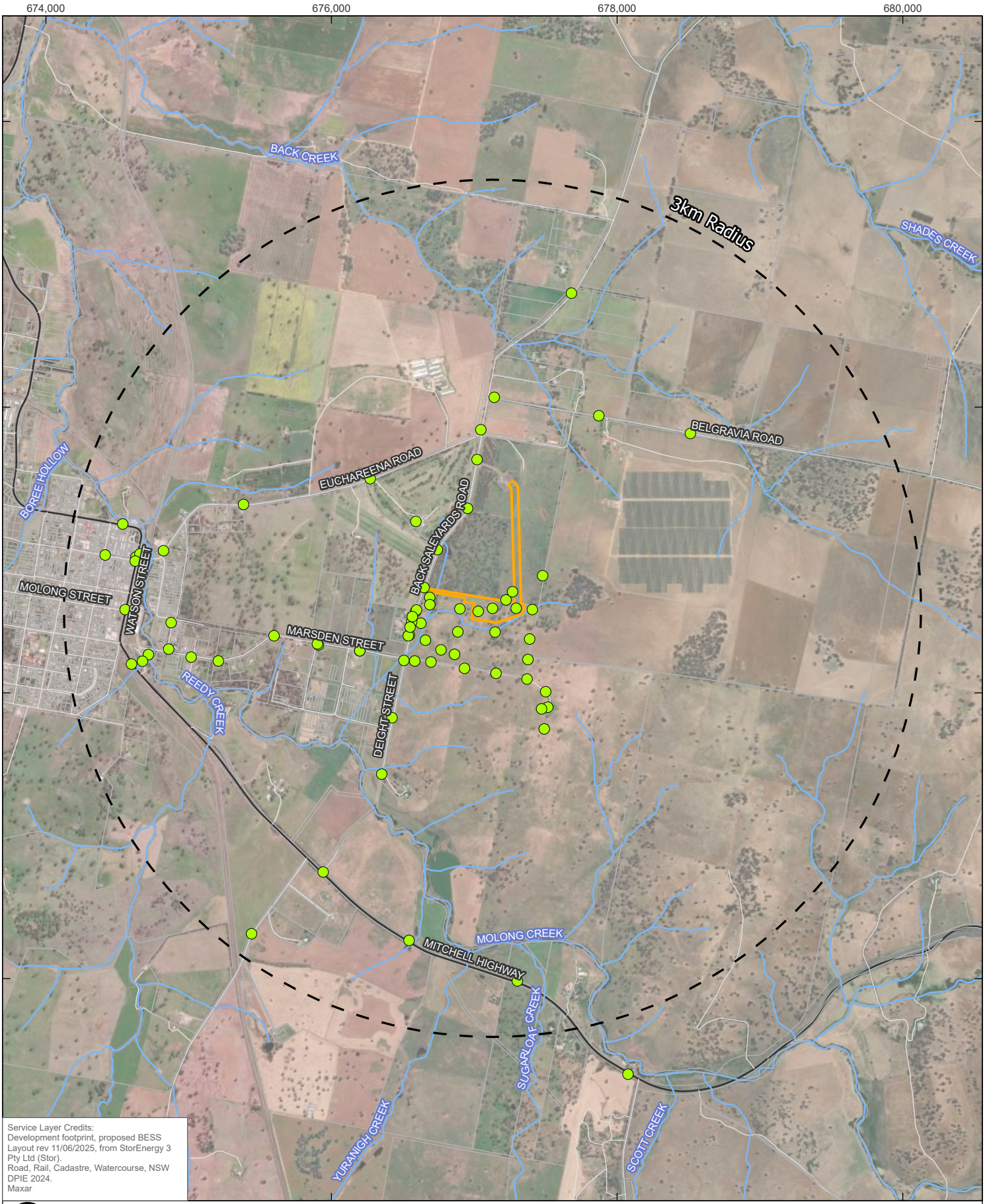
A 'study area' has been defined to inform the assessment of the Project and has been based on the limit of discernibility of the most visually prominent project elements. The key landscape and visual values include the undulating agricultural and rural landscape, creek corridor and historical township. The study area and photo locations is shown in Figure 30.

Landscape character zones (LCZs) are distinct areas within a broader landscape that share similar patterns of physical, natural, and cultural features such as landform, vegetation, land use, and settlement patterns. The inclusion of these zones in this LVIA methodology helps to organise and focus the analysis by recognising the unique qualities and sensitivities of different parts of the landscape.

By assessing each zone individually, the potential impacts of a proposed development can be more accurately understood, ensuring that appropriate measures are taken to preserve or enhance the specific character and visual integrity of each zone. This approach ensures a comprehensive evaluation that supports informed decision-making and sustainable landscape management.

Figure 31 shows the general configuration of LCZs within the study area. Note, the map only displays LCZs that are relevant to the viewpoints assessed in the LVIA. Furthermore, there are many occurrences of Parks and Reserves LCZ within the township that are too small and numerous to be readable at this scale.

A description of each LCZ, its sensitivity to change, and impacts from the Project are included in Table 36.



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Development footprint, proposed BESS Layout rev 11/06/2025, from StorEnergy 3 Pty Ltd (Stor).
Road, Rail, Cadastre, Watercourse, NSW DPIE 2024.
Maxar

0 0.5 1 km

Coordinate System:	GDA2020 MGA Zone 55
Scale:	1:35,000 at A4
Project Number:	620.041615
Date Drawn:	30-Jul-2025
Drawn by:	NT

LEGEND

- Photo Location
- Watercourse
- Primary Road
- Road
- Cadastre
- Development Footprint (9.56 ha)
- 3km Radius

STOR ENERGY MOLONG BESS

STUDY AREA

SLR

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FIGURE 30

Path: H:\Projects-SLR\620-BNE\620-BNE\620.041615.00001 Stor Energy NSW\06 SLR Data\01 GIS\GIS\NSW_Stor.aprx\620041615_LVIA_F04_1_Study Area

Figure 31 Landscape Character Zones (SLR, LVIA, 2025)

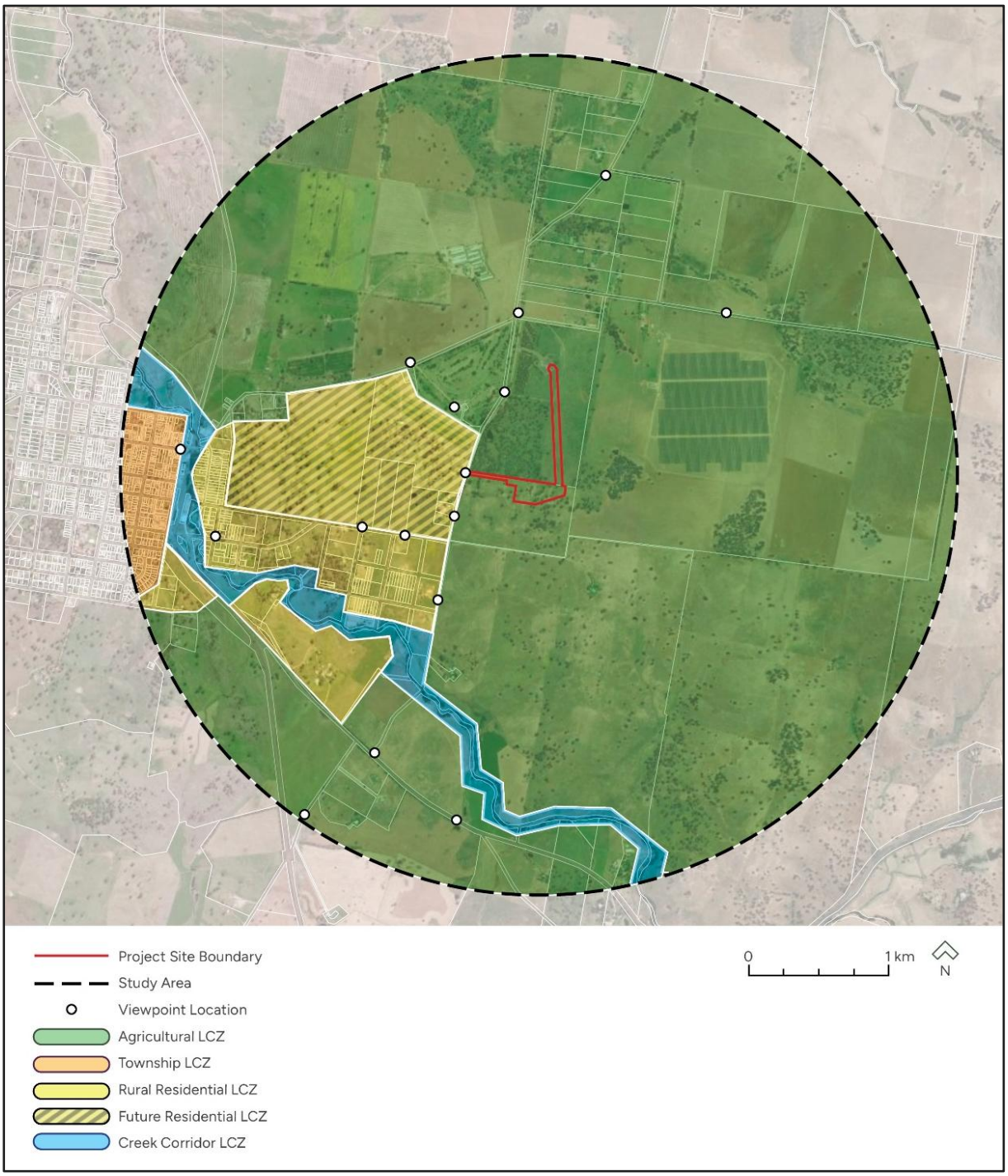


Table 36 Description of Landscape Character Zones

LCZ	Description	Impact Assessment Summary
LCZ 1 – Township	This LCZ is characterised by a flat to gently undulating landscape with the collection of heritage buildings that are a key visual feature of the town. The main thoroughfare, Bank Street, is characterised by one to two storey commercial buildings, wide footpaths and mature street trees. Molong Creek runs adjacent to the town centre, providing a natural landscape element that complements the township with a range of green open spaces and recreational public open spaces, such as the Molong bowling club and Hunter Caldwell Park. Development within the township is typified by a blend of single and double storey buildings fine to medium grain blocks. Locations away from Bank Street are majority single storey residential buildings, with some commercial and cultural buildings. As the commercial centre town is located at a lower elevation in relation to the rest of the township, the surrounding topography limit views out towards the surrounding area and Project	**Sensitivity:** Moderate - Modest residential lots and small-scale commercial buildings that are oriented toward the main central street. The sensitivity to changes in the character of towns tends to be moderately sensitive due to frequency and numbers of people visiting and cultural associations with the character of the town. This is mitigated by the process of continuous change that townships are undergoing. **Magnitude:** Very Low - The Project would not be visible from anywhere in the town so will not result in any changes to the character of the town. **Overall Impact:** Minor
LCZ 2 – Rural Residential	The Rural Residential LCZ of Molong is characterised by a gently undulating landscape and agricultural use and appearance of the land. These areas sit beyond the Township LCZ and are composed of large residential lots with modest dwellings set in an open, spacious setting. Buildings are detached and vary in architectural style and age. Often sheds, water tanks and other ancillary structures will be built on the lots as well. Most properties maintain generous setbacks from roads with low or open fencing. Boundary treatments tend to be minimal, reinforcing the sense of openness and continuity of the broader rural setting. Vegetation plays an important role in defining the character of the Rural Residential LCZ. Majority of the lots retain dispersed remnant native trees or patches of isolated vegetation. Some properties have screen planting, shelter breaks or windbreak planting along their driveways or dwellings. Overall, the Rural Residential LCZ has a strong sense of place and privacy with a connection to the agricultural LCZ beyond.	**Sensitivity**: Moderate - These areas sit beyond the Township LCZ and are composed of large residential lots with modest dwellings set in an open, spacious setting. The sensitivity of the rural residential LCZ is mitigated by the highly modified nature of the landscape since European settlement. **Magnitude:** Very Low - The Project would not easily discernible from most locations within this LCZ so will not result in significant changes to its character. **Overall Impact:** Minor

LCZ	Description	Impact Assessment Summary
LCZ 3 – Future Residential	The Golf Course Heights Estate will transform the existing rural and agricultural character of the area to a more structured, higher density residential environment. The development proposal includes 635 lots with majority of the lot sizes between 700 m^2 to 1500 m^2. This is relatively high density in comparison to existing Rural Residential LCZ. The subdivision will comprise a structured but curvilinear residential street layout. The built form will likely include single-storey and double-storey detached homes on medium lots with contemporary architectural styles. The streetscape is expected to be consistent as the lot sizes and building types have little variation within the estate. The vegetation and public realm design will likely be suburban in appearance with street trees, playgrounds and several bio basins and pocket parks.	**Sensitivity**: Low - The built form will likely include single-storey and double-storey detached homes on medium lots with contemporary architectural styles. The future residential LCZ would have a low sensitivity to change given it represents a dramatic change to the current landscape character **Magnitude:** Very Low - The Project would not easily discernible from most locations within this LCZ so will not result in significant changes to its character. **Overall Impact:** Minor
LCZ 4 – Creek Corridor	The Creek Corridor LCZ is defined by the presence and influence of Molong Creek and its associated riparian environment. It forms a distinctive landscape element that weaves through the township and surrounding rural landscape, acting as a visual, ecological and recreational spine. The creek corridor retains a more natural and densely vegetated appearance compared to the surrounding built areas. Vegetation in this zone is a mix of native and riparian species along with grasses, reeds and understorey species. The character of this zone is shaped by the landform of the creek, and types of uses along the edges. Adjacent to the Molong township, the creek corridor has been integrated into the urban fabric as parks and recreational amenities.	**Sensitivity**: Low - The Creek Corridor LCZ is defined by the presence and influence of Molong Creek and its associated riparian environment. However it is a minor waterway and is filtered from view from most locations within the study area. **Magnitude:** Very Low - The Project would not easily discernible from most locations within this LCZ so will not result in significant changes to its character. **Overall Impact:** Minor
LCZ 5 – Agricultural	Agricultural LCZ comprises a sizeable portion of the study area. This LCZ is characterised by undulating farmland. The flatter terrain affords broad open views across large fields to distant hills. While in hillier regions, the topography creates a sense of enclosure and varies viewing distances. The agricultural vegetation generally presents as open fields with dispersed trees or isolated patches of vegetation. These landscapes are characterised by open and long-range views. The built form predominantly consists of homesteads and sheds that are located intermittently across the landscape with occasional other built form elements (e.g. golf course).	**Sensitivity**: Low This LCZ is characterised by undulating farmland. The flatter terrain affords broad open views across large fields to distant hills. Its sensitivity is mitigated by the highly modified nature of the landscape since European settlement. **Magnitude:** Low - The Project would not be easily discernible from most locations in this LCZ so will not result in significant changes to its character. **Overall Impact:** Minor

6.5.1.2 Viewpoint Locations

The Viewpoints have been selected by first analysing aerial photography to identify areas that may have impact significance. These include evaluating numerous viewpoints that are located within a 3km radius from the Project. Depending on the bulk, height, and scale of the development generally, sensitive receivers beyond 3km are unlikely to result in a high level of impact. Typically distances of vantage points within the 3km radius can vary depending on site conditions such as undulating topography and established vegetation.

A number of proposed viewpoints are selected with the prospect of being impacted by the Project. The site visit was undertaken, and photographs taken at each point in the direction of the Project. These Viewpoints were analysed to ascertain the potential view of the Project and its likelihood of it to be absorbed into the surrounding context. For completeness, images were taken at all the selected key viewpoints within the 3km study area.

Visual receptors are people or groups of people that may be visually impacted by the Project. Potential visual receptors that are often identified based on several key parameters. Depending on the site, proposed use, and future anticipated impacts, not all of these may be selected as receptors.

- Proximity of the receptor – most affected visual receptors are anticipated to be located closer to the Project (Greater consideration if proposed development in located in an elevated position).
- Drivers or passengers of vehicles travelling past, through or alongside the Project.
- Workers on or near the site that visit or work in nearby buildings.
- Members of the general public accessing adjoining public areas (parks, open spaces, streets and waterways) for recreation or visual purposes.
- Permanent residents living near the Project.

Public receptors (views visible by the general public) are accepted as the most suitable for visual impact and amenity assessments, because they represent the highest number of visitations or views to the nominated site in question. Private receptors (namely from private residences) can be selected if the views are unique, significant or the combined effects on a few residents are considered high.

The inspection of the Project site and its contextual surrounds provided a range of viewpoints from which the proposed development could potentially be visible.

Consideration for selecting vantage points were from within the public realm and were chosen based on the ability (wherever possible) to:

- View the site unencumbered.
- View the site from varying locations within the local context.
- View the site for a range of receptor groups from public locations.
- Demonstrate the proposed development height within the local context.

Viewpoints were chosen following this process for this LVIA report.

6.5.2 Construction Impact Assessment

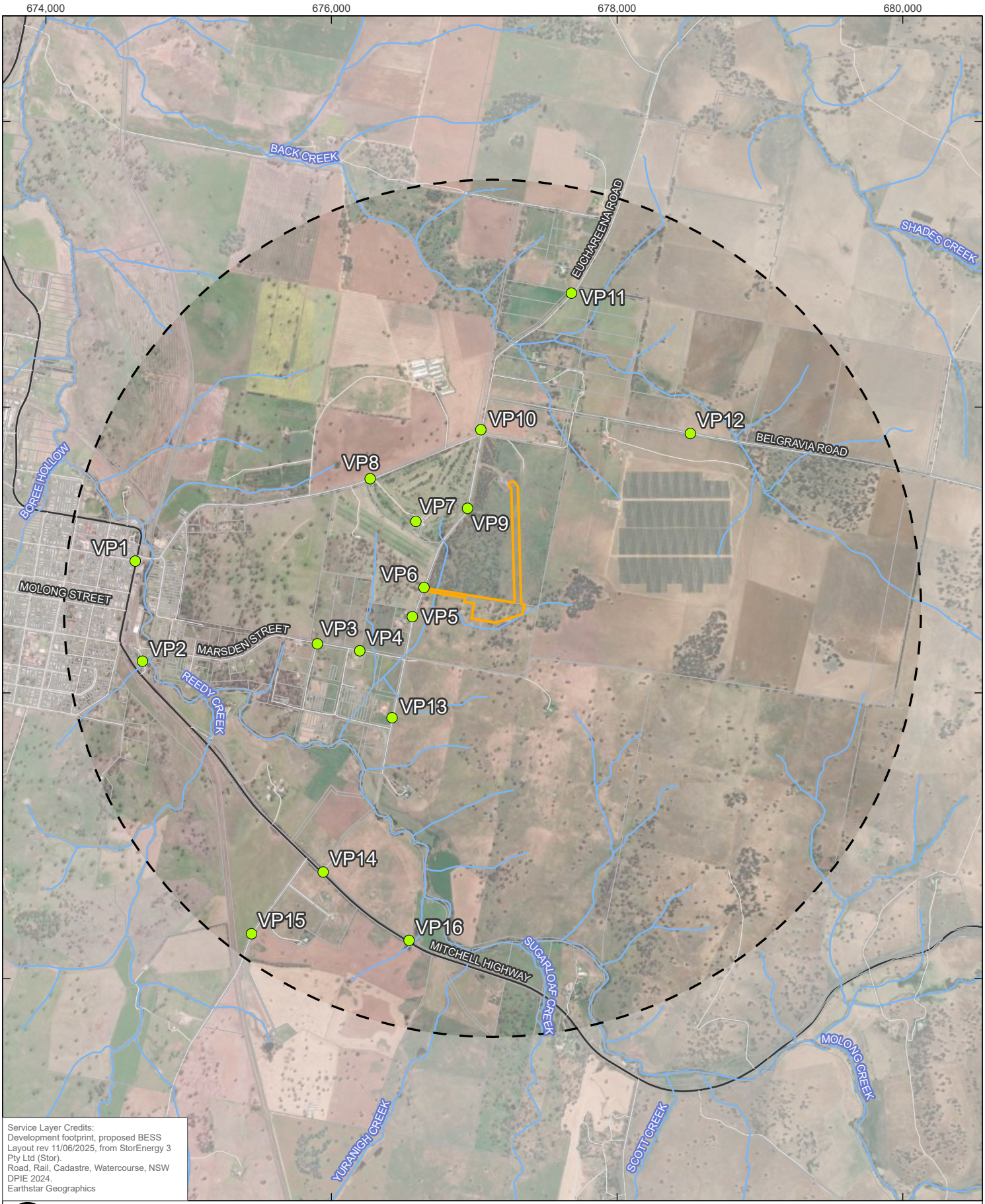
Visual impacts during the construction phase are expected to be temporary and localised, associated with activities such as site preparation, crane operation, machinery movement, and the establishment of construction compounds. These impacts may result in short-term



visual disruption for nearby residents and road users, particularly along Back Saleyards Road.

However, as these effects are transient and will cease upon completion of construction, the LVIA focuses on the enduring presence of built infrastructure and associated mitigation measures. Construction lighting will be designed in accordance with AS/NZS 3012:2010.

Construction-related visual impacts will be managed through standard site management practices and will be limited to the construction period only.



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Development footprint, proposed BESS Layout rev 11/06/2025, from StorEnergy 3 Pty Ltd (Stor).
Road, Rail, Cadastre, Watercourse, NSW DPIE 2024.
Earthstar Geographics

0 0.5 1 km

Coordinate System:	GDA2020 MGA Zone 55
Scale:	1:35,000 at A4
Project Number:	620.041615
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LEGEND

- Viewpoint Location
- Watercourse
- Primary Road
- Road
- Cadastre
- Development Footprint (9.56 ha)
- 3km Radius

STOR ENERGY MOLONG BESS

VIEWPOINT LOCATION

SLR

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FIGURE 32

Path: H:\Projects-SLR\620-BNE\620-BNE\620.041615.00001 Stor Energy NSW\06 SLR Data\01 GIS\GIS\NSW_Stor.aprx\620041615_LVIA_F07_2_Viewpoint Locations

6.5.3 Operational Impact Assessment

6.5.3.1 Visual Impact

As noted, the study area considered for the LVIA was a 3 km radius of the Project. This distance has been derived from site observations and has been informed by other projects with a similar visual profile. Ground truthing was undertaken to consideration of the potential visibility of the Project and numerous locations were considered as part of this exercise. Subsequently, 16 viewpoint locations were analysed in further detail, ensuring consideration of all of the identified Landscape Character Zones (LCZs) in proximity to the Project.

The likelihood of potential impacts varies considerably due to:

- The location / orientation of the viewpoint relative to the Project.
- Existing tree canopy and screening vegetation.
- Site location and orientation.
- Topography on and surrounding the Project.

Private receptor locations were captured in proximity to private residence usually adjacent to the property boundary.

Table 37 provides a summary of Visual Impact of the Project from the assessed Viewpoint locations. For context, the closest sensitive receivers in relation to each Viewpoint are also included.

Table 37 Summary of Visual Impact

Viewpoint	Visual Impact	Closest Sensitive Receiver
Viewpoint 1 – Bank Street Molong Township	**Low**	**R66**
Viewpoint 2 – Mitchell Highway Rest Stop	**Low**	**R94**
Viewpoint 3 – Molong Street #1	**Low**	**R37**
Viewpoint 4 – Molong Street #2	**Low**	**R8**
Viewpoint 5 – Back Saleyards Road #1	**Low**	**R1**
Viewpoint 6 – Back Saleyards Road #2	**Low**	**R1**
Viewpoint 7 – Molong Golf Course #1	**Low**	**R10**
Viewpoint 8 – Molong Golf Course #2	**Low**	**R9**
Viewpoint 9 – Back Saleyards Road #3	**Very Low**	**R10**
Viewpoint 10 – Euchareena Road #1	**Very Low**	**R11, R19**
Viewpoint 11 – Euchareena Road #2	**Low**	**R58**
Viewpoint 12 – Belgravia Road	**Low**	**R12**
Viewpoint 13 – Deight Street	**Low**	**R7**
Viewpoint 14 – Mitchell Highway #1	**Low**	**R46**
Viewpoint 15 – Yuranigh Road	**Low**	**R46**
Viewpoint 16 – Mitchell Highway #2	**Low**	**R5**



Of the 16 viewpoints that were assessed, two were rated as having a Very Low visual impact. 14 viewpoints were assessed as having a Low visual impact. This is because the visual elements of the Project would be visually absorbed by the landscape or screened by existing vegetation to a significant degree from most viewpoints.

Viewpoints 4 and 5 were considered to have the 'worst case' potential impacts, due to their location and aspect in relation to the site. Accordingly, photomontages were prepared for these locations to demonstrate their visibility.

As demonstrated in the photomontages, the modelled visual impact of the Project would be 'low' , predominantly given the intervening topography, setback of the Project from the road and existing vegetation.

All viewpoints would have experience similar or less visual impact than Viewpoint 4 and 5

Notwithstanding, visual mitigation is proposed via the application of a recessive green colour to the proposed acoustic walls (up to 5m in height) to ensure the acoustic wall contributes to a visually coherent and contextually appropriate outcome, with minimal impact to local landscape character. In addition, lighting of compounds will be undertaken with low impact lighting in accordance with *AS/NZS 4282-2023 Control of the Obtrusive Effect of Outdoor Lighting* to minimise any potential light spill impacts.

A viewshed analysis has been undertaken to determine the visibility of the Project from the heritage items in surrounding vicinity. The viewshed analysis indicates that the Project will not be visible from any heritage item.

6.5.4 Decommissioning Impact Assessment

Decommissioning at the end of the Project life cycle is anticipated to have minimal and temporary visual impacts. Activities will generally involve the removal of infrastructure such as BESS units, inverters, security fencing and lighting, ancillary items and specifically the acoustic barriers, with the site returned to a condition similar to its pre-development state and rural setting.

6.5.5 Mitigation and Management Measures

The following measures will further mitigate any potential impacts from the Project.

- VIS1 – The noise wall located closest to Back Saleyards Road will have a recessive and low-reflective green finish applied to the outer surface.
- VIS2 – AS/NZS 4282-2023 Control of the Obtrusive Effect of Outdoor Lighting sets out general principles that should be applied when designing outdoor light to minimise any adverse effect of the light installation. The following principles will be applied when designing the site lighting:
    - Direct lights downward as much as possible.
    - Use luminaires that are aimed to minimise light spill, e.g. full cut off luminaires where no light is emitted above the horizontal plane.
    - Avoid wasted energy and increased light pollution from over-lighting.
    - Wherever possible use floodlights with asymmetric beams that permit the front glazing to be kept at or near parallel to the surface being lit.
    - Lighting should be aimed inward the middle of the site where possible and away from the site boundaries.

6.5.6 Concluding Remarks

The LVIA prepared for the Project identified five LCZs within a 3km radius of the site. The impacts on these LCZs are considered 'minor' as the Project would not be visible or easily discernible from these locations. In addition,16 publicly accessible viewpoints (VPs) were assessed where impacts are also assessed as Very Low or Low on the basis the visual elements of the Project would be visually absorbed by the landscape or screened by existing vegetation.

Overall, it is concluded that the Project would not detract from any key view lines of significant visual amenity given the existing rural environment and its capacity to visually absorb the permanent elements of the Project. With the incorporation of appropriate mitigation, the Project is considered to have an acceptable level of visual and landscape impacts.

6.6 Noise and Vibration

This section presents the findings of the Noise and Vibration Impact Assessment (NVIA) (SLR Consulting, 2025) at Appendix K. The NVIA includes a detailed analysis of the existing environment and proposed operation and construction and outlines the methodology and criteria utilised to form an assessment of the Project.

The NVIA has been prepared in accordance with the *Interim Construction Noise Guideline* (ICNG) and the *NSW Noise Policy for Industry* (NPfI). This report presents applicable noise criteria, assessment methodology, results and management strategies to demonstrate compliance with the project's day, evening and night noise criteria as prescribed by the ICNG and NPfI during construction and operation of the BESS.

6.6.1 Existing Environment

The existing noise environment in the area is typically dominated by infrequent road traffic noise from Back Saleyards Road.

For the purposes of the NVIA, the nearest receivers in each direction have been selected to represent worst-case impacts, these receivers are identified in Figure 33 and Table 38. An additional receiver H1, is the host receiver within the Title containing the BESS and receivers F3, F4 and F5 represent potential future dwellings as enabled by an approved on-site subdivision.

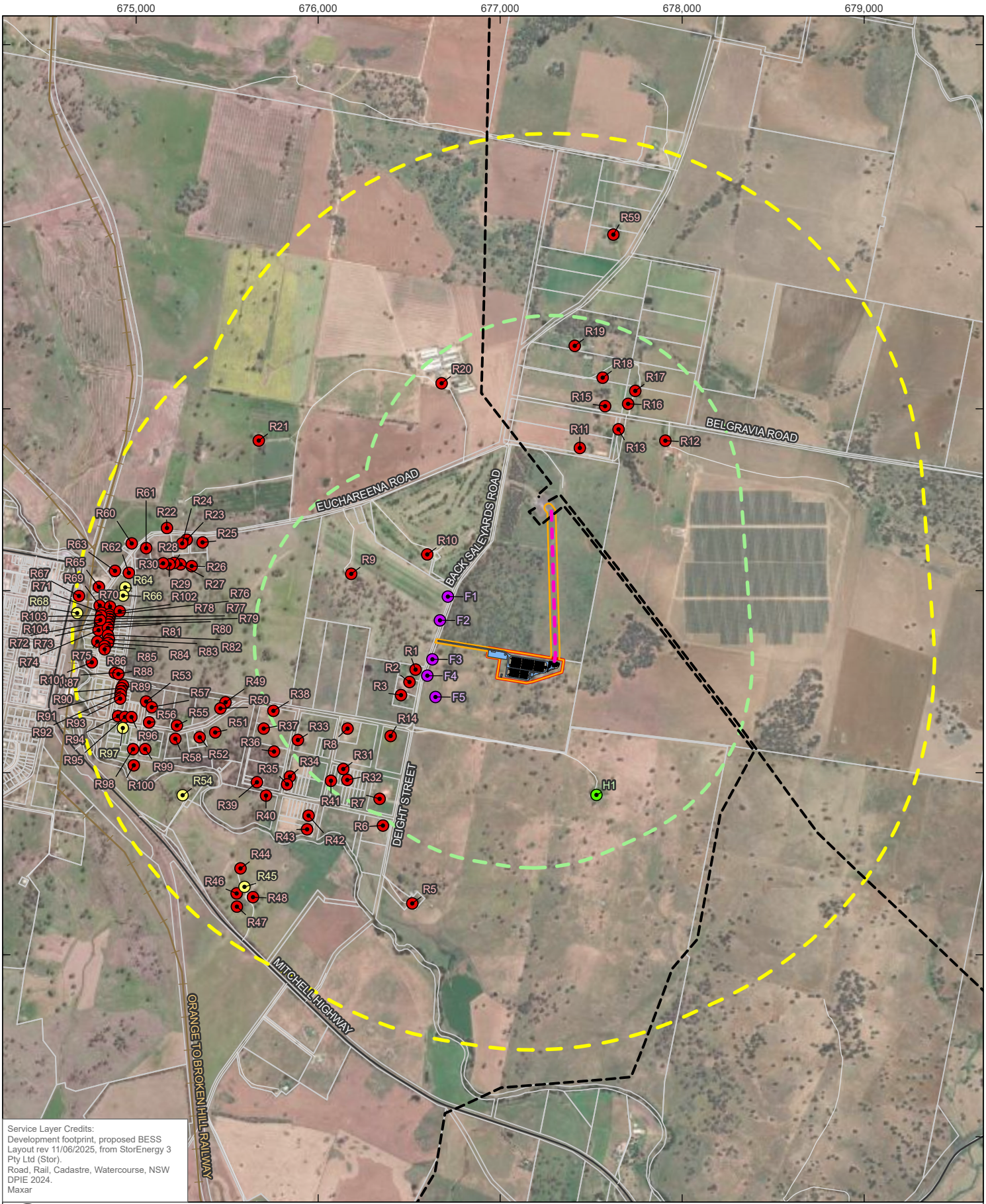
It is noted that the rezoning for the residential subdivision between Back Saleyards Road and Molong Township has progressed to assessment with the DPHI. While a rezoning has not yet been granted for this subdivision, two future receivers (F1 and F2) have been identified to be representative of the closest future receivers in this assessment.

The predicted noise levels at these closest sensitive receivers (one being the host receiver) for construction and operation were assessed against the various requirements of the NPfI and the Interim Construction Noise Guideline.

Table 38 Surrounding Sensitive Receivers (SLR, NVIA, 2025)

ID	Type	Distance to BESS centroid (m)	Direction
F1	Residential (Future)	580	Northwest
F2	Residential (Future)	540	Northwest
F3 (Project-involved)	Residential	510	West

ID	Type	Distance to BESS centroid (m)	Direction
F4 (Project-involved)	Residential	540	West
F5 (Project-involved)	Residential	520	West
H1 (Project-involved)	Residential	800	Southeast
R1	Residential	600	West
R2	Residential	640	West
R3	Residential	700	West
R5	Residential	1430	Southwest
R6	Residential	1160	Southwest
R7	Residential	1070	Southwest
R10 (Golf Course)	Private Recreation	820	Northwest
R11	Residential	1240	Northeast
R12	Residential	1460	Northeast
R13	Residential	1400	Northeast
R14	Residential	850	Southwest



MOLONG BESS

Coordinate System:	GDA2020 MGA Zone 55
Scale:	1:27,500 at A4
Project Number:	620.041615
Date Drawn:	28-Aug-2025
Drawn by:	NT

SENSITIVE RECEIVERS PLAN (1KM AND 2KM RADIUS)

SLR

DISCLAIMER: All information within this document may be based on external sources. SLR Consulting Pty Ltd makes no warranty regarding the data's accuracy or reliability for any purpose.

FIGURE 33

Path: H:\Projects-SLR\620-BNE\620-BNE\620.041615.00001 Stor Energy NSW\06 SLR Data\01 GIS\GIS\NSW_Stor.aprx\620041615_EIS_FXX_Recievers

6.6.1.1 Background Noise Monitoring

SLR Consulting conducted background noise monitoring at Easting 619,884 Northing 6,335,909 (UTM Zone 55H) between 13th Nov 2024 to 25th Nov 2024 to establish baseline conditions. The selected location had sufficient offset from the road and was considered a representative location for the noise levels experienced by the receivers within the surroundings of the Development Footprint.

The noise monitoring equipment continuously measured ambient noise levels in 15-minute periods during the daytime, evening and night-time. All equipment carried current National Association of Testing Authorities (NATA) or manufacturer calibration certificates and equipment calibration was confirmed before and after each measurement.

The measured data has been processed to exclude noise from extraneous events and periods affected by adverse weather conditions, such as strong wind or rain (measured at Orange Airport Automatic Weather Station to establish representative existing noise levels in the area. The measured noise levels have been used to determine the existing noise environment and to set the criteria used to assess the potential impacts from the proposal.

The noise monitoring location is shown in Figure 33 and the results are summarised in Table 39.

Table 39 Summary of Unattended Noise Monitoring Results

ID	UTM Coordinate (Zone 55H)	Measured Noise Levels (dBA)[1]					
		Background Noise (RBL)			Average Noise (L_{Aeq})		
		Day	Evening	Night	Day	Evening	Night
L01	E 619,884; N 6,335,909	35 (32)[2]	31	30 (24)[2]	48	43	37

Note 1: The assessment periods are the daytime which is 7 am to 6 pm Monday to Saturday and 8 am to 6 pm on Sundays and public holidays, the evening which is 6 pm to 10 pm, and the night-time which is 10 pm to 7 am on Monday to Saturday and 10 pm to 8 am on Sunday and public holidays. See the NSW EPA *Noise Policy for Industry*.

Note 2: The NPfI minimum RBL value has been adopted. The measured RBL shown in brackets is below the NPfI minimum value.

Full details of the noise monitoring results are presented in the NVIA (SLR Consulting, 2025) contained in Appendix K.

6.6.2 Construction Impact Assessment

The ICNG is used to assess and manage impacts from construction noise on residences and other sensitive land uses in NSW.

The ICNG contains procedures for determining project specific Noise Management Levels (NMLs) for sensitive receivers based on the existing background noise in the area. The 'worst-case' noise levels from construction of a proposal are predicted and then compared to the NMLs in a 15-minute assessment period to determine the likely impact of the proposal.

The NMLs are not mandatory limits, however, where construction noise levels are predicted or measured to be above the NMLs, feasible and reasonable work practices to minimise noise emissions are to be investigated.

A noise model has been used to predict noise levels from the proposed construction work to all surrounding receivers. The model uses ISO 9613-2:1996 *Acoustics — Attenuation of sound during propagation outdoors* algorithm in SoundPLAN software. Both the algorithm and the software are considered best-practice for noise predictions in Australia.

Local terrain, receiver buildings and structures were digitised in the noise model to develop a three-dimensional representation of the construction sites and surrounding areas.

Vibration from construction works tends to be intermittent in nature and the EPA's *Assessing Vibration: a technical guideline* (2006) provides criteria for intermittent vibration based on the Vibration Dose Value (VDV). The 'preferred' and 'maximum' VDVs for human comfort impacts are shown in Table 40.

Table 40 Vibration Dose Values for Intermittent Vibration (SLR, NVIA, 2025)

Building Type	Assessment Period	Vibration Dose Value[1] ($m/s^{1.75}$)	
		Preferred	Maximum
Critical Working Areas (eg operating theatres or laboratories)	Day or night-time	0.10	0.20
Residential	Daytime	0.20	0.40
	Night-time	0.13	0.26
Offices, schools, educational institutions and places of worship	Day or night-time	0.40	0.80
Workshops	Day or night-time	0.80	1.60

Note 1: The VDV accumulates vibration energy over the daytime and night-time assessment periods, and is dependent on the level of vibration as well as the duration.

6.6.2.1 Construction Noise Assessment

The potential impacts from proposal-related traffic on the surrounding public roads are assessed using the NSW EPA Road Noise Policy (RNP). In considering the potential construction noise impacts, the following scenario has been adopted for the Project:

- The following standard construction hours are proposed for the Project:
  - Monday to Friday - 7am to 6pm.
  - Saturday – 8am to 1pm.
  - Sunday and Public Holidays – No works to be undertaken.
- No works are proposed to be undertaken outside of the standard construction hours. In the event this is required, out of hours (OOH) approval would be sought, and all works would be undertaken in accordance with the appropriate OOH protocols and approval processes.
- A worst case 1-hour day period construction traffic of 6 heavy vehicles, 16 light vehicles and 4 shuttle buses.
- Based on the review of baseline traffic flows, Back Saleyards Road is found to have the least traffic and a worst-case dwelling offset distance of 36 m from the road. Therefore, the off-site construction traffic noise assessment will be prepared on the basis of assessing impacts to receivers along Back Saleyards Road.

Construction activities, particularly during site establishment, are expected to generate noise from various construction activities from a range of different construction equipment. These activities and equipment are included in Table 41.



Table 41 Construction Equipment (SLR, NVIA, 2025)

Equipment	Total SWL	Chainsaw[1]	Chipper	Concrete Pump	Concrete Truck	Concrete Vibrator	Crane - Mobile (100t)	Dozer	Elevated Working Platform	Excavator (20t)	Front End Loader	Hand Tools	Roller - Vibratory[1]	Rockbreaker	Truck - Dump	Truck - Flatbed	Water Truck	Bored Piling Rig	Grader
Sound Power Level[2]		119	120	109	109	113	113	116	97	105	112	104	114	117	110	103	107	116	114
Estimated on-time in any 15 minutes		5	15	10	15	5	15	10	15	10	10	15	15	10	10	10	10	15	15
Scenario																			
W.01 Vegetation clearing	122	X	X							X	X				X		X		
W.02 Earthworks	121							X		X	X		X	X	X		X		
W.03 Construction of pads, hardstands & ramps	113			X	X	X													
W.04 Equipment installation	114						X		X			X				X			
W.05 Noise walls installation	117											X			X			X	
W.06 Site driveway construction	116									X					X		X		X

Note 1: Equipment classed as 'annoying' in the ICNG and requires a 5 dB correction.

Note 2: Sound power level data is taken from the DEFRA Noise Database, TfNSW *Construction and Vibration Guideline* and TfNSW *Construction Noise and Vibration Strategy*.

The predicted noise levels at the most-affected sensitive receivers surrounding the site and exceedances of the NMLs are shown in Table 42.

The predictions represent a realistic worst-case scenario where the equipment in each scenario is working concurrently and the nearest location to each receiver. It is expected that noise levels would frequently be lower than the worst-case levels presented. The worst-case predictions show the following:

- Exceedance of the Highly Noise Affected NML threshold is not expected for all construction phases.
- Construction noise levels during W.01 (vegetation clearing) are predicted to result in minor to marginal exceedances of the NML at the majority of nearest receivers. These are associated with use of equipment such as chainsaws and chippers during vegetation clearing at the closest locations on site to these receivers.
- Construction noise levels during W.02 (earthworks) are predicted to result in minor exceedances (up to 8 dB) at most receivers, particularly at F1-F5, H1, and R1-R3. These levels are considered manageable, and noise is expected to reduce quickly with distance from the work site.
- Construction noise levels during W.03 (construction of pads and hardstands) are not expected to have any exceedance at all receivers.
- Construction noise levels during W.04 (equipment installation) are predicted to result in minor exceedances (up to 1 dB) only at F2 to F5 and R1. All other receivers are predicted to experience noise levels below the NML.
- Construction noise levels during W.05 (noise walls installation) are predicted to result in marginal exceedances at F1-F5, H1, R1-R3, and R10 where exceedances of up to 7 dB are predicted.
- Construction noise levels during W.06 (Site driveway construction) are predicted to result in moderate exceedances of the NML at F2 and F3. This is due to the proximity of the driveway construction area to these receivers. It is noted however that these receivers do not contain dwellings and are unlikely to during the construction period. Minor exceedances of the NML are predicted at F1, F4, F5, R1-R3, R10 and R14. As the construction progresses toward the BESS area and moves further away from Back Saleyards Road, the associated noise impact at nearby receivers is expected to decrease accordingly.
- Overall, the highest predicted noise impacts are expected during W.06 (Site driveway construction) at F2, F3, F4 and R1 with exceedances of the NML reaching up to 14 dB. The second highest predicted noise impacts are anticipated to occur during W.01 (vegetation clearing) and W.02 (earthworks) at F1 to F5, R2 and R1, where exceedances of up to 9 dB are forecasted.
- Works would only occur during Standard Daytime Construction Hours. There is no expectation that evening or night-time work would be required.

Feasible and reasonable construction noise mitigation measures will be applied where exceedances of the NMLs are predicted. Construction noise mitigation and management measures are included in Section 6.6.5.



Table 42 Predicted Exceedance at Nearest Receivers – Standard Daytime Construction Hours (SLR, NVIA, 2025)

Receiver Location	Type	NML	Predicted Exceedance – $L_{Aeq(15minute)}$ (dB)					
			W.01 Vegetation clearing	W0.2 Eaerthworks	W.03 Construction of pads and hardstands	W.04 Equipment installation	W.05 Noise walls installation	W.06 Site driveway construction
F1	Residential (Future)	45	8	7	-	-	5	8
F2	Residential (Future)	45	9	8	-	1	7	13
F3 (Project-involved)	Residential	45	9	8	-	1	7	14
F4 (Project-involved)	Residential	45	9	8	-	1	6	10
F5 (Project-involved)	Residential	45	9	8	-	1	7	7
H1 (Project-involved)	Residential	45	5	4	-	-	1	-
R1	Residential	45	9	8	-	1	6	10
R2	Residential	45	8	7	-	-	5	7
R3	Residential	45	7	6	-	-	4	5
R5	Residential	45	-	-	-	-	-	-
R6	Residential	45	1	-	-	-	-	-
R7	Residential	45	2	1	-	-	-	-
R10 (Golf Course)	Private Recreation	45	5	4	-	-	2	3
R11	Residential	45	-	1	-	-	-	-
R12	Residential	45	-	-	-	-	-	-
R13	Residential	45	-	-	-	-	-	-
R14	Residential	45	5	2	-	-	1	1
= Minor to marginal (1 to 10 dB)			= Moderate (11 to 20 dB)				= High (>20 dB)	

The results of the off-site traffic assessment are shown in Table 43.

Table 43 Traffic Noise Assessment

Receiver Location	Road	RNP Increase Criterion (dB)	Predicted Change (dB)	RNP Criteria (dBA)	Predicted Noise Level (dBA)	Mitigation distance (m)
R1	Back Saleyards Road	2	9	55	55	35

The assessment shows that the predicted change in road noise levels at the most-impacted receiver (R1) on Back Saleyards Road from construction-related vehicles is expected to exceed 2 dB. As such, further assessment comparing the predicted noise level against the RNP criteria was carried out.

The result shows that the predicted noise level does not exceed the RNP criteria. The mitigation distance from the assessed road was predicted to be 35m. The nearest façade of R1 is marginally outside the mitigation distance.

Whilst the predicted levels do not exceed the absolute thresholds, they may cause annoyance due to the anticipated increase in noise. A letter drop has been undertaken to all receivers who may temporarily impacted by construction noise advising them of potential noisy activities and how the noise will be managed. The exceedance will occur over a short duration and not over the entire construction period. Further consultation, in accordance with the Construction Noise and Vibration Management Plan (CNVMP), will be undertaken to advise on the anticipated construction noise and traffic.

The impacts during construction of the proposal are predicted to be consistent with major construction work near sensitive receivers. No works outside of Standard Construction Hours are currently proposed. The use of standard mitigation measures to minimise the impacts is considered sufficient to control the majority of the impacts.

Construction impacts are expected to remain during certain work activities at the nearest sensitive receivers even with the implementation of all feasible and reasonable mitigation measures.

Based on the findings of NVIA and following the implementation of the recommendations and/or safeguards are applied, the proposal is considered appropriate having regard to construction noise impacts.

6.6.2.2 Qualitative Construction Vibration Assessment

Minimum working distances for typical vibration intensive construction equipment are provided in the TfNSW *Construction Noise and Vibration Guideline (CNVG)* and shown in Table 44.

The minimum working distances are for cosmetic damage (from BS 7385) and human comfort (from the EPA *Assessing Vibration: A Technical Guide*). Works that occur further from receivers the minimum distances are unlikely to result in vibration impacts.

Table 44 Recommended Minimum Working Distances from Vibration-intensive Equipment

Plant Item	Rating/Description	Minimum Distance		
		Cosmetic Damage		Human Response (NSW EPA Guideline)
		Residential and Light Commercial (BS 7385)	Heritage Items (DIN 4150, Group 3)	
Vibratory Roller	<50 kN (1–2 tonne)	5 m	11 m	15 m to 20 m
	<100 kN (2–4 tonne)	6 m	13 m	20 m
	<200 kN (4–6 tonne)	12 m	25 m	40 m
	<300 kN (7–13 tonne)	15 m	31 m	100 m
	>300 kN (13–18 tonne)	20 m	40 m	100 m
	>300 kN (>18 tonne)	25 m	50 m	100 m
Small Hydraulic Hammer	300 kg (5 to 12 t excavator)	2 m	5 m	7 m
Medium Hydraulic Hammer	900 kg (12 to 18 t excavator)	7 m	15 m	23 m
Large Hydraulic Hammer	1,600 kg (18 to 34 t excavator)	22 m	44 m	73 m
Vibratory Pile Driver	Sheet piles	2 m to 20 m	5 m to 40 m	20 m
Piling Rig – Bored	≤ 800 mm	2 m (nominal)	5 m	4 m
Jackhammer	Hand held	1 m (nominal)	3 m	2 m

Based on the equipment and activities identified for the proposed construction, potential sources of vibration are limited and would likely only occur during site preparation, bulk earthworks and road works. Given the large distance offsets to receivers (the closest non project-involved receiver and project-involved receiver are 500 m and 400 m from the Project boundary), vibration is unlikely to be perceptible and impacts unlikely to occur.

It is therefore expected that vibration generated by the construction works will comply with the requirements of the human comfort and cosmetic damage criteria.

6.6.3 Operational Impact Assessment

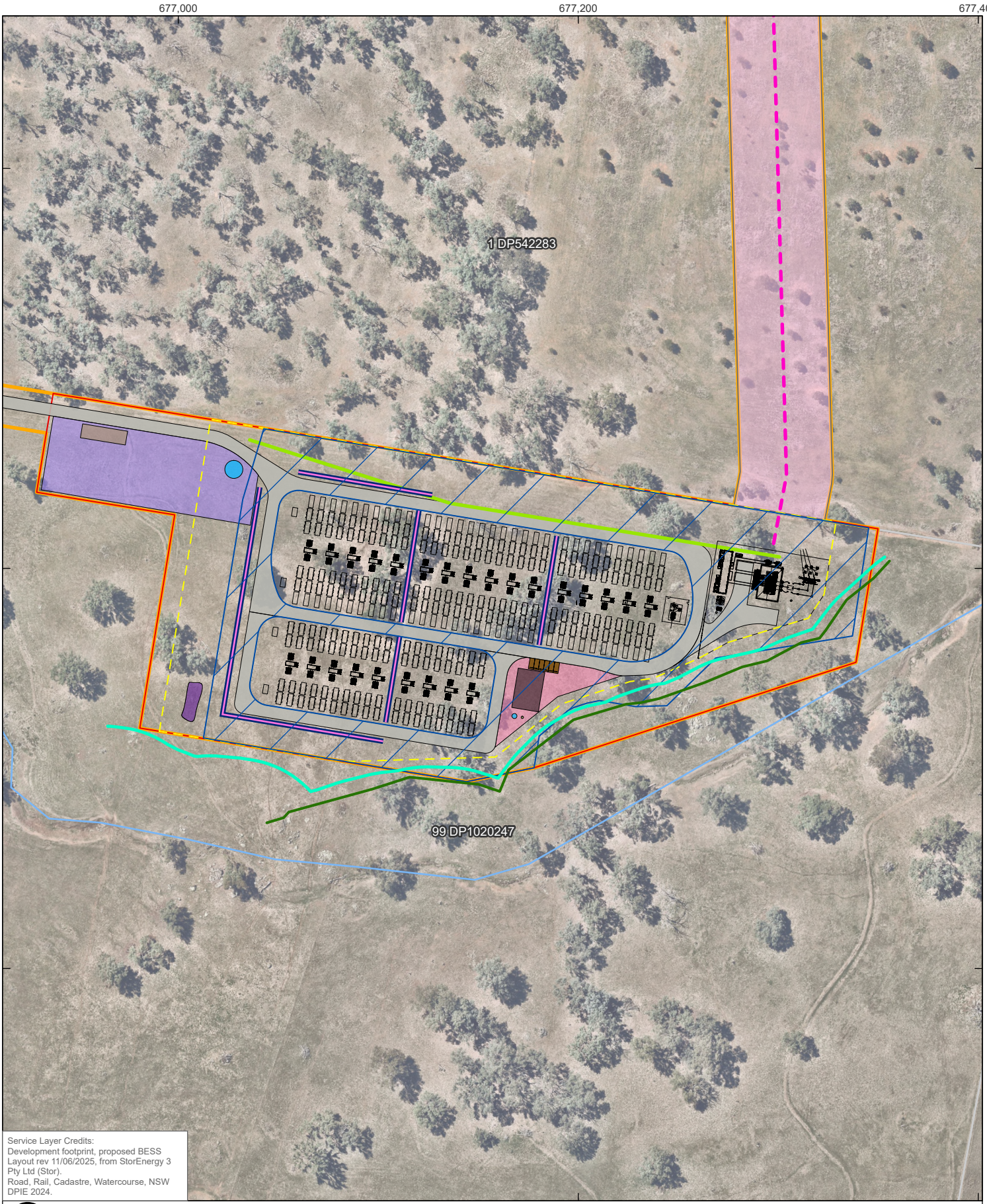
The potential operational noise levels from the proposal have been predicted to the surrounding receivers using the ISO 9613-2 algorithm in SoundPLAN V8.2, implemented in accordance with ISO 17534.

All equipment items are assumed to be in operation for the entirety of a 15-minute assessment period. Noise emissions of the BESS equipment is typically dominated by cooling noise sources, which can be variable depending on the percentage of maximum power (charge/discharge) and the subsequent temperatures, both ambient and that being generated by the equipment.

The following two scenarios were developed based on the period of the BESS operation.

For both scenarios, 4 m noise walls (with 70% absorptivity on both sides, with the exception of external noise walls where absorptivity is specified on internal sides only) were modelled and the configuration of these noise walls is shown in Figure 34.





Service Layer Credits:
Development footprint, proposed BESS Layout rev 11/06/2025, from StorEnergy 3 Pty Ltd (Stor).
Road, Rail, Cadastre, Watercourse, NSW DPIE 2024.

0 50 100 m

Coordinate System:	GDA2020 MGA Zone 55
Scale:	1:2,500 at A4
Project Number:	620.041615
Date Drawn:	22-Aug-2025
Drawn by:	NT

LEGEND

- Watercourse
- Proposed Electricity Transmission Line
- Noisewall
- Swale (Indicative)
- BESS Infrastructure
- BESS Footprint (5.06 ha)
- Development Footprint (9.56 ha)
- Heritage Buffer (50m)
- Top of Bank 40m Buffer
- Fence line
- Car Parking Spaces
- Construction Compound
- Detention Basin
- Internal Road
- Laydown Area
- O&M Building
- Sewerage Holding Tank
- Washdown Bay
- Water Tank
- Proposed Easement
- APZ (Indicative)

MOLONG BESS

BESS OVERVIEW

SLR

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FIGURE 34

Path: H:\Projects-SLR\620-BNE\620-BNE\620.041615.00001 Stor Energy NSW\06 SLR Data\01 GIS\GIS\NSW_Stor.aprx\620041615_EIS_FXX_BESS Layout

Scenario 1: Day period – 100% battery fan duty with silencer and 100% inverter fan duty with attenuation

This is considered the worst-case day-time scenario where all fans are operating at 100% duty for the duration of the assessment. Predicted noise levels at the receivers are assessed against the day criterion of 40 dBA.

Scenario 2: Evening and Night period – 85% battery fan duty with silencer and 80% inverter fan duty with attenuation

Depending on market conditions, the BESS is likely to discharge this period. This scenario models a typical evening and night period discharge. Considering that evening ambient temperatures are lower than day time temperatures, an 85% battery fan duty and 80% inverter fan duty is expected based on operational performance guarantees provided by the battery and inverter unit suppliers without derating the BESS power rating. Predicted noise levels at the receiver are assessed against the night criterion of 35 dBA. Table 45 presents the Sound power levels (SWL) used in the assessment with the designed silencing treatment.

Table 45 Equipment and Sound Power Levels (SLR, NVIA, 2025)

Qty	Item	Sound Power Level (SWL), per unit $L_{eq\ 15\ min}$, dBA
264	Battery Container	76 (Scenario 1: day) 75 (Scenario 2: evening and night)
50	Inverter	92 (Scenario 1: day) 88 (Scenario 2: evening and night)
1	High Voltage Transformer	98[1]
25	Medium Voltage Transformer	68 to 70[2]

Note 1: Based on AS 60076.10:2009 reduced maximum (150 MVA rating).

Note 2: The medium voltage transformers (MVT) at least 10 dB quieter than the inverter units, and there are twice as many inverter sources as MVTs, therefore the source contribution of the MVT to noise levels at the closest sensitive receiver are negligible.

A summary of the worst-case operational noise assessment at the receivers surrounding the proposal is shown in Table 46. The predicted worst-case levels are compared to the PNTLs to determine the potential impact from the proposal.

Table 46 Operational Noise Assessment (SLR, NVIA, 2025)

ID	Type	Period	Predicted Noise Level (dBA)			Compliance
			Noise Criteria	Scenario 1 - Day	Scenario 2 – Evening and Night	
F1	Residential (Future)	Day	40	37	-	Yes
		Evening	36	-	34	Yes
		Night	35	-	34	Yes
F2	Residential (Future)	Day	40	38	-	Yes
		Evening	36	-	35	Yes
		Night	35	-	35	Yes

ID	Type	Period	Predicted Noise Level (dBA)			Compliance
			Noise Criteria	Scenario 1 - Day	Scenario 2 – Evening and Night	
F3 (Project-involved)		Day	40	38	-	Yes
		Evening	36	-	35	Yes
		Night	35	-	35	Yes
F4 (Project-involved)		Day	40	37	-	Yes
		Evening	36	-	35	Yes
		Night	35	-	35	Yes
F5 (Project-involved)	Residential	Day	40	38	-	Yes
		Evening	36	-	35	Yes
		Night	35	-	35	Yes
H1 (Project-involved)	Residential	Day	40	35	-	Yes
		Evening	36	-	32	Yes
		Night	35	-	32	Yes
R1	Residential	When in use	53	37	34	Yes
						Yes
						Yes
R2	Residential	Day	40	36	-	Yes
		Evening	36	-	34	Yes
		Night	35	-	34	Yes
R3	Residential	Day	40	35	-	Yes
		Evening	36	-	33	Yes
		Night	35	-	33	Yes
R5	Residential	Day	40	28	-	Yes
		Evening	36	-	25	Yes
		Night	35	-	25	Yes
R6	Residential	Day	40	30	-	Yes
		Evening	36	-	27	Yes
		Night	35	-	27	Yes
R7	Residential	Day	40	31	-	Yes
		Evening	36	-	28	Yes
		Night	35	-	28	Yes
R10 (Golf Course)	Private Recreation	Day	40	34	-	Yes
		Evening	36	-	31	Yes
		Night	35	-	31	Yes

ID	Type	Period	Predicted Noise Level (dBA)			Compliance
			Noise Criteria	Scenario 1 - Day	Scenario 2 – Evening and Night	
R11	Residential	Day	40	27	-	Yes
		Evening	36	-	24	Yes
		Night	35	-	24	Yes
R12	Residential	Day	40	26	-	Yes
		Evening	36	-	23	Yes
		Night	35	-	23	Yes
R13	Residential	Day	40	26	-	Yes
		Evening	36	-	23	Yes
		Night	35	-	23	Yes

The above assessment indicates that noise from the Project is predicted to comply with the PNTLs at all receivers during all periods of operation. Whilst compliance is demonstrated with 4m high walls, subject to other project impact assessments, an allowance of up to 5m boundary walls may be considered to provide an additional margin of contingency for variability in noise emissions during detailed design subject to the 5m walls being reasonably practicable. Note that the noise walls considered in the NVIA are concept design level and the final noise walls heights / locations will be confirmed during the detailed design stage.

The noise sources proposed for the Project are steady-state and do not exhibit characteristics of impulsiveness and intermittency. As such, sleep disturbance as a result of the Project is not expected at nearest receivers.

During operations, the Project will generate minimal traffic, limited to a maximum of 2 light vehicles only, with no heavy vehicle movements occurring during the day, evening, or night-time periods, unless required for any maintenance purposes. Whilst this may cause a noticeable increase to the receivers on Back Saleyards Road (baseline traffic has only 2 light vehicles in the peak hour), the overall predicted levels are anticipated to be significantly below the established thresholds.

Based on the findings of the NVIA, all operational noise will be appropriately managed and mitigated.

6.6.4 Decommissioning Impacts

Decommissioning of the Project at the end-of-life cycle is expected to generate temporary noise and vibration impacts associated with the use of machinery and heavy vehicles during the dismantling and removal of infrastructure, it is anticipated that the required equipment and vehicles would be similar to those during construction. These impacts would be short-term and limited to standard construction hours, with typical sources including cranes, trucks, and hand tools. Given the rural location and generally low density of nearby sensitive receivers, the overall noise and vibration levels are anticipated to be minor and unlikely to cause significant disturbance.

Mitigation measures used during construction would also be implemented during the decommissioning stage. Noise and vibration effects during decommissioning are expected to be low and well within acceptable limits.



6.6.5 Mitigation and Management Measures

- NV1 – A Construction Noise and Vibration Management Plan (CNVMP) will be included in the CEMP and will include the measures outlined in Appendix F of the NVIA.
- NV2 – The noise impacts from all noise-generating plant items would be reviewed during detailed design stage to confirm unit selections and any mitigation requirements.
- NV3 – The following standard construction hours are proposed for the Project:
  - Monday to Friday – 7am to 6pm.
  - Saturday – 8am to 1pm.
  - Sunday and Public Holidays – No works to be undertaken.
- NV4 – No works are proposed to be undertaken outside of the standard construction hours. In the event this is required, out of hours (OOH) approval would be sought, and all works would be undertaken in accordance with the appropriate OOH protocols and approval processes.
- NV5 – Construction of 4-5 m noise walls shall be implemented to mitigate noise from battery and inverter units. The final noise wall heights / locations will be confirmed during the detailed design stage.

6.6.6 Concluding Remarks

The NVIA identifies the following key Project impacts and mitigation strategies as follows:

- Noise from construction activities: All construction works will be completed during standard construction hours (Mon. to Fri. 7 am to 6 pm, Saturday 8 am to 1 pm, no work on Sunday or public holidays). Some of the closest receivers will be potentially Noise Affected (but not Highly Noise Affected) at various times during the construction of the Project. Community engagement and best practice noise management controls to minimise residual risk of impairment at nearby receivers will be applied to reduce noise impacts as low as reasonably practicable.
- Construction vibration is unlikely to be perceptible at the nearest receivers.
- Noise from operational activities: Compliance with the NPfI is demonstrated at all receivers for each assessment period with the inclusion of silencing treatment of the BESS battery containers and inverters and 4 metre (m) noise walls at strategic locations within the Development Footprint.

All plant, equipment and design layout will be reviewed during the detailed design stage to ensure that compliance with the noise criteria is achieved as the acoustic performance of the plant and layout is refined. On this basis, it is considered that all noise and vibration from the Project will be sufficiently management and mitigated.

6.7 Traffic and Transport

This section presents the findings of the Transport Impact Assessment (TIA) (SLR Consulting, 2025) prepared in response to the SEARs and TfNSW requirements, refer to Appendix L. The TIA includes a detailed analysis of the existing environment and proposed operation and construction and outlines the methodology and criteria utilised to form an assessment of the Project.



6.7.1 Existing Environment

The Project Lots are located east of the Molong Township and have frontage to both Back Saleyards Road and Deight Street. Back Saleyards Road connects to Euchareena Road in the northwestern corner of Lot 1 which directs traffic to the Molong Township to the west and the township of Euchareena to the northeast. Belgravia Road connects to Euchareena Road and runs east along the northern extent of the Project Lots towards the suburb of Belgravia. Deight Street is a no through road, bound by Molong Creek to the South.

Both Back Saleyards Road and Deight Street connect to Marsden Street, which connects off Mitchell Highway to the west. Mitchell Highway is the main highway in the area which connects Molong to Orange in the south and Wellington in the north. The characteristics of the surrounding road network are summarised in Table 47.

Table 47 Surrounding Road Network Characteristics (SLR, TIA, 2025)

Road Name	Jurisdiction	Average Daily Weekday Traffic	Average Daily Weekend Traffic	Average Daily Traffic	Speed Limit	Road Classification
Mitchell Highway	TfNSW	2,555 [1]	2,228 [1]	2,502 [1]	50 km/h [2] – 100 km/h [4]	State Road (#7)
Euchareena Road	Council	430 [3]	-	-	50 km/h [3] – 100 km/h [1]	Collector Road
Back Saleyards Road		20 [3]	-	-	100 km/h	Access Road
Belgravia Road		-	-	-	100 km/h [5]	Collector Road
Strathmore Lane		-	-	-	100 km/h [5]	Access Road

[1] TfNSW Traffic Volume Viewer 2025 (TfNSW Permanent Counter Station ID: T6172S).
[2] Lower speed limit (within Molong town centre).
[3] Derived from Traffic Surveys
[4] Higher speed limit (outside Molong town centre).
[5] No posted speed limit, therefore the default speed limit applies (100 km/h for all roads outside of built-up areas).

SLR completed a review of the rail corridors and level crossings impacted by the proposed transport routes (refer Figure 35). The NSW Public Level Crossing finder was used to identify the rail crossings or corridors that would be impacted along the proposed route. The rail crossings or corridors identified as being impacted by the proposed heavy vehicle routes are provided in Table 48.

Table 48 Key Level Crossings Details (SLR, TIA, 2025)

Level Crossing ID	Line Section	Rail (km)	Rail Manager	Controls	Location	Road Name
676	Main West	322.935	UGL Regional Linx	Boom Gates & Flashing Lights	Orange	Summer Street / Mitchell Highway
950	Orange – Broken Hill	339.009	UGL Regional Linx	Boom Gates & Flashing Lights	Borenore	The Escort Way

Level Crossing ID	Line Section	Rail (km)	Rail Manager	Controls	Location	Road Name
958	Orange – Broken Hill	360.115	UGL Regional Linx	Boom Gates & Flashing Lights	Molong	Euchareena Road

6.7.1.1 Traffic Surveys and Demand

SLR completed a site visit on Thursday 28th November 2024 and Friday 29th November 2024, which included classified intersection count surveys at the following intersections:

- Mitchell Highway/Marsden Street.
- Euchareena Road/ Back Saleyards Road.

A review of the survey data indicated that the peak hours were as follows:

- Weekday AM peak: 08:30 – 09:30.
- Weekday PM peak: 15:45 – 16:45.

Further to these counts, SLR identified a permanent counter that belongs to TfNSW in the vicinity of the development site. This data was also used to determine a background traffic growth rate suitable for the local area.

6.7.2 Construction Impact Assessment

6.7.2.1 Proposed Access to Site

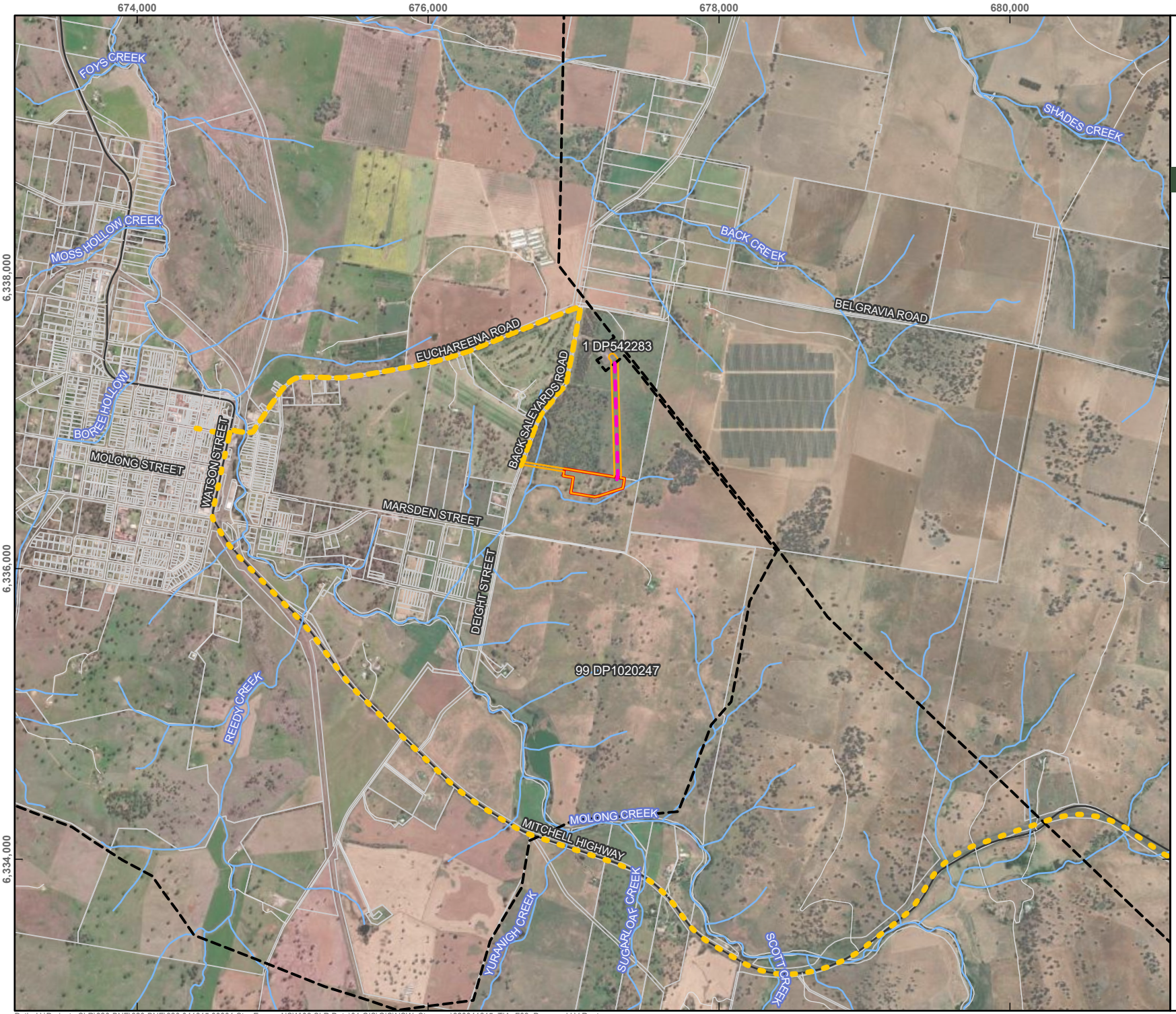
Construction traffic will access the Development Footprint from a new access driveway and crossover to be constructed from Back Saleyards Road. A concept plan is provided in the TIA The Project will maintain a single point of ingress and egress to assist in controlling equipment and construction staff movements. The arrangement will, in turn, help manage the potential movement of biohazards and weeds by vehicles. Construction traffic along Back Saleyards will be monitored and managed in consultation with Cabonne Council.

The internal access tracks to the site office and the laydown areas will be gravel as the generally short-term use does not warrant a more permanent construction standard. Following the conclusion of the construction period, access to the site will be limited to maintenance activities only.

The construction vehicle fleet will comprise a mixture of ‘light’, ‘heavy’, Oversize and Over Mass (OSOM) vehicles used to transport workers and materials to the Project Lots. The proposed construction vehicle fleet is included Table 49.

The proposed Light Vehicle Route is shown in Figure 35 and the Heavy Vehicle and OSOM route is shown in Figure 36. The routes are proposed are based on consultations with the Council and understanding of the approved heavy vehicle route network and the local context of the site. The largest anticipated OSOM movement will be for the transportation of the main transformer from Port Kembla whereas the battery containers will be imported from Port of Newcastle. OSOM material route studies for both Port Kembla and Port of Newcastle routes have been undertaken by SLR and included as Appendices C and D to the TIA, Appendix L. The analysis concludes that the proposed heavy routes are sufficiently wide to transport all materials (including the transformer).

Furthermore, the level crossings identified in Table 48 have active controls, being a combination of boom gates and flashing lights with good sight lines and reasonable queuing space to the next intersection to ensure sufficient stacking distance on both sides of these level crossings.



MOLONG BESS

PROPOSED LIGHT VEHICLE ROUTE

FIGURE 35

LEGEND

- Watercourse
- Primary Road
- Road

Transgrid Line

- 132kV
- 330kV
- Proposed Light Vehicle Route
- Proposed Electricity Transmission Line
- BESS Footprint (5.06 ha)
- Development Footprint (9.56 ha)
- Cadastre

Service Layer Credits:
Development footprint, proposed BESS Layout rev 11/06/2025, from StorEnergy 3 Pty Ltd (Stor).
Road, Rail, Cadastre, Watercourse, NSW DPIE 2024.
Earthstar Geographics

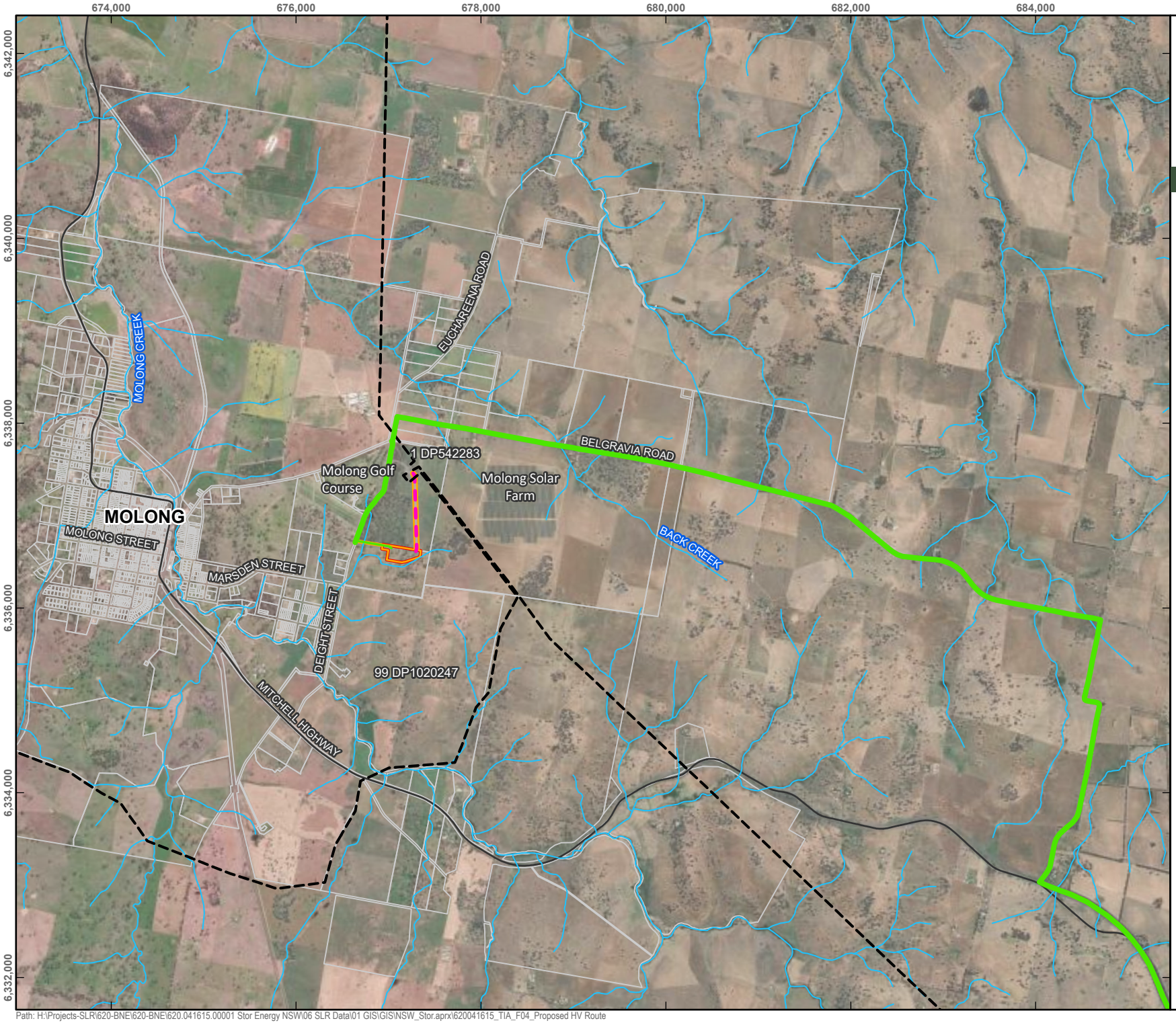
DISCLAIMER: All information within this document may be based on external sources. SLR Consulting Pty Ltd makes no warranty regarding the data's accuracy or reliability for any purpose.

0 0.5 1 km

Coordinate System:	GDA2020 MGA Zone 55
Scale:	1:35,000 at A4
Project Number:	620.041615
Date Drawn:	28-Aug-2025
Drawn by:	JH

SLR

Path: H:\Projects-SLR\620-BNE\620-BNE\620.041615.00001 Stor Energy NSW\06 SLR Data\01 GIS\GIS\NSW_Stor.aprx\620041615_TIA_F03_Proposed LV Route



MOLONG BESS

PROPOSED HEAVY VEHICLE ROUTE

FIGURE 36

LEGEND

- Watercourse
- Primary Road
- Proposed Heavy Vehicle Route

Transgrid Line

- 132kV
- 330kV
- Proposed Electricity Transmission Line
- Proposed Site Access
- BESS Footprint (5.06 ha)
- Development Footprint (9.56 ha)
- Proposed Easement
- Cadastre

Service Layer Credits:
Development footprint, proposed BESS Layout rev 11/06/2025, from StorEnergy 3 Pty Ltd (Stor)..
Road, Rail, Cadastre, Watercourse, NSW DPIE 2024.
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0 0.5 1 km

Coordinate System:	GDA2020 MGA Zone 55
Scale:	1:55,000 at A4
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SLR

Path: H:\Projects-SLR\620-BNE\620-BNE\620.041615.00001 Stor Energy NSW\06 SLR Data\01 GIS\GIS\NSW_Stor.aprx\620041615_TIA_F04_Proposed HV Route

6.7.2.2 Heavy and Light Vehicle Demand

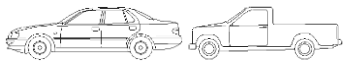
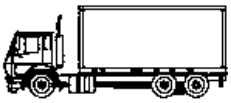
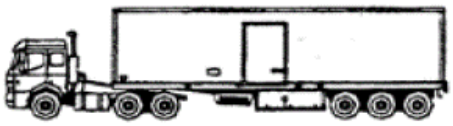
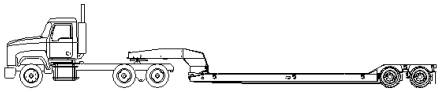
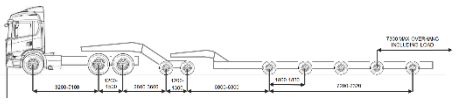
The following construction activities are anticipated to generate traffic on the external road network:

- Site Compound establishment and construction vehicle & machinery deliveries.
- Equipment, Materials and Miscellaneous deliveries.
- Workforce transportation.

The light vehicle movements are expected to be predominantly for the workforce required to service the development for all phases. These vehicles will originate predominantly from Molong and Orange and comprise utes and small vans.

The heavy vehicles will transport the core BESS and construction equipment from Port Kembla and Port of Newcastle. OSOM vehicles will also be required during the construction period for the transformer, switch room, control room and battery containers (enclosures). The anticipated vehicle fleet is shown in Table 49.

Table 49 Project Construction Vehicle Fleet (SLR, TIA, 2025)

Vehicle	Typical Vehicle Profile	Approx. Load(t)	Haulage Material / Use
Private Vehicle (B99 design vehicle)		-	Workforce Travel
Concrete Mixer Truck (6.0m3 - 4 or 5 Axle)		15t	Concrete
HRV (12.5m)		12t	Waste, Water, Fuel, Oil, Hydraulic Fluids, Sewage, Various Miscellaneous
Truck and Dog Trailer Combination (20m - 7 Axle)		25t	Quarry Products Aggregates
AV (20m - 6 Axle)		25t	Demountables Inverter Delivery Various Equipment
Low Loader (25m - 5 Axle)		25t	Plant Mobilisation Construction Demobilisation Various Equipment
Class 1 OSOM Prime Mover and Goose-Neck Low Loader with Dolly (Up to 23m)		43t	Battery Units
Class 1 OSOM 33m prime mover with a 10-axle flatbed trailer with a two-axle dolly		160t	Large Power Transformer

Traffic that will be generated during the construction of the proposed development will largely be associated with the transportation of the workforce and materials & equipment. To simplify the construction traffic, the traffic-generating elements of the proposed works have been broken into the following classes:

- Workforce.
- Heavy Vehicle Traffic associated with:
  - Site Clearance and Establishment.
  - Substation.
  - Battery Area.
  - Transmission Line.
  - Miscellaneous.

Workforce Movements

The indicative workforce assumptions based on information are set out in Table 50.

Table 50 Construction Workforce Assumptions (SLR, TIA, 2025)

Element	Assumption
Construction Duration	13 months total Assumed conservative construction period of 12 months for the traffic assessment (excl. Sundays and public holidays = 300 work days).
Workforce	Construction commencement (23 staff) Main construction (29 staff) Main construction – Peak (70 staff) Commissioning (20 staff). (Assumed staff will not travel to the accommodation for lunch)
Travel Arrangements	Assume 75% travel by coaster bus (22 seats). 25% travel by light vehicles.
Roster	6 days on/ 1 day off
Construction Hours	Weekdays: 7:00am – 6:00pm (Monday – Friday) Weekend: 8:00am – 1:00pm (Saturday)
Accommodation	50% Orange 50% Molong

Based on the assumptions outlined in Table 50, the number of vehicles for each construction phase, broken down by day and construction phase, is summarised in Table 51.

Table 51 Construction (Excluding Commissioning) Workforce Travel Arrangements (SLR, TIA, 2025)

Construction Phase	Duration (months)	Work Days (excl. PH)	Staff Numbers (per Day)			No. of Vehicles (per Day)			No. of Vehicles (per Phase)		
			In LV	In Bus	Total	Car	Bus	Total	Car	Bus	Total
Construction (Early Stages)	2	51	6	17	23	6	2	8	306	102	408
Construction (Core Stages)	8	197	7	22	29	7	2	9	1,379	394	1,773
Construction (Peak Stage)	2	51	17	53	70	17	4	21	867	204	1,071
Total	**12**								**2,552**	**700**	**3,252**

As summarised in Table 51, it is anticipated that 3,252 inbound trips and 3,252 outbound trips associated with the workforce will occur during the construction of the Project (across 300 business days and 12 months).

Construction Heavy Vehicle Movements

Table 52 provides a summary of the anticipated construction heavy vehicle movements as they relate to certain construction activities.

Table 52 Summary of Heavy Vehicle Trips

Construction Activity	Anticipated Trips
BESS, Substation and Transmission Line Site Clearance and Establishment	781 inbound and 781 outbound trips
Substation Construction Materials and Equipment	120 inbound and 120 outbound trips
Battery Area Construction Materials and Equipment	538 inbound and 538 outbound trips
Transmission Line Construction Materials and Equipment	56 inbound and 56 outbound trips
Miscellaneous Items (e.g. plant equipment, water, waste and fuel trucks)	1,333 inbound and 1,333 outbound trips

Overall, total heavy vehicle movements during the construction period are anticipated to be a maximum of 2,828 inbound trips and 2,828 outbound trips.

Total Movements

Based on the numbers above and calculations included in the TIA, across the 12-month construction period (assumed 300 working days), there will be a total of 6,078 inbound trips and 6,078 outbound trips (light vehicle and heavy combined).

Further details regarding the activity, assumption, delivery method (i.e. type of vehicle) and anticipated trips of the workforce and heavy construction movements can be found in Tables 13-19 in the TIA (Appendix L).

Construction traffic is anticipated to peak during a two-month period. During this period, heavy vehicle movements could be as high as 20 inbound and 20 outbound vehicles per



day. Accordingly, it is anticipated that peak construction daily traffic generation will be in the order of 41 inbound and 41 outbound trips a day, with the following breakdown:

- 15 inbound and 15 outbound heavy vehicle trips.
- 5 inbound and 5 outbound OSOM vehicle trips.
- 17 inbound and 17 outbound light vehicle trips.
- 4 inbound and 4 outbound Toyota Coaster type shuttle bus trips.

Based on the analysis undertaken, the surrounding traffic network has sufficient capacity to accommodate all construction traffic movements associated with the Project.

6.7.2.3 Sight Distances

A sight distance assessment was undertaken at the Euchareena Road & Back Saleyards Road intersection in accordance with the following:

- *Part 4A: Unsignalised and Signalised Intersection of the Austroads Guide to Road Design.*
- *Part 3: Guide to Road Design: Geometric Design of the Austroads Guide to Road Design.*

Safe Intersection Sight Distance (SISD) is the minimum sight distance which should be provided on the major road at any intersection, providing sufficient distance for a driver of a vehicle on the major road to observe a vehicle on the minor road moving into a collision situation (e.g., in the worst case, stalling across the traffic lanes), and to decelerate to a stop before reaching the collision point.

For vehicles at the driveway access, the current SISD are considered appropriate. Light vehicles approaching the Euchareena Road/ Back Saleyards Road intersection from the north will have limited visibility and, therefore, will not satisfy the SISD requirements at this intersection for the current posted speed limit. However, trucks on the minor road can be seen, allowing heavy vehicles on Euchareena Road to safely navigate the intersection.

During the construction and decommissioning phases of the Project, the implementation of the following temporary traffic management measures will be undertaken at the Euchareena Road/ Back Saleyards Road intersection to mitigate the limitations with the SISD:

- Temporary speed reduction measures on Euchareena Road to reduce the sight distance requirements.
- Advanced warning signage advising approaching motorists along the major leg (Euchareena Road) of construction activities at the minor leg (Back Saleyards Road).

6.7.2.4 Turn Lane Warrant Assessment

SLR has undertaken a turn lane warrant assessment to establish the desirable form of the assessed intersections in accordance with the industry research summarised within the *Austroads Guide to Road Design Part 4A.* The assessment includes a variety of industry-recognised analysis methods that determine the appropriate design requirements for each intersection location based on the anticipated future traffic demands as well as geometric considerations.

The relevant intersection and associated turn warrant assessment is included in Table 53.



Table 53 Turn Warrant Assessment Summary (2-Year Benefit Period)

ID	Intersection Name	Required Turn Treatment
D1	Back Saleyards Road/ Site Access	Basic Left Turn (BAL) / Basic Right Turn (BAR)
I1	Euchareena Road/ Back Saleyards Road	BAL / BAR
I2	Mitchell Highway/ Euchareena Road	BAL / BAR
I3	Mitchell Highway/ Strathmore Lane	BAL / BAR

Due to the very low through and turning volumes, no major turn lane treatments are required at the driveway access or study intersections I1 and I2.

The access driveway will be designed with a BAL because all vehicles will approach from the north. The Euchareena Road/ Back Saleyards Road intersection will be designed with a BAL for heavy vehicle movements and a BAR for light vehicle movements.

No upgrades are considered necessary for all other intersections on the basis Mitchell Highway & Euchareena Road intersection readily has an overtaking lane to travel around vehicles turning right into Euchareena Road from Mitchell Highway. This intersection readily has an Auxiliary Right Turn (AUR) arrangement and exceeds the BAL requirements.

For the completeness of this report, the TIA also provides a summary of the recommended intersection treatments for the key intersections and proposed access driveway crossover under the AM peak and PM peak traffic conditions, assuming a 10-year traffic impact. At *I3 – Mitchell Highway/ Strathmore Lane,* the turn warrant assessment shows that a Channelised Right Turn (CHR) type turn treatment is required if the works generated traffic for 10 years. It is noted that this intersection in its existing form readily has dedicated turn lanes for left-turn and right-turn movements, which meet the requirements for Basic Right Turn (BAL) & CHR (S - short) turn treatments.

As discussed in the TIA, while it is acknowledged that the provision of the highest order treatment, such as the CHR, would provide a higher level of safety, this would be only appropriate for long-term usage, i.e. 10 years On the basis of the expanded warrants consideration outlined in the TIA, the existing AUL(s) & CHR(s) turn treatments at Intersection 3 – Mitchell Highway/ Strathmore Lane are considered appropriate for the temporary increase in traffic due to the Project construction phase.

Light vehicle drivers travelling to the Project Lots will be required to review and sign the Drivers' Code of Conduct, in addition to the heavy vehicle drivers. The drivers' code of conduct, which will be developed as part of the post-approval CTMP, will detail the appropriate measures put in place in the vicinity of the site (i.e. sight distances).

6.7.3 Operational Impact Assessment

The operational traffic demands associated with the development are expected to be minimal and limited to maintenance crews' movements and the 2 FTE personnel required on site throughout the operational phase (30 years). Therefore, the operational traffic of the Project is not considered a critical element within the traffic assessment.

6.7.4 Decommissioning Impact Assessment

The Project is proposed to be decommissioned and the infrastructure removed following the end of life of the BESS. Works will be undertaken to return the site as close as possible to its original state and use.



Detailed consideration of potential traffic demands associated with the decommissioning of the Project has not occurred. Nevertheless, the traffic demands associated with decommissioning are anticipated to be less than those associated with construction activity, and hence, the sizing of infrastructure to accommodate construction traffic demands is expected to provide sufficient capacity to accommodate decommissioning traffic demands.

6.7.5 Mitigation and Management Measures

- TR1 – A Construction Traffic Management Plan (CTMP) will be developed in accordance with the recommendations of the TIA, prior to the substantial commencement of construction activities. The CTMP will outline measures including:
    - Preparation and execution of Traffic Guidance Schemes (TGS). TGS plans will be implemented, managing the access and the general public's movement around construction activities. They should identify all reasonably foreseeable hazards, assess them, and manage them as best possible by eliminating or minimising the risks. The TGSs shall be monitored and updated accordingly throughout the Project.
    - Management of transport from workforce accommodation, including the construction program, accommodation availability and the vehicle fleet that will be used. The majority of the workforce must be transported by shuttle buses that are similar to a Toyota Coaster.
    - Drivers Code of Conduct, consistent with the measures outlined in the TIA.
    - All vehicles are to park and load/ unload within the site using the designated parking and loading areas where possible. Vehicles are not parked or loading/ unloading within the public road reserve.
    - Consistent with the OSOM material transportation requirements, pilot vehicles and escorts must be utilised for non-standard loads.
    - Temporary signage must be positioned at critical intersections, including the intersection of Euchareena Road and Back Saleyards Road, to inform construction vehicle drivers and to warn the general public about the construction activities in the vicinity.
    - Vehicles travelling along Euchareena Road and Back Saleyards Road must abide by any reduced speed limits associated with construction works.
    - Residents of the area must be informed prior to the commencement of construction works.
    - Heavy vehicles must abide any posted speed limits and vehicles are to be turned off when not in use.
    - Identify appropriate mitigation measures and list strategies for dust management.
    - A risk assessment is intended to identify hazards and risks associated with construction activities.
    - A Contingency Plan, in consultation with Stor.
- TR2 – To ensure the safe and coordinated movement of vehicles to, on and around the site, a Traffic Management Communications Strategy shall be established by the Contractor in accordance with the requirements of Stor. This should consider the scheduling and coordination of deliveries, incident reporting, regular meetings and periodic evaluations of the strategy to ensure relevance and alignment with current standards/ practices.

- TR3 –The section of Back Saleyards Road from the access driveway to the Euchareena Road intersection be monitored over the course of the construction phase, to ensure that the maintenance of the road allows the ongoing accommodation of bi-directional movements of the anticipated construction vehicle fleet. As part of the CTMP, consultation will occur with Cabonne Council on a maintenance plan that can be facilitated and paid for by the Proponent.
- TR4 – An application will be made to NHVR to obtain approvals to operate Performance Based Standards (PBS) Level 1 design vehicles along the last mile sections (Strathmore Lane, Belgravia Road, Euchareena Road and Back Saleyards Road), if no existing approvals in place.
- TR5 – Dilapidation surveys will be undertaken to assess the condition of all the road sections, along with intersections along the nominated transportation route, to identify changes prior to and following the proposed construction works.
- TR6 – The proposed use of the local road network for the heavy vehicle route (Strathmore Lane off Mitchell Highway, and then Belgravia Road, Euchareena Road and Back Saleyards Road) shall be consistent with Austroads Guidelines.

6.7.6 Concluding Remarks

The proposed development will generate approximately 6,100 inbound trips and 6,100 outbound trips during construction (300 business days or 12 months). Peak construction traffic volume would be sufficiently low (up to 41 return trips a day) and that there will be no capacity constraints at the access crossover or any key intersections.

The OSOM route studies confirm the BESS equipment and transformer can be safely transported from the Ports of Kemba and Newcastle.

The access location from Back Saleyards Road will be designed with a BAL/BAR to ensure turn warrant assessments comply with Austroads Guidelines. No upgrades are considered necessary at any other key intersection. Sight distances available at the access driveway crossover satisfy the SISD requirements of the Austroads Guidelines. Limitations to the available sight distances at Euchareena Road/ Back Saleyards Road intersection will be managed by implementing temporary traffic management measures during the construction and decommissioning phases of the project.

A CTMP will be prepared to ensure that the construction traffic is managed and mitigated to ensure no unreasonable impacts.

The operational traffic demands associated with the Project are expected to be minimal and limited to maintenance crews' movements.

On this basis, any traffic impacts of the Project will be adequately managed and mitigated.

6.8 Hydrology

This section presents the findings of the Flood Impact Assessment (FIA) (SLR, 2025) refer to Appendix M, and the Surface and Groundwater Impact Assessment (SGIA) (SLR, 2025), refer Appendix V, both prepared in response to the SEARs.

The FIA and SGIA include a detailed analysis of the existing environment and proposed operation and construction and outlines the methodology and criteria utilised to form an assessment of the Project.

6.8.1 Existing Environment

6.8.1.1 Groundwater

The solid geology underlying the site is categorised as Fairbridge Volcanics which comprise interbedded andesitic to dacitic lava flows, volcanic breccias, and volcaniclastic sandstones, with local limestone units likely related to the Reedy Creek or Molong Limestone formations.

Information from 18 bores with Standing Water Level (SWL) within 3km of the Project Lots. Recorded SWLs range from approximately 3m to 48m below ground level (mbGL), with an average depth to water of around 15 mbGL. Groundwater levels generally show a trend of shallowing towards surface water features, particularly ephemeral creeks, indicating potential groundwater discharge zones near these drainage lines. Given the highly ephemeral nature of these watercourses - which typically sustain flow only for hours to several days following rainfall events and the generally deep groundwater levels, sustained baseflow contributions are unlikely.

Limited groundwater quality data is available for the Project Lots. Groundwater quality has been derived from bores located within 3 km from the Project Lots, where comprehensive major ion analysis and physicochemical data (pH and Electrical Conductivity) are available. The available samples predominantly indicate a magnesium-bicarbonate water type, consistent with rainfall recharge. Minor magnesium concentrations likely reflect aquifer mineral interactions, while variability in sulfate and calcium, and occasional elevated sodium and chloride, suggest localised soil influence during infiltration. The relatively low Electrical Conductivity (EC) values indicate slightly brackish conditions for bores screened within the Fairbridge Volcanics unit, with little variation observed between varying lithologies (regolith, interbedded limestone, and basalt). Additionally, water quality records reflect a neutral pH.

6.8.1.2 Surface Water and Flood

The Project Lots are located within a gently undulating agricultural landscape with small intermittent watercourses that generally feed into the Molong Creek adjacent to the southern boundary of Lot 99 (refer Figure 8, Chapter 2.0). Molong Creek is identified as ‘Key Fish Habitat’, however is separated from the Development Footprint by approximately 1.2km.

The Project Lots are not situated within a known drinking water catchment.

The elevation of the Project Lots range from 577m to 600m above sea level, generally sloping north to south. There is an unnamed first order stream running in a western direction near the southern extent of the BESS footprint towards a small farm dam near Back Saleyards Road. There is also an unnamed first order creek west of the BESS Footprint and within the footprint of the proposed access road. The project design will include the installation of creek crossings over this unnamed first order creek to avoid blocking of fish passage and minimise damage to seasonal riparian vegetation. Survey’s undertaken by SLR Ecologists recorded this creek as dry during November 2024 and February 2025.

The Project Lots are not mapped as having any flood prone land. Council has prepared a Draft Molong Flood Study for the Molong area, however the sits immediately east (i.e. outside) of the study area.

6.8.1.3 Surface Water and Flood Methodology

Hydraulic modelling has been undertaken to determine pre-development conditions and how they will be impacted by the Project.

A rainfall on grid (pluvial) hydraulic model has been developed for this assessment due to the location of the Project within the tributary catchment and the size of the catchment

(approximately 143 Ha). Hydrological data such as temporal patterns, storm durations, rainfall and losses are sourced from ARR Data Hub. Hydrologic data is used as inputs to the hydraulic model, which predict flood heights, depths, velocities, hazards and afflux on the catchment in response to rainfall.

The Probable Maximum Flood (PMF) event has been modelled by generating Probable Maximum Precipitation (PMP) using the Generalised Short-Duration Method (GSDM) for design events ranging from 15 minutes to 3 hours. This method has been chosen as the catchment is less than 1000 km^2, and the critical duration is less than 3 hours.

Assessment of flood impact has been undertaken utilising the output of the modelling for each Annual Exceedance Probability (AEP) for flood heights, depths, hazard and velocities. Afflux has been calculated between the maximum flood height results, pre and post-development to assess the flood impact on the Project Lots as well as in surrounding areas.

Pre-Development Conditions

The 0.5% and 1% AEP results are indicated in Table 54. Peak flood depths and levels while for the 0.5% AEP event are illustrated in Figure 37.

Table 54 TUFLOW Model results – Pre-development Scenario (SLR, FIA, 2025)

Results	0.5% AEP	1% AEP
Peak flood levels in southern tributary (mAHD)	570.0 to 586.1	569.3 to 586.0
Peak flood velocities in southern tributary (m/s)	1.5-3.2	1.1-3.1
Maximum overland flow depth within BESS footprint (mm)	170	160
Maximum overland flow velocity within BESS footprint (m/s)	1.3	1.2
Maximum NSW flood risk category in BESS footprint	1	1

The key results of the pre-development flood mapping are:

- There are four overland flow paths mapped flowing north to south within the development footprint.
- There are two overland flows mapped within the BESS footprint.
- A large portion of the flow produced by the catchment, is shown to drain through the unnamed watercourse outside the southern boundary of the development footprint.
- In the 0.5% and 1% event, a flood risk category of H1 is predicted.

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MOLONG BESS

TUFLOW MODEL RESULTS
PRE-DEVELOPMENT SCENARIO
PEAK FLOOD DEPTHS AND LEVELS
0.5% AEP Event
SSP5-8.5 YEAR 2100

FIGURE 37

Legend

- Development Footprint
- TUFLOW Model Extent
- Flood Height Contours (mAHD)

Depth (m)

- Below 0.1
- 0.1 - 0.2
- 0.2 - 0.3
- 0.3 - 0.5
- 0.5 - 1
- 1 - 2
- Above 2

0 20 40 80 Meters

Coordinate System:	GDA2020 MGA Zone 55
Scale:	1:3,000 at A3
Project Number:	620.041615
Date:	24-Jul-2025
Drawn by:	LY / HM

SLR

H:\Projects-SLR\620-BNE\620-BNE\620.041615.00001 Stor Energy NSW\06 SLR Data\01 GIS\GIS\Mapping\620041615_A3L_Figure07_0-5p Depth and WSL Contours Pre-dev.mxd

The 0.5% and 1% AEP results are provided in Table 55 with peak flood depths and levels predicted for the 0.5% post-development scenario in Figure 38.

Table 55 0.5-1% AEP flood results, post-development

Results	0.5% AEP	1% AEP
Peak flood levels in southern tributary (mAHD)	570.0 to 586.1	569.3 to 586.0
Peak flood velocities in southern tributary (m/s)	1.5-3.2	1.1-2.8
Maximum overland flow depth within BESS footprint (mm)	130 mm	120 mm
Maximum overland flow velocity within BESS footprint (m/s)	1.2	0.8
Maximum NSW flood risk category on BESS footprint	1	1

The mapping of the post-development scenario indicates that 0.5% and 1% AEP events, the key results are:

- Velocity on the development pad is predicted to range between 0.2-0.5 m/s, with small areas of maximum velocities reported in Table 54 occurring a southern section of the development pad. These maximum velocities occur where the rainfall on the development pad is draining off, and is caused by grading between the pad and existing terrain.
- Velocity of up to 2.7 m/s is calculated in the drainage channel.
- NSW flood risk category H1 is predicted due to overland flow on the development pad, while category H5 is mapped in some parts of the drainage channel.
- In the PMF event, shallow ponding of 50-200 mm is mapped under the BESS infrastructure only. NSW flood risk category H1 is predicted on the development pad, except in the drainage channel in this event

Peak flood levels, depths, hazards and velocities for the post-development scenario in the PMF, 0.5%, 1%, 5% and 10% AEP events are provided in Appendix B TUFLOW Model Results -Post-development Scenario of the FIA (SLR, 2025).

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MOLONG BESS

TUFLOW MODEL RESULTS
POST-DEVELOPMENT SCENARIO
PEAK FLOOD DEPTHS AND LEVELS
0.5% AEP EVENT
SSP5-8.5 YEAR 2100

FIGURE 38

Legend

- Development Footprint
- TUFLOW Model Extent
- Flood Height Contours (mAHD)

Depth (m)

- Below 0.1
- 0.1 - 0.2
- 0.2 - 0.3
- 0.3 - 0.5
- 0.5 - 1
- 1 - 2
- Above 2

0 20 40 80 Meters

Coordinate System:	GDA2020 MGA Zone 55
Scale:	1:3,000 at A3
Project Number:	620.041615
Date:	24-Jul-2025
Drawn by:	LY / HM

SLR

H:\Projects-SLR\620-BNE\620-BNE\620.041615.00001 Stor Energy NSW\06 SLR Data\01 GIS\GIS\Mapping\620041615_A3L_Figure08_0-5p Depth and WSL Contours Post-dev.mxd

Flood difference mapping (afflux) for the 0.5% and 1% AEP events have been undertaken and the key results are as follows:

- Small areas with significant afflux are predicted where the drainage channel collects overland flows from the upstream catchment. This is due to the diversion drain receiving flows from an existing overland flow path. These areas are on the edge of the development pad where there is no BESS infrastructure planned.
- Localised areas of afflux of up to between 10 and 50 mm are predicted to occur within the tributary south-west of the Development Footprint as a result of re-alignment of the existing upstream overland flow path with the drainage channel.
- Peak flood levels predicted for the 0.5% and 1% AEP are within +/- 10 mm of the pre-development scenario downstream of the junction of the tributary of Molong Creek and overland flow path approximately 150 m downstream of the site.

The results indicate that no adverse flood impacts will occur in properties external to the Project Lots as there is less than 10 mm afflux predicted downstream 150 m from the BESS footprint. The change in peak flood levels and velocities in the creek, indicates that are no adverse predicted impacts to bank and bed stability.

6.8.2 Construction Impact Assessment

6.8.2.1 Groundwater

The Project's construction phase is unlikely to involve interactions with groundwater as the maximum excavation cut will not exceed 4m in depth where existing groundwater levels are expected to be approximately 15mgbl. Management and mitigation measures relating to the storage of fuel, vehicle maintenance and emergency response plans are set out below.

Groundwater monitoring is not required during the construction of the facility. Based on the assessed understanding of the local hydrogeological regime and site operations during construction and operation, it is considered that there is negligible risk to groundwater or Groundwater Dependent Ecosystems (GDEs).

6.8.2.2 Surface Water and Flood

The proposed earthworks and subsequent construction of the BESS have been considered in the design scenario discussed in Section 6.8.1.3.

Design flood events have been assessed to understand the likelihood of potential flooding impacts from the Project to the surrounding floodplain areas. The runoff management elements as they are currently proposed are predicted to cause minimal impacts on surrounding areas for events up to and including the 0.5% AEP.

The flood risk to the Project has been mitigated through design, with the proposed levels of the BESS pad being above the PMF levels in the creek. Overland flow over the BESS pad can be managed for the majority of design events by elevating electrical elements and chemicals over the 0.5% AEP flow depth. The modelling indicates that with the incorporation of the BESS earthworks pad that the development is appropriate for the site, given the flood constraints on the land.

As noted in the FIA, the Project is not expected to result in adverse flood impacts on adjacent properties, critical infrastructure, or existing conveyance corridors during modelled flood events up to 0.5% AEP and minimally impacts surrounding areas during PMF events.



A site wide Soil and Water Management Plan (SWMP) will be prepared as part of the Project's Construction Environmental Management Plan (CEMP) to manage mitigate the impacts of land disturbance activities on soils, landforms and receiving waters by focussing on erosion and sediment control. The proposed stormwater basin will be constructed early on the construction process to manage and mitigate stormwater and sediment from the proposed construction, i.e. to act as a construction period sediment basin.

6.8.3 Operational Impact Assessment

6.8.3.1 Groundwater

For the operation phase, the potential risks to groundwater relate to the potential release of contaminants due to incidents such as fires or leakages of pollutants from the BESS facility. Considerations for management and mitigation of risk at this stage include:

- Collecting waste liquids from wash-down facilities in lined on-ground small-scale basins or impermeable containers to prevent contaminated runoff from leaching into groundwater.
- Design bund walls/intercept drains to prevent contaminated runoff from wash-down facilities reaching unlined areas.
- Bunding of external hard standing to avoid uncontrolled runoff. Runoff from these areas should be directed through interceptors.
- Appropriate storage of any chemicals or fuels kept on site.
- Design an emergency response plan to deal with chemical / fuel spillages.
- Ensure groundwater contamination and adverse impacts are included in the environment risk register of the project and that their management and mitigation measures are included in the Operational Environment Management Plan to be developed for the project.

The above measures are reflected in the mitigation measures in Section 6.8.5.

6.8.3.2 Surface Water and Flood

Mitigation measures have been recommended in the FIA to manage any potential flooding impacts to the operation of the Project, including developing a Safety in Design Plan to exclude personnel and vehicles from drainage channel, such as provision of an adequate road crossing over the drain.

Operational impacts on water quality will be mitigated by the construction of appropriately sized stormwater infrastructure, including the proposed stormwater basin. The stormwater basin will retain pollutants in the event of accidental spillage, with the basin and infiltration medium retaining pollutants.

6.8.4 Decommissioning and Rehabilitation

At the conclusion of the useful life of the Project, infrastructure will be removed, and the site will be graded as close to pre-Project landform as possible, with some revegetation anticipated to be required during this phase. During this phase it is likely there may be disturbance of site soils, and the risk of soil erosion until an effective vegetative cover is established. Potential impacts of erosion are similar to the construction phase and include the potential loss of future land productivity if topsoil is eroded. An SWMP will be implemented to mitigate these impacts.



6.8.5 Mitigation and Management Measures

- GRD1 – CEMP and OEMP shall include measures to prevent chemical spills from reaching the groundwater system in the unlikely event of leakage. Mitigation measures include:
  - Bunded storage of bulk fuel (and any other chemicals) used for plant or stored on site.
  - Regular maintenance and inspection of vehicles used during construction. Provide a dedicated surface for vehicle parking.
  - Development of environmental management plans including a emergency response plan to deal with spillages in unlined areas. This would include keeping spill kits on site and ensuring staff are trained in their use and spill response as detailed in the environmental management plan.
  - Collecting waste liquids from wash-down facilities in lined on-ground small-scale basins or impermeable containers to prevent contaminated runoff from leaching into groundwater.
  - Design bund walls/intercept drains to prevent contaminated runoff from wash-down facilities reaching unlined areas.
  - External hardstand areas should be graded or designed to manage surface water runoff in a controlled manner. Runoff from these areas should be directed via swales to the proposed downstream retention basin.
- GRD2 – A firewater management plan will be prepared in consultation with Fire and Rescue NSW (FRNSW) and RFS and included in the site's Emergency Management Plan(s), detailing procedures for containment, collection, and appropriate disposal of contaminated runoff. Mitigation measures will be confirmed during detailed design stage but may include permanent or emergency bunding of external hardstand areas, installation of interception drains, and the use of collection basins or tanks to prevent uncontrolled migration of contaminants.
- GRD3 – During the decommission phase, the following will be undertaken:
  - Adhere to protocols for the safe disposal of batteries and waste liquids remaining from the operation of the BESS facility.
  - Collect soil samples in areas of potential contamination to validate that the site is clean. If the concrete slab is to be removed, then soil samples would also be collected once the slab is removed. In the event that significant soil contamination is identified, a remediation strategy would need to be developed which may include groundwater monitoring to determine the presence and extent of any groundwater contamination.
  - Where significant concrete installations were used, validation sampling of soils should be carried out to confirm no impacts to soil quality or potential for leachate migration to groundwater.
- SW1 – Drainage elements including the stormwater basin will be sized and designed to minimise risk of localised surface water ponding.
- FL1 – BESS Pad to be built above the 0.5% AEP creek flood level.
- FL2 – Electrical elements and chemical storage to be built stored above the maximum 0.5% AEP flow depth.

- FL3 – The footings will be designed to withstand the flood velocities described which are mostly low (<1m/s) in the BESS Footprint.
- FL4 – A Safety and Design Plan to be prepared to exclude personnel and vehicles from drainage channel, such as provision of an adequate road crossing over the drain.
- FL5 – Where the site access crosses over the watercourse, the manner will be in accordance with the '*Controlled activities – Guidelines for watercourse crossings on waterfront land' (DPE, 2022),* to ensure that the project design will include measures to minimise any modifications to flow and the watercourse.
- ESD1 – Construction works and decommissioning works are to be managed under a Soil and Water Management Plan (SWMP) The SWMP will be prepared in accordance with Managing Urban Stormwater: Soils and Construction (Landcom 2004), known as 'the Blue Book', and Volume 2A Installation of Services (DECC 2008a).

6.8.6 Concluding Remarks

Overall, the construction and operation of the Project is not predicted to intercept groundwater and therefore will not impact groundwater receptors, including groundwater dependent ecosystems and surrounding landholder bores.

A SWMP will be prepared to manage and mitigate the impacts of land disturbance activities on soils, landforms and receiving waters by focussing on erosion and sediment control during construction. Operational impacts on water quality will be sufficiently mitigated by the construction of a stormwater basin with the Project not anticipated to result in any measurable changes to the water quality of the downstream receiving environments.

The Project is not expected to result in adverse flood impacts on adjacent properties, critical infrastructure, or existing conveyance corridors during modelled flood events.

6.9 Air Quality

This section presents the findings of the Air Quality Assessment (AQA) (SLR, 2025) prepared in response to the SEARs, refer Appendix H. The AQA includes a detailed analysis of the existing environment and proposed operation and construction and outlines the methodology and criteria utilised to form an assessment of the Project.

6.9.1 Existing Environment

Given the rural character and setting of the Project Lots, air quality in the locality is expected to be consistent with other rural environments across NSW. Existing sources of air pollution are expected to include emissions from vehicles and dust from agricultural operations.

The NSW DPHI operates an Air Quality Management System (AQMS) at Orange (Orange AQMS), located approximately 27 km southeast of the Project Lots that monitors Particulate Matter (PM), PM_{10} and $PM_{2.5}$ concentrations. Total Suspended Particulates (TSP) and deposited dust are not routinely monitored.

Available validated $PM_{2.5}$ and PM_{10} concentration data recorded by the above monitoring station is summarised in Table 56.

The PM_{10} and $PM_{2.5}$ data summaries show that exceedances of the short-term (24-hour average) air quality criteria for PM_{10} and $PM_{2.5}$ are sometimes recorded in Orange. However, typically, the ambient levels are well below the standards. The main causes of these

intermittent exceedance events are bush fires, hazard reduction or agricultural burning, and dust storms.

Table 56 Summary of Review of Available Monitoring Data – Orange (2021-2024)

Year	PM_{10} (µg/m^3)			$PM_{2.5}$ (µg/m^3)		
	24-Hours		Annual Average	24-Hours		Annual Average
	Maximum	90th %ile		Maximum	90th %ile	
2021	46.3	20.4	11.3	32.3 (3)	13.4	6.6
2022	43.1	14.7	8.6	38.9 (5)	9.9	5.3
2023	34.1	21.3	11.4	24.9	15.5	6.7
2024	39.7	20.5	11.3	26.4 (1)	13.1	6.7
All Years	46.3	19.6	10.7	38.9	14.9	6.3
Criterion	**50**		**25**	**25**		**8**
Red indicates exceedance of the criteria with number of exceedances indicated by value in parentheses						

6.9.2 Construction Impact Assessment

The only potential air pollution and amenity issue identified for the Project is associated with fugitive dust emissions from the proposed construction activities. The potential impacts for surrounding sensitive receptors include:

- Annoyance due to dust deposition (soiling of surfaces) and visible dust plumes.
- Health impacts due to elevated suspended particulate concentrations.

If there were excessive dust emissions associated with the works, and considering the dominant southwest wind direction in the afternoon, there is also potential that nuisance or (possibly) engineering related impacts (e.g. dust loadings on electrical equipment) could be experienced by the Molong Solar Farm located to the northeast.

A qualitative assessment of the potential risks to air quality associated with dust from the Project's construction activities would be sufficient to address any potential risk. The *IAQM Guidance on the Assessment of Dust from Demolition and Construction* developed in the United Kingdom by the Institute of Air Quality Management (IAQM, 2024) can be used to provide a qualitative assessment.

The bulk of the earthworks will occur for the BESS itself with less intensive earthworks required to construct the site access road and to install the transmission line, which are already mostly clear of vegetation.

Given the closest human receptor is 480m west of the BESS and land is already clear for the northern area of the transmission line nearest to receptors, a detailed air quality impact assessment is not considered to be warranted for this Project and any dust generated during the construction phase can be suitably mitigated.

6.9.3 Operational Impact Assessment

No potential air quality risks are identified for the operational phase of the Project. Traffic-related emissions, including wheel-generated dust, associated with any Project-related vehicle movements are expected to be minimal.

6.9.4 Mitigation and Management Measures

- AQ1 – A Dust Management Plan (DMP) outlining the key sources of dust during the construction phase and a list of practical mitigation measures to minimise the potential offsite dust nuisance to receptors situated near the site entrance and unsealed areas of Back Saleyard Rd will be prepared to minimise or eliminate any adverse air quality or dust deposition impacts. The management plan should implement speed limits, and if necessary watercart treatment and speed limits for unsealed access roads used by construction vehicles in the vicinity of residential dwellings. The Dust Management Plan may form part of the broader CEMP.

6.9.5 Concluding Remarks

The AQA prepared for the Project concludes that any dust generated during the construction phase can be suitably mitigated through measures contained in the DMP/CEMP.

No potential air quality risks are identified for the operational phase of the Project. Traffic-related emissions, including wheel-generated dust, associated with any Project-related vehicle movements are expected to be minimal.

6.10 Bushfire

This section presents the findings of the Bushfire Risk Assessment Report (BRAR) (SLR, 2025) prepared in response to the SEARs, refer to Appendix S. The BRAR includes a detailed analysis of the existing environment and proposed operation and construction and outlines the methodology and criteria utilised to form an assessment of the Project.

6.10.1 Existing Environment

The RFS Bushfire Prone Land mapping identifies the Project Lots as Vegetation Category 3 bushfire prone land (refer Figure 15, Chapter 2.0)

According to NSW RFS *Guide for Bushfire Prone Land Mapping* (Version 5b, 2015), Vegetation Category 3 is considered to be medium bush fire risk vegetation. It is higher in bushfire risk than Category 2 (and the excluded areas) but lower than Category 1. It is generally consists of grasslands, freshwater wetlands, semi-arid woodlands, alpine complex and arid shrublands. It is recommended that Vegetation Category 3 be given a 30m buffer.

The Vegetation 3 category aligns with the relevant key findings of the BDAR (Appendix F) which has been used to prepare this BRAR. In summary:

- The Development Footprint includes areas of remnant woodland, regrowth woodland and non-native vegetation. Areas of remnant woodland include mature canopy species dominated by Yellow Box (*E. melliodora*) and Apple Box (*E. bridgesiana*), with lower strata mostly absent and dominated by introduced species.
- Evidence of regrowth woodland vegetation was observed in some areas with juvenile growth of woodland canopy species Yellow Box, Apple Box and Blakelys Red Gum (*E. blakelyi*), native shrub layer including Silver Wattle (*Acacia dealbata),* with the native groundcover absent.
- Non-native vegetation consists of exotic pasture with introduced forbs and grasses including High Threat Weed (HTW) Great Brome (*Bromus diandrus),* and non-HTWs Patersons Curse (*Echium plantagineum*), Meadow Salsify (*Tragopogon pratensis)* and Clovers (*Trifolium* spp).

The NSW Government Shared and Enabling Environmental Data (SEED) initiative mapping tool documents historical National Parks and Wildlife Service (NPWS) wildfires in NSW. The two nearest document wildfire / prescribed burn events are:

- "Packham Way" Wildfire:
  - 2006-07 Season 1,035 Ha
  - Approximately 6.5 km southwest of the Project.
- "Caufield" Prescribed Burn:
  - 2006-07 Season 246 Ha
  - Approximately 13 km east of the Project
- "Callula Range" Prescribed Burn:
  - 2008-09 Season 245 Ha
  - Approximately 13 km east of the Project.

The topography surrounding the Development Footprint varies with a general increase in elevation from west to east. Elevations across the BESS Site vary from RL590m at the northeast end to RL578m at the southwest corner. Elevations along the transmission Line easement vary from RL600m at the northern end to RL588m at the southern end. In terms of bushfire risk, the immediate land surrounding the Project site boundaries varies from "flat", ie zero slope, to 5° DOWNslope to the west and 5° UPslope to the east. The Fire Danger Index (FDI) determined for the site is 80.

6.10.2 Construction and Operational Impact Assessment

A key input in the assessment of bushfire risk is to determine the Bushfire Attack Level (BAL) of the Project. In the *Australian Standard AS3959:2018, "Construction of Buildings in Bushfire-Prone Areas"*, the BAL is defined as:

- *A means of measuring the severity of a building's potential exposure to ember attack, radiant heat and direct flame contact, using increments of radiant heat expressed in kW/m^2, and the basis for establishing the requirements of construction to improve protection of building elements from attack from bushfire.*

Once BALS are calculated, Asset Protection Zones (APZ) are established around the project infrastructure to ensure appropriate setback from vegetation.

The Project is subject to PBP-2019 Section 8 and therefore, a risk assessment based on the nature of the site. The more stringent BAL-12.5 level has been recommended as this would ensure that the maximum exposure at any point of a facility will be below 10 kW/m². This will ensure the safety of firefighters and other emergency workers to safely defend the facility, evacuate personnel if needed and allow access to and from all areas within the Development Footprint.

APZs as recommended in the mitigation measures will be required to be implemented during construction. During operations the APZs are to be managed by the BESS operator to ensure no overgrowth and that the cleared distances be maintained.

6.10.3 Mitigation and Management Measures

- BF1 – Prior to the commencement of the BESS, APZs shall be implemented, consistent with the BRAR. The APZ will be maintained as either completely cleared land or a mown area with a grass height of less than 100mm.

- BF2 – Buildings and structures will adopt a BAL of -12.5, and use non-combustible materials, such as fire-resistant concrete and metal.
- BF3 – Prior to construction commencing, a Bushfire Management Plan (BMP) will be prepared for the Project detailing the ongoing implementation measures, including:
  - Access and Egress for the public and for firefighters and their equipment.
  - Adequate Water Supply for fire suppression.
  - Landscape Management.
  - Emergency Response and Management – Preparedness and Planning.
- BF4 – The BMP will be prepared in consultation with the NSW RFS and NSW Fire and Rescue, with final approved copies stored locally within an appropriate "emergency cabinet" securely located on-site. The BMP will align with other related project plans including the Fire Safety Study (FSS) and Emergency Management Plan (EMP).
- BF5 – The general principles and RFS-compliant design recommendations made in the BRAR will be apply to ensure that firefighting vehicles are provided with safe, all-weather access to the proposed BESS facility.
- BF6 – Provide a water supply (150kL tank) dedicated for firefighting purposes (including cooling purposes for the equipment immediately surrounding the BESS on fire and for control of any associated smoke plume).
- BF7 – The noise walls shall be made of non-combustible (i.e. fire-resistant) materials, in accordance with the recommendations of the BRAR.

6.10.4 Concluding Remarks

The BRAR has assessed the bushfire risk associated with the Project and its location. The recommendations made, including BAL and APZs enable sufficient setback from vegetation and minimise bushfire risk. Use of non-combustible materials and firefighting measures will also further mitigate bushfire risk with any impacts considered adequately mitigated.

6.11 Hazards and Risk

This section presents the findings of a Hazard and Risk Assessment (SLR Consulting, 2025) (HRA) prepared in response to the SEARs, refer to Appendix N. The HRA includes a detailed analysis of the existing environment and proposed operation and construction and outlines the methodology and criteria utilised to form an assessment of the Project.

6.11.1 Existing Environment

The nearest sensitive receptors to the project are shown in Figure 5 (Chapter 2.0). The nearest 'non-involved' dwellings (excluding host and future sites) are located approximately 530m west of the Development Footprint.

6.11.2 Preliminary Risk Screening

Preliminary Risk Screening (PRS) of the Project is required under the Resilience and Hazard SEPP to determine the need for a Preliminary Hazard Assessment (PHA).

The PRS process assesses the dangerous goods classes that have the potential for significant, off-site effects. Specifically, the assessment involves the identification of classes

and quantities of all dangerous goods to be used, stored, or produced on site with respect to storage depot locations as well as those transported to and from the Development Footprint.

As detailed further in Chapter 3.0 of the HRA at Appendix N (SLR Consulting, 2025), the Project would not require toxic chemicals or processes to be involved in the construction of any Project component.

6.11.2.1 BESS Units

The Project's BESS units are battery powerpacks consisting of lithium-ion batteries. Lithium-ion batteries are classed as Class 9 Miscellaneous Dangerous Substances and articles, which are excluded from the Resilience and Hazard SEPP screening process. However, the hazards associated with these batteries mandate that a PHA is required to further assess the hazards and risks associated with the lithium-ion batteries.

6.11.2.2 Diesel Storage

Diesel fuel to be stored on site, is not classed as a Dangerous Good, but is classed as a C1 Combustible Liquid, provided no flammable liquids are stored with the diesel. Similarly, top-up Transformer Oil to be stored on site, is not classed as a dangerous good, but is classed as a C1 Combustible Liquid, provided no flammable liquids are co-located. Diesel and transformer oil stored at the site will not be co-located.

While C1 combustible liquids are not a Dangerous Good under UN (United Nations) classification, they are defined as dangerous goods under NSW workplace legislation.

The total storage on site will be 1 tonne, and accordingly SafeWork NSW Notification is not required and an EPL is not required in accordance with the *POEO Act*.

Total storage of diesel and transformer oil will not exceed 1 tonne each, which is well below the threshold for both Safework NSW notification and an EPL-trigger under the *POEO Act*. Separation distances of the stored diesel and transformer oil at the site will be in accordance AS1940-2017 *Storage and Handling of Flammable and Combustible Liquids*.

6.11.2.3 Other Dangerous Goods or Other Hazardous Materials

Dangerous goods present on-site during the construction and operational phases are expected to consist of:

- Fuel for use by construction plant and equipment, which will be stored on-site.
- Tiny amounts of clinical waste stored safely by medical or first aid staff at the Project first aid station, to be disposed of at the nearest district hospital or another suitable facility as required.
- Regulated substances to be stored on-site (for maintenance, repair, emergency, etc., purposes) which are expected to be used entirely, leaving no waste. These will be stored in a properly maintained (and code-compliant) storage area with suitable signage, any PPE requirements if relevant, etc. They will include fire extinguishers, machine oils and lubricants, hydraulic fluid, spare (emergency) fuel and transformer oil for transformer top-up purposes.
- Common 'over the counter' products used for ongoing vegetation maintenance (e.g. herbicides).
- The transformers that form part of the BESS facility contain transformer oil for insulation and cooling, however toxic Polychlorinated biphenyl are no longer used as a cooling fluid; instead, non-toxic mineral or biodegradable oils are used.

No hazardous chemicals will be produced during operation of the facility, and the decommissioning phase of the Project will mirror the Construction phase in terms of materials and equipment activities.

The dangerous goods that will require transportation and storage at the Project site are detailed in Tables 2 and 3 of the HRA (SLR, 2025). The final quantity and transportation parameters of the materials listed in will be confirmed during detailed design however as currently foreseen, they do not exceed the relevant storage (or transport) thresholds.

The storage and handling of dangerous goods to be used or stored at the facility and transported to/from the facility is not considered potentially hazardous with regards to the screening thresholds contained in the Resilience and Hazards SEPP. Further detailed analysis via a PHA is therefore not required.

6.11.3 Preliminary Hazard Analysis

Where the Resilience and Hazard SEPP identifies a development as potentially hazardous and/or offensive, developments are required to undertake a PHA to determine the level of risk to people, property and the environment at the proposed location and in the presence of controls. Therefore, a PHA has been completed in accordance with *Hazardous Industry Planning Advisory Paper No.6 - Guidelines for Hazard Analysis* (HIPAP6) (DOP, 2011). Detailed methodology for the PHA is contained within Section 4.1 of the HRA (SLR, 2025).

Potentially hazardous events or scenarios were evaluated to establish if further comprehensive qualitative analysis was required. A summary of the hazardous events, causes, consequences and controls have been set out in Tables 11, 12 and 13 of the HRA (SLR, 2025) respectively for the construction, operational and de-commissioning phases of the Project. Hazards associated with Bushfire were not considered in the PHA but have been considered in Section 6.10. Hazards associated with BESS facility equipment are discussed in Section 6.11.3.1.

The PHA identified included analysis against the following potential hazards and events in relation to the Project:

- Soil deterioration
- Traffic Accident
- Vandalism
- Physical damage to transformers
- Physical damage to BESS (no combustion)
- Fire Impact (internal source -- but impacts on BESS units)
- Fire Impact (external – e.g. bushfire)
- Concreting
- Contact with high voltage
- Seismic activity
- Wind
- Lighting strike
- Climatic concerns
- Flooding isolation

The following potential hazards could not be eliminated through first review and require further examination:

- Hazards associated with Bushfire.
- Hazards associated with BESS facility equipment.

Bushfire hazards have been addressed in a separate stand-alone report.

6.11.3.1 BESS Hazard Mitigation and Control - General Background

Fire is recognised as a primary hazard associated with Lithium-ion Batteries (LiBs). The HRA (Appendix N) provides comprehensive details of the proposed BESS and analysis against the technical and management guidance.

Containerised BESS Units have been designed so that the occurrence of a fire does not spread easily to adjacent containerised units, when constructed and installed according to relevant standards and guidelines and the manufacturers specifications.

Discussed below are both general control measures common to modern BESS units and specific features of the Wärtsilä BESS units which are currently being considered for the Project. These control measures are designed to maintain and contain the risks within the site boundary and essentially eliminate the risk to areas outside the site boundary.

The technical and management safeguards incorporated in a BESS Unit are readily implemented as part of plant safety engineering. Following these safeguards, including codes and standards, will ensure that the resulting risk level is acceptable and that the proposed Molong BESS component meets the principles of:

- The circumvention of all avoidable risks.
- The risk from a major hazard should be reduced wherever practicable, even where the likelihood of exposure is low.
- The effects of significant events should, wherever possible, be contained within the site boundary.
- Where the risk from an existing installation is already high, further development should not pose any incremental risk.

6.11.3.2 BESS-Related Hazards

BESS-related hazards include:

- Thermal Runaway; Fire; Explosion; Toxic Gas Venting; Flammable Gas Venting; Electric Arc Flash; Hot Surfaces and Electric Shock.

The above arise from the following two broad areas.

Risks Associated with Non-Battery Fire Events

- Wiring Issues, eg short circuits.
- Electrical Safety System Failures, eg fuses, breakers, insulation, etc.
- Mechanical Interference, eg bugs, rodents, mishandling, etc.

Thermal Runaway

- Causes: manufacturer defect, overcharge, over-discharge, mechanical damage, environmental (too hot, too cold).
- Hazards Produced: heat, flame, off-gassing of mainly H2 and CO, off-gassing of other toxic gases, deflagration/explosion risk.

The key “links” in managing “internal” fire related risks within a BESS facility are illustrated in the “Fire Response Chain” shown in Figure 39 and summarised below:

Link 1 - Globally manufactured, commercially available BESS units (battery packs, convertors, etc) come with a range of sophisticated in-built hazard reduction mechanisms to avoid the onset of a fire event; detect a fire and “announce” it to relevant “stakeholders”, and



contain and suppress the fire until external firefighting resources can be brought to bear to shut the fire down, if it has not already been contained.

Link 2 - In between the Link 1 automatic fire-management systems and the Link 3 intervention of fire-fighting resources are a series of physical measures, e.g. separation of BESS units, APZ zones, etc, designed to limit the spread of a fire event until firefighting resources arrive to shut down the fire, if it has not already been contained.

Link 3 - Appropriate access for firefighting vehicles, availability of an adequate water supply for firefighting, emergency response planning, etc, form the last link aimed at being able to shut a fire down before it has the chance to spread beyond the BESS perimeter and into the surrounding community.

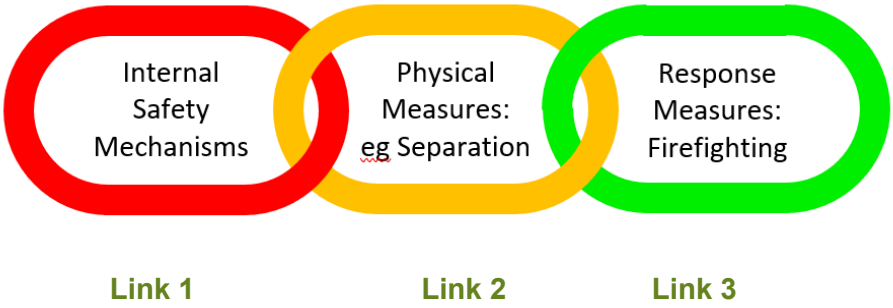


Figure 39 Key Strategic Links in Managing BESS Fire-Related Risks –The 'Fire Response Chain' (SLR, HRA, 2025)

A consideration of the ket strategic links is outlined in the HRA, and summarised below.

Link 1

The Wärtsilä Quantum2 BESS unit uses liquid-cooled Li-ion batteries, which are installed inside a compact battery enclosure together with the necessary safety instrumentation and other accessories. The proposed battery module for the Project is the CATL 306Ah – Model M01306P05L01 which includes various specific safety features such as:

- Multi-level protective structures, testing and verification as noted above, 24-hour monitoring and big data-based early warning.
- Intelligent Management is delivered via 24/7 protection through the BMS which monitors the battery health status 24/7 and identifies unhealthy batteries in advance.
- State-of-art components such as the cathodes, anodes, electrolytes, and pole pieces of the battery designed to slow down the battery capacity loss, extend the battery life, and reduce LCOS throughout the battery life cycle.
- Intelligent Temperature Control: automatic temperature adjustment to cope with cold and heat. The intelligent thermal management system effectively avoids the bucket effect caused by the series connection of cells, ensures a temperature difference of cells in the container within 5°C.
- Integrated liquid-cooled units feature adaptive adjustment of the operating state.
- Intelligent internal short-circuit detection with early warning of battery fire hazards has been shown to reduce the probability of relevant fires by more than 90%.

All of the above-mentioned safety features have been incorporated into the BESS units following on from major BESS incidents.

Link 2

The key to Link 2 is to provide sufficient clearance between adjacent BESS units, their Inverters, BESS compound auxiliary transformers, BESS compound buildings and the BESS enclosure perimeter. A specific design guide has been developed for the Wärtsilä Quantum2 units which sets out the relevant principles and standards to be complied with to ensure sufficient setback/separation.

In this instance, the nearest BESS units at the site are approximately 80 m from the Substation Main Transformers which easily exceeds the clearances recommended in the standard. The BESS units also comply with the required separation distances between each other, inverters, inverter transformers and the nearest site boundary and fire modelling undertaken confirms Radiant Heat distance requirements are met.

Link 3

Link 3 focuses on firefighting provisions that will manage potential fire events. These matters are discussed in detail in the BRAR, at Appendix S, and include the following:

- Asset Protection Zones
- Access for Firefighting Resources and Emergency Personnel
- Water Supply
- Vegetation Management
- Control of Bushfire Risk Initiators
- Engagement with NSW RFS and FRNSW

In summary:

- BESS-related fire risk issues will be adequately mitigated at the Molong BESS facility.
- Comprehensive information is provided regarding installation, commissioning and operational guidance for the proposed Quantum2 and CATL battery modules.
- The facility's BESS will not in itself pose an additional fire hazard that has the potential to increase the extent or severity of a bushfire event on surrounding property, people and the environment.
- The proposed 730 MWh BESS capacity can be comfortably accommodated within the site space with appropriate separation distance for protection of both personnel and equipment

On the basis of the Risk Matrix and assessment in the HRA, the residual risk associated with the BESS-initiated or other equipment-related fire hazard to be low, and hence adequately mitigated.

6.11.3.3 EMF Risk and Management Assessment

It is a Project commitment that the Project's electrical equipment will comply with relevant Australian Radiation Protection and Nuclear Safety Agency (ARPANSA) and International Commission on Non-Ionizing Radiation Protection (ICNIRPP) standards for exposure to electromagnetic radiation.

As a result, the magnitude of the EMFs from all equipment types, in particular their Magnetic Fields, will be highly localized and should remain well below the exposure limits found in the



Australian and International guidelines shown in Table 17 of the HRA, Appendix N (SLR, 2025).

The only measurable EMFs present outside the border of the Project Lots would almost entirely be from the existing transmission lines which run along the northeastern boundary of the proposal site.

Despite the above, and in line with the cautionary approach undertaken in the HRA, in addition to compliance with the guidelines and standard, the proponent has made the following project commitment:

- The design of the facility will be developed in accordance with Energy Networks Association (ENA), *"ENA Policy Statement on Electric and Magnetic Fields",* adopted by the ESAA Board in 1991 and reconfirmed by the ENA EMF Committee, March 2006; and Nutall, K., Flanagan, P. and Melik, G., *"Prudent Avoidance Guidelines for Power Frequency Magnetic Fields"*, 23rd Annual Conference of the Australasian Radiation Protection Society, 1998.
- The integrity of all security fencing will be maintained through the lifetime of the Project to ensure adequate exposure separation for all members of the public.

During the Project construction phase, construction staff may be intermittently exposed to EMFs when working near selected equipment (e.g inverters) once testing of the BESS facility begins. Potential EMF impacts are possible, in particular for sensitive workers (eg workers with implanted medical devices). They are however likely to be short term and negligible and will be managed according to the Project's Occupational Health & Safety Management Plan.

The PHA for EMF risk concludes that EMF fire risk issues can be adequately mitigated, for both the public and site workers.

On the basis of the risk matrix in Table 7 of the HRA, residual risk associated with EMF risk is assessed to be low, and hence adequately mitigated.

6.11.4 Decommissioning Impacts

Decommissioning of the Project presents low and manageable hazards and risks, primarily associated with the handling and removal of electrical equipment, potential chemical exposure from residual battery materials, and the operation of heavy machinery. These risks can be effectively mitigated through adherence to established safety protocols, including isolating and discharging battery systems prior to removal, implementing spill containment measures, and ensuring all personnel are trained and equipped with appropriate personal protective equipment.

A detailed decommissioning and safety management plan would be prepared and implemented to address potential hazards, ensuring risks remain low and are appropriately controlled throughout the process.

6.11.5 Mitigation and Management Measures

- HRA1 – An Occupational Health & Safety Management Plan will be prepared for the facility to include all measures aimed at managing hazards and risks, including specific targeted measures detailed in the Emergency Response Plan, as recommended in the HRA.
- HRA2 – EMF - The design of the facility will be developed in accordance with (i) Energy Networks Association (ENA), *"ENA Policy Statement on Electric and Magnetic Fields"*, adopted by the ESAA Board in 1991 and reconfirmed by the ENA

EMF Committee, March 2006; and (ii) Nutall, K., Flanagan, P. and Melik, G., "Prudent Avoidance Guidelines for Power Frequency Magnetic Fields", 23rd Annual Conference of the Australasian Radiation Protection Society, 1998.

- HRA3 – The integrity of all site security fencing will be maintained through the lifetime of the Project to ensure adequate exposure separation for all members of the public.
- HRA4 – The following management plans will be prepared and included in the CEMP and OEMP:
  - Emergency Response Plan (ERP).
  - Water Management Plan (WMP).
  - Fire Safety Study (FSS).
  - Spill Management Plan (SMP).
  - Bushfire Management Plan (BMP).

6.11.6 Concluding Remarks

The HRA has identified various potential hazardous events, causes, and consequences associated with Project including fire and EMF exposure. It is the overall conclusion of the HRA that the risks associated with the Project will be adequately managed, with suitable engineering controls, operational controls and management controls in place, as proposed.

6.12 Social Impact

This section presents the findings of the Social Impact Assessment (SIA) (SLR, 2025) prepared in response to the SEARs, refer to Appendix O. The SIA includes a detailed analysis of the existing environment and proposed operation and construction and outlines the methodology and criteria utilised to form an assessment of the Project.

The SIA was conducted in accordance with the *NSW Social Impact Assessment Guideline for State Significant Projects (DPHI, 2023) (the SIA Guideline).* The methodology involved extensive stakeholder consultation, social baseline analysis, impact prediction and evaluation, and development of mitigation strategies. The assessment was informed by findings from other technical studies, including economic impact, visual impact, noise and vibration, bushfire risk, and traffic analyses.

6.12.1 Existing Environment

Situated in the Central West region of New South Wales, Cabonne is a predominantly rural area with a population of approximately 13,766 residents as of the 2021 Census. The shire encompasses a mix of vibrant towns, including Molong, Canowindra, and Cudal, each offering and contributing to the region's rich cultural identity. The area is known for its scenic landscapes and historic buildings.

The Study areas considered in the SIA are described below:

- Regional Study Area (RSA): The Orange SA3 is adopted as the RSA for the SIA. Where possible, Cabonne LGA data has also been used to provide broader regional context and highlight differences between the township and the wider regional setting. This area provides the broader strategic policy and socioeconomic context for the Project. Residents here may encounter indirect impacts, including employment opportunities, workforce accommodation needs, and changes in service accessibility.



- Local Study Area (LSA): this includes the Molong Suburb and Locality (SAL12682) where communities most likely to experience direct or near-neighbour impacts associated with the Project, such as effects on local amenity and traffic.

The social baseline analysis highlights several key considerations for the Molong BESS Project's Social Impact Assessment:

- **Population stability and ageing trends**: Molong has a median age of 43 and displays an aging population, with 17.7% of residents aged over 70 years (SAL). This suggests an established, permanent community with a growing cohort of older residents who may be more sensitive to amenity changes, access limitations, or construction-phase disruptions near the Project Lots.
- **Strong community participation**: Above-average volunteerism and rates of unpaid care reflect strong social cohesion and a high degree of local engagement. Changes brought by The Project—especially during construction—may affect perceptions of local control or disrupt established networks and social rhythms.
- **Constrained short-term accommodation**: Molong township offers a small supply of visitor accommodation with a large variation in style, age and standard of room stock. Longer term visitors will need to balance against seasonal visitor fluctuations including seasonal agricultural workers. Orange has a larger and more established accommodation sector which is more likely to have suitable facilities that can accommodation seasonal fluctuations and peak demands.
- **Transport reliance and road access**: High rates of car ownership and limited public transport reflect a car-dependent community. Construction-phase traffic, particularly along Mitchell Highway and Euchareena Road may disrupt access and raise local concerns around safety, congestion, and road wear.
- **Employment and economic participation**: The regional workforce includes strong representation of tradespeople, and machinery operators (SAL) and Construction industry employees, indicating potential capacity to support the Project. However, the low unemployment rate across Cabonne LGA of 1.6% points to a tight labour market. Careful workforce planning and engagement with local contractors and suppliers will be important to maximise benefit while avoiding local labour constraints.
- **Increasing rental costs and mounting pressure on housing affordability**: Although housing in Molong and Cabonne LGA remains more affordable than NSW averages, rental costs are showing steady rates of increase, with Cabonne LGA demonstrating some of the highest rental increases in the Central West and Orana regions. This has implications for existing residents and must be considered with respect to potential pressures on local housing availability and affordability if construction workforce accommodation is addressed through the local rental market.
- **Emergency planning and rural service delivery**: The Project's rural setting, combined with bushfire risk and known seasonal weather extremes, underlines the importance of proactive emergency planning. Collaboration with local fire services, police, health services, and FRNSW will be critical during both construction and operations, especially regarding access, risk response, and incident management.
- **First Nations engagement**: The Project is located on Wiradjuri Country and within the area of the Orange LALC. Ongoing engagement with Aboriginal stakeholders is essential, not only in relation to cultural heritage but also for procurement, employment, and long-term community benefit initiatives.



These findings form the basis for assessing potential social risks and benefits and will guide the development of appropriate mitigation, management, and benefit-sharing measures in subsequent sections of the SIA.

6.12.1.1 Social Infrastructure

The size of construction workforce, temporary nature of the peak construction period for the Project, and the close proximity of the major regional centre of Orange mean that impacts on local social infrastructure are expected to be moderate and temporary. Interactions are most likely to occur with essential services such as emergency services and healthcare facilities in the event of an incident.

Key infrastructure and service providers in the area include:

- **Molong Health Services**: Redeveloped in 2018 under the NSW Government's Multipurpose Service Program (MPS), Molong Health Service is in the centre of Molong township and part of the Western NSW Local Health District. It is a Multipurpose Service providing 24-hour emergency department, a small local hospital (27 beds), inpatient and residential aged care beds and community health services.
- **NSW Police Force**: The Molong Police Station, located on Gidley Street, provides law enforcement and community safety services to the region.
- **NSW Ambulance Service**: Recently improved under the Rural Ambulance Infrastructure Reconfiguration (RAIR) program, Molong Ambulance Station is located on King Street in the north west of the township and oversees emergency medical response across the district.
- **NSW Rural Fire Service (RFS)**: The Molong Fire Station is operated by NSW Fire and Rescue and located on Edward Street in the south east of the township.
- **Fire and Rescue NSW (FRNSW)**: The Molong Fire Station is managed under Fire and Rescue NSW and supports urban fire and emergency response in conjunction with RFS where needed. Additional support is provided by Orange as required and available.
- **State Emergency Service (SES):** The Molong SES unit is located on Riddell and William Streets in the town centre. They support flood and disaster response, with back-up from Orange as available. Council notes that support from Orange is not available during flood events as road access between Molong and Orange is typically inundated.

Given the existing capacity of these services, recent upgrades and the proximity of additional services in the Orange regional centre, and short term nature of construction workforce peak timeframes, no sustained pressure is anticipated.

However, emergency management planning and ongoing communication with local emergency service providers will remain important throughout the construction and operational phases.

6.12.2 Impact Assessment

The SIA assesses the social impacts arising from the construction and operation of the Project, including measures to enhance social benefits and mitigate potentially negative impacts as per the principles set out in *The SIA Guideline* and aligns with requirements set out in the *Technical Supplement for Social Impact Assessment Guidelines for State Significant Developments* (DPIE, 2023).



The assessment identifies the potential social impacts of the Project as a result of amenity impacts, changes to community cohesion and character due to an influx of construction workers during construction into a relatively small rural community, traffic and construction based disruption, potential loss of Aboriginal cultural heritage values and residents concern about the risk of fire from the BESS.

As outlined in Section 6.12.4, a number of measures are recommended to ensure that any impacts are mitigated through the project life.

Table 57 provides a summary of the residual risk of social impacts, following the implementation of the mitigation measures.

Table 57 Residual Risk Assessment

#	Social Impact	Stakeholder Affected	Pre-Mitigation Social Risk Rating	Mitigation and management measures	Impact post mitigation		
					Likelihood	Magnitude	Residual Social Risk Rating
Construction							
C-1	Amenity impacts during construction activities, including, but not limited to, noise, vibration, dust, and odour affect residents' wellbeing and the way they use and enjoy private space	Near neighbours and properties along transport routes Molong Golf Course	**Medium** (Minor + Almost Certain)	• Prepare and implement a Construction Communication and Stakeholder Management Plan to ensure that near neighbours and affected stakeholders are appropriately notification and consulted ahead of planned works or disruptions. • Implementation of best practice noise management controls to minimise residual risk of harm at nearby receivers to reduce noise impacts as low as reasonably practicable. • Design mitigations including silencing treatment of the BESS battery containers and inverters, and 4 metre acoustic walls at strategic locations within the Development Footprint. • Ongoing compliance with the NSW Noise Policy for Industry. • Preparation and implementation of a dust management plan including implementation of watercart treatment and speed limits for unsealed access roads used by construction vehicles in the vicinity of residential dwellings.	Likely	Minor	**Low (negative)**

#	Social Impact	Stakeholder Affected	Pre-Mitigation Social Risk Rating	Mitigation and management measures	Impact post mitigation		
					Likelihood	Magnitude	Residual Social Risk Rating
				• Preparation of a greenhouse gas emissions assessment.			
C-2	Changes to community cohesion and character due to an influx of construction workers during construction into a relatively small and stable population centre.	Residents of Molong, surrounding town and Orange Local business owners and service providers Molong community	**High** (Moderate + Likely)	• Prepare a voluntary workforce accommodation schedule and plan as deemed necessary. • Prepare and implement a Construction Communication and Stakeholder Management Plan to ensure that affected stakeholders are appropriately notification and consulted ahead of planned works or disruptions. • Ongoing engagement with accommodation service providers to assess availability and suitability of latent provision. • Ongoing consultation with Council, business sector and service providers to plan for fluctuations in service demand. • Work with Council and Molong community to design and implement an appropriate method of delivering community benefits.	Possible	Moderate	**Medium (negative)**
C-3	Delays and disruption to local traffic networks resulting from construction activity including,	Properties access via Strathmore Lane, Belgravia Road or	**Medium** (Moderate + Unlikely)	Prepare and implement a Construction Communication and Stakeholder Management Plan to ensure that affected stakeholders are appropriately notification and consulted ahead of planned works.	Minor	Unlikely	**Low (negative)**

#	Social Impact	Stakeholder Affected	Pre-Mitigation Social Risk Rating	Mitigation and management measures	Impact post mitigation		
					Likelihood	Magnitude	Residual Social Risk Rating
	increased truck movements and heavy and oversized vehicles affect residents' movement patterns and perceptions of safety on the road network	Euchareena Road Community and school transport operators, garbage collection services, agricultural users, and general road users		The traffic assessment outlines several mitigation and management measures designed to reduce the impact of the project on the local road network. These include: • Development of a Construction Traffic Management Plan. • Dilapidation surveys of the local road network along transport routes. • OSOM material transportation route study for the one-off transportation of the transformer from the port of import to the development site. • The section of Back Saleyards Road from the access driveway to the Euchareena Road intersection be monitored over the course of the construction phase, to ensure that the maintenance of the road allows the ongoing accommodation of bi-directional movements of the anticipated construction vehicle fleet. • Construction workforce to be briefed on recommended heavy vehicle and light vehicle routes, with a Driver's Code of Conduct prepared by the applicant.			
C-4	Loss of environmental/ biodiversity values	Council	**High**	The site has been already selected to minimise clearing of native vegetation and/or mature trees.	Unlikely	Minor	**Low (negative)**

#	Social Impact	Stakeholder Affected	Pre-Mitigation Social Risk Rating	Mitigation and management measures	Impact post mitigation		
					Likelihood	Magnitude	Residual Social Risk Rating
	due to construction and site preparation works (pending biodiversity assessment)	Agriculture businesses Tousom business Molong Community	(Likely + Moderate)	Implement the recommendations of the BDAR including implementing clearing protocols and construction management measures (e.g. protective fencing, light shields) and rehabilitation.			
C-5	Saturation of temporary accommodation providers in the local area during constriction resulting in limited accommodation options for seasonal workers, students, and visitors	Seasonal agricultural workers Visitors Local accommodation providers Tourism business Businesses relying on seasonal workforce	**High** (Major + Likely)	• Ongoing consultation with local accommodation businesses and service providers. • Consultation with agricultural businesses utilising seasonal labour. • Prepare a workforce accommodation schedule and plan focussing on peak visitation periods on Molong including Harvest season and major events. • Investigate available accommodation supply in Orange to accommodate contingency or overflow supply.	Possible	Moderate	**Medium (negative)**
C-6	Economic opportunities for local businesses during construction, including temporary accommodation providers,	Working-age residents of Molong and Cabonne LGA Local contractors and businesses Young people and jobseekers	**High (positive)** (Moderate + Almost Certain)	Stor is continuing to work with Cabonne Council, stakeholders and local business networks to identify and implement opportunities to support the local economic, job market and skill development.	Almost Certain	Moderate	**High (positive)**

#	Social Impact	Stakeholder Affected	Pre-Mitigation Social Risk Rating	Mitigation and management measures	Impact post mitigation		
					Likelihood	Magnitude	Residual Social Risk Rating
	hospitality and food retail, and general retail outlets as a result of increased workforce						
Construction and operation							

CO-7	Perceived changes to local community character resulting from reduction of agricultural land and associated activities in the local area	Local community
		Local businesses
		Local services and organisations
			Medium
			(Minor + Possible)
				• Prepare and implement a Communication and Stakeholder Management Plan to:
				  ○ Guide ongoing community consultation to build community understanding and trust in the project.
				  ○ Outline appropriate tools and techniques tailored to stakeholder groups and community.
				  ○ Guide regular monitoring and review of consultation activities and support continual improvement.
				• The Agricultural Impact Assessment recommended the following mitigations to protect the use and viability of Agricultural land and protect this element of local landscape character and social fabric.
				• Prepare and implement:
				  ○ Construction Environmental Management Plan.
					Unlikely	Minor	**Low (negative)**

#	Social Impact	Stakeholder Affected	Pre-Mitigation Social Risk Rating	Mitigation and management measures	Impact post mitigation		
					Likelihood	Magnitude	Residual Social Risk Rating
				○ Vegetation Management Plan. ○ Operational Environmental Management Plan. ○ Construction Traffic Management Plan. ○ Construction Noise and Vibration Management Plan. ○ Erosion and Sediment Control Plan (construction phase). • Undertake noise and/or vibration monitoring in response to any complaints. • Direct onsite lights downward and inward as much as possible and away from site boundaries.			
CO-8	Loss of Aboriginal and non-Aboriginal cultural heritage values due to construction activities and site preparation works affects Aboriginal peoples' connection to Country and spiritual wellbeing (pending heritage assessment)	First Nations communities Orange LALC	**Medium** (Possible + Moderate)	Implement recommendation of ACHA including: • Further investigation of potential artifacts to inform ongoing management. • Preparation and implementation of management plans including: ○ Aboriginal Cultural Heritage Management Plan (ACHMP). ○ Construction Environment Management Plan (CEMP). ○ Ongoing liaisons and shared management with other land users	Possible	Minor	**Medium (negative)**

#	Social Impact	Stakeholder Affected	Pre-Mitigation Social Risk Rating	Mitigation and management measures	Impact post mitigation		
					Likelihood	Magnitude	Residual Social Risk Rating
				within the project area, such as Transgrid.			
Operation							
O-9	Impacts on local amenity due to operational noise impacts resulting from the project	Near neighbours Moong Golf Course	**Low** (Minor + unlikely)	Implement the recommendations of the noise and vibration, air quality and traffic impacts assessments including: • Design mitigations to introduce physical noise controls can assist in compliance with evening and night project trigger levels incusing noise attenuation wall directly adjoining the BESS to the north and west boundaries of the site and near-field barriers to the HV transformers. • Construction materials and protocols for constructing perimeter noise barriers including noise attenuation wall. • Prepare and implement an Operational Communication and Stakeholder Management Plan to ensure that affected stakeholders are appropriately notification and consulted ahead of planned works.	Unlikely	Minor	**Low (negative)**
O-10	Permanent changes to community character and	Near neighbours General community	**Low** (Minor + unlikely)	Implement recommendations from the LVIA including: • Minimising vegetation removal as far as practicable.	Unlikely	Minor	**Low (negative)**

#	Social Impact	Stakeholder Affected	Pre-Mitigation Social Risk Rating	Mitigation and management measures	Impact post mitigation		
					Likelihood	Magnitude	Residual Social Risk Rating
	surrounding landscape	Agriculture and tourism businesses		• Appropriate design and finish on external structures including acoustics walls to maximise integration with established landscape. • Considering the site design to reduce visual bulk where practicable. • Ensuring prompt clean up, storage and removal of site debris\ and materials during construction. • Restricting lighting of compounds and worksites to low impact lighting.			
O-11	Improved energy infrastructure to enhance reliability of energy supply in the region and in NSW	Households and businesses in Molong and surrounds NSW Energy users	**Very High** (Major + Almost Certain)	• Ongoing consultation with Council and local community to ongoing capacity building and understanding of electricity grid the continued transition to renewables.	Almost certain	Major	Very High (Positive)
O-12	Residents concern about the risk of fire from the BESS Facility affects general feelings of safety and wellbeing.	Near neighbours Local Rural Fire Service (RFS) and emergency responders Cabonne Council Surroundings townships and Orange	**High** (Moderate + Likely)	• Prepare and implement a Communication and Stakeholder Management Plan to: ○ Guide ongoing community consultation to build community understanding and trust in the project. ○ Outline appropriate tools and techniques tailored to stakeholder groups and community.	Possible	Moderate	**Medium (negative)**



#	Social Impact	Stakeholder Affected	Pre-Mitigation Social Risk Rating	Mitigation and management measures	Impact post mitigation		
					Likelihood	Magnitude	Residual Social Risk Rating
				○ Guide regular monitoring and review of consultation activities and support continual improvement. • Maintain a complaint handling process to record and respond to community concerns. • Ongoing stakeholder engagement with Council land emergency services to support a coordinated and well-planned approach to emergency response and resource management. • Preparation, implementation and promotion of emergency management plans including: ○ Bushfire Management Plan. ○ Fire Safety Study. ○ Emergency Response Plan. ○ Flood Management Plan. ○ Hazard management Plan.			
Decommissioning							
D-13	Socio-environmental changes associated with decommissioning the Molong BESS Facility	All	**Provisional rating: High** (Moderate + Likely)	• Ongoing consultation with Council and the local business sector and operators. • Ensure community benefit model is appropriately design and implemented in close collaboration with Council and Molong businesses.	Subject to revised SIA and management planning		

#	Social Impact	Stakeholder Affected	Pre-Mitigation Social Risk Rating	Mitigation and management measures	Impact post mitigation		
					Likelihood	Magnitude	Residual Social Risk Rating
				• Ongoing review and monitoring of social, economic and environmental impacts associated with the Project throughout operational phases. • Undertake decommission phase social baseline and impact assessment.			

The management of social impacts will primarily be achieved through:

- Integration with the project's environmental management and reporting frameworks, as many social impacts are directly related to environmental factors such as noise, visual amenity, and traffic.
- Implementation of specific social management measures targeting impacts that cannot be fully addressed through environmental management alone.
- Ongoing stakeholder engagement to monitor community sentiment and respond to emerging concerns.
- Ongoing reporting and regular auditing of performance and mitigation measures on public platforms including the project website and collateral.

Given the relatively short construction timeframe and even shorter peak construction period, the plan will emphasise timely response to issues rather than long-term trend analysis. The management approach will:

- Focus on effective communication mechanisms managed in real-time.
- Address issues promptly as they emerge.
- Adjust management strategies based on feedback and observations.
- Apply learnings from similar BESS projects in the region.

By implementing the recommended mitigation and enhancement measures outlined in this report, the Project can be delivered with social outcomes that align with community expectations and generate lasting benefits for the Cabonne LGA and Region. Ongoing stakeholder engagement, transparent communication, and adaptive management will be essential to maintaining social performance throughout the project lifecycle.

6.12.3 Decommissioning Impacts

Stor has committed to removing all infrastructure and returning the site “as close as possible to its original condition and use,” with materials to be recycled or disposed of in line with future regulatory requirements and best practice recycling systems for battery energy storage systems.

It is important to acknowledge that assessing social impacts beyond the Project life cycle is inherently speculative. The Cabonne LGA and Central West region is undergoing continuous economic and demographic change, and over the coming decades, the community composition, land use planning, regulatory frameworks, and technological capabilities (particularly related to battery recycling and circular economy practices) will continue to evolve.

Notwithstanding, decommissioning of the Project is expected to have minimal community social impacts, given the short duration and temporary nature of the works. There may be minor disruptions such as increased vehicle movements on local roads and short-term noise during working hours, but these are not expected to significantly affect the local community and mitigation measures similar to those during construction will be implemented. Early communication with the community, along with clear scheduling and management of decommissioning activities will be implemented to minimise any potential concerns or inconvenience to residents.



6.12.4 Mitigation and Management Measures

It is noted that mitigation measures recommended to address impacts from the Project to the community. Further to these recommendations, the following measures are also recommended to mitigate social impacts from the Project:

- S01 – The proponent will develop and execute a Community and Stakeholder Engagement Plan (CSEP) to ensure community members receive accurate, timely information throughout the construction phase. This strategy will encompass:
  - Systems for notifying nearby communities, residents, visitors and road users about scheduled activities, their timing, possible effects, and mitigation strategies (including transport operations and activities generating significant noise).
  - Methods for consultation with impacted stakeholders and residents regarding possible effects and management approaches.
  - Systems for gathering and addressing project-related inquiries and concerns during construction, operational, and decommissioning phases, such as an online project portal with contact information.
  - Ongoing and consistent reporting of performance measures, engagement summaries, project updates and outcome of impact mitigations on public platforms including project website and printed collateral.
- S02 – The proponent will undertake the following actions to ensure the community and stakeholders are adequately informed about the Project, the proponent and BESS for the entire life of the Project:
  - Develop an easy to understand factsheet addressing battery safety, fire risks, and electromagnetic radiation.
  - Continue engagement with the RFS and Fire and Rescue and involve them in future community briefings.
  - Reassure stakeholders through transparent emergency response planning.
  - Include information on Stor-Energy's ownership structure and any company policies or strategies in place.
  - Share an overview of Project's delivery plans. Stor will also share the contact information of local suppliers already expressed interested in supplying for the project to main contractors and organise ‘meet the buyer’ event.
  - Clearly identify key project partners and roles across the project lifecycle
  - Provide accessible information about battery lifespan and replacement timelines.
  - Explain end-of-life recycling processes and compliance with waste regulations.
  - Prepare material focused on lifecycle and sustainability which can be handed out atcommunity events Stor will participate (e.g. Christmas shopping street event, Molong markets).
  - Develop visual materials that demonstrate how the battery supports the regional energy network.
  - Implement input from residents and Council to VPA Terms of Reference and any additional ad hoc sponsorships and benefit sharing.
  - Establish transparent funding criteria and governance mechanisms.
  - Communicate how community suggestions have shaped funding priorities.

- Maintain regular project updates via website, email, social media and community notices.
- Share milestone announcements and progress against the approval's timeline.
- Offer guided site visits or virtual tours when safe and appropriate.
- Provide updates on environmental assessments and mitigation strategies.
- Incorporate local ecological knowledge into project design and rehabilitation.
- Share how feedback has informed environmental planning decisions.

6.12.5 Concluding Remarks

The SIA identifies the potential social impacts of the Project as amenity impacts, changes to community cohesion and character due to an influx of construction workers during construction into a relatively small rural community, traffic and construction-based disruption, potential loss of Aboriginal cultural heritage values and residents concern about the risk of fire from the BESS.

Most social impacts will be effectively managed through a range of project environmental performance requirements, including targeted environmental management measures to reduce amenity impacts and fire safety measures and engagement with local emergency services. Furthermore, a CSEP will be developed to ensure transparent communication throughout all project phases and, on this basis, the SIA found that the Project can proceed with acceptable social outcomes.

6.13 Economic Impact

This section presents the findings of the Economic Impact Analysis (EIA) (BDO, 2025) prepared in response to the SEARs, refer to Appendix P. The EIA includes a detailed analysis of the proposed assessment methodology and the expected construction and operational economic impacts of the Project.

6.13.1 Methodology

Impacts of the Project (i.e. the change to economic indicators between 'with' and 'without' scenarios of the Project) were analysed using Regional Industrial Structure and Employment (RISE) Input-Output (IO) models. Impacts were estimated for the Project's infrastructure development, expected regional expenditure and the income from the Project's expected electricity supply on both Cabonne and the New South Wales economy.

Impacts were measured in terms of the following economic indicators:

- Gross Regional Product (GRP) / Gross State Product (GSP).
- Employment (FTE jobs).

The direct FTE estimates of employment are a combination of on-site and off-site employment by businesses that directly supply the Project with goods and services. These estimates are based on RISE model estimates of direct FTE jobs, which reflect the economy-wide effects of the capital expenditure profile of the Project. The same principles apply regarding GRP/GSP estimates.

The assessment period for construction is 2026/2027 and 2027/2028, corresponding to the expected Project construction period of 22 months and the expected commencement of operations in August 2028. The assessment period for operations and maintenance spans from 2028/29 to 2057/58, approximately 30 years.

For economic impact modelling, it was assumed that capital expenditure is equal in each financial year of construction. The categories of capital expenditure included expenditures on equipment, civil engineering and installation costs, and grid connection for the Project. Refer to Table 58 for annual capital expenditure assumptions.

Table 58 Annual capital expenditure assumptions used in analysis ($m) (EIA, BDO, 2025)

Capital expenditure category	2027/2028
Site clearance and general works	2.1
Civil and building	12.8
Electrical works	158.6
Substation	11.8
Transmission line	3.2
Testing and commissioning	2.2
Contractors design	2.2
Preliminaries	9.0
Total	**201.8**

The estimated revenue used in the economic impact analysis is provided in Table 59.

Table 59 Estimated project revenue assumptions used in analysis ($m) (EIA, BDO, 2025)

Year of operation	Estimated revenue per year ($m)
2028/29	21.7
2029/30	26.0
2029/30 – 2057/58	26.0

Table 60 presents the estimated operational expenditures used in the analysis. The Project is expected to begin operation in August of 2028, operating expenditure assumed to begin concurrently.

Table 60 Annual operational expenditure assumptions used in analysis ($m) (EIA, BDO, 2025)

Operating expenditure category	2028/29	2029/30	2030/31	2031/32 – 2057/58
Supplier service agreement	1.56	1.87	1.87	1.87
Operations and Maintenance Contract	0.89	1.07	1.07	1.07
Asset management fees	0.29	0.35	0.35	0.35
Insurance	0.95	0.95	0.95	0.95
Wages	0.26	0.26	0.26	0.26
Total	**3.95**	**4.50**	**4.50**	**4.50**

6.13.2 Construction Impact Assessment

Table 61 shows the estimated economic impacts of the Project's construction on the Cabonne (i.e. regional) economy.

Table 61 Potential economic impacts of Project construction, Cabonne area (EIA, BDO, 2025)

Indicator	2026/2027	2027/2028
GSP ($m)		
Direct	9.8	9.8
Flow-on	7.1	7.1
Total	**16.9**	**16.9**
PV		**30.6**
Employment (FTE jobs)		
Direct	91	90
Flow-on	44	43
Total	**134**	**134**
Average annual		**134**

The total impact on the regional economy over the 22 months of construction for GRP is estimated to be $16.9m in each financial year or a present value (PV) of $30.6m over two years. Of this, $9.8m is estimated as direct impact, and $7.1m as flow-on impact each year.

The average annual total impact on employment in the regional economy during the construction period is estimated to be 134 full-time equivalent (FTE) jobs. Of this, 91 FTE jobs are expected to be created directly across the Cabonne Shire and surrounding region economy, and 44 FTE jobs from the flow-on impacts of construction in the first year of construction. Following assumed gains in labour productivity, the FTE impact in the second year of construction reduces to 90 FTEs directly employed, and 43 FTEs employed as a result of flow-on effects

Table 62 shows the estimated economic impacts of the Project's construction on the New South Wales economy.

Table 62 Potential economic impacts of Project construction, New South Wales (EIA, BDO, 2025)

Indicator	2025/26	2026/27
GSP ($m)		
Direct	15.1	15.1
Flow-on	28.3	28.3
Total	**43.4**	**43.4**
PV		**78.5**
Employment (FTE jobs)		
Direct	98	98
Flow-on	152	152
Total	**250**	**250**
Average annual		**250**

The total impact on the regional economy over the 22 months of construction for GRP is estimated to be $43.4m in each financial year or a present value (PV) of $78.5m over two years. Of this, $15.1m is estimated as direct impact and $28.3 as flow-on impact each year.

The average annual total impact on employment in the regional economy during the construction period is estimated to be 250 FTE jobs. Of this, 98 FTE jobs are expected to be supported in the New South Wales economy due to direct effects, and 152 FTEs is expected to be supported due to flow-on effects.

6.13.3 Operational Impact Assessment

Table 63 shows the estimated economic impacts of the Project's operation on Cabonne.

Table 63 Potential economic impacts of Project operation, Cabonne area (EIA, BDO, 2025)

Indicator	2028/29	2033/34	2038/39	2043/44	2048/49	2053/54	2057/58
GSP ($m)							
Direct	20.6	24.7	24.7	24.7	24.7	24.7	24.7
Flow-on	1.0	1.2	1.2	1.2	1.2	1.2	1.2
Total[a]	**21.6**	**25.9**	**25.9**	**25.9**	**25.9**	**25.9**	**25.9**
PV	**296.4**						
Employment (FTE jobs)							
Direct	2	2	2	2	2	2	2
Flow-on	5	6	6	5	5	5	5
Total	**7**	**8**	**8**	**7**	**7**	**7**	**7**
Average annual	**7**						

The impact on GRP in the first year of operation is expected to be $21.6 million, rising to $25.9 million in subsequent years, or $296.4 million in PV over thirty years. The BESS at Molong is expected to support 7 FTEs in the first year of operation (2 FTEs directly and 5 FTEs flow-on), rising to 8 per year until 2039 and 7 FTEs every year subsequently due to modelled increases in labour productivity.

Table 64 shows the estimated economic impacts of the Project's operation on the NSW economy.

Table 64 Economic impacts, operation, New South Wales (EIA, BDO, 2025)

	2028/29	2033/34	2038/39	2043/44	2048/49	2053/54	2057/58
GSP ($m)							
Direct	20.6	24.7	24.7	24.7	24.7	24.7	24.7
Flow-on	3.2	3.9	3.9	3.9	3.9	3.9	3.9
Total[a]	**23.8**	**28.6**	**28.6**	**28.6**	**28.6**	**28.6**	**28.6**
PV	**327.1**						
Employment (FTE jobs)							
Direct	2	2	2	2	2	2	2
Flow-on	13	15	15	14	14	13	13

	2028/29	2033/34	2038/39	2043/44	2048/49	2053/54	2057/58
Total	**15**	**17**	**17**	**16**	**16**	**15**	**15**
Average annual	**16**						

The impact on GSP is estimated to be $23.8m in the first year of operation, reaching $28.6 per year, or $327.1m in PV over thirty years. The BESS at Molong is expected to support 15 FTEs in the first year of operation, rising to 17 FTEs with full operation, or an average of 16 FTEs per year.

6.13.4 Concluding Remarks

During the construction phase, the project is expected to generate $30.6 million in GRP for Cabonne Shire and surrounding region and $78.5 million in GSP for New South Wales, along with creating an average of 134 full-time equivalent (FTE) jobs annually in Cabonne and 250 FTE jobs annually in New South Wales.

Once operational, the BESS will contribute an estimated $296.4 million (PV) in GRP for Cabonne Shire and surrounding region and $327.1 million (PV) in GSP for New South Wales over 30 years, supporting an average of 7 FTE jobs in Cabonne and surrounding region, and an average of 16 FTE jobs in New South Wales.

6.14 Waste Management

This section presents the findings of the Waste Management Plan (WMP) (SLR Consulting, 2025) prepared in response to the SEARs, refer to Appendix Q. The WMP includes a detailed analysis of the existing environment and proposed operation and construction and outlines the methodology and criteria utilised to form an assessment of the Project.

6.14.1 Existing Environment

Back Saleyards Road is currently serviced by Council kerbside bin collection for domestic waste, including general waste and recycling. The Project Lots currently do not generate much waste, which includes general rural waste such as vegetation and grasses and domestic waste generated by the existing dwelling. The waste expected during the construction and operation of the Project is detailed below.

6.14.2 Assessment Methodology

In order to estimate the waste types and quantities and to identify potential impacts and mitigation measures a desktop assessment was conducted. The method involved the following:

- Review of the relevant legislation and regulatory framework related to waste management.
- Identification of potential waste generating activities during site preparation, construction, operational and decommissioning phases.
- Estimation of potential waste generating activities during site preparation, construction, operational and decommissioning phases.
- Identification of likely classification of waste types in accordance with relevant legislation and guidelines.
- Description and management methods of the key identified waste streams.
- Identification of lawful disposal or recycling facilities.

The waste types and quantities estimated in this waste assessment are indicative and have been identified for the purpose of providing potential waste management options. The final quantities of waste will be determined before the relevant stage of the Project.

6.14.3 Construction Impact Assessment

Construction activities have the potential to generate waste through excess construction materials, waste generation from construction offices and excess spoil from excavation and foundation works. The construction activities for the Project would be undertaken according to a Project CEMP developed by the Construction Contractor that addresses waste management and reduction practices.

During site preparation and construction phases, the following broad waste streams are expected to be generated:

- Excavation waste - spoil
- Green waste - vegetation from site preparation and tree removal
- Mixed construction waste - metal and timber offcuts
- Plant maintenance waste - oils and tyres
- Packaging waste - plastic wrap, straps, pallets, drums and cardboard
- Work compound waste - lunch waste and drink containers
- Faulty, damaged or broken battery units
- Effluent from on-site toilets for workers
- Wastewater from minor dewatering excavations (if required), plant maintenance and construction activities

Large quantities of waste are not expected to be generated during the site preparation and construction phases. Construction will require heavy vehicles, plant, and equipment for the transportation of components and installation at the BESS.

Most waste generated through construction activities is expected to come from site preparation, earthworks, connection of services and temporary office installation. Small quantities of waste are also expected to be generated from building materials such as concrete, timber, aggregate, metals and packaging.

Details of the likely key waste types from excavation, and construction activities, along with their waste classifications and proposed management methods, is provided in Table 65.

While different waste types are identified, actual quantities of waste are estimated to be minimal. Waste will be placed in separate bins or skips and transported to a facility lawfully able to accept it for recovery. Defective or damaged batteries will be kept in their containers until removal by a licenced contractor.

Table 65 Potential Waste Type, Classifications, and Management Methods - Construction (SLR, WMP, 2025)

Waste Types and Activities	NSW EPA Waste Pre-Classification	Avoidance and Reuse	Storage and Collection	Recycle / Disposal
Soil from earthworks spoil to prepare the access road,	General solid (non-putrescible) waste	On-site reuse of topsoil for landscaping of the site.	Separate materials requiring off-site recovery	Will be sent off-site for disposal at a facility lawfully able to accept it or

Waste Types and Activities	NSW EPA Waste Pre-Classification	Avoidance and Reuse	Storage and Collection	Recycle / Disposal
construction laydown areas				landscaping off-site
Green waste - grasses, trees, roots, and associated topsoil	General solid (non-putrescible) waste	On-site reuse of topsoil and mulch for landscaping of the site Offering felled timber to local community	Stored in bins or other contained area	Waste that can't be recycled on-site will be sent off-site for disposal to recycling facility or landfill lawfully able to accept it.
Construction waste - metal off-cuts, mainly from operations and maintenance building	General solid (non-putrescible) waste	Recycle scrap metal	Separate, stockpile, reuse on-site Separate materials requiring off-site recovery	Dispose waste that cannot be reused on-site at a facility lawfully able to accept it. Recyclable materials will be reused on-site or sent to a facility lawfully able to accept it for recycling
Construction waste - timber off-cuts, packaging, glass, plastic, and rubber	General solid (non-putrescible) waste	Pallets to be returned to the supplier, if possible. Appropriate procurement processes to avoid ordering and delivery of excess materials and supplies	Off-site timber recycling, chip for landscaping, sell for firewood Remainder to landscape supplies. Reused for similar projects	Dispose waste that cannot be reused on-site at a facility lawfully able to accept it. Recyclable materials will be reused on-site or sent to a facility lawfully able to accept it for recycling
Empty oil and other drums or containers, such as fuel, chemicals, paints, spill clean ups. Containers were previously used to store Dangerous Goods (Class 1, 3, 4, 5 or 8) and residues have not been removed by washing or vacuuming.	Hazardous waste	Conduct refuels and maintenance activities away from receptors, signage and labelling, on-site spill kits, adhere to the site Spill Management Plan	Transport to comply with the transport of Dangerous Goods Code applies in preparation for off-site recycling or disposal at a facility lawfully able to accept it	Transport to comply with the Australian Dangerous Goods Code, spill kits consistent with Australian Standards.

Waste Types and Activities	NSW EPA Waste Pre-Classification	Avoidance and Reuse	Storage and Collection	Recycle / Disposal
Empty oil and other drums or containers, such as fuel, chemicals, paints, spill clean ups. Containers have been cleaned by washing or vacuuming.	General solid waste (non-putrescible)			
Air filters and rags, oil filters, drained	General solid waste (non-putrescible)		Off-site disposal or recycling	
Paper, cardboard and comingled recycling including containers from office activities, food and beverage	General solid waste (non-putrescible)	Procurement of products delivered in reusable or returnable containers.	Separation and storage of recyclables in designated bins in waste storage area	Collected by a contractor and delivered to a recycling facility lawfully able to accept it. Redeemed through 'Return and Earn 'NSW container deposit scheme
Food waste - such as food scraps generated by staff.	General solid (putrescible) waste		Food waste bins to always have closed lids. Dispose to landfill with general garbage.	Food waste collected as part of Council kerbside organics service.
Sewage and greywater from washdown activities and staff amenities	Liquid waste	Wastewater treatment plant	Portable amenities or on-site amenities	Transported off-site or direct to treatment plant

6.14.4 Operational Impact Assessment

During the operational phase of the Project, operational waste streams are expected to be generated by site workers, as well as materials generated during maintenance of the site, including the following:

- Damaged or failed lithium-ion batteries.
- General waste – lunch waste, food scraps, soiled paper and cardboard.
- Recyclable containers - aluminium and steel cans, plastics and glass bottles.
- Recyclable paper and cardboard.

- Bulky waste – broken and non-reusable timber pallets, non-recyclable plastics, scrap metal.
- Waste oils and grease, chemical drums and contaminated rags – small quantities of residual chemicals, cleaning materials, paint.

The quantities and types of waste generated will be within the capacity of the waste management facilities closest to the Project and other identified facilities.

Separated recyclable materials such as cardboard and containers, will be taken by staff when they leave the site after which it will be disposed of or recycled lawfully and responsibly.

6.14.5 Waste Management Facilities

Which facility construction contractors use for construction waste and which will be used by operational staff for operational waste will depend on their preferences and convenience. Stor have contacted local waste contractors to confirm waste removal and disposal is possible. Those contactors noted that they could provide all necessary waste services for the project during and post construction including general waste, recycling, green waste, chemicals, wastewater disposal and food waste. Local providers are unable to dispose of batteries, however, battery waste will be exclusively dealt with by the provider.

Waste and recycling generated during the operational phase of the project will be delivered to facilities lawfully able to accept them for recycling or disposal. These facilities are included in Table 66.

Table 66 Waste management facilities licensed to accept waste

Facility Name	Distance (km)	Approximate Travel Time (minutes)
Manildra Waste Management Facility, 368 Yellowbox Rd, Manildra	30	27
Cumnock Waste Management Facility, 247 Baldry Rd, Cumnock	30	27
Ophir Road Resource Recovery Centre, Ophir Rd, Orange	41	33
Yeoval Waste Management Facility, Jobs Rd, Yeoval	46	37
Cargo Waste Management Facility, 3635 Cargo Rd, Cargo	48	37
Eugowra Waste Management Facility, The Escort Way, Eugowra	53	39
Canowindra Waste Management Facility, Nangar Rd, Canowindra	82	60

6.14.5.1 Wastewater

The on-site effluent or sewage generation during construction was estimated based on Water Services Association of Australia code. The sewage generation rate was calculated using average daily sanitary flow into a sewer from domestic, commercial and industrial sources.

An estimated daily wastewater generation rate of 15.2 litres per person has been adopted, accounting for up to 5.2 litres per person per day for drinking and general consumption, plus an additional 10 litres for hand washing, and other sanitary uses, all of which contribute to the wastewater output.

During construction, there will be portable facilities established on site to cater for the large numbers of construction workers. This will include the provision of a transportable demountable toilet block for up to 8 toilets (uni sex in nature to cater for males and females) for the project's construction workers will be provided. This complies with the NSW SafeWork guidance of 1 toilet per 15 males and 1 toilet per 10 females. As the NCC guidance sets out 1 toilet to 20 males and 1 toilet to 15 females, catering for the NSW SafeWork guidance will cater for peak construction staff numbers (up to 70 staff).

This toilet block will only be required during the construction phase and will be serviced by an elevated onsite storage tank for flushing of the toilets. The sewage discharge will be contained within a storage tank compliant with the National Construction Code. It is expected that wastewater would then be transported by a licensed contractor and disposed to a nearby wastewater treatment facility.

6.14.6 Decommissioning

Waste types and quantities generated during the decommissioning phase of the project would be managed similarly to construction phase, and in accordance with the waste hierarchy to avoid, reduce, re-use, recycle and recover materials where possible, through effective planning.

The decommissioning phase is anticipated to generate waste such as end-of-life batteries and associated infrastructure (cabling, inverters, transformers and other components). Most materials will be reused or recycled at a facility lawfully able to accept them. Any waste that cannot be reused or recycled would be collected by a licenced contractor and disposed of at a site lawfully able to accept it.

As far as practical, batteries in the battery energy storage system would be recycled at approved battery recycling facilities, or subject to confirmation, could be returned to the original equipment manufacturer for refurbishment and recycling. Where spent batteries are unable to be recycled, they would be disposed of at a facility lawfully able to accept it.

6.14.7 Mitigation and Management Measures

- WM1 – Waste will be managed according to the provisions of the WMP including:
    - Identification of roles and responsibilities for waste management procedures. Any subcontractors engaged will have roles and responsibilities identified and the Project’s waste management system clearly explained.
    - Methods for managing waste or wastewater including appropriate liquid storage equipment, spill containment kits.
    - Litter and waste management to mitigate emission of dust, litter, potentially offensive odours, and vermin resulting from improper storage and collection of solid residues and putrescible waste.
    - Wastewater would be transported by licenced contractors and disposed of at appropriately licensed wastewater treatment plants.
    - Decommissioning will be managed by a suitably qualified contractor or operator. End of life batteries will be delivered to a facility lawfully able to accept them.
- WM2 – All staff, including sub-contractors and labourers, employed during the site preparation and construction phases of the Project will undergo waste management induction training for the Project. Induction training will cover, as a minimum:
    - Legal obligations and targets.

- Emergency response procedures on-site.
- Waste priorities and opportunities for reduction, reuse and recycling.
- Waste storage locations and separation of waste.
- Procedures for suspected contaminated and hazardous waste.
- Waste related signage.
- Site safety.
- The implications of poor waste management practices.
- Responsibilities and reporting, including identification of personnel responsible for waste management and individual responsibilities.

- WM3 – Daily visual inspections of the waste storage areas will be undertaken by site personnel and inspection checklists and logs recorded for reporting to the site manager or equivalent role each week or as required. These inspections will be used to identify and rectify any resource and waste management issues.

6.14.8 Concluding Remarks

The Project WMP sets out comprehensive waste management protocols that will be adhered during all stages of the Project to ensure all waste is appropriately managed. This includes batteries themselves that will be recycled at approved battery recycling facilities or disposed of at a facility lawfully able to accept it.

6.15 Land and Soils

In the SEARs, an Agricultural Impact Assessment (AIA) (SLR, 2025) has been undertaken, which includes a detailed analysis of the existing environment, agricultural assessment of impacts, and outlines mitigation measures to be implemented to manage impacts (refer to Appendix T). This AIA was prepared generally in accordance with the *Large-Scale Solar Energy Guideline* (NSW DPE, August 2022).

A Preliminary Site Investigation (PSI) (SLR, 2025) has been undertaken, refer to Appendix U. The PSI provides a detailed analysis on potential contamination present on the Project Lots. The PSI was prepared generally in accordance *State Environmental Planning Policy (Resilience and Hazards) 2021 (NSW).*

A Land and Soil Capability Assessment (LSCA) (SLR, 2025) has been undertaken, refer to Appendix X. The LSCA provides an analysis on the soil characteristics of the Development Footprint and considers the potential for salinity, acid sulfate soils, and erosion to occur as a result of the Project.

6.15.1 Existing Environment

6.15.1.1 Agriculture

Molong has a long rural history producing wheat, sheep, wool, cattle, fruit and wine. Agriculture forms the second largest industry in the LGA, contributing $178 million to Cabonne's annual economy. All communities within Cabonne are supported and leverage off the agricultural sector with agricultural land making up approximately 92% or 556,500 Ha of the LGA. Beef and sheep meat together represent $47 million annually to the economy, whilst wool production contributes $29 million. A significant amount of the region's orchard fruits ($26 million), representing 62% of the overall regional output) and wine grapes ($4 million), represent 40% of the regional output.

The main regional agricultural commodities have shown sustained growth in terms of value of production. The region's agriculture industry is estimated to produce $2.4 billion of agricultural commodities annually, including $1.3 billion from wine, beef, wool, vegetables, cotton, wheat, fruit and timber. This represents 18% of all agricultural production in NSW annually. Cabonne LGA is one of the fastest-growing LGAs in the Central West, primarily due to its diverse agricultural sector, but also due to its proximity to Orange. Agricultural production values for the Cabonne LGA totals $265 million.

Historical aerial imagery demonstrates the Project Lots has been used for agricultural purposes continuously since 1964 to today. The Project Lots currently supports a rotation grazing system between ewes and cattle, with a typical rotation including approximately 900 ewes and a few steers. It is anticipated that the surrounding land has also primarily been used for agriculture over the same period.

The NSW Department of Primary Industries Gross Margin Budgets for Livestock can be utilised to estimate the productivity of the land within the Project Lots and Development Footprint. Table 67 utilises 2024 data for first cross ewes and growing out steers to estimate the production of the grazing land within the Project Lots, specifically Lot 99.

Table 67 Gross Margin Budgets for Livestock

		Lot 99		Development Footprint	
Livestock	Estimated Gross Margin per hectare (DPI)	Grazing Land (ha)	Lot 99 Gross Margin	Grazing Land	Development Footprint Gross Margin
Growing-out Steers	$330.87	339	$112,198.83	5.561	$3,163.18
First Cross Ewes	$355.69	339	$120,578.91	5.561	$3,400.40

6.15.1.2 Contamination

A review of the NSW EPA Contaminated Land Record and the List of Notified Contaminated Sites was undertaken on 26 June 2025 and identified two contaminated sites in the Cabonne LGA. The *Cabonne BP Service Station* located and *Former Gasworks,* both located approximately 2km east of the Project Lots in the Molong Township.

A review of the NSW Department of Regional NSW Naturally Occurring Asbestos (NOA) map, hosted on the SEED (SEED 2024) was undertaken on 11 June 2025. The review indicated that the Project Lots were not on the register and were in an area of known geological unites with low asbestos potential.

The Project Lots is not listed as a notified or regulated contaminated area under the *CLM Act* (Govt. of NSW 1997). The Project Lots do not hold EPLs under the *POEO Act* (Govt. of NSW 1997) for activities undertaken onsite. Some sites within 5 km of the Project Lots were identified to be registered, notified or licensed under these acts. However, these were not considered to pose a contamination risk to the Development Footprint.

Based on this review, there are no known contaminated sites on or near the Project Lots and, based on a desktop investigation and Project Lots' inspection, there is no indication of potential contamination within the Development Footprint.

6.15.1.3 Soils and Land Soil Capability (LSC) Class

Survey observations were conducted in accordance with the *Guidelines for Surveying Soil and Land Resources* (National Committee on Soil and Terrain (NCST), 2009). Two soil map units (SMU) were identified within the LSC Study Area, Haplic Eutrophic Brown/Grey Dermosol and Haplic Eutrophic Brown/Red Chromosol. The LSC Study Area and observation sites are shown in Figure 40 and the composition of the SMUs are shown in Table 68.

Haplic Eutrophic Brown/Grey Dermosols and Haplic Eutrophic Brown/Red Chromosols exhibit similarities in their physical and chemical properties, which are relevant to land management and infrastructure development. Both soil types are classified as Eutrophic, indicating elevated base cation concentrations and inherently high fertility, which supports vegetation establishment and post-disturbance rehabilitation.

Table 68 Soil Units within LSC Study Area

SMU	ASC Soil Type	Observation Site	Hectares	Percentage
1	Haplic Eutrophic Brown/Grey Dermosol	M1, M2	2.72	53%
2	Haplic Eutrophic Brown/Red Chromosol	M3, M4	2.33	47%
		Total	**5.1**	**100%**

The LSC classification applied to LSC Study Area has been undertaken in accordance with the OEH guideline *The Land and Soil Capability Assessment Scheme; Second Approximation* (OEH 2012) **(**'LSC Scheme'). This scheme uses the biophysical features of the land and soil to derive detailed rating tables for a range of land and soil hazards.

Land is classified between an LSC class of 1 (best, highest capability land) and 8 (worst, lowest capability land).

The biophysical features of the land that are associated with various hazards are broadly soil, climate and landform and more specifically: slope, landform position, acidity, salinity, drainage, rockiness and climate. The eight hazards associated with these biophysical features that are assessed by the LSC Scheme are:

1 Water erosion
2 Wind erosion
3 Soil structure decline
4 Soil acidification
5 Salinity
6 Water logging
7 Shallow soils and rockiness
8 Mass movement

Based on this investigation, the LSC Study Area has been classified into LSC Class 3 and LSC Class 4 as shown in Table 69. The compositions of these classes and agricultural ratings are shown in Table 70.

Table 69 Land & Soil Capability Assessment

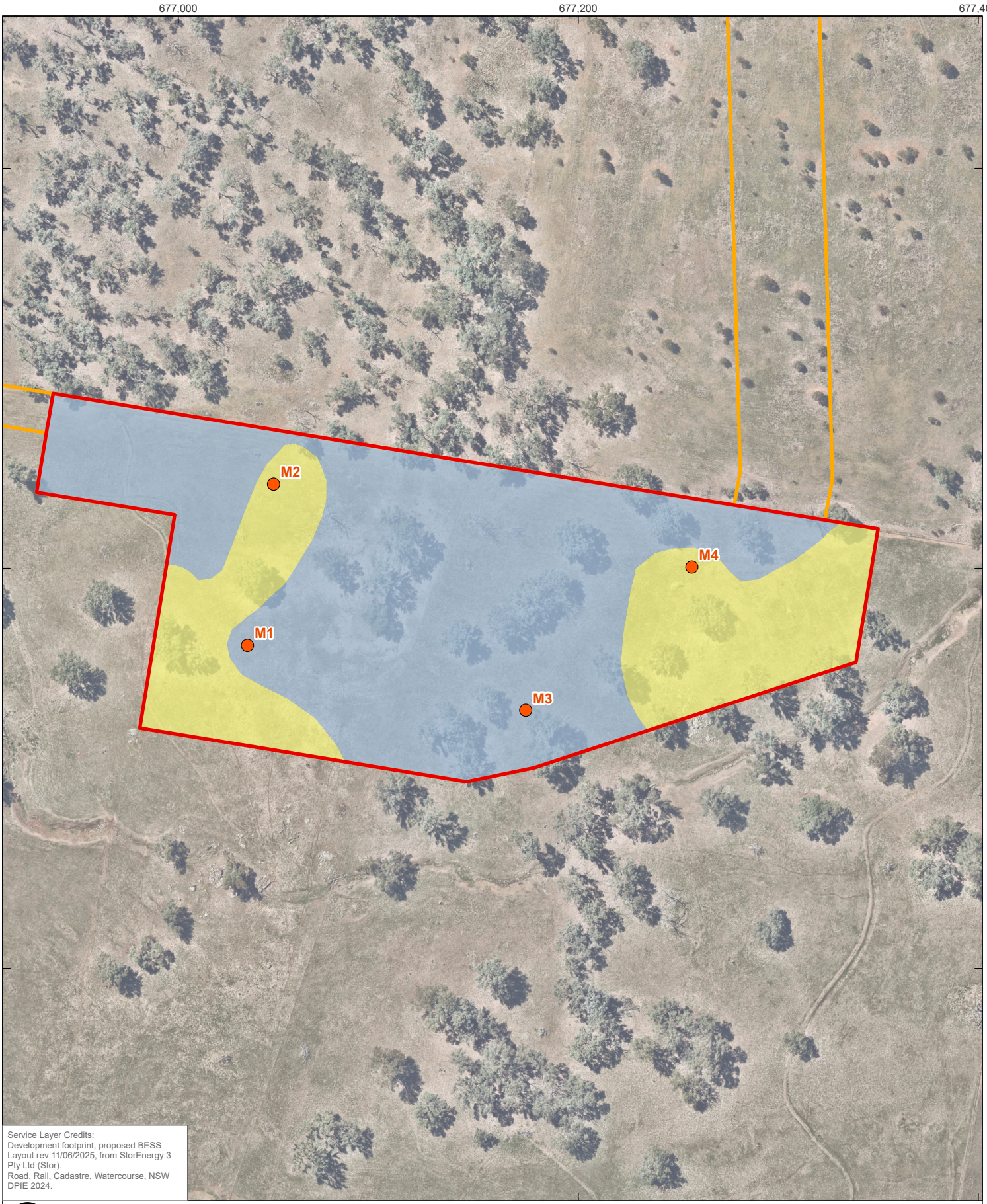
Soil Type		Hazard Criteria								LSC
SMU	ASC Great Group	Water erosion	Wind erosion	Soil structure decline	Soil acidification	Salinity	Water logging	Shallow soils and rockiness	Mass Movement	
1	Haplic Eutrophic Brown Dermosol	3	2	1	2	1	2	1	1	**3**
1	Haplic Eutrophic Grey Dermosol	3	2	1	2	2	2	1	1	**4**
2	Haplic Eutrophic Brown Chromosol	3	2	1	2	1	2	1	1	**3**
2	Haplic Eutrophic Red Chromosol	3	2	1	2	1	2	2	1	**4**

Table 70 LSC Class within LSC Study Area

LSC	Analysed Site	ASC	Limitation	Agricultural Capability Rating	LSC Study Area	
					Hectare	Percentage
3	M1, M3	Haplic Eutrophic Brown Dermosol / Chromosol	Water erosion	High	3.5	69%
4	M2, M4	Haplic Eutrophic Grey Dermosol / Red Chromosol	Water erosion	Moderate	1.6	31%
				Total	**5.1**	**100%**

LSC Class 3 is rated as having high capability land. Land has moderate limitations and is capable of sustaining high-impact land uses, such as cropping with cultivation, using more intensive, readily available and widely accepted management practices. However, careful management of limitations is required for cropping and intensive grazing to avoid land and environmental degradation.

LSC Class 4 is rated as having moderate capability land. Land has moderate to high limitations for high-impact land uses with restricted land management options for regular high-impact land uses such as cropping, high-intensity grazing and horticulture. These limitations can only be managed by specialised management practices with a high level of knowledge, expertise, inputs, investment and technology.



Service Layer Credits:
Development footprint, proposed BESS Layout rev 11/06/2025, from StorEnergy 3 Pty Ltd (Stor).
Road, Rail, Cadastre, Watercourse, NSW DPIE 2024.

0 25 50 m

Coordinate System:	GDA2020 MGA Zone 55
Scale:	1:2,500 at A4
Project Number:	620.041615
Date Drawn:	18-Sep-2025
Drawn by:	AS

LEGEND

- Sample Location
- LSC Study Area
- Development Footprint (9.56 ha)

Land and Soil Capability

- Class 3
- Class 4

MOLONG BESS

VERIFIED LAND AND SOIL CAPABILITY CLASSIFICATION

SLR

DISCLAIMER: All information within this document may be based on external sources. SLR Consulting Pty Ltd makes no warranty regarding the data's accuracy or reliability for any purpose.

FIGURE 40

Path: \\au.slr.local\Corporate\Projects-SLR\620-BNE\620-BNE\620.041615.00001 Stor Energy NSW\06 SLR Data\01 GIS\GIS\NSW_Stor.aprx\620041615_LSC_F05-10_Verified Land and Soil Capability Classification

6.15.2 Construction, Operation and Decommissioning Impact Assessment

6.15.2.1 Agriculture

There is 556,500Ha of agricultural land within the Cabonne LGA and the Project will involve the removal of 5.56ha of this land, resulting in a loss of 0.01%.

From a productivity viewpoint, the impact the proposal will have can be measured against the Gross Margin Budgets for Livestock, referenced in Table 67. The total Gross Margin loss from the development would be $6,563.58, which represents a Gross Margin loss of 2.81% for the Project Lots, which is considered negligible in the context of both the Project Lots and productive land in the wider LGA. Furthermore, at the Project's end of life (30 years), the development will be decommissioned and land rehabilitated to enable the land to be reinstated to its original use.

The construction, operation and decommissioning of the Project may generate or exacerbate other impacts surrounding agricultural land including land use conflict, weeds and pest, bushfire, dust, noise and vibration, light spill, traffic, erosion and sediment, water supply issues, and flooding. All these matters will be suitably managed and mitigated through measures contained in the CEMP and OEMP.

6.15.2.2 Soils and LSC

Soil disturbed during the Project will be stripped and stored locally (i.e. adjacent to the works area) where it will be re-used during construction and/or rehabilitated to mitigate long term impacts on soil resources during operation. Soil erosion and sedimentation measures will be implemented during construction woks to ensure any associated impacts are suitably managed.

Due to the nature of the Project, which will only require localised and sporadic landform modification, including minor soil stripping (for excavation works and leveling), impacts on LSC are expected to be minor.

Following the end of life of the Project, disturbance footprints will be re-graded (where required) and any minor stockpiles of topsoil and subsoil be respread over disturbed areas and rehabilitated to return the site as close as possible to its original state and use. This strategy, along with good soil management practices as proposed in Section 6.15.3 will facilitate the rehabilitation in returning the land to an equivalent LSC Class.

Due to the land elevation and distance from the coast, in conjunction with existing Acid Sulphate Soils (ASS) mapping for NSW, the potential for ASS is considered a very low risk. Further, there was no evidence of ASS indicators such as soil gleying, odour, marine sediments and organic materials recorded as part of the soils survey.

6.15.3 Mitigation and Management Measures

- S1 – A Soil and Water Management Plan (SWMP) will be prepared in accordance with Managing Urban Stormwater – Soils and Construction Volume 1 (Landcom, 2004):
    - The SWMP will be prepared as part of a Construction Environmental Management Plan (CEMP) to manage potential risks to soils, surface and ground water. The construction SWMP is to be prepared with reference to relevant development controls within the Cabonne DCP. Recommended measures for the construction SWMP include but are not limited to:
        - Measures to minimise and manage the potential for erosion and sediment transport within and from the site.

- Measures to manage accidental spills and waste storage.
- Measures to manage stormwater and the potential for contaminated runoff from the development site.
- Measures to ensure that excavation activities and any stockpiling are managed to minimise the potential for downstream contamination.
- Measures to ensure that areas of exposed soil and the time in which they are exposed are minimised as far as practical.

  - Areas disturbed during construction that are not in active use for over 3 months, will be sown with pasture species with starter fertiliser to provide stabilising ground cover and a healthy topsoil to provide long term protection against erosion.

- S2 – The construction of the Project will be managed in compliance with measures specified within the construction SWMP to ensure impacts to water quality are appropriately managed. Measures will be implemented to ensure that areas of exposed soil and the time in which they are exposed, are minimised as far as practical during construction. S3 – As part of the OEMP for the Project, the following measures will be included:
  - Soil disturbance during operation of the Project will be limited to maintenance activities, involving very small, localised disturbance areas on an infrequent basis.
  - Standard erosion and sediment control measures will be implemented to minimise the potential for sediment export within areas to be disturbed during operations. These measures would be developed on a case-by-case basis referring to this soil assessment and are likely to include measures such as sediment fencing, localised sediment traps, and progressive stabilisation with vegetation.
  - Measures to manage any bare areas and erosion that develop over time.

6.15.4 Concluding Remarks

Overall, the Project will result in minimal agricultural impact, with minimal loss of active farmland or significant effect on the region's agricultural output. Standard mitigation measures will manage construction-related soil risks with no permanent negative impact on LSC. The site is suitable for development, with agricultural and soil impacts considered low and manageable.

6.16 Cumulative Impact Assessment

This cumulative impact section evaluates the potential combined effects of the Project with the existing and approved developments in the locality, specifically other electricity generation or storage activities. The aim is to determine whether the cumulative presence of similar infrastructure results in any significant environmental, social, or land use impacts beyond those identified for the project in isolation. Cumulative impacts are discussed within the technical reports in the appendices, and this section provides a summary of the findings.

The *Cumulative Impact Assessment Guidelines for State Significant Projects* (CIA Guideline) (DPE, 2022) require consideration of a Project together with the impacts of other relevant future and existing projects in order to determine the potential cumulative impact. The CIA Guideline (DPE, 2021) indicates the following future projects should be considered in the cumulative impact assessment:

- Changes to existing projects (expansion, modification, closure).
- Approved projects (approved but construction has not commenced).
- Projects under assessment (application for the project has been exhibited and is currently under assessment).
- Related development (development that is required for the Project but subject to separate assessment).

There are a number of projects within the Cabonne LGA and adjoining LGAs (Orange and Dubbo Regional) that have the potential to result in cumulative impacts during the construction period. Table 71 below summarises projects identified across the Major Projects website and Council Development's Application (DA) tracker that are in proximity to the Project Lots. The below section addresses the potential cumulative impacts as a result of the future construction and ongoing operation of the Project.

Table 71 Significant Projects in the Cabonne LGA and Surrounds

Project Name	LGA	Project Status	Project Summary	Approximate Distance to Site
Manildra Solar Farm SSD-9550	Cabonne	Operational: • Operational overlap • No construction overlap	50 MW solar farm	18km southwest
Kerrs Creek Wind Farm SSD-62199230	Dubbo Regional	Lodged (SEARS received, EIS being prepared): • No information on timing	441 MW wind farm	18km northeast
Aquila Wind Farm SSD-67667971	Dubbo Regional	Lodged (SEARS received, EIS being prepared): • No information on timing • Based on current status, it is not likely that the Molong BESS construction time would coincide with the either of the wind farms.	300MW wind farm with BESS	30km northeast
Molong Solar Farm (DA) 2017/155	Cabonne	Operational: • Operational overlap • No construction overlap	25MW solar farm	800m east
Electricity Generation Works (Solar Farm)	Orange	Approved (Understood currently under construction – completion expected Jun-Jul 2025): • Unlikely to have construction overlap • Likely operational overlap	5MW solar farm	21km southeast
Electricity Generating Works (solar farm) and BESS	Orange	Lodged No information on timing	5MW solar farm	31km southeast

6.16.1 Biodiversity

Consideration of the cumulative impacts of the proposed development on biodiversity included a review of other development applications for solar farms and BESS sites within the locality that are either under assessment, approved or under construction, being:

- Molong Solar Farm (Approved July 2017) developed on predominantly cleared land, with direct impacts to 12 scattered eucalypt trees (paddock trees) (DPE 2025).
- Manildra Solar Farm (Approved August 2015) developed on predominantly cleared land, with direct impacts to 55 mature trees, and indirect impacts to 152 ha of vegetation (native and non-native) (DPE 2025).

The cumulative impact of these projects is not expected to result in a significant reduction in the extent of native vegetation, threatened species habitat or TECs within the region (refer to BDAR included at Appendix F).

6.16.2 Land Use Conflict

The presence of multiple energy projects, including solar farms and the Project, may contribute cumulatively to land use pressure in a predominantly agricultural region. However, the LUCRA (Appendix I) and the AIA (Appendix T) have found that risk to agricultural land use is low.

The Project occupying approximately 9.56ha, represents a relatively minor contribution to the cumulative agricultural land use impact within the locality. Unlike solar farms, which typically require significantly larger land areas and involve the widespread placement of panels across productive surfaces, a BESS has a more compact footprint with a higher infrastructure density. This results in a more efficient use of land per megawatt and reduces the extent of land taken out of agricultural production.

The BESS simple infrastructure of modular containerised units and service infrastructure minimise fragmentation of agricultural land and the land beneath and surrounding the BESS can retain some ancillary agricultural use or be rehabilitated more readily than land developed for other, more intensive type uses, which may require grading or more extensive land area.

From a cumulative impact perspective, while the broader region may be experiencing a transition toward renewable energy development, including multiple solar farms, the contribution of a BESS to the overall loss of agricultural land is minor both in scale and intensity. It does not significantly erode the agricultural land base or contribute meaningfully to land use conflict, particularly when sited on land that is already marginal, fragmented, or subject to existing infrastructure constraints.

Furthermore, BESS installations can support the integration of energy sources such as solar, enabling more efficient use of electricity generated in nearby solar farms. In this sense, the BESS contributes to the broader energy network without proportionately increasing the pressure on agricultural resources.

6.16.3 Landscape and Visual Amenity

Cumulative effects encompass the combined visual impact of multiple alternative energy developments over time that collectively alter the landscape character and visual experience.

In this case, this refers to the collective visual impact of existing Molong Solar Farm and proposed Molong BESS, both of which are in immediate proximity to one another. No other projects are identified as being in the same visual catchment.

The cumulative visual effects associated with the Molong Solar Farm and the proposed Molong BESS reflect a progressive transformation of the local rural landscape through the introduction of energy infrastructure. These projects, while individually discreet, are situated within close proximity to each other and collectively contribute to a noticeable shift in the area's landscape character, particularly through the introduction of uniform structures such as PV arrays, BESS and substation alterations.

In isolation, the Project contributes only marginally to this cumulative effect due to its compact footprint and low-profile built form. Its limited public visibility and strategic placement away from prominent view corridors further reduces its contribution to broader landscape change. As a result, the Project does not significantly exacerbate cumulative visual effects beyond those already introduced by the larger solar farm development.

6.16.4 Traffic and Access

Cumulative traffic impacts from the Project and surrounding developments is only expected as a potential outcome during construction stage, there is no expected cumulative impacts during the operational phase as on-site requirements for all identified developments are minimal.

As the Molong and Manildra solar farms are both operational, no construction overlap or associated cumulative traffic impacts are anticipated.

The construction timing of the other identified projects is uncertain. Notwithstanding, due to their separation from the Project and different construction routes, no adverse cumulative impacts are expected nor any upgrades to the road network needed.

6.16.5 Noise Impact

Cumulative noise impacts can be caused by the compounding effects of multiple projects in an area, and by the accumulation of effects from past, current and future activities as they arise.

The proposed Golf Course residential estate, to the west of the Project, is expected to be developed in the coming years and there may a possibility of an overlap of construction works from the estate for certain periods. However, there is currently no certainty on the construction program and methodology of the proposed estate, and hence there may not be any realistic adverse overlap to the residents from a cumulative construction noise perspective.

There are no other known developments in the vicinity of the Project that will have construction activities overlapping with the construction phase of the project; therefore, cumulative construction noise impacts are not anticipated.

The *Noise Policy for Industry* states that it aims to limit continuing increases in cumulative industrial noise through the application of amenity noise levels, which are applicable to all industrial noise sources in an area. The policy accounts for potential cumulative impacts by lowering the criteria for each individual development to ensure that the ambient noise level within an area from all industrial noise sources combined remains below the recommended amenity noise levels, where feasible and reasonable. As such, the potential cumulative impacts from the proposal and other potential sources of industrial noise in the area such as the Transgrid Substation and Molong Solar Farm are accounted for in the proposal-specific PNTLs and, therefore, do not require further consideration of cumulative noise.



6.16.6 Social and Economic

The simultaneous development of large-scale infrastructure projects in the surrounding region, including Aquila Wind Farm and BESS in Dubbo, Kerrs Creek Wind Farm in Dubbo, and a new solar farm in Orange, will increase demand for skilled labour and short-term accommodation across the region. While the Project alone is expected to require a relatively small construction workforce over a limited timeframe, the cumulative impact of overlapping projects may:

- Contribute to labour shortages across sectors such as agriculture, construction, and local trades.
- Create competition for accommodation, particularly during peak construction periods or major regional events.
- Disproportionately distribute economic benefits to areas outside of Molong if regional workers remain in centres with larger or purpose-built accommodation offerings such as Orange or Dubbo.

Molong has a modest accommodation base, and periods of high regional construction activity may place pressure on available rooms, impacting seasonal agricultural workers, tourists, and other temporary residents.

Cumulative infrastructure development may place additional pressure on local and regional services, including:

- Healthcare services, particularly emergency departments, GPs, and allied health, which already experience resourcing constraints.
- Local roads and transport networks, especially Mitchell Highway and Euchareena Road, which serve as freight and workforce routes for multiple concurrent developments.
- Emergency services, including the NSW Rural Fire Service, Fire and Rescue and local Volunteer Fire Brigades, which may be called upon to respond to a wider range of industrial and infrastructure risks across projects.

While the Project is not anticipated to place major demands on these systems, the cumulative effects of infrastructure growth across the region warrant monitoring and coordinated planning.

Major investment and ongoing development in the region is anticipated to impose changes on the local character and social fabric through the introduction of new industry and economic sectors, fluctuation workforce population and significant population growth (in the case of the proposed Golf Course Heights Estate). Periods of change can result in community discomfort and uncertainty if not sensitively coordinated and communicated.

Cumulatively, the increase in major infrastructure and development projects may:

- Contribute to community disillusionment if perceived benefits are not delivered or communicated transparently.
- Generate frustration from repeated engagement processes, particularly if they appear duplicative or tokenistic.
- Exacerbate concerns about changing rural character, especially if multiple energy and resource projects alter traditional agricultural landscapes.

To mitigate these effects, transparent and inclusive engagement will continue to be undertaken that demonstrates responsiveness to community priorities and builds long-term trust. Further engagement will adopt a coordinated approach between Stor and stakeholders to streamline information, demonstrate cumulative benefits, and enhance opportunities for community capacity building. On this basis, any potential cumulative impacts can be effectively managed.

6.16.7 Flooding

The flood impacts of the Project are limited to the immediate vicinity of the Development Footprint. The nearby developments are the subject of separate flood impact assessments and are not anticipated to have any flood impacts at the proposed BESS footprint, or to be impacted by the proposed development in the BESS Footprint.

6.16.8 Environmental Values

While each project may result in isolated impacts on vegetation, soil, and water, no sensitive environmental features—such as national parks, major watercourses, or strategic conservation areas—are located within the immediate locality.

The cumulative impact on biodiversity is expected to be low, particularly with appropriate implementation of environmental management plans (CEMP, OEMP, DMP).

As outlined in the SGRA, there is not expected to be any impact to groundwater from the Project given the depth to groundwater and no plans for abstraction. Operational impacts on water quality will be sufficiently mitigated by the construction of a stormwater basin with the Project not anticipated to result in any measurable changes to the water quality of the downstream receiving environments.

Therefore, there are no additional impacts to those that may already be present in the area from existing or already approved projects.

6.16.9 Infrastructure Capacity

The Molong Substation and associated transmission infrastructure are central to the integration of regional renewable energy projects. The cumulative use of these assets must be managed carefully to:

- Prevent network congestion.
- Ensure coordinated upgrades where necessary.

Ongoing consultation with Transgrid ensures the Project integrates efficiently with existing infrastructure.

6.16.10 Concluding Remarks

The cumulative impacts of employment and workforce; housing and short-term accommodation; regional economy; agricultural production; population change; services; amenity; traffic, biodiversity, and infrastructure have all been assessed. There is the potential for cumulative social benefits and impacts, primarily due to the influx of workers and increased economic activity associated with the simultaneous construction of multiple renewable energy projects.

For reasons previously outlined, all potential cumulative impacts will be appropriately managed and mitigated.



7.0 Project Justification and Conclusion

This section provides a justification and evaluation of the Project and conclusion to the EIS. It includes discussion of the design of the Project, taking into consideration the economic, environmental, and social impacts and opportunities of the development. This section outlines consistency of the Project with the strategic context and compliance with relevant statutory requirements.

7.1 Project Design and Response

The site selection and project design process were undertaken with regard to a range of matters including design choices informed by specialist assessment and consultation.

A review of the surrounding sites identified 104 sensitive receivers, other than the host receiver (H1) within a 2km buffer around the Development Footprint. The operational noise assessment identified compliance with the project noise trigger levels at all identified sensitive receivers.

The Development Footprint was specifically located to be as close to the existing substation as possible to minimise the extent of transmission line and towers and associated visual impacts. Locating the BESS close to the substation also decreases energy losses and increases the utilisation rate of shared infrastructure which is beneficial for the network.

Special consideration was also given to avoid the unnamed first order stream located immediately south of the Development Footprint. The proposed access road location and transmission line corridor have been reduced and realigned to avoid a patch of native trees, therefore minimising impacts on biodiversity and site hydrology.

Flood impacts have been managed through design elements including appropriate pad grading and stormwater management features offsetting potential for impacts to and from the Project.

7.2 Consistency with Strategic Context

As the Project would include the construction and operation of a BESS to support the electricity network reliability in NSW, the Project would directly contribute to increasing the capacity and resilience of the State and further the State's efforts to reach net-zero emissions by 2050.

The Project would contribute directly to the goals of the NSW Government energy objectives through the investment in energy storage and the growth of new low carbon industries across the region.

The AEMO Integrated System Plan (AEMO, 2024) is a whole-of-system plan that provides an integrated roadmap for the changes happening in the NEM to meet future energy needs. The NEM must almost triple its capacity to supply energy by 2050 to replace retiring coal capacity and to meet increased electricity consumption as other sectors decarbonise through electrification. The energy transition depends on grid-scale batteries as part of the overall delivery of the plan.

The proposed BESS will directly contribute to achieving the target by providing large scale energy storage to the network and enhanced firming capacity. The Project will improve to the stability of grid frequency will reduce the risk of system failure and blackouts. It also helps to ensure that the NEM can accommodate an increasing proportion of variable load and generation forecast in years to come. By addressing grid security, stability, and reliability challenges in the context of rapid thermal unit retirements, the proposed development

provides economic, environmental, and social benefits to the immediate and wider community.

7.3 Statutory Compliance

The Project is deemed to be SSD being an electricity generating works development with an EDC higher than $30 million and is assessed as SSD under the *EP&A Act*. This EIS has been prepared in accordance with the requirements of the EP&A Regulation and meets the requirements of the SEARs.

The Development Footprint is within the Cabonne LGA and therefore is subject to the Cabonne LEP and is zoned 'RU1 – Primary Production' therein. E*lectricity generating works* are prohibited under the LEP, and consent is therefore being sought under the State Environment Planning Policy (Transport and Infrastructure).

As demonstrated in Appendix C, the Project is acceptable having regard to the relevant statutory requirements.

7.4 Stakeholder Views of the Project

7.4.1 Community/others

The in-person face to face engagement events, targeted communications, and online survey collectively captured key insights into community sentiment and identified several core themes of interest.

The engagement program aimed to inform key stakeholders about the Project, gather feedback to inform the EIS, and build early awareness and trust within the Molong community. A range of tailored communication tools were used to reach diverse audiences, including newspaper advertisements, social media campaign, targeted mailouts to near neighbours, drop-in sessions and direct engagement with local government representatives and community organisations. These materials provided accessible information about the Project and encouraged participation via community engagement sessions and online surveys.

The community participation was consistent with the regional setting and early stage of the Project, and feedback from those who did engage was generally neutral to positive. Stakeholders expressed a willingness to learn more about the Project and provided valuable feedback on a range of topics, including:

- Concerns around battery fires, any emergence response procedures and potential radiation.
- Interest in the Project proponent's structure, responsibilities, and the long-term management of the facility.
- Questions surrounding battery lifespan, recycling, and disposal processes.
- Interest in how the local community, including Aboriginal groups, would benefit from the Project.
- Suggestions for local procurement, employment opportunities, and involvement in environmental initiatives.
- Recognition of the battery's potential to enhance energy reliability and support broader energy goals in the region.

These insights have directly informed the development of tailored mitigation measures and clear actions for future engagement. Chapter 5.0 and Section 6.2 of this EIS contain detailed discussions of the outcomes of community engagement and views.

7.5 Economic, Social, and Environmental Impacts

The Project's purpose and design have been developed to provide a sustainable form of energy production to provide long-term economic, environmental, and social benefits to the Molong area and NSW including:

- The production of a dispatchable power supply to the wider community, thus contributing towards the current obligations of State and Federal energy targets.
- Develop the dispatchable energy power supply within NSW and increase the energy capacity and resilience of the State and further efforts to reach net-zero emissions by 2050.
- Providing for cleaner reliable electricity generation, while reducing greenhouse gas emissions and the impacts of climate change.
- Assist in establishing a more reliable energy supply by providing energy capture and firming technology to increase energy security in the region.
- Increase local employment and investment opportunities during construction.
- Capital investment of approximately $250 million and up to 70 FTE positions during the construction phase and 2 FTE positions during operation.
- The BESS is located along a major transmission route which is in line with the Federal Government's direction to improve the affordability and security of the national energy market while also delivering on international climate commitments.
- Play an important role in providing stability to the NSW energy network by charging up during the day when renewable energy generation is high and then providing that power back to the grid at night to support high demand.
- Add significant benefits to the NSW electricity grid allowing for the dispatch of energy in accordance with market demand to assist in load leveling and grid support to balance the natural fluctuations in electricity demand throughout the day and reduce congestion on the local grid.

7.6 Project Compliance

Throughout the construction phase, management measures will be implemented via the preparation and adoption of a CEMP, which will consist of a range of supporting sub-plans as identified across the specialist investigations completed to inform the Project.

Operation and monitoring of the facility would be governed by an OEMP that would identify any residual matters requiring ongoing attention during operation, with particular emphasis on fire management and risk management, and landscaping and vegetation management to ensure ongoing compliance with adopted criteria.

The BESS is expected to be operational for a period of approximately 30 years, after which the BESS would be decommissioned as per a Decommissioning Management Plan (DMP) and the infrastructure removed, returning the site to its original use.

7.7 Key Uncertainties

As a result of the technical investigations completed to inform the Project and the mitigation measures proposed to address impacts of construction, operation, and decommissioning of the Project, it is considered that uncertainties are unlikely. All impacts are able to be, or have been, adequately mitigated through the siting and design of the BESS and ancillary infrastructure, as well as on-going management practices and monitoring.

7.8 Ecologically Sustainable Development

The National Strategy for Ecologically Sustainable Development (1992) defines ESD as *"using, conserving and enhancing the community's resources so that ecological processes, on which life depends, are maintained, and the total quality of life, now and in the future, can be increased."*

The *EP&A Act* utilises the definition of ESD from Part 3, Clause 6(2) of the *Protection of the Environment Administration Act 1991* (*POEO Act*), wherein ESD can be achieved through the implementation of a set of principles and programs. The Project has been assessed under these principles in the sections below.

The Project is overall considered consistent with the principles of ESD as it does not exploit natural resources unsustainably, has been based soundly on economic and environmental considerations, and the likely environmental impacts of the Project have been identified and are predictable and able to be managed effectively. Furthermore, the Project does not unreasonably affect biological diversity or ecological, and it provides a renewable energy asset for future generations.

7.8.1 The Precautionary Principle

The precautionary principle states that if there are threats of serious or irreversible environmental damage, the lack of full scientific certainty should not be used as a reason for postponing measures to prevent said damage.

Detailed investigations relating to the environmental, heritage, and economic aspects of the Project have been undertaken with the aim to produce an optimal Project design and siting. The Project assessed in this EIS and the supporting technical assessments provides the current optimised Project location, which takes into consideration all physical, environmental, social, heritage, and economic aspects which are required to be addressed.

The Project has been designed and sited to minimise the removal of any native vegetation. The current proposed layout and location of the Project has been amended through an iterative design process to avoid impacts to biodiversity values. In addition, consideration was also given to minimising the visual prominence of the Development Footprint by locating it near the Molong Substation to reduce the extent of overhead transmission lines and towers and by not locating the development in an elevated or visually prominent location.

The result is that for all potential impacts, no serious or irreversible harm will occur to the environment. Therefore, the Project addresses the precautionary principle, as there will be no serious or irreversible environmental damage.

The technical assessments were prepared by qualified and experienced technical specialists relevant to their field. The potential implications of the Project have been understood through the contents of this EIS and accompanying appendices, and the management strategies, mitigation measures, and proposed monitoring activities required to ensure potential impacts are appropriately minimised has also been documented.



7.8.2 Inter-Generational Equity

Inter-generational equity refers to the principle that the current generation should ensure that the health, diversity, and productivity of the environment is maintained or enhanced for the benefit of future generations.

Overall, the Project would provide positive economic outcomes through the proposed employment of a local construction workforce and the Project itself will contribute to public infrastructure and services for future generations.

Potential impacts to cultural heritage have been assessed in consultation with Aboriginal stakeholders.

The environmental, social, cultural, and economic impacts of the Project are described in this EIS. The Project has proposed mitigation measures to manage impacts and is not predicted to result in significant residual impacts.

7.8.3 Conservation of Biological Diversity and Maintenance of Ecological Values

The third principle of ESD states that the conservation of biological diversity and ecological integrity should be a fundamental consideration in development applications.

The Project has been the subject of a thorough biodiversity assessment as detailed in Section 6.1 and as informed by the BDAR at Appendix F. The potential environmental impacts of the Project have been detailed throughout this EIS, including from those associated with the limited native and non-native vegetation removal, and deemed adequately mitigated through the proposed mitigation measures.

7.8.4 Improved Valuation, Pricing, and Incentive Mechanisms

The final principle of ESD concerns improved valuation and the pricing of environmental resources which establishes the need to determine economic values for services provided by the natural environment.

The development of policy to guide pricing and incentive mechanisms in delivering ESD is the responsibility of governments and regulatory stakeholders.

7.9 Site Suitability

The Project Area is considered suitable for the Project following consideration of the following:

- Site history – The Development Footprint largely consists of agricultural land with isolated stands of native vegetation. The Development Footprint has been historically cleared for grazing and reducing the potential for environmental and cultural heritage values to be present.
- Land ownership – The landowners have agreed to a lease / easement to the Proponent for the construction and operation of the proposed facility.
- Site topography – The site suitability for the Project has been chosen specifically to ensure minimal impacts to biodiversity values and the surrounding community.
- Proximity to the existing TransGrid substation – To minimise impacts of easements and visual impacts associated with transmission lines and towers.
- Permissibility – The Project is permissible with consent as *electricity generating works* under the SEPP (Transport & Infrastructure) 2021.

7.10 Project Alternatives

Do Nothing

The ‘do nothing’ approach would involve not constructing and operating the Project at the site. This option would not align with the range of national and State policies discussed in Chapter 2.0, which identify the need to improve energy security and reliability in NSW and transition away from fossil fuel energy towards renewable sources sch as solar and wind. The Project provides 150 MW/730 MWh of power storage to dispatch into the local grid when required to assist with growing energy demands.

Alternative Sites

Alternative sites were not considered sufficient for the purposes of the Project due to unsuitable characteristics including site topography and land use, proximity to an existing substation, landowner discussions for leasing, permissibility, and distance from sensitive receivers.

7.11 Conclusion

Through the implementation of best practice management, the potential environmental impacts associated with the Project can be appropriately managed, which will also address the community concerns and associated social impacts identified during the stakeholder engagement process. Given the net benefit and commitment from Stor to appropriately manage the potential environmental impacts associated with the Project, it is considered the Project would result in a net benefit to the region and broader NSW community.

The Project is located within a predominantly rural setting in close proximity to the existing Transgrid Molong 132/66 kV substation and is sufficiently separated from sensitive receivers such as residential areas and schools. The Project would provide for an advantageous and economically beneficial use of land in a landscape that has existing electrical infrastructure alongside various rural land uses. The Project would provide both short-term and long-term benefits including supporting a sustainable electricity future for NSW, and reducing the price of electricity in NSW, providing major investment in NSW.

Most importantly, the Project will provide dispatchable power, adding to local employment through the investment in energy storage and the growth of new low carbon industries across the region.

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Appendix A:

SEARS Compliance Table



APPENDIX A

SEARs Compliance Table

1.1 Introduction

This appendix provides a consolidated summary of the SEARs.

1.2 Assessment Requirements

The requirements as issued in the SEARs and the section reference throughout the EIS are provided in Table 1.

Table 1 General SEARs Requirements

No.	SEARs Requirements	Reference
	General Requirements	
1	• A stand-alone executive summary;	Beginning of EIS report ('Executive Summary')
2	• A full description of the development, including: ○ Details of construction, operation and decommissioning, including any staging of the development. ○ A description of the physical elements of the development including the form, maximum height and materials (including ancillary infrastructure). ○ A high quality site plan at an adequate scale showing all infrastructure and facilities (including any infrastructure that would be required for the development, but the subject of a separate approvals process). ○ The Project Area (as per Table 1 of the *SSD guidelines – preparing an environmental impact statement*) and Development Footprint (disturbance area including but not limited to areas for infrastructure, road works, access tracks, defendable space, fencing and temporary laydown). ○ A high quality detailed constraints map identifying the key environmental and other land use constraints that have informed the final design of the development. ○ Confirmation if the project is designated development in accordance with the Environmental Planning and Assessment Act 1979 (EP&A Act) and the Regulation;	Chapter 3 (EIS) Figure 1 & 2 (EIS) Appendix B (Project Plans) Appendix C (Statutory Compliance Table)
3	• Consistency in information presented in the EIS and all technical reports, including distances, development footprint, project design and infrastructure proposed, construction timeframes and receiver numbers.	Throughout EIS
	• A strategic justification of the development focusing on site selection and the suitability of the proposed site with respect to potential land use conflicts with existing and future surrounding land uses (including existing land use, other proposed or approved energy facilities, major projects, rural/residential development, Crown lands within and adjacent to the project site and subdivision potential).	Chapter 7 (EIS)

No.	SEARs Requirements	Reference
4	• A risk assessment of the potential impacts of the development, identifying the key issues for further assessment.	Chapter 6 (EIS) & within technical reports in appendices
5	• An assessment of the likely impacts of the development on the environment, and any other significant issues identified in the above risk assessment, focusing on the specific issues identified below, including: o A description of the existing environment likely to be affected by the development using sufficient baseline data. o An assessment of the likely impacts of all stages of the development (which is commensurate with the level of impact), including any cumulative impacts of the site and existing, approved or proposed developments in the region and impacts on the site and any road upgrades, taking into consideration any relevant legislation, environmental planning instruments, guidelines, policies, plans and industry codes of practice including the *Cumulative Impact Assessment Guideline* (DPE, 2022). o A description and assessment if staging of the project is proposed including any site mobilisation or pre-construction works. o A description of the measures that would be implemented to avoid, mitigate and/or offset the impacts of the development. o A description of the measures that would be implemented to monitor and report on the environmental performance of the development.	Chapter 6 (EIS) & within technical reports in appendices
	• A consolidated summary table of all the proposed environmental mitigation, management and monitoring measures, identifying all the commitments in the EIS.	Appendix E (Mitigation Measures)
6	• A detailed evaluation of the merits of the project as a whole, having regard to: o The requirements in Section 4.15 of the Environmental Planning and Assessment Act 1979, including the objects of the Act and how the principles of ecologically sustainable development have been incorporated into the design, construction and ongoing operations of the development. o The suitability of the site with respect to potential land use conflicts. o With existing and future surrounding land uses. o Feasible alternatives to the development and its key components. o Including siting and project design alternatives to avoid areas of biodiversity value, opportunities for shared infrastructure with proposed developments in the region, and the consequences of not carrying out the development. o A detailed consideration of the capability of the project to contribute to the security and reliability of the electricity system in the National Electricity Market, having regard to local system conditions and the Department's guidance on the matter	Chapter 2 & Chapter 4 & Chapter 7 & Appendix I (LUCRA) & Appendix C

No.	SEARs Requirements	Reference
Capital Investment Value and Employment		
7	• Provide the estimated development cost (EDC) of the development prepared in accordance with the relevant planning circular using the Standard Form of EDC Report;	Appendix D (EDC)
8	• Provide an estimate of the retained and new jobs that would be created during the construction and operational phases of the development, including details of the methodology to determine the figures provided.	Appendix D (EDC) & Appendix P (EIA)
9	• The development application must also be accompanied by: o the consent of the owner/s of the land (as required in Section 23(1) of the EP&A Regulation). o a declaration from a Registered Environmental Assessment Practitioner that the EIS includes the information specified in the Department's Registered Environmental Assessment Practitioner Guidelines.	Consent submitted on the NSW Major Project Portal REAP declaration at end of Executive Summary
Key Issues		
Biodiversity		
10	An assessment of the biodiversity values and the likely biodiversity impacts of the project in accordance with Section 7.9 of the *Biodiversity Conservation Act 2016 (NSW) (BC Act), the Biodiversity Assessment Method (BAM) 2020* and documented in a Biodiversity Development Assessment Report (BDAR). The BDAR must: • Be prepared using the approved BDAR template. • Document the application of the avoid, minimise and offset framework including assessing all direct, indirect and prescribed impacts in accordance with the BAM. • Assess the impacts associated with all ancillary infrastructure, including the transport route road upgrades. • Include an assessment for serious and irreversible impacts (SAII) in accordance with Section 9.1 of the BAM. • Include a strategy to offset any residual impacts of the development in accordance with the BC Act. • Be finalised by an accredited assessor as BAM-compliant within 14 days of submission. unless Conservation Programs, Heritage and Regulation Group (CPHR) and DPHI determine the proposed development is not likely to have any significant impacts on biodiversity values.	Appendix F (BDAR)
11	• An assessment of the likely impacts on listed aquatic threatened species, populations or ecological communities and riparian vegetation adjacent to Molong Creek, scheduled under the Fisheries Management Act 1994, and a description of the measures to minimise and rehabilitate impacts.	Section 8 of Appendix F (BDAR)
12	• A cumulative impact assessment of biodiversity values in the region from nearby developments.	Section 8 of Appendix F (BDAR)
13	• If an offset is required, details of the measures proposed to address the offset obligations.	Section 10 of Appendix F (BDAR)

No.	SEARs Requirements	Reference
Heritage		
14	• An Aboriginal Cultural Heritage Assessment Report (ACHAR) prepared in accordance with the *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW (OEH, 2011)* and *the Code of Practice for the Archaeological Investigation of Aboriginal Objects in NSW (DECCW, 2010),* identifying, describing, and assessing any impacts to any Aboriginal cultural heritage sites or values associated with the site (including impacts from any proposed earth works, construction works and road upgrades), including results of archaeological test excavations (where required), undertaken in accordance with the relevant standards and requirements.	Appendix G (ACHAR)
15	• Evidence of adequate consultation with Aboriginal communities in determining and assessing impacts, identifying and selecting options for avoidance of Aboriginal cultural heritage and identifying appropriate mitigation measures (including the final proposed measures), having regard to the Aboriginal Cultural Heritage Consultation Requirements for Proponents (DECCW, 2010).	Chapter 5 (EIS) & Appendix G (ACHAR)
16	• Assess the impact to historic heritage having regard to the *Guidelines for Preparing a Statement of Heritage Impact*.	Chapter 6 (EIS)
Land		
17	• A detailed justification of the suitability of the site and that the site can accommodate the proposed development having regard to its potential environmental impacts, land contamination, permissibility, strategic context and existing site constraints;	Chapter 2 (EIS) & Chapter 4 (EIS) & Appendix I (LUCRA) & Appendix T (AIA)
18	• An assessment of the potential impacts of the development on existing land uses on the site and adjacent land, including: ○ Agricultural land, flood prone land, nearby drinking water catchments, Crown lands, mining, quarries, mineral or petroleum rights (if relevant). ○ A soil survey to determine the soil characteristics and consider the potential for salinity, acid sulfate soils, and erosion to occur. ○ A cumulative impact assessment of nearby developments	Chapter 6 (EIS) and supporting appendices
19	• An assessment of the compatibility of the development with existing land uses, during construction, operation and after decommissioning, including: ○ Consideration of the zoning provisions applying to the land, including subdivision (if required). ○ Completion of a Land Use Conflict Risk Assessment in accordance with the *Land Use Conflict Risk Assessment Guide* (if required). ○ An assessment of impact on agricultural resources and agricultural production on the site and region.	Chapter 6 (EIS) & Appendix I (LUCRA) & Appendix T (AIA)
	• A preliminary investigation into potential contamination across the site, in accordance with the *State Environmental Planning Policy (Resilience and Hazards) 2021* (as required).	Appendix U (PSI)
Visual		
20	• A detailed assessment of the likely visual impacts of all components of the project on surrounding residences (including approved developments, lodged development applications and dwelling	Appendix J (LVIA)

No.	SEARs Requirements	Reference
	entitlements), and key locations, scenic of significant vistas and road corridors in the public domain.	
	• Details of measures to mitigate and/or manage potential impacts (including a draft landscaping plan for on-site perimeter planting, with evidence it has been developed in consultation with affected landowners).	Appendix J (LVIA)
Noise		
21	• An assessment of the construction noise impacts (including impacts from proposed road upgrades) of the development in accordance with the Interim Construction Noise Guideline (ICNG), operational noise impacts in accordance with the NSW Noise Policy for Industry (2017), assess traffic noise having regard to the NSW Road Noise Policy (DECCW, 2011) and cumulative noise impacts (considering other developments in the area), including (where appropriate): ○ Identification of impacts associated with construction, site emission and traffic generation at noise affected sensitive receivers, including the provision of operational noise contours. ○ Details of noise monitoring survey, background noise levels and amenity noise levels at the most-affected residential receivers. ○ Details of manufacturer specifications for plant and equipment and noise source inventory (demonstrating worst-case modelling of plant and equipment). ○ An assessment of 'worst case' noise emission scenarios; consideration of annoying characteristics of noise and prevailing meteorological conditions in the study area. ○ Details and analysis of the effectiveness of proposed management and mitigation measures to adequately manage identified impacts, including a clear identification of residual noise and vibration impacts following application of these mitigation measures and details of any proposed compliance monitoring programs.	Appendix K (NVIA)
Transport		
22	• An assessment of the peak and average traffic generation, including light vehicles (including shuttle buses), heavy vehicles, heavy vehicles requiring escort, high risk heavy vehicles requiring escort (noting Table 1 in TfNSW Fact Sheet - Transport Management Plans for Over Size and/or Overmass Movements in NSW) and construction worker transportation.	Appendix L (TIA)
23	• An assessment of the likely transport impacts to the site access route(s), including the above listed vehicles, site access point(s), any Crown land, particularly in relation to the capacity and condition of the roads, road safety and intersection performance.	Appendix L (TIA)
24	• A concept Level Route Analysis for heavy vehicles requiring escort and high risk heavy vehicles requiring escort.	Appendix L (TIA)
25	• A cumulative impact assessment of traffic from nearby developments (including mining operations).	Appendix L (TIA)
26	• Provide details of measures to mitigate and / or manage potential impacts (developed in consultation with the relevant road authorities) including:	Appendix L (TIA)

No.	SEARs Requirements	Reference
	○ A schedule of all required road upgrades (including resulting from heavy vehicle and over mass / over dimensional traffic haulage routes). ○ Strategic concept designs of proposed road upgrades (including the site access point). ○ Road maintenance contributions, and any other traffic control measures.	
Water		
27	• An assessment of the likely impacts of the development (including flooding and flood modelling) on surrounding watercourses (including their Strahler Stream Order), groundwater resources and surface water movements, and measures proposed to monitor, reduce and mitigate these impacts including water management.	Chapter 6 (EIS) and supporting appendices
28	• A site water balance for the development.	Appendix V (SGIA)
29	• Details of water requirements and supply arrangements for construction and operation (including consultation with suppliers).	Appendix W (OF)
30	• A description of the erosion and sediment control measures that would be implemented to mitigate any impacts in accordance with Managing Urban Stormwater: Soils & Construction (Landcom, 2004) and Managing Urban Stormwater: Soils and construction – Volume 2A manual (Landcom, 2008)	Appendix V (SGIA)
31	• Assessing the impacts of the development on hydrology of the site, including any changes to overland flows on-site or off-site, and detail design solutions and operational procedures to manage impacts.	Appendix M (FIA)
32	• Where the project involves works within 40 metres of any river, lake or wetlands (collectively waterfront land), identify likely impacts to the waterfront land, and how the activities are to be designed and implemented in accordance with the DPI Guidelines for Controlled Activities on Waterfront Land (2018) and (if necessary) Why Do Fish Need to Cross the Road? Fish Passage Requirements for Waterway Crossings (DPI 2003), and Policy & Guidelines for Fish Habitat Conservation & Management (DPE, 2013).	Appendix F (BDAR)
33	• Identification of any flood risk on site having regard to adopted flood studies, potential effects of climate change and any relevant provisions of the NSW Flood Risk Management Manual: ○ Where the development could alter flood behaviour, affect flood risk to the existing community or expose its users to flood risk, provide a flood impact and risk assessment (FIRA) prepared in accordance with the *Flood Impact and Risk Assessment – Flood Risk Management Guide LU01.* ○ Detailed design solutions and operational procedures to mitigate flood risk where required.	Appendix M (FIA)
Hazards		
34	• *Health* – an assessment of potential hazards and risks including but not limited to fires, spontaneous ignition, electromagnetic fields or the proposed grid connection infrastructure against the *International Commission on Non-Ionizing Radiation Protection (ICNIRP)*	Appendix N (HRA)

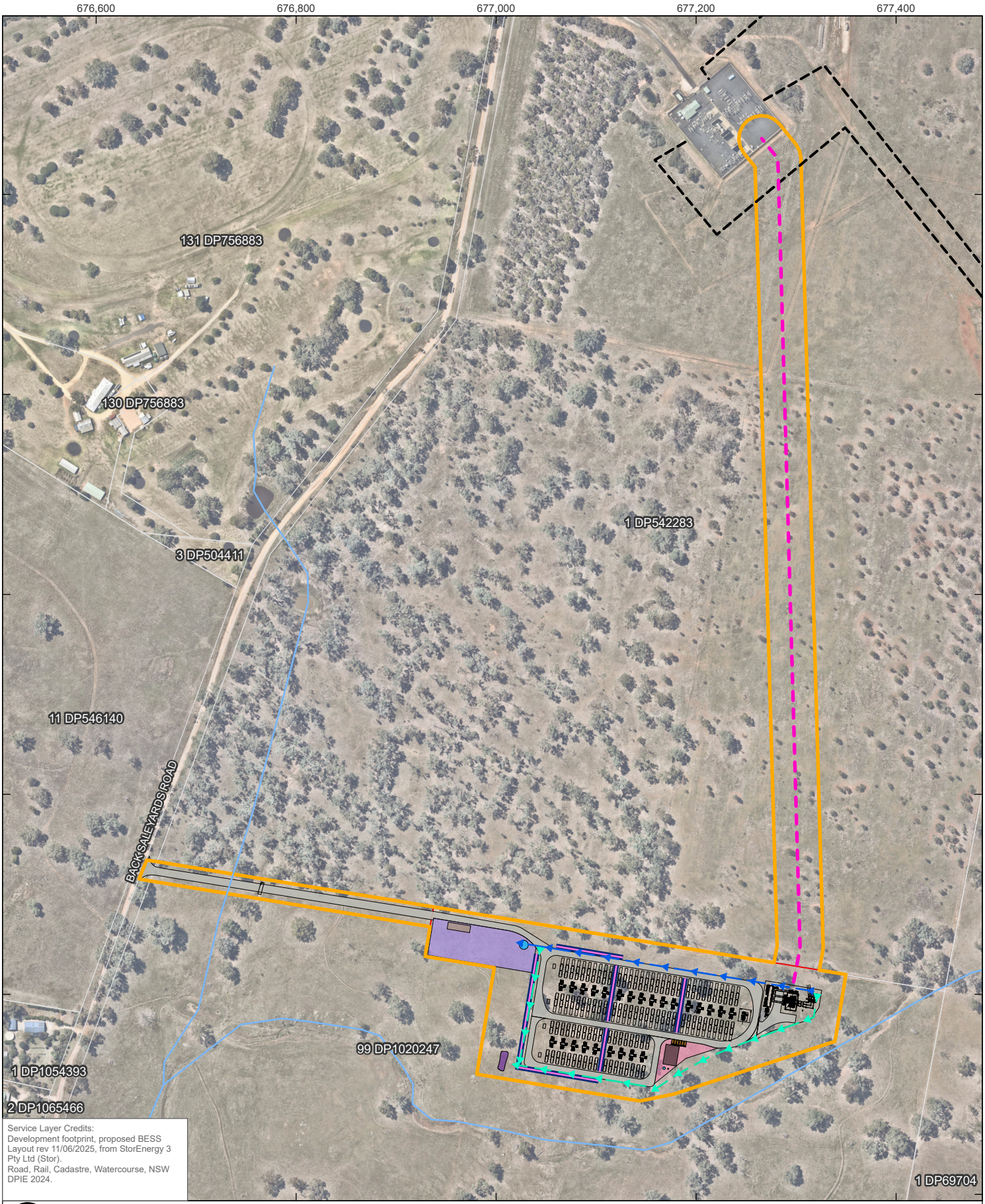
No.	SEARs Requirements	Reference
	Guidelines for limiting exposure to Time-varying Electric, Magnetic and Electromagnetic Fields.	
35	• *Bushfire* – a bush fire hazard assessment completed by a suitably qualified consultant and identify potential hazards and risks associated with bushfires / use of bushfire prone land including the risks that a BESS would cause a bush fire and demonstrate compliance with *Planning for Bush Fire Protection 2019.*	Appendix S (BRAR)
36	• *Dangerous Goods* – a preliminary risk screening completed in accordance with the State Environmental Planning Policy (Resilience and Hazards) 2021.	Appendix N (HRA)
37	• *Battery Energy Storage System* – a Preliminary Hazard Analysis (PHA) prepared in accordance with *Hazardous Industry Planning Advisory Paper No. 6 – Guideline for Hazard Analysis (DoP, 2011) and Multi-Level Risk Assessment.* The PHA must consider all recent standards and codes and verify separation distances to on-site and off-site receptors to prevent fire propagation and compliance with Hazardous Industry Advisory Paper No. 4, Risk Criteria for Land Use Safety Planning. The PHA must consider the effect of bushfires on batteries or other components of the BESS.	Appendix N (HRA)
Social		
38	• Including an assessment of the social impacts or benefits of the project for the region and the State as a whole in accordance with the *Social Impact Assessment Guideline (DPE, 2023),* including consideration of any increase in demand for community infrastructure services, and consideration of construction workforce accommodation.	Appendix O (SIA)
Economic		
39	• Including an assessment of the economic impacts or benefits of the project for the region and the State as a whole and provide details of any proposed voluntary benefit sharing programs, having regard for the Benefit-Sharing Guideline 2024 and Private Agreement Guideline 2024.	Appendix P (EIA)
Waste		
40	• Identify, quantify and classify the likely waste stream to be generated during construction, operation, and decommissioning, and describe the measures to be implemented to manage, reuse, recycle and safely dispose of this waste (in consultation with waste facilities, including Council).	Appendix Q (WMP)
Plans and Documents		
41	• The EIS must include all relevant plans, diagrams and relevant documentation required under Part 3 of the EP&A Regulation. Provide these as part of the EIS rather than as separate documents.	Throughout EIS
42	• In addition, the EIS must include high quality files of maps and figures of the subject site and proposal.	Throughout EIS
Legislation, Policies & Guidelines		
43	• The assessment of the key issues listed above must take into account relevant guidelines, policies, and plans as identified.	Chapter 4 (EIS) & Appendix C (Statutory Compliance Table)

No.	SEARs Requirements	Reference
	• A list of some of the legislation, policies and guidelines that may be relevant to the assessment of the project can be found at: ○ https://www.planning.nsw.gov.au/Policy-and-Legislation/Planning-reforms/Rapid-Assessment-Framework/Improving-assessment-guidance ○ https://www.planningportal.nsw.gov.au/major-projects/assessment/policies--and-guidelines; and ○ http://www.environment.gov.au/epbc/publications#assessments.	
Consultation		
44	• During the preparation of the EIS, you should consult with the relevant local, State or Commonwealth Government authorities, infrastructure and service providers, community groups, affected landowners and any exploration licence and/or mineral title holders.	Chapter 5 & Appendix O (SIA) & Appendix R (CR)
45	• In particular, you must undertake detailed consultation with affected landowners surrounding the development, the owners of all exploration licences across the proposed development site, the operator of any pipelines on or adjacent to the site, and all relevant government agencies, including the relevant local Council	Chapter 5 & Appendix O (SIA) & Appendix R (CR)
46	• The EIS must: ○ Detail how engagement undertaken was consistent with the Undertaking Engagement Guidelines for State Significant Projects (DPIE, 2024). ○ Describe the consultation process and the issues raised, and identify where the design of the development has been amended in response to these issues. Where amendments have not been made to address an issue, an explanation should be provided.	Chapter 5 & Appendix O (SIA) & Appendix R (CR)

Appendix B:

Maps and Plans





Service Layer Credits:
Development footprint, proposed BESS Layout rev 11/06/2025, from StorEnergy 3 Pty Ltd (Stor).
Road, Rail, Cadastre, Watercourse, NSW DPIE 2024.

0 100 200 m

Coordinate System:	GDA2020 MGA Zone 55
Scale:	1:5,000 at A4
Project Number:	620.041615
Date Drawn:	30-Oct-2025
Drawn by:	NT

LEGEND

- Watercourse
- Road

Transgrid Line

- 132kV
- Cadastre
- Proposed Electricity Transmission Line
- Noisewall
- BESS Infrastructure
- Proposed Site Drain
- Proposed Swale Drain
- BESS Footprint (5.06 ha)
- Development Footprint (9.56 ha)
- Car Parking Spaces
- Construction Compound
- Detention Basin
- Internal Road
- Laydown Area
- O&M Building
- Sewerage Holding Tank
- Washdown Bay
- Water Tank
- Culvert

MOLONG BESS

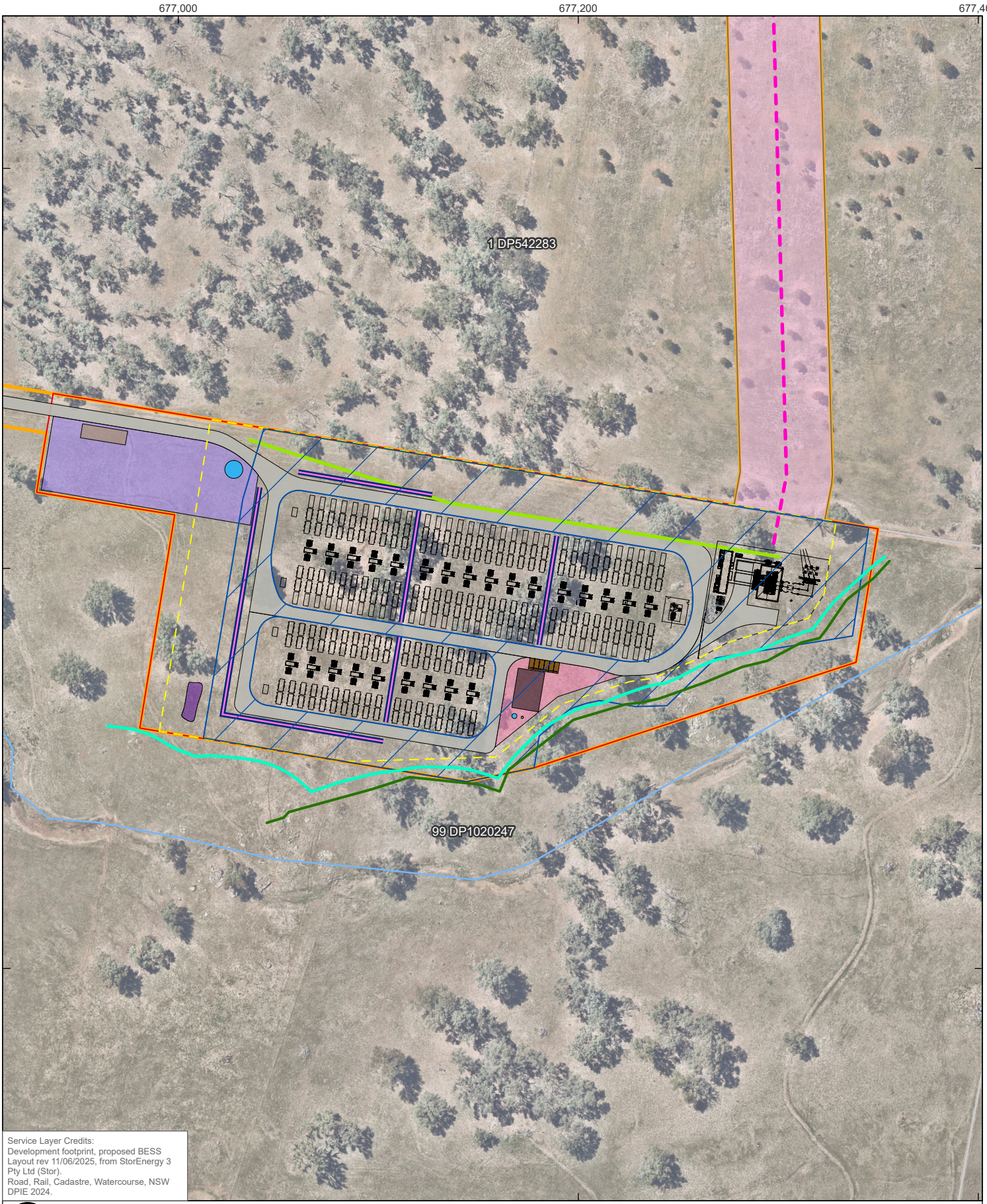
PROJECT LAYOUT

SLR

DISCLAIMER: All information within this document may be based on external sources. SLR Consulting Pty Ltd makes no warranty regarding the data's accuracy or reliability for any purpose.

FIGURE B-1

Path: H:\Projects-SLR\620-BNE\620-BNE\620.041615.00001 Stor Energy NSW\06 SLR Data\01 GIS\GIS\NSW_Stor.aprx\620041615_EIS_FX_Project Layout



Service Layer Credits:
Development footprint, proposed BESS Layout rev 11/06/2025, from StorEnergy 3 Pty Ltd (Stor).
Road, Rail, Cadastre, Watercourse, NSW DPIE 2024.

0 50 100 m

Coordinate System:	GDA2020 MGA Zone 55
Scale:	1:2,500 at A4
Project Number:	620.041615
Date Drawn:	22-Aug-2025
Drawn by:	NT

LEGEND

- Watercourse
- Proposed Electricity Transmission Line
- Noisewall
- Swale (Indicative)
- BESS Infrastructure
- BESS Footprint (5.06 ha)
- Development Footprint (9.56 ha)
- Heritage Buffer (50m)
- Top of Bank 40m Buffer
- Fence line
- Car Parking Spaces
- Construction Compound
- Detention Basin
- Internal Road
- Laydown Area
- O&M Building
- Sewerage Holding Tank
- Washdown Bay
- Water Tank
- Proposed Easement
- APZ (Indicative)

MOLONG BESS

BESS OVERVIEW

SLR

DISCLAIMER: All information within this document may be based on external sources. SLR Consulting Pty Ltd makes no warranty regarding the data's accuracy or reliability for any purpose.

FIGURE B-2

Path: H:\Projects-SLR\620-BNE\620-BNE\620.041615.00001 Stor Energy NSW\06 SLR Data\01 GIS\GIS\NSW_Stor.aprx\620041615_EIS_FXX_BESS Layout

Appendix C:

Statutory Compliance Table



Appendix D:

Estimated Development Cost Report



Appendix E:

Mitigation Measures Table



Appendix E – Mitigation Measures

1.0 Introduction

This appendix provides a consolidated summary of the commitments made to manage, mitigate, and monitor impacts during the construction and operation of the Project as proposed within this EIS.

2.0 Management Measures

A summary of the mitigation, management, and monitoring measures proposed for the Project is presented at Table 1.

Table 1 Consolidated Summary of Proposed Environmental Management and Monitoring Measures

Impact	Mitigation Measures and Monitoring Requirements
Biodiversity	
ECO1	A Flora and Fauna Management Plan (FFMP) will be prepared prior to the commencement of any clearing or substantive site works. The FFMP will incorporate the recommendations of the BDAR, including: • Whereby Superb Parrot breeding is identified within the development footprint, clearing should be avoided during breeding season (i.e Sept-Jan). An ecologist must complete thorough pre-clearance checks, including the inspection of hollow-bearing trees prior to felling. Further details to be included in FMMP. • Instigating clearing protocols, including pre-clearing surveys, daily surveys and staged clearing, and using a trained ecologist or licensed wildlife handler during clearing events. • Relocating habitat features (e.g. fallen timber, hollow logs) from the development or clearing site, to adjacent retained vegetation. • Hollow-bearing trees to be removed one at a time, with a fauna spotter-catcher or suitably qualified ecologist on site during clearing works to complete daily wildlife capture as required • Using light shields, or daily/seasonal timing of construction and operational activities to reduce impacts of light spill. • Erecting temporary fencing of the construction area, and along the proposed access track to temporarily restrict movement into active work site from adjacent intact vegetation.

Impact	Mitigation Measures and Monitoring Requirements
	• Washing all machinery down prior to site entry and exit. • Training staff and conducting site briefings to communicate environmental features to be protected and measures to be implemented. • Providing for the ecological restoration, rehabilitation and/or ongoing maintenance of retained native vegetation habitat on, or adjacent to, the development or clearing site. • Using sediment barriers or sedimentation ponds to control the quality of water released from the site into the receiving environment.
Aboriginal Heritage	
ACH1	Prior to the commencement of construction works, the further investigations recommended by the ACHAR will be undertaken.
ACH2	Prior to the commencement of construction works, an Aboriginal Cultural Heritage Management Plan (ACHMP) will be prepared and submitted to the DPHI for approval. The ACHMP should include: • Roles and responsibilities for undertaking actions for 'In situ' management of potential scarred trees, SCT1, SCT2 and SCT3 with conservation and management recommendations prepared by an arborist. • Include protocols for continued consultation with RAPs throughout the remainder of the project, as outlined in the ACHAR. • Detail descriptions and methods to avoid any inadvertent impacts to known Aboriginal objects and/or sites and areas of archaeological potential outside of the construction activities (for example, potential scarred tree, SCT2 and Molong Broken Hammerstone). The methods will address the matters outlined in the ACHAR. • Procedures for undertaking further Aboriginal cultural heritage assessment, investigation and mitigation of any areas of the project that have changed following completion of the ACHA and/or during the final design and construction phases of the project; • Processes for reviewing, monitoring and updating the ACHMP as the project progresses, including incorporating any mitigation measures identified in the ACHA being prepared and in accordance with the requirements of any future project approval conditions.
ACH3	The Construction Environment Management Plan (CEMP), shall incorporate key elements of the ACHMP and incorporate Cultural Awareness Training and Heritage Induction that includes: • An Unexpected Finds Procedure for Aboriginal Objects. • Unexpected Human Remains Procedure • A briefing on the possible identification of Aboriginal sites and objects during construction, including mapped heritage exclusion zones and briefed on their responsibility according to the provisions of the NPW Act 1974, in the event that unknown objects are uncovered during proposed works.

Impact	Mitigation Measures and Monitoring Requirements
	• The contact phone numbers of Heritage NSW regional archaeologist, EnviroLine 131 555, and Orange LALC. • The relevant contact phone number of the Environmental Officer / Site Supervisor responsible for this project in case unknown objects are uncovered during excavation. • The penalties for moving Aboriginal objects needs to be made clear and given due consideration. • An outline of the types of unexpected heritage objects and their legal protection • Registered Aboriginal Parties should be provided the opportunity to input into or deliver cultural awareness training and heritage inductions by the general works contractor as noted earlier.
ACH4	Copies of the ACHMP, updated site cards and any SSD consent conditions shall be provided to other land users of the project area (e.g. Transgrid).
Historic Heritage	
HER1	In the unlikely event of an unanticipated heritage object (relic) being identified during the construction of the BESS, all works must cease, and an appropriately qualified heritage consultant should be engaged to assess the find and provide management advice for the relic.
Land Use Conflict	
LUC1	The following management plans will be prepared, and will provide documented requirements for performance measures and monitoring during each stage of the project. Performance will also be monitored through the outcomes of consultation during all phases of the project. Monitoring community feedback and concerns are key to assessing the performance of management strategies: • Construction Environmental Management Plan (CEMP). • Operational Environmental Management Plan (OEMP). • Decommissioning Management Plan (DMP). • Any other management plan specified in the EIS or conditions of consent.
Landscape and Visual	
VIS1	The noise wall located closest to Back Saleyards Road will have a recessive and low-reflective green finish applied to the outer surface.
VIS2	AS/NZS 4282-2023 Control of the Obtrusive Effect of Outdoor Lighting sets out general principles that should be applied when designing outdoor light to minimise any adverse effect of the light installation. The following principles will be applied when designing the site lighting:



Impact	Mitigation Measures and Monitoring Requirements
	• Direct lights downward as much as possible. • Use luminaires that are aimed to minimise light spill, e.g. full cut off luminaires where no light is emitted above the horizontal plane. • Avoid wasted energy and increased light pollution from over-lighting. • Wherever possible use floodlights with asymmetric beams that permit the front glazing to be kept at or near parallel to the surface being lit. • Lighting should be aimed inward the middle of the site where possible and away from the site boundaries.
Noise and Vibration	
NV1	A Construction Noise and Vibration Management Plan (CNVMP) will be included in the CEMP and will include the measures outlined in Appendix F of the NVIA.
NV2	The noise impacts from all noise-generating plant items would be reviewed during detailed design stage to confirm unit selections and any mitigation requirements.
NV3	The following standard construction hours are proposed for the Project: • Monday to Friday – 7am to 6pm. • Saturday – 8am to 1pm. • Sunday and Public Holidays – No works to be undertaken.
NV4	No works are proposed to be undertaken outside of the standard construction hours. In the event this is required, out of hours (OOH) approval would be sought, and all works would be undertaken in accordance with the appropriate OOH protocols and approval processes.
NV5	Construction of 4-5 m noise walls shall be implemented to mitigate noise from battery and inverter units. The final noise walls heights / locations will be confirmed during the detailed design stage.
Traffic	
TR1	A Construction Traffic Management Plan (CTMP) will be developed in accordance with the recommendations of the TIA, prior to the substantial commencement of construction activities. The CTMP will outline measures including: • Preparation and execution of Traffic Guidance Schemes (TGS). TGS plans will be implemented, managing the access and the general public's movement around construction activities. They should identify all reasonably foreseeable hazards, assess them, and

Impact	Mitigation Measures and Monitoring Requirements
	manage them as best possible by eliminating or minimising the risks. The TGSs shall be monitored and updated accordingly throughout the Project. • Management of transport from workforce accommodation, including the construction program, accommodation availability and the vehicle fleet that will be used. The majority of the workforce must be transported by shuttle buses that are similar to a Toyota Coaster. • Drivers Code of Conduct, consistent with the measures outlined in the TIA. • All vehicles are to park and load/ unload within the site using the designated parking and loading areas where possible. Vehicles are not parked or loading/ unloading within the public road reserve. • Consistent with the OSOM material transportation requirements, pilot vehicles and escorts must be utilised for non-standard loads. • Temporary signage must be positioned at critical intersections, including the intersection of Euchareena Road and Back Saleyards Road, to inform construction vehicle drivers and to warn the general public about the construction activities in the vicinity. • Vehicles travelling along Euchareena Road and Back Saleyards Road must abide by any reduced speed limits associated with construction works. • Residents of the area must be informed prior to the commencement of construction works. • Heavy vehicles must abide any posted speed limits and vehicles are to be turned off when not in use. • Identify appropriate mitigation measures and list strategies for dust management. • A risk assessment is intended to identify hazards and risks associated with construction activities. • A Contingency Plan, in consultation with Stor.
TR2	To ensure the safe and coordinated movement of vehicles to, on and around the site, a Traffic Management Communications Strategy shall be established by the Contractor in accordance with the requirements of Stor. This should consider the scheduling and coordination of deliveries, incident reporting, regular meetings and periodic evaluations of the strategy to ensure relevance and alignment with current standards/ practices.
TR3	The section of Back Saleyards Road from the access driveway to the Euchareena Road intersection be monitored over the course of the construction phase, to ensure that the maintenance of the road allows the ongoing accommodation of bi-directional movements of the anticipated construction vehicle fleet. As part of the CTMP, consultation will occur with Cabonne Council on a maintenance plan that can be facilitated and paid for by the Proponent
TR4	An application will be made to NHVR to obtain approvals to operate Performance Based Standards (PBS) Level 1 design vehicles along the last mile sections (Strathmore Lane, Belgravia Road, Euchareena Road and Back Saleyards Road), if no existing approvals in place.

Impact	Mitigation Measures and Monitoring Requirements
TR5	Dilapidation surveys will be undertaken to assess the condition of all the road sections, along with intersections along the nominated transportation route, to identify changes prior to and following the proposed construction works
TR6	The proposed use of the local road network for the heavy vehicle route (Strathmore Lane off Mitchell Highway, and then Belgravia Road, Euchareena Road and Back Saleyards Road) shall be consistent with Austroads Guidelines.
Hydrology	
GRD1	CEMP and OEMP shall include measures to prevent chemical spills from reaching the groundwater system in the unlikely event of leakage. Mitigation measures include: • Bunded storage of storage of bulk fuel (and any other chemicals) used for plant or stored on site • Regular maintenance and inspection of vehicles used during construction. Provide a dedicated surface for vehicle parking. • Development of environmental management plans including a emergency response plan to deal with spillages in unlined areas. This would include keeping spill kits on site and ensuring staff are trained in their use and spill response as detailed in the environmental management plan. • Collecting waste liquids from wash-down facilities in lined on-ground small-scale basins or impermeable containers to prevent contaminated runoff from leaching into groundwater. • Design bund walls/intercept drains to prevent contaminated runoff from wash-down facilities reaching unlined areas. • External hardstand areas should be graded or designed to manage surface water runoff in a controlled manner. Runoff from these areas should be directed via swales to the proposed downstream retention basin.
GRD2	A firewater management plan will be prepared in consultation with Fire and Rescue NSW (FRNSW) and RFS and included in the site's Emergency Management Plan(s), detailing procedures for containment, collection, and appropriate disposal of contaminated runoff. Mitigation measures will be confirmed during detailed design stage but may include permanent or emergency bunding of external hardstand areas, installation of interception drains, and the use of collection basins or tanks to prevent uncontrolled migration of contaminants.
GRD3	During the decommission phase, the following will be undertaken: • Adhere to protocols for the safe disposal of batteries and waste liquids remaining from the operation of the BESS facility. • Collect soil samples in areas of potential contamination to validate that the site is clean. If the concrete slab is to be removed, then soil samples would also be collected once the slab is removed. In the event that significant soil contamination is identified, a

Impact	Mitigation Measures and Monitoring Requirements
	remediation strategy would need to be developed which may include groundwater monitoring to determine the presence and extent of any groundwater contamination. • Where significant concrete installations were used, validation sampling of soils should be carried out to confirm no impacts to soil quality or potential for leachate migration to groundwater.
SW1	Drainage elements including the stormwater basin will be sized and designed to minimise risk of localised surface water ponding.
FL1	BESS Pad to be built above the 0.5% AEP creek flood level.
FL2	Electrical elements and chemical storage to be built stored above the maximum 0.5% AEP flow depth.
FL3	The footings will be designed to withstand the flood velocities described which are mostly low (<1m/s) in the BESS Footprint.
FL4	A Safety and Design Plan to be prepared to exclude personnel and vehicles from drainage channel, such as provision of an adequate road crossing over the drain.
FL5	Where the site access crosses over the watercourse, the manner will be in accordance with the '*Controlled activities – Guidelines for watercourse crossings on waterfront land' (DPE, 2022),* to ensure that the project design will include measures to minimise any modifications to flow and the watercourse.
ESD1	Construction works and decommissioning works are to be managed under a Construction Soil and Water Management Plan (CSWMP) The CSWMP will be prepared in accordance with Managing Urban Stormwater: Soils and Construction (Landcom 2004), known as 'the Blue Book', and Volume 2A Installation of Services (DECC 2008a).
Air Quality	
AQ1	A Dust Management Plan (DMP) outlining the key sources of dust during the construction phase and a list of practical mitigation measures to minimise the potential offsite dust nuisance to receptors situated near the site entrance and unsealed areas of Back Saleyard Rd will be prepared to minimise or eliminate any adverse air quality or dust deposition impacts. The management plan should implement watercart treatment and speed limits for unsealed access roads used by construction vehicles in the vicinity of residential dwellings. The Dust Management Plan may form part of the broader CEMP.
Bushfire	
BF1	Prior to the commencement of the BESS, APZs shall be implemented, consistent with the BRAR (refer to Figure 14). The APZ will be maintained as either completely cleared land or a mown area with a grass height of less than 100mm.
BF2	Buildings and structures will adopt a BAL of -12.5, and use non-combustible materials, such as fire-resistant concrete and metal.

Impact	Mitigation Measures and Monitoring Requirements
BF3	Prior to construction commencing, a Bushfire Management Plan (BMP) will be prepared for the Project detailing the ongoing implementation measures, including: • Access and Egress for the public and for firefighters and their equipment. • Adequate Water Supply for fire suppression. • Landscape Management. • Emergency Response and Management – Preparedness and Planning.
BF4	The BMP will be prepared in consultation with the NSW RFS and NSW Fire and Rescue, with final approved copies stored locally within an appropriate "emergency cabinet" securely located on-site. The BMP will align with other related project plans including the Fire Safety Study (FSS) and Emergency Management Plan (EMP).
BF5	The general principles and RFS-compliant design recommendations made in the BRAR will be apply to ensure that firefighting vehicles are provided with safe, all-weather access to the proposed BESS facility.
BF6	Provide a water supply (150kL tank) dedicated for firefighting purposes (including cooling purposes for the equipment immediately surrounding the BESS on fire and for control of any associated smoke plume).
BF7	The noise walls shall be made of non-combustible (i.e. fire-resistant) materials, in accordance with the recommendations of the BRAR.
Hazard and Risk	
HRA1	An Occupational Health & Safety Management Plan will be prepared for the facility to include all measures aimed at managing hazards and risks, including specific targeted measures detailed in the Emergency Response Plan, as recommended in the HRA.
HRA2	EMF - The design of the facility will be developed in accordance with (i) Energy Networks Association (ENA), *"ENA Policy Statement on Electric and Magnetic Fields"*, adopted by the ESAA Board in 1991 and reconfirmed by the ENA EMF Committee, March 2006; and (ii) Nutall, K., Flanagan, P. and Melik, G., "Prudent Avoidance Guidelines for Power Frequency Magnetic Fields", 23rd Annual Conference of the Australasian Radiation Protection Society, 1998.
HRA3	The integrity of all site security fencing will be maintained through the lifetime of the Project to ensure adequate exposure separation for all members of the public.
HRA4	The following management plans will be prepared and included in the CEMP and OEMP: • Emergency Response Plan (ERP). • Water Management Plan (WMP).

Impact	Mitigation Measures and Monitoring Requirements
	• Fire Safety Study (FSS). • Spill Management Plan (SMP). • Bushfire Management Plan (BMP).
Social	
S01	The proponent will develop and execute a Community and Stakeholder Engagement Plan (CSEP) to ensure community members receive accurate, timely information throughout the construction phase. This strategy will encompass: • Systems for notifying nearby communities, residents, visitors and road users about scheduled activities, their timing, possible effects, and mitigation strategies (including transport operations and activities generating significant noise). • Methods for consultation with impacted stakeholders and residents regarding possible effects and management approaches. • Systems for gathering and addressing project-related inquiries and concerns during construction, operational, and decommissioning phases, such as an online project portal with contact information. • Ongoing and consistent reporting of performance measures, engagement summaries, project updates and outcome of impact mitigations on public platforms including project website and printed collateral.
S02	The proponent will undertake the following actions to ensure the community and stakeholders are adequately informed about the Project, the proponent and BESS for the entire life of the Project: • Develop an easy-to-understand factsheet addressing battery safety, fire risks, and electromagnetic radiation. • Continue engagement with the RFS and Fire and Rescue and involve them in future community briefings. • Reassure stakeholders through transparent emergency response planning. • Include information on Stor-Energy's ownership structure and any company policies or strategies in place. • Share an overview of Project's delivery plans. Stor will also share the contact information of local suppliers already expressed interested in supplying for the project to main contractors and organise ‘meet the buyer’ event. • Clearly identify key project partners and roles across the project lifecycle. • Provide accessible information about battery lifespan and replacement timelines. • Explain end-of-life recycling processes and compliance with waste regulations.

Impact	Mitigation Measures and Monitoring Requirements
	• Prepare material focused on lifecycle and sustainability which can be handed out in community events Stor will participate (e.g. Christmas shopping street event, Molong markets). • Develop visual materials that demonstrate how the battery supports the regional energy network. • Implement input from residents and Council to VPA Terms of Reference and any additional ad hoc sponsorships and benefit sharing. • Establish transparent funding criteria and governance mechanisms. • Communicate how community suggestions have shaped funding priorities. • Maintain regular project updates via website, email, social media and community notices. • Share milestone announcements and progress against the approval's timeline. • Offer guided site visits or virtual tours when safe and appropriate. • Provide updates on environmental assessments and mitigation strategies. • Incorporate local ecological knowledge into project design and rehabilitation. • Share how feedback has informed environmental planning decisions.
Waste	
WM1	Waste will be managed according to the provisions of the WMP including: • Identification of roles and responsibilities for waste management procedures. Any subcontractors engaged will have roles and responsibilities identified and the Project's waste management system clearly explained. • Methods for managing waste or wastewater including appropriate liquid storage equipment, spill containment kits. • Litter and waste management to mitigate emission of dust, litter, potentially offensive odours, and vermin resulting from improper storage and collection of solid residues and putrescible waste. • Wastewater would be transported by licenced contractors and disposed of at appropriately licensed wastewater treatment plants. • Decommissioning will be managed by a suitably qualified contractor or operator. End of life batteries will be delivered to a facility lawfully able to accept them.
WM2	All staff, including sub-contractors and labourers, employed during the site preparation and construction phases of the Project will undergo waste management induction training for the Project. Induction training will cover, as a minimum:

Impact	Mitigation Measures and Monitoring Requirements
	• Legal obligations and targets. • Emergency response procedures on-site. • Waste priorities and opportunities for reduction, reuse and recycling. • Waste storage locations and separation of waste. • Procedures for suspected contaminated and hazardous waste. • Waste related signage. • Site safety. • The implications of poor waste management practices. • Responsibilities and reporting, including identification of personnel responsible for waste management and individual responsibilities.
WM3	Daily visual inspections of the waste storage areas will be undertaken by site personnel and inspection checklists and logs recorded for reporting to the site manager or equivalent role each week or as required. These inspections will be used to identify and rectify any resource and waste management issues.
Land and Soils	
S1	A Soil and Water Management Plan (SWMP) will be prepared in accordance with Managing Urban Stormwater – Soils and Construction Volume 1 (Landcom, 2004). • The SWMP will be prepared as part of a Construction Environmental Management Plan (CEMP) to manage potential risks to soils, surface and ground water. The construction SWMP is to be prepared with reference to relevant development controls within the Cabonne DCP. Recommended measures for the construction SWMP include but are not limited to: • Measures to minimise and manage the potential for erosion and sediment transport within and from the site. • Measures to manage accidental spills and waste storage. • Measures to manage stormwater and the potential for contaminated runoff from the development site. • Measures to ensure that excavation activities and any stockpiling are managed to minimise the potential for downstream contamination. • Measures to ensure that areas of exposed soil and the time in which they are exposed are minimised as far as practical..

Impact	Mitigation Measures and Monitoring Requirements
S2	The construction of the Project will be managed in compliance with measures specified within the construction SWMP to ensure impacts to water quality are appropriately managed. Measures will be implemented to ensure that areas of exposed soil and the time in which they are exposed, are minimised as far as practical during construction
S3	As part of the OEMP for the Project, the following measures shall be included: • Soil disturbance during operation of the Project will be limited to maintenance activities, involving very small, localised disturbance areas on an infrequent basis. • Standard erosion and sediment control measures will be implemented to minimise the potential for sediment export within areas to be disturbed during operations. These measures would be developed on a case-by-case basis referring to this soil assessment and are likely to include measures such as sediment fencing, localised sediment traps, and progressive stabilisation with vegetation. • Measures to manage any bare areas and erosion that develop over time.



Appendix F:

Biodiversity Development Assessment Report



Appendix G:

Aboriginal Cultural Heritage Assessment Report



Appendix H:

Preliminary Air Quality Assessment



Appendix I:

Land Use Conflict Risk Assessment



Appendix J:

Landscape and Visual Impact Assessment



Appendix K:

Noise and Vibration Impact Assessment



Appendix L:

Transport Impact Assessment



Appendix M:

Flood Impact Assessment



Appendix N:

Hazard and Risk Assessment



Appendix O:

Social Impact Assessment



Appendix P:

Economic Impact Assessment



Appendix Q:

Waste Management Plan



Appendix R:

Engagement Summary Report



Appendix S:

Bushfire Risk Assessment Report



Appendix T:

Agricultural Impact Assessment



Appendix U:

Preliminary Site Investigation



Appendix V:

Surface and Groundwater Impact Assessment



Appendix W:

Onsite Facilities



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