Request for Secretary's Environmental Assessment Requirements (SEARs)

Stoney Creek Battery Energy Storage System (BESS)

Enervest Operations Pty Ltd

Level 6, 627 Chapel Street
SOUTH YARRA VIC 3141

Prepared by:

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SLR Project No.: 620.31316.00000

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Revision Record

Revision	Date	Prepared By	Checked By	Authorised By
0.1	14 February 2024	Hugh Jones	Melissa Thomas	Julian Voller
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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 Enervest Operations 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.

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Executive Summary

Enervest Operations Pty Ltd (Enervest) seeks to establish a 125-Megawatt (MW)/8 hour Battery Energy Storage System (BESS) facility with a connection to the existing electricity grid via an underground cable to TransGrid's Narrabri 132/66kV substation in close proximity to the BESS area.

The Project is proposed on Lot 156 in DP 754944 at 41 Stoney Creek Road, Narrabri NSW 2390. The existing Narrabri 132/66kV substation that the BESS is located on Lot 1 in DP 502189, 70 Stoney Creek Road, Narrabri NSW 2390, approximately 40m south of the site.

The proposed development comprises of approximately 192 batteries, each contained individually within a shipping container. Approximately 64 inverters (one per every three batteries) are located externally to the shipping containers. Batteries and inverters are fixed to hardstand 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 single demountable building used for storage.

The development is self-operating and only requires minor periodic visitation by an authorised person. The facility is otherwise restricted to the public.

Project Overview

Table 1: Project Summary

Project Element	Description
Proposed Development - Construction and Operation Summary	The Project would generally involve the following components: • Mobilisation and establishment of access, temporary construction facilities and laydown area; • Transport of construction personnel, associated heavy and light vehicles, and materials to and from site on a day-to-day basis, dependent on construction schedule; • Road works to formalise internal site access road to accommodate heavy vehicles, including a new driveway crossover to Stoney Creek Road; • Clearing and grubbing, cut, fill and compaction activities to create level pads; • Installation of drainage; • Installation of concrete footings or pads to support transformers, BESS battery packs, control building and other outdoor electrical infrastructure; • Delivery and placement of all equipment on the footings/pads; • Trenching, installation and backfilling of underground cabling between equipment on the pad including the BESS battery packs, transformers, auxiliary electrical equipment and the control room; • Construction of gravel hardstand, gravel internal roads, control room/switchgear, transformers, circuit breakers, harmonic filters, auxiliary underground transmission lines, car parking, lay down area, landscaping, security fencing/lighting, and a single demountable building used for storage; • Acoustic attenuation measures, to be determined as part of detailed assessment; • Removal of temporary construction facilities, and rehabilitation of disturbed areas following completion of construction of the Project.
Site Access	Access to the Project Area is proposed to be via Stoney Creek Road via a new driveway crossing. The internal access road is planned to be gravel formalised to accommodate heavy vehicles associated with the construction of the BESS.

Project Element	Description
Grid Connection	A new underground transmission line will be constructed to connect the BESS substation, to the existing TransGrid Narrabri 132/66kV substation to the immediate southwest of the BESS footprint area. The transmission line will transect the Project Area and connect to the Narrabri 132/66kV substation to the southwest via underground transmission lines. Following further consultation with TransGrid, the transmission line will run southwest from the southern portion of the BESS footprint, crossing the Stoney Creek Road reserve, then entering the Narrabri 132/66kV substation land.
Total Development Footprint	4.29 hectares (ha)
Construction Duration	Construction of the Project is anticipated to take approximately 12 months. Construction is scheduled to commence within 12 months of approval being granted (2026).
Operation Life Expectancy	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 20-30 years. It is expected that the successive lease terms will be executed under the Lease contract. This will be leased from the landowner on a long-term 30 year basis, with a 10 year option to renew lease. No Subdivision is proposed for this development.
Decommissioning	The Project would be decommissioned, and the infrastructure removed, returning the site to its original use following the approximate 20-30 year life expectancy. However, the Project may continue beyond 30 years if it is deemed viable to extend the lifespan of the development.

This Scoping Report has been prepared for the State Significant Development (SSD) component of the Project by SLR Consulting Pty Ltd (SLR) on behalf of the proponent, Enervest Operations Pty Ltd (Enervest). The purpose of this Scoping Report is to request and inform the content of the Secretary's Environmental Assessment Requirements (SEARs) issued by NSW Department of Planning, Housing and Infrastructure (DPHI) as delegate to the Minster for Planning and Public Spaces, for the SSD Environmental Impact Statement (EIS) for the Project.

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Acronyms and Abbreviations

Term	Definition
ACHA	Aboriginal Cultural Heritage Assessment
ACHAR	Aboriginal Cultural Heritage Assessment Report
AC	Alternating current
AEP	Annual exceedance probability
AEMO	Australian Energy Market Operator
AHIMS	Aboriginal Heritage Information Management System
AHIP	Aboriginal Heritage Impact Permit
AIA	Agricultural Impact Assessment
AOBV	Areas of Outstanding Biodiversity Value
APZ	Asset Protection Zone
AQA	Air Quality Assessment
ASL	Above Sea Level
ASS	Acid Sulfate Soils
BAM	Biodiversity Assessment Method
BC Act	Biodiversity Conservation Act 2016
BCD	Department of Climate Change, Energy, the Environment and Water - Biodiversity and Conservation Division
BOS	Biodiversity Offsets Scheme
BDAR	Biodiversity Development Assessment Report
BESS	Battery Energy Storage System
BESS Site	Lot 156 DP 754944 at 41 Stoney Creek Road, Narrabri NSW 2390
BMS	Battery Management System
BSAL	Biophysical Strategic Agricultural Land
BV	Biodiversity Values
CCTV	Closed Circuit Television
CEEC	Critically Endangered Ecological Community
CEMP	Construction Environmental Management Plan
CIV	Capital Investment Value
CLM Act	*Contaminated Land Management Act 1997*
COP 21	2015 United Nations Climate Change Conference 21
CSEP	Community Stakeholder Engagement Plan
Cth	Commonwealth
DA	Development Application
DC	Direct Current
DCP	Development Control Plan
DECCW	Department of Environment, Climate Change and Water (NSW)
DP	Deposited Plan

Term	Definition
DPHI	Department of Planning, Housing and Infrastructure
DOP	Department of Planning, known as DPHI
EDC	Estimated Development Cost
EEC	Endangered Ecological Community
EIS	Environmental Impact Statement
EMF	Electromagnetic Fields
EMT	Electromagnetic Transient
Enervest	Enervest Operations Pty Ltd
EOL	End of Life
EPA	Environmental Protection Authority
EPL	Environmental Protection Licence
EPBC Act	*Environment Protection and Biodiversity Conservation Act 1999* (Cth)
EP&A Act	*Environmental Planning and Assessment Act 1979* (NSW)
EP&A Regulation	*Environmental Planning and Assessment Regulation 2021* (NSW)
ESD	Ecologically Sustainable Development
FIA	Flood Impact Assessment
FM Act	*Fisheries Management Act 1994* (NSW)
ft	Foot
FTE	Full Time Equivalent
GIS	Geographical Information Systems
GW	Gigawatt
ha	Hectares
Heritage Act	*Heritage Act 1977* (NSW)
HV	High Voltage
ICNG	Interim Construction Noise Guideline
IPC	Independent Planning Commission
KFH	Key Fish Habitat
kg	Kilogram
km	Kilometre
kV	Kilovolt
kVA	Kilovolt Amps
LALC	Local Aboriginal Land Council
LCVIA	Landscape Character and Visual Impact Assessment
LFP	Lithium ferro-phosphate
LEP	Local Environmental Plan
LGA	Local Government Area
LLS Act	*Local Land Services Act 2013*
LSPS	Local Strategic Planning Statement
LUCRA	Land Use Conflict Risk Assessment

Term	Definition
m	Metre
mm	Millimetre
MNES	Matters of National Environmental Significance
MV	Medium Voltage
MW	Megawatts
MWh	Megawatt hours
Narrabri LEP	*Narrabri Local Environment Plan 2012*
NDC	Nationally Determined Contributions
NEM	National Electricity Market
NENWRP	*New England North West Regional Plan 2041*
NMC	Lithium-Nickel-Manganese-Cobalt-Oxide
NSW	New South Wales
NVIA	Noise and Vibration Assessment
NPW Act	*National Parks and Wildlife Act 1974* (NSW)
NPfi	NSW Noise Policy for Industry
NPWS	National parks and Wildlife Service
NRAR	National Resources Access Regulator
NSW	New South Wales
OOH	Out of Hours
PCT	Plant Community Types
PHA	Preliminary Hazard Analysis
PMF	Probable Maximum Flood
POEO	*Protection of the Environment Operations Act 1997* (NSW)
Project Area	Lot 156 DP 754944 at 41 Stoney Creek Road, Narrabri NSW 2390 Road Reserve of Stoney Creek Road, Narrabri NSW 2390 Lot 6 DP 224780 at 80 Stoney Creek Road, Narrabri NSW 2390 Lot 1 DP 502189 at 70 Stoney Creek Road, Narrabri NSW 2390
PV	Photo Voltaic
RAMSAR	Wetlands of International Importance
RAPs	Registered Aboriginal Parties
REZ	Renewable Energy Zone
SAII's	Serious and Irreversible Impacts
SALRA	Soil and Agricultural Land Resource Assessments
SEAR's	Secretary's Environmental Assessment Requirements
SEPP	State Environmental Planning Policy (NSW)
SFAZ	Strategic Fire Advantage Zone
SGWIA	Surface and Groundwater Water Impact Assessment
SIA	Social Impact Assessment
SIS	Species Impact Statement
SLR	SLR Consulting Australia Pty Ltd

Term	Definition
SSAL	State Significant Agricultural Land
SSD	State Significant Development
TIA	Traffic Impact Assessment
TEC	Threatened Ecological Community
TMP	Traffic Management Plan
TS	Transmission System
TfNSW	Transport for New South Wales
VIA	Visual Impact Assessment
VPA	Voluntary Planning Agreement
WMP	Waste Management Plan

1.0 Introduction

1.1 Project Overview

SLR Consulting Australia Pty Ltd (SLR) on behalf of Enervest Operations Pty Ltd (Enervest) would like to request the Secretary's Environmental Assessment Requirements (SEARs) from NSW Department of Planning, Housing and Infrastructure (DPHI) to enable the lodgement of a State Significant Development (SSD) Application. The proposal involves the installation a Battery Energy Storage System (BESS) located at 41 Stoney Creek Road, Narrabri NSW 2390, adjacent to an existing substation facility.

The Project will involve the development, construction, operation, and eventual decommissioning of a Battery Energy Storage System (BESS) with a capacity of 125 Megawatts (MW) connecting via transmission line directly to the existing Narrabri 132/66kV substation operated by TransGrid, (henceforth referred to as 'the Project'). The Project will consist of BESS containers (or enclosures), with each container having dimensions of approximately 20 foot with an approximate weight of 35,000 kilograms (kg). The BESS will be supported by inverters which will convert the electricity from the BESS and connect to the existing TransGrid substation via approximately 320m of new underground lines.

The proposal is considered State Significant under the State Environmental Planning Policy (Planning Systems) 2021 (SEPP Planning Systems), as the proposed Electricity generating works are estimated to cost in excess of $30 million.

This Scoping Report has been prepared in accordance with the State Significant Development guidelines. The report presents an overview of the proposed BESS, its critical alignment with both national and state renewable energy policies, an overview of expected assessment requirements and intended community and stakeholder engagement.

1.2 Background

The Project has been developed to respond to the National, State and local climate change and energy framework aiming to deliver sustainable and reliable renewable energy supply within the network.

A comprehensive site selection process was undertaken to determine appropriate siting for the Project. This considered zoning, access, proximity to existing transmission infrastructure, ecological constraints, topography, and surrounding land uses. Of the sites reviewed, the Project Area was considered to best meet the criteria for successful delivery of the Project

A "do nothing" option was also considered, however this approach does not support the National and State objectives to improve energy affordability, invest in new power sources and network infrastructure, and ensure new technologies deliver benefits for customers and work towards Australia's emission reduction targets.

Detailed impact assessment has not yet been undertaken, however the specialist studies considered necessary to comprehensively assess the potential impacts of the Project from construction through to decommissioning are set out under Section 6.0 of this report. Where necessary, avoidance and mitigation measures will be employed throughout the Project design and operation where recommended within the detailed specialist assessments.

1.3 Project Objectives

The Australian energy market is undergoing an unprecedented transformation on the journey to a 100% renewable electricity grid. This transformation is seeking the rapid uptake of renewable energy and storage technologies. The market for large-scale energy storage in

Australia growing at a rapid rate, with batteries playing an ever-increasing role in the grid. Storage plays a significant role in dealing with 'peaky' demand, and the higher costs that energy users face during those peaks. Substantial investment and effort are being expended to increase the availability and use of storage technologies, including grid-scale batteries, to smooth out the availability of electricity generated from renewables at different times of the day.

The key objectives of the Project include the following:

- Minimise impacts to the local environment and surrounding community during construction, operation, and decommissioning;
- Contribute to improving the renewable power supply within the region;
- Provide critical energy storage within the State; and
- Improve the security, affordability, and sustainability of the State's electricity grid.

1.4 Proponent Details

Enervest is an Australian owned and operated company specialising in the design, construction and operation of dispatchable generation and storage assets. Enervest provide engineering and operational services on Australia's decarbonisation journey and is a developer of grid-scale battery storage and green hydrogen projects.

Enervest are proposing a BESS facility at this location, in addition to a number of other BESS facilities at sites across the nation, in response to an identified need for 60 gigawatts (GW) of energy storage by 2050 to support the renewable electricity grid due to variability of wind and solar power generation.

BESS are an energy storage technology that enable large capacity energy storage and release upon demand. Unlike many other forms of energy storage and generation, batteries are particularly valuable because they provide flexibility. They can respond faster than other energy storage or generation technology and help maintain grid stability by providing the stored energy on demand.

Table 2: Proponent Details

Requirement	Detail
Proponent	Enervest Operations Pty Ltd
ABN/ACN	51 160 709 286
Postal Address	Level 6/627 Chapel Street, South Yarra VIC 3141
Contact	Julian Voller
Contact Details	julian.voller@enervest.com.au

1.5 Document Purpose

The *Environmental Planning and Assessment Act 1979* (EP&A Act) and *Environmental Planning and Assessment Regulation 2021* (EP&A Regulation) form the statutory framework for the environmental impact assessment and planning approval of development in NSW. Both the EP&A Act and the EP&A Regulation are administered by the DPHI.

This Scoping Report has been prepared for the SSD component of the Project by SLR on behalf of the proponent, Enervest. The purpose of this Scoping Report is to request and inform the content of the SEARs issued by DPHI as delegate to the Minster for Planning and Public Spaces, for the EIS for the Project.

1.6 Consultation

On 21 October 2022, Enervest and SLR met with representatives of DPHI to introduce the project and obtain preliminary feedback. Enervest provided DPHI with a high-level concept plan and briefing letter which outlined the proposal and key items of consideration. The DPHI provided guidance on the preparation of the future SSD Application and identified areas for further investigation, including transmission connections and potential environmental impacts of the connection.

It is acknowledged that during the assessment process the application will be referred to several State agencies as well as Narrabri Shire Council (Council). The anticipated referrals include, Transport for New South Wales (TfNSW), TransGrid, NSW Environment and Heritage and Environmental Protection Authority (EPA).

Engagement with the local community has commenced between Enervest and stakeholders, by way of maildrop to residents and businesses of Narrabri, providing a project information sheet and a link to an online survey in February 2023. An online meeting has been held with the local Member of Parliament (MP) along with face-to-face meetings occurred in August 2023 with representatives of the following stakeholders:

- Council;
- Geni Energy (local not-for-profit community solar and battery installer);
- Narrabri Chamber of Commerce; and
- Narrabri Industrial Network.

Engagement with the Traditional Owners - the Gomeroi People via the Narrabri Local Aboriginal Land Council (LALC) has commenced with the maildrop and subsequent discussions with the CEO. Consultation will continue through the Aboriginal Cultural Heritage Assessment process and as required through targeted engagement.

1.7 Structure of Report

This Scoping Report has been prepared in accordance with DPHI's State Significant Development Guidelines – Preparing a Scoping Report (DPIE, 2022). The report contains the following information:

- **Chapter 1** – Introduction;
- **Chapter 2** – Strategic Context;
- **Chapter 3** – Project Description;
- **Chapter 4** – Statutory Context;
- **Chapter 5** – Engagement;
- **Chapter 6** – Proposed Assessment of Impacts;
- **Chapter 7** – Conclusion; and
- **Chapter 8** – References.

2.0 Strategic Context and Objectives

2.1 Strategic Need for the Project

The strategic policy context at the National, State, and local level underpins key Project objectives and need, and includes plans, policies, key strategic directions, and frameworks. This section outlines the relevant context and framework that applies to the Project.

2.1.1 National Context

2.1.1.1 The Paris Agreement

The Paris Agreement (United Nations Framework Convention on Climate Change, 2016) is a legally binding international treaty on climate change, adopted by 196 nations at the 2015 United Nations Climate Change Conference (COP 21) 21 in Paris in December 2015 and entered into force in November 2016. The goal of the Paris Agreement is to limit global warming to below 2 degrees Celsius (°C), preferably 1.5 °C when compared to pre-industrial levels.

Under the Paris Agreement, the Australian Government in committed to reducing emissions by 26 to 28% below 2005 levels by 2030 and must submit emissions reduction commitments known as Nationally Determined Contributions (NDCs). The 2021 NDC update committed Australia to net zero emissions by 2050, detailed low emissions technology stretch goals, affirmed the 2030 target, and reported 2021 Projections results. The NDC 2022 update had Australia increasing the ambition of our 2030 target by committing to reduce greenhouse gas emissions to 43% below 2005 levels by 2030.

The energy sector is a key part of Australia's emissions reduction effort as electricity generation is a key contributor to carbon emissions and hence the growth of renewables is crucial in the transition to low emission energy. The Project facilitates the growth of the Australian renewable energy network and will contribute to Australia's goals as per our latest NDC commitment to reduce greenhouse gas emissions to 43% below 2005 levels by 2030.

2.1.1.2 Powering Australia

The Australian Government's Powering Australia plan prepared by Department of Climate Change, Energy, the Environment and Water (DCCEEW) 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 expand and modernise Australia's electricity grids at low cost.

This proposal aligns with the intent of this plan.

2.1.1.3 AEMO Integrated System Plan

The Australia Energy Market Operators Integrated System (AEMO, 2022) Plan a whole-of-system plan that provides an integrated roadmap for the efficient development of the National Electricity Market (NEM) over the next 20 years and beyond. The plan identifies that by 2050, the NEM is likely to require 60GW of energy storage across the network to manage the variability of wind and solar on the journey to a 100% renewable electricity grid.

The proposal will provide an energy storage system on the subject site to provide this function of the NEM.

2.1.1.4 Australia's Long Term Emissions Reduction Plan

Australia's whole-of-economy Long-Term Emissions Reduction Plan (DCCEEW, 2022) seeks to achieve net zero emissions by 2050, through practical and responsible actions that will take advantage of new economic opportunities while continuing to serve traditional markets. The Plan focuses on technology that will help Australia cut emissions while creating jobs and growing our economy.

2.1.2 NSW Context

2.1.2.1 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.

While the Project is not located within a priority energy zone or renewable energy zone, it is considered to directly contribute to the distribution network proposed within the Transmission Infrastructure Strategy as a key private sector led investment to improve energy supply in the State.

2.1.2.2 NSW Electricity Strategy

The NSW Electricity Strategy (Department of Planning, Industry & Environment, 2019) is the NSW Government's plan for a reliable, affordable and sustainable electricity future that supports a growing economy. 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.

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.

2.1.2.3 Electricity Infrastructure Road Map

In 2020, the NSW Government released the electricity Infrastructure Roadmap.

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 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.

This proposal aligns with the intent of this road map.

2.1.2.4 NSW Climate Change Policy Framework

The NSW Climate Change Policy Framework (State of NSW and Office of Environment and Heritage, 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.

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.

As the Project would include the construction and operation of a BESS to further develop the renewable energy 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.

2.1.2.5 Net Zero Plan Stage 1: 2020-2030

The Net Zero Plan Stage 1: 2020-2030 (Department of Planning, Industry & Environment, 2020) 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.

2.1.2.6 Transmission Infrastructure Strategy

The Transmission Infrastructure Strategy (NSW Government, 2018) seeks to unlock private sector investment in priority energy infrastructure projects, which can deliver least cost energy to customers in 2040 and beyond. The strategy forms part of governments broader plan to make energy more affordable, secure investment in new power stations and network infrastructure and ensure new technologies deliver benefits.

2.1.2.7 Climate Change Policy Framework

The Climate Change Policy Framework (State of NSW and Office of Environment and Heritage, 2016) seeks to maximise the economic, social and environmental wellbeing of the State in the context of climate change and the emerging international and national policy actions to achieve the long term net zero emissions target. It identifies key policy directions for the state, including:

- Reduce climate change impacts on health and wellbeing;
- Manage impacts on natural resources, ecosystems and communities;
- Take advantage of opportunities to grow new industries in NSW; and
- Capture co-benefits and manage unintended impacts of external policies.

2.1.3 Regional Context

2.1.3.1 New England North West Regional Plan 2041 (NENWRP)

The regional plan recognises the future of energy is renewable and the regions resilient and diverse economy is on the cusp of unprecedented opportunities associated with the growing renewable energy sector. A key objective of the plan is for the region to be a leader in renewable energy technology and investment and contribute to the States net zero emissions by 2050. The plan specifically notes the importance of battery storage to support renewable energy forms to ensure they can reliably supply energy at all times.

This proposal aligns with the intent of this plan.

2.1.3.2 Narrabri Special Activation Precinct

The Narrabri Special Activation Precinct was announced in November 2020 to attract employment and investment opportunities to the region, capitalising on Narrabri's strategic location to Inland Rail, the Narrabri West Walgett Line and the Narrabri Northern NSW Inland Port. The Precinct will also identify housing, infrastructure, community and social needs required for the town to support additional growth. The investigation area of the Precinct includes the Narrabri Northern NSW Inland Port, which is located 6 km from the town centre on Yarrie Lake Road. The final boundary of the Precinct will be determined following technical investigations and community consultation.

Master planning is currently underway, due to complete in late 2023, to determine the area and land uses for the Precinct. This is being led by the Department of Planning, Industry and Environment, in partnership with the Department of Regional NSW and Narrabri Shire Council.

2.1.4 Local Context

2.1.4.1 Narrabri Local Strategic Planning Statement (LSPS)

The purpose of this document is to identify the Narrabri Shire's economic, social and environmental land use needs over the 20 years (until 2040). This plan helps to give effect to the NENWRP. The strategy notes that Narrabri is strategically located to attract investment in renewable energy development and specifically references battery systems and this will help leverage opportunities and projects to meet the governments net zero emissions target.

A key planning priority (no. 4) is to manage and support the transition to renewable energy. Council commitments include:

- Encourage and facilitate development of solar farms and EV charging sites in identified areas;
- Ensure the community is part of the transition to renewable energy; and
- Avoid and manage impacts on the scenic rural landscape and visitor attractions from renewable energy development and associated infrastructure.

2.1.4.2 Narrabri Shire Council Community Strategic Plan 2027

This strategy seeks to identify the community's aspirations for the future and is centred around four key directions, being social, environmental, economic and civic leadership outcomes for Narrabri. The vision is for a strong and vibrant regional growth centre providing a quality living environment for the entire community. Key strategies in the plan include:

- Planning controls appropriately identify and conserve open spaces and natural environmental areas;
- Decision making will be informed by the principles of Ecologically Sustainable Development and the precautionary principle;
- Investigate and implement alternative energy technologies to reduce Council's carbon footprint; and
- Promote opportunities created through abundant supply of energy and easy access to transport logistics.

2.2 Site Context

2.2.1 Locality

The Project Area is located on land approximately 900m from the northeast periphery of the township of Narrabri, within the Narrabri Shire Council Local Government Area (LGA). It is located approximately 320km due west of Coffs Harbour and 135km northwest of Tamworth. Narrabri Shire is strategically positioned at the crossroads of two major arterial roads, the Newell and Kamilaroi Highways, midway between Sydney and Brisbane. It is also considered the main freight hub in the Northern Inland Region of NSW, refer to Figure 1.

There are two other large towns within the LGA, being Boggabri and Wee Waa. A number of other villages are found throughout the LGA. Narrabri provides essential retail, commercial and community services to a range of local communities with a strong and growing economy centred on agricultural production, agribusiness and mineral resources production and includes several research institutions.

2.2.2 Site Description

The BESS site is identified as 41 Stoney Creek Road, Narrabri NSW 2390, being Lot 156 in DP 754944. The site also includes the existing Narrabri 132/66kV substation that the BESS would be connected to via a new underground line. The substation is located on Lot 1 in DP 502189, 70 Stoney Creek Road, Narrabri NSW 2390, approximately 40m southwest of the site. The substation is to the western corner adjacent to Lot 6 in DP 224780, 80 Stoney Creek Road, Narrabri NSW 2390, where the underground transmission line shall traverse leading into the substation, refer to Figure 2 and Figure 3.

The site is relatively flat and approximately 20ha in size and contains no existing built development. The total development footprint area is 4.29 ha.

2.2.3 Surrounding Areas

Scattered vegetation occurs sporadically along the site's boundaries, with the majority of land previously cleared for the purpose of regular crop planting and harvesting. Overhead powerlines run through the site at several locations.

The neighbouring lots are predominantly large rural lots and generally cleared land. The closest residence is approximately 600 metres from the proposed BESS facility to the south.

Narrabri Cemetery is located to the southwest of the site.

Stoney Creek Road runs along the site's southern extent of the site, with an existing substation located on the opposite side of this road.

2.2.4 Roads and Access

When approaching the site from the regional centre of Tamworth the Project Area is accessed via the Kamilaroi Highway or access from Moree to the north is via the Newell Highway. Access to the township of Narrabri is via Stoney Creek Road onto Old Cemetery Road. Old Cemetery Road merges into Doyle Street and runs directly into the centre of the township of Narrabri and connects to the Newell Highway which then connects to the Kamilaroi Highway. Access to the Project Area is via Stoney Creek Road.

2.2.5 Approvals History

There are no related or associated approvals relevant to this Project.

A review of the Narrabri Shire Council Local Development Register (from June 2011 to present) did not identify any development history on the subject site.

2.2.6 Sensitive Receptors

Based on the definition of noise sensitive receivers in the NSW Noise Policy for Industry (NPfI), nine (9) noise sensitive receptors were identified within 1.1 km of the Project Area boundary and are listed in Table 3 in relation to the BESS location. Receptors 2 through 7 comprise a cluster of neighbouring residential dwellings that, for practical purposes, can be regarded as a unified receptor. Additional evaluation pertaining to these receptors along with the receptors within a 2-kilometer radius identified in Figure 10 will be undertaken in the future EIS.

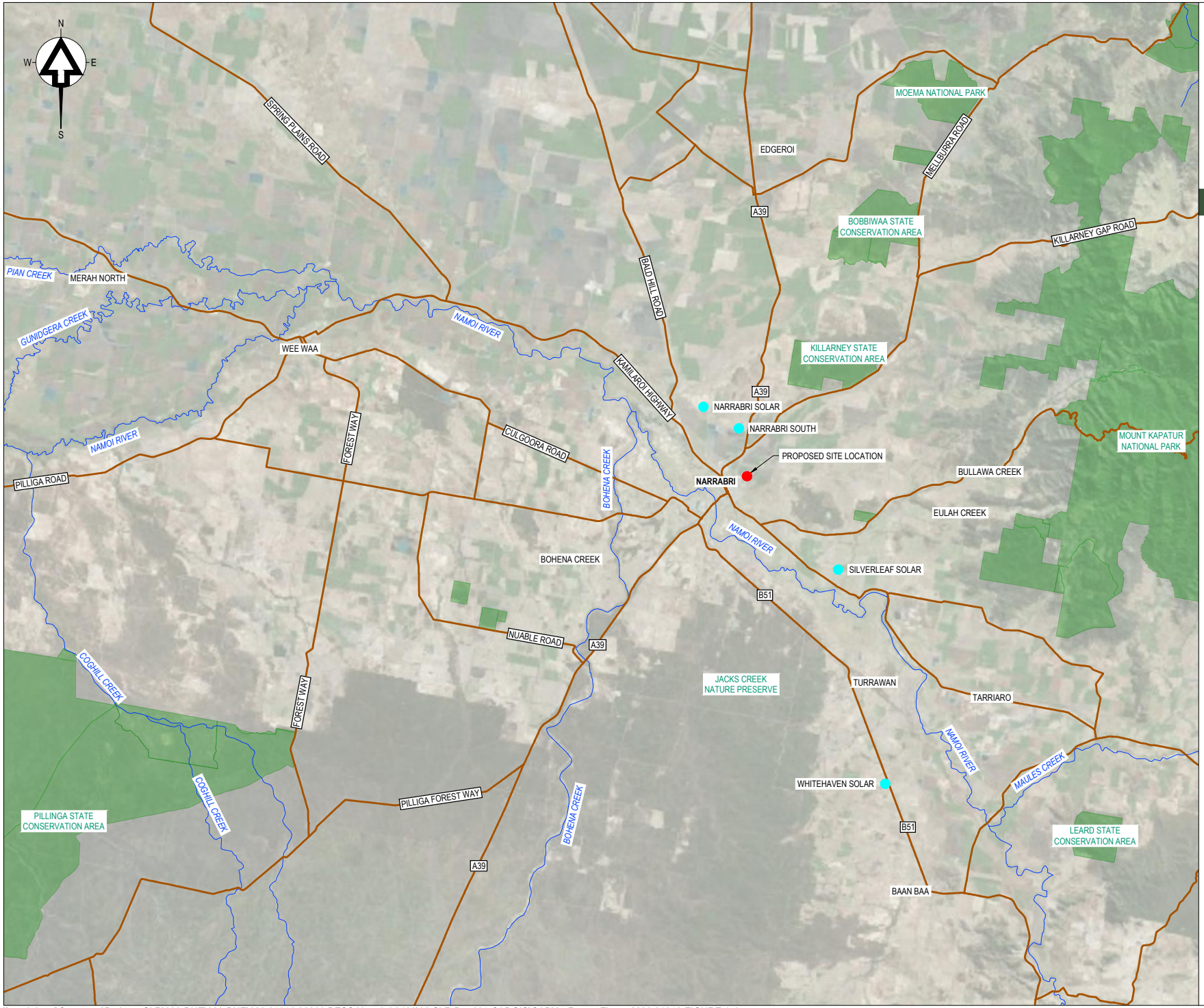
Table 3: Assessed Noise Sensitive Receptors

Receptor ID	Address	Easting (GDA2020 – MGA54)	Northing (GDA2020 – MGA54)	Distance to Site Centroid
R1	80 Stoney Creek Rd	1347669.635	6612638.727	630m
R2	12 Bailey St	1346872.612	6612951.283	790m
R3	10 Bailey St	1346882.654	6612932.844	800m
R4	8 Bailey St	1346895.647	6612912.097	810m
R5	6 Bailey St	1346894.196	6612893.516	820m
R6	4 Bailey St	1346909.666	6612877.769	830m
R7	2 Bailey St	1346914.601	6612860.767	840m
R8	74 Goldman St	1347451.149	6612380.593	960m
R9	19 Stoltenbergs Rd	1348654.36	6614178.888	1100m

PROJECT OPUS BESS
STONEY CREEK - 3400

LOCAL CONTEXT PLAN

FIGURE 1



LEGEND:

- PROPOSED SITE LOCATION
- PROPOSED LOCAL SITE SIGNIFICANT DEVELOPMENT (SSD) SITES
- ROAD NETWORK
- RIVERS AND CREEKS
- PARKS/CONSERVATION AREAS

0.0 0.04 0.08 0.12 0.16
KILOMETRES

SCALE 1:400 000

Coordinate System:	(GDA2020) MGA Zone 55
Scale:	1:400 000
Project Number:	620.31316
Date:	20-Aug-2024
Drawn by:	JG

SLR

\\au.slr.local\Corporate\Projects-SLR\620-BNE\620-BNE\620.31316.00000 BESS Narrabri 3400\06 SLR Data\01 CADGIS\CAD\05 Report Figures\620.31316-FIGURE 1.dwg

PROJECT OPUS BESS
NARRABRI - 3400

SITE PLAN

FIGURE 2

- Road
- Track
- Transmission Line
- Project Area
- Cadastral Plan

0 100 200 m

Coordinate System:	GDA2020 MGA Zone 55
Scale:	1:7,500 at A4
Project Number:	620.31316
Date:	21-Dec-2023
Drawn by:	NT

SLR

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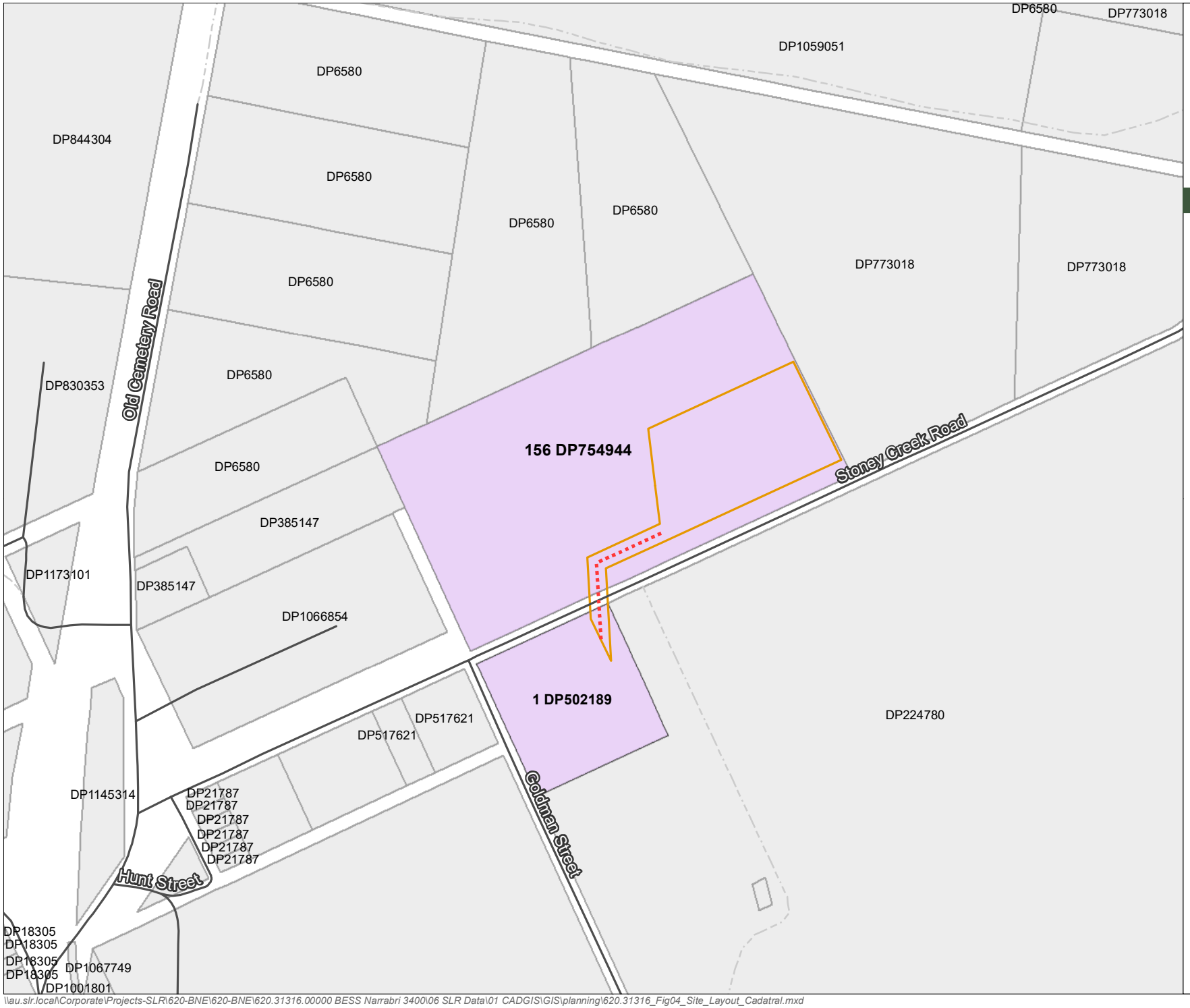

PROJECT OPUS BESS
NARRABRI - 3400

CADASTRAL PLAN

FIGURE 3

- Road
- Track
- Transmission Line
- Project Area
- Project Cadastral Plan
- Cadastral Plan

0 100 200 m

Coordinate System:	GDA2020 MGA Zone 55
Scale:	1:7,500 at A4
Project Number:	620.31316
Date:	21-Dec-2023
Drawn by:	NT

SLR

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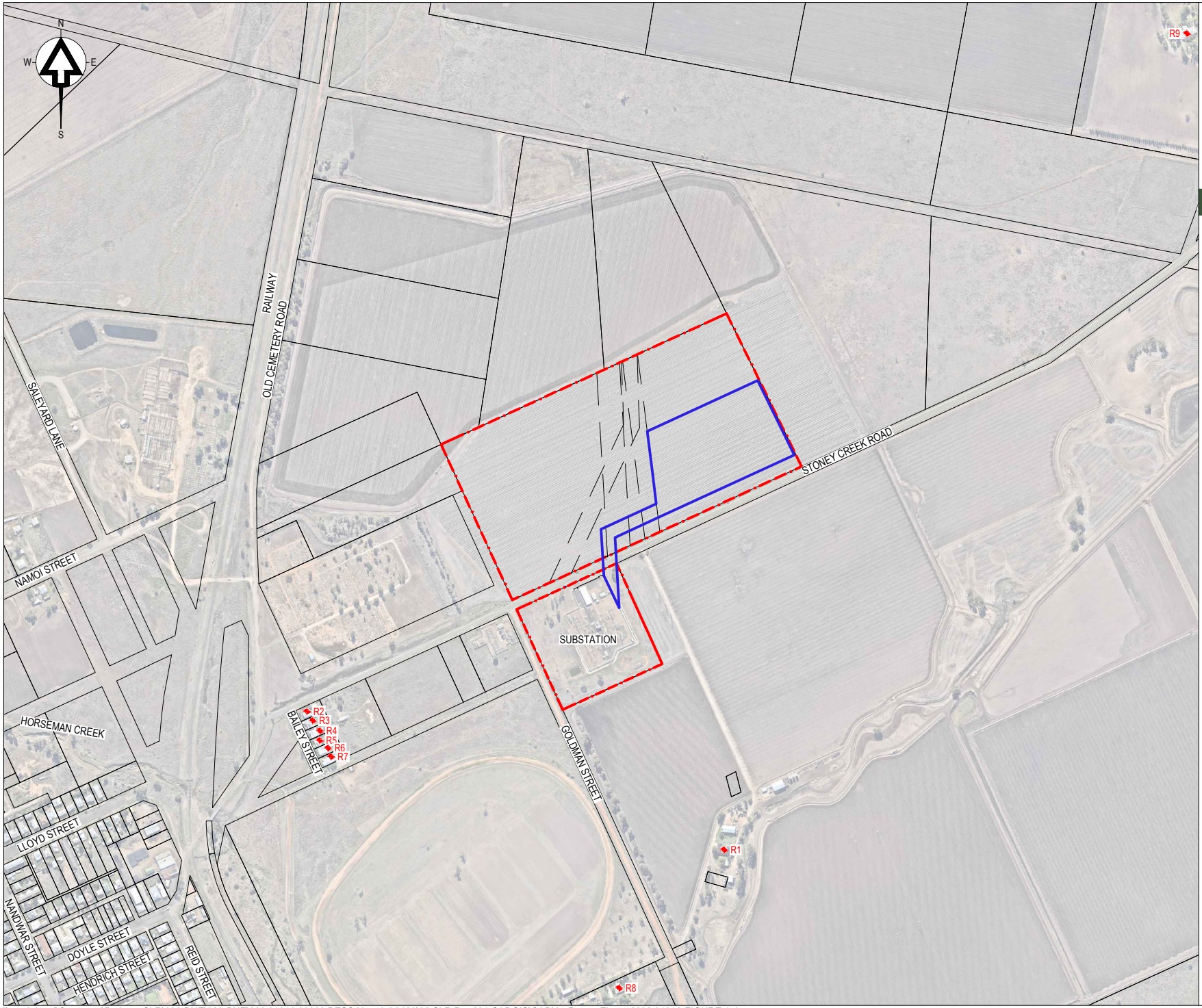
PROJECT OPUS BESS
STONEY CREEK - 3400

NEARBY RECEIVERS ENGAGED

FIGURE 4



LEGEND:

- CADASTRAL BOUNDARY
- EASEMENT BOUNDARY
- PROJECT AREA
- DEVELOPABLE AREA
- NEARBY RECEIVERS

RECEPTOR ID	ADDRESS
R1	80 STONEY CREEK RD
R2	12 BAILEY ST
R3	10 BAILEY ST
R4	8 BAILEY ST
R5	6 BAILEY ST
R6	4 BAILEY ST
R7	2 BAILEY ST
R8	74 GOLDMAN ST
R9	19 STOLTENBERGS RD

0.0 100 200 300 400
METRES

SCALE 1:10000

Coordinate System:	(GDA2020) MGA Zone 55
Scale:	1:10 000
Project Number:	620.31316
Date:	06-Sep-2024
Drawn by:	JG

SLR

\\au.slr.local\Corporate\Projects-SLR\620-BNE\620-BNE\620.31316.00000 BESS Narrabri 3400\06 SLR Data\01 CADGIS\CAD\05 Report Figures\620.31316-FIGURE 4.dwg

2.2.7 Soils

The Project Area occurs on Vertosol soil in accordance with the Australian Soil Classification Soil Orders. Vertosols are clay rich soils with high agricultural potential with high chemical fertility and water holding capacity. They require a high level of rainfall before water is available to plants. Vertosol soils are found in the Liverpool Plains and areas in Northern NSW.

The majority of the Project Area is classified by the NSW DPHI eSPADE mapping as having slight but significant limitations and is rated as Land & Soil Capability Class 2. The Project Area is identified as State Significant Agricultural Land (SSAL) on the Draft State Significant Agricultural Land Map.

Contaminated land is not recorded on the subject site.

The Project Area is not assessed against acid sulfate soil (ASS) risk according to the available data. Following the issue of the SEARs it will be determined if geotechnical testing will be required, this may include further confirmation on ASS.

2.2.8 Biodiversity

There are no trees located within the Project Area. It is noted that the road reserve area is vegetated with weeds and grasses. Neighbouring lots are also agricultural managed land.

There are no Biodiversity Values (BVs) Plant Community Types (PCTs) mapped within the Project Area, refer to Figure 5.

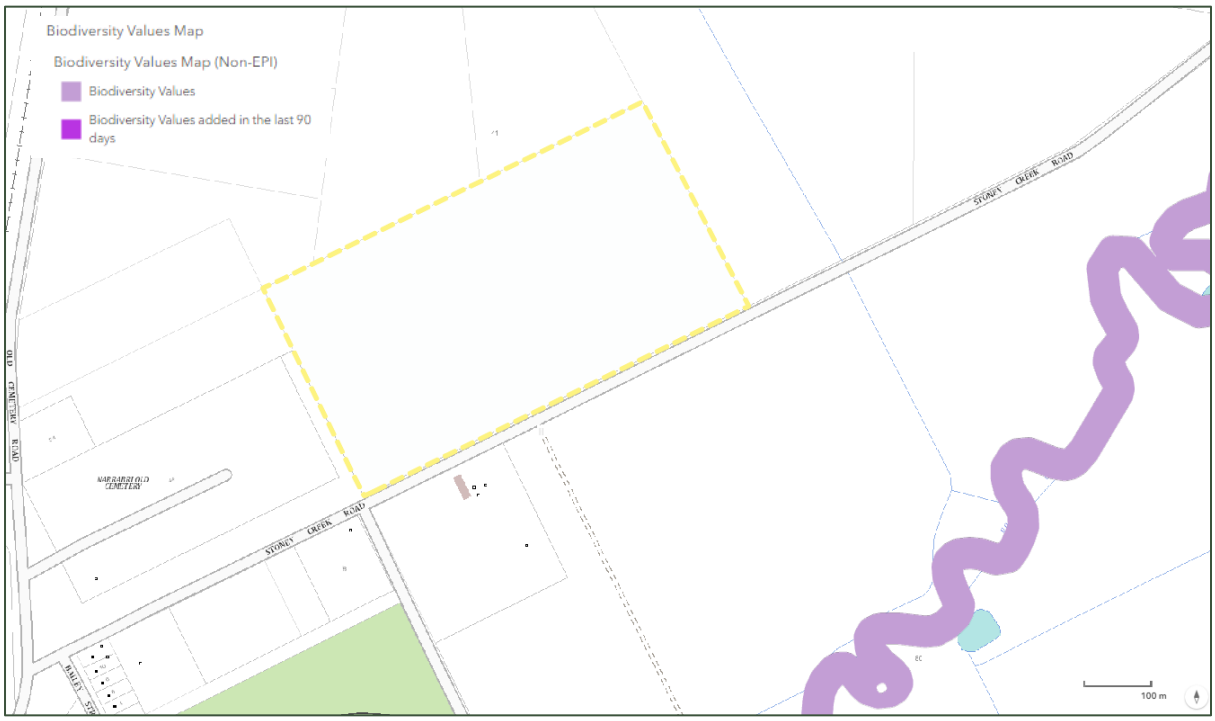
2.2.9 Bushfire

The Project Area is not mapped as bushfire prone land under the NSW Rural Fire Service's Bushfire Prone Land mapping.

2.2.10 Waterbodies

Waterbodies that occur within a local context include small artificial lakes, dams, and creeks that are scattered within private land allotments and generally utilised for livestock consumption and irrigation purposes associated with farming enterprises. There are no creeks or waterbodies that traverse the Project Area.

Figure 5: Biodiversity Mapping Extract



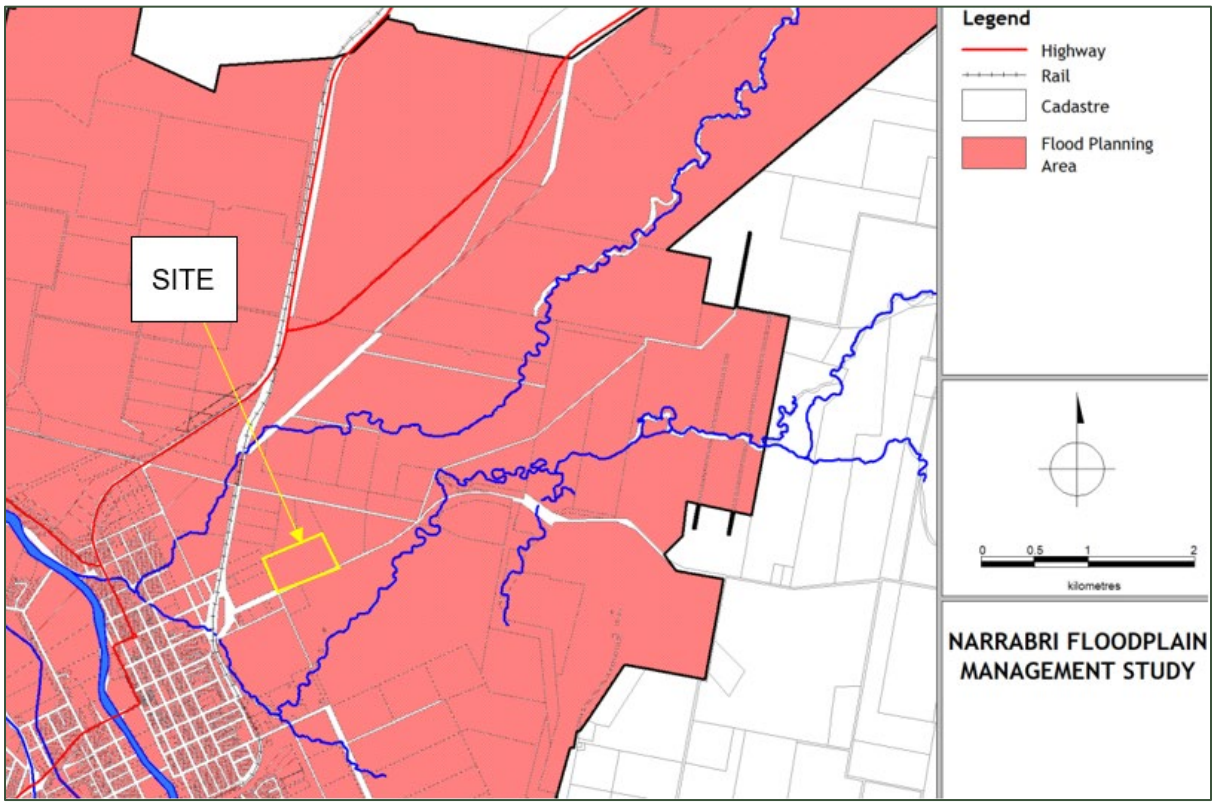
Source: Biodiversity Values Map and Threshold Tool, NSW Office of Environment and Heritage

2.2.11 Flood Hazard

The entire Project Area is mapped as being within a flood planning area, refer to Figure 6. Flood planning levels may apply to the Project.

There is a small agricultural dam located 800m from the Project Area eastern boundary and a watercourse that connects to the dam approximately 300m from the Project Area northern boundary. The Project is not expected to impact the dam or identified watercourse.

Figure 6: Flood Planning Map Extract



Source: Narrabri Floodplain Risk Management Study and Plan (2023) WRM

2.2.12 Heritage

A desktop assessment was conducted using the NSW Government's Aboriginal Heritage Information Management System ('AHIMS') Search Tool. The search results have identified that there are no Aboriginal sites recorded within 1km of the proposed development.

The adjoining Narrabri Cemetery is identified as an item of local significance.

2.2.13 Mine Subsidence

The site is not located within a mine subsidence district.

2.3 Voluntary Planning Agreements

The applicant has not entered into any agreements with other parties, including planning agreements, landowners and benefit-sharing schemes.

2.4 Project Alternatives Considered

2.4.1 Transmission Line Routes

Existing transmission lines traverse the site and link to the Narrabri 132/66kV substation, this offers the opportunity to connect the proposed BESS to the existing transmission lines or propose new transmissions to connect to the Narrabri 132/66kV substation.

It is envisioned that new underground transmission lines will be the most practical form of connection to the existing Narrabri substation. However, further consultation shall be

undertaken with TransGrid to determine the best connection method for the proposal, and the final EIS will be made in accordance with the final position.

2.4.2 Alternative Sites

In general terms, BESS facilities require large areas of land located adjacent to, or in close vicinity to, an existing powerline and 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.

Enervest identified a number of criteria during site selection and suitability assessment for the Project, including the following key considerations:

- Appropriate zoning of land to facilitate development consent for a BESS;
- Availability of existing access to the site via an establish road network;
- Proximity to the existing TransGrid substation to minimise impacts of easements; and
- Selection of a construction location that would avoid and/or minimise impacts to high quality native vegetation and protected fauna.

Development of this type can demonstrate compatibility within a rural setting, and the future EIS studies will consider land use conflicts and compatibility.

2.4.3 Do Nothing

A 'do-nothing' approach would involve not constructing and operating the BESS at the identified site. This approach will not support the State and National Government's plans, policies, and strategies to improve energy affordability, invest in new power sources and 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).

2.5 Cumulative Impacts

There are a number of projects within the Narrabri LGA and surrounds that have the potential to result in cumulative impacts during the construction period. Table 4 below summarises projects identified across the Major Projects and Regional Planning Panel websites that are in proximity to the Project site.

Table 4: Significant Projects in the LGA and Surrounds

Project Name	Distance from Project site	Project Status	Project Summary	Potential Overlap	Cumulative Impacts
Department of Planning, Housing and Infrastructure (SSD)					
Maules Creek Solar Farm SSD-6244372	38km south east	EIS Preparation	100 MW solar farm, a 120 MW / 240 MWh BESS, and electrical substation	Potential construction overlap (construction estimated to commence early 2026) Operations overlap	Noise/Vibration – No direct cumulative impacts due to separation distances. Biodiversity (Standard Assessment) - To determine any common impacts. Aboriginal and Historic Heritage (Standard Assessment) – To determine cumulative impacts of projects. Traffic/Access (Standard Assessment) – To determine potential cumulative impacts arising from the interaction of projects on road networks. Visual Amenity – No direct cumulative impacts due to separation distances. Land Quality / Agricultural Impacts (Standard Assessment) – Land use conflict risk assessment will consider effects on regional agricultural activity. Social/Economic (Detailed Assessment) – To determine potential cumulative impacts arising from the interaction of these projects on local facilities, goods and services, including staff accommodation.
Silverleaf Solar Farm SSD-9358	4.5km north west	Determined (Approved)	Construction and operation of a photovoltaic (PV) generation facility with an estimated capacity of 120 MW; and associated infrastructure	Construction timeframes unknown Operations overlap	Noise/Vibration (Standard Assessment) - To determine any cumulative impacts. Biodiversity (Standard Assessment) - To determine any common impacts. Flood (standard assessment) – to determine cumulative impacts of development on the flood regime Aboriginal and Historic Heritage (Standard Assessment) – To determine cumulative impacts of projects. Traffic/Access (Standard Assessment) – To determine potential cumulative impacts arising from the interaction of projects on road networks. Visual Amenity (Standard Assessment) - To determine any common impacts. Land Quality / Agricultural Impacts (Standard Assessment) – Land use conflict risk assessment will consider effects on regional agricultural activity. Social/Economic (Detailed Assessment) – To determine potential cumulative impacts arising from the interaction of these projects on local facilities, goods and services, including staff accommodation.

Project Name	Distance from Project site	Project Status	Project Summary	Potential Overlap	Cumulative Impacts
Narrabri South Solar Farm SSD-8387	9km south east	Determined (Approved)	60MW solar PV system with a footprint of approximately 152Ha on a site with an area of approximately 190H Subsequent modification (powerline realignment and battery system) being prepared.	Construction status unknown Operations overlap	Noise/Vibration (Standard Assessment) - To determine any common impacts. Biodiversity (Standard Assessment) - To determine any common impacts. Aboriginal and Historic Heritage (Standard Assessment) – To determine cumulative impacts of projects. Traffic/Access (Standard Assessment) – To determine potential cumulative impacts arising from the interaction of projects on road networks. Visual Amenity (Standard Assessment) - To determine any common impacts. Land Quality / Agricultural Impacts (Standard Assessment) – Land use conflict risk assessment will consider effects on regional agricultural activity. Social/Economic (Detailed Assessment) – To determine potential cumulative impacts arising from the interaction of these projects on local facilities, goods and services, including staff accommodation.
Joint Regional Planning Panel (Northern Region)					
PPSNTH-122	45km south east	Determined (Approved)	Establishment of a 5MW Solar PV Electricity Generation Facility with Associated Infrastructure	Site works commenced - no construction overlap anticipated Operations overlap	Noise/Vibration – No direct cumulative impacts due to separation distances. Biodiversity (Standard Assessment) - To determine any common impacts. Aboriginal and Historic Heritage (Standard Assessment) – To determine cumulative impacts of projects. Traffic/Access (Standard Assessment) – To determine potential cumulative impacts arising from the interaction of projects on road networks. Visual Amenity – No direct cumulative impacts due to separation distances. Land Quality / Agricultural Impacts (Standard Assessment) – Land use conflict risk assessment will consider effects on regional agricultural activity. Social/Economic (Detailed Assessment) – To determine potential cumulative impacts arising from the interaction of these projects on local facilities, goods and services, including staff accommodation.
PPSNTH-100	6km south west	Determined (Approved)	Establishment of a Solar PV Electricity Generation Facility	Construction commencement date unknown	Noise/Vibration (Standard Assessment) - To determine any common impacts. Biodiversity (Standard Assessment) - To determine any common impacts.

Project Name	Distance from Project site	Project Status	Project Summary	Potential Overlap	Cumulative Impacts
			with Associated Infrastructure	Operations overlap	Aboriginal and Historic Heritage (Standard Assessment) – To determine cumulative impacts of projects. Flood (standard assessment) – to determine cumulative impacts of development on the flood regime. Traffic/Access (Standard Assessment) – To determine potential cumulative impacts arising from the interaction of projects on road networks. Visual Amenity (Standard Assessment) - To determine any common impacts. Land Quality / Agricultural Impacts (Standard Assessment) – Land use conflict risk assessment will consider effects on regional agricultural activity. Social/Economic (Detailed Assessment) – To determine potential cumulative impacts arising from the interaction of these projects on local facilities, goods and services, including staff accommodation.
PPSNTH-98	32km west	Determined (Approved)	Establishment of a 5MW Solar PV Electricity Generation Facility with Associated Infrastructure	Construction commencement date unknown Operations overlap	Noise/Vibration – No direct cumulative impacts due to separation distances. Biodiversity (Standard Assessment) - To determine any common impacts. Aboriginal and Historic Heritage (Standard Assessment) – To determine cumulative impacts of projects. Traffic/Access (Standard Assessment) – To determine potential cumulative impacts arising from the interaction of projects on road networks. Visual Amenity – No direct cumulative impacts due to separation distances. Land Quality / Agricultural Impacts (Standard Assessment) – Land use conflict risk assessment will consider effects on regional agricultural activity. Social/Economic (Detailed Assessment) – To determine potential cumulative impacts arising from the interaction of these projects on local facilities, goods and services, including staff accommodation
PPSNTH-99	3km south east	Determined (Approved)	Establishment of a 5MW Solar PV Electricity Generation Facility with Associated Infrastructure	Construction commencement date unknown Operations overlap	Noise/Vibration (Standard Assessment) - To determine any common impacts. Biodiversity (Standard Assessment) - To determine any common impacts. Aboriginal and Historic Heritage (Standard Assessment) – To determine cumulative impacts of projects. Flood (standard assessment) – to determine cumulative impacts of development on the flood regime.

Project Name	Distance from Project site	Project Status	Project Summary	Potential Overlap	Cumulative Impacts
					Traffic/Access (Standard Assessment) – To determine potential cumulative impacts arising from the interaction of projects on road networks. Visual Amenity (Standard Assessment) - To determine any common impacts. Land Quality / Agricultural Impacts (Standard Assessment) – Land use conflict risk assessment will consider effects on regional agricultural activity. Social/Economic (Detailed Assessment) – To determine potential cumulative impacts arising from the interaction of these projects on local facilities, goods and services, including staff accommodation.
PPSNTH-97	46km south east	Determined (Approved)	Establishment of a 5MW Solar PV Electricity Generation Facility with Associated Infrastructure	Site works commenced – no construction overlap anticipated Operations overlap	Noise/Vibration – No direct cumulative impacts due to separation distances. Biodiversity (Standard Assessment) - To determine any common impacts. Aboriginal and Historic Heritage (Standard Assessment) – To determine cumulative impacts of projects. Traffic/Access (Standard Assessment) – To determine potential cumulative impacts arising from the interaction of projects on road networks. Visual Amenity – No direct cumulative impacts due to separation distances. Land Quality / Agricultural Impacts (Standard Assessment) – Land use conflict risk assessment will consider effects on regional agricultural activity. Social/Economic (Detailed Assessment) – To determine potential cumulative impacts arising from the interaction of these projects on local facilities, goods and services, including staff accommodation

3.0 Project Description

3.1 Project Summary

The Project will involve the development, construction, operation, and eventual decommissioning of a BESS with a capacity of 125MW/8h connecting via transmission line directly to the existing Narrabri 132/66kV substation operated by TransGrid. The Project will consist of BESS containers (or enclosures), with each container having dimensions of approximately 20ft with an approximate weight of 35,000kg. The BESS will be supported by inverters which will convert the electricity from the BESS and connect to the existing TransGrid substation via approximately 320m of new underground lines.

The proposal is considered State Significant under the Planning Systems SEPP, as the proposed Electricity generating works are estimated to cost in excess of $30 million.

The key aspects of the project are summarised in Table 1 and are particularised in detail below.

3.2 Project Overview

3.2.1 Construction

Construction of the Project would 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.

A Construction Environmental Management Plan (CEMP) will be prepared, prior to construction describing how the activities will be undertaken during the construction phase of the development and how these activities will be managed to mitigate environmental impacts.

3.2.2 Construction Activities

It is anticipated that the construction and commissioning phase will last approximately 12 months with the project forecast to commence within 12 months of determination. Over that time, the main construction activities will include:

- Mobilisation and establishment of access, temporary construction facilities and laydown area;
- Transport of construction personnel, associated heavy and light vehicles, and materials to and from site on a day-to-day basis, dependent on construction schedule;
- Road works to formalise internal site access road to accommodate heavy vehicles, including a new driveway crossover to Stoney Creek Road;
- Clearing and grubbing, cut, fill and compaction activities to create level pads;
- Installation of drainage;
- Installation of concrete footings or pads to support transformers, BESS battery packs, control building and other outdoor electrical infrastructure;
- Delivery and placement of all equipment on the footings/pads;

- Trenching, installation and backfilling of underground cabling between equipment on the pad including the BESS battery packs, transformers, auxiliary electrical equipment and the control room;
- Construction of hardstand, paved internal roads, control room/switchgear, transformers, circuit breakers, harmonic filters, auxiliary underground transmission lines, car parking, lay down area, landscaping, security fencing/lighting, and a single demountable building used for storage (refer to Figure 7 and Figure 8);
- Acoustic attenuation measures, to be determined as part of detailed assessment; and
- Removal of temporary construction facilities, and rehabilitation of disturbed areas following completion of construction of the Project.

3.2.3 Construction Materials

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

- Approximately 192 battery units, within shipping containers (192 containers);
- Approximately 64 Inverters;
- Gravel hardstand work materials and equipment;
- Bulk earthworks materials and equipment;
- Piling;
- Cabling;
- Building structures (incl. temporary structures for construction crew and management);
- Internal roads and parking areas;
- Control room and 33kV Switchgear;
- Harmonic Filters;
- Auxiliary transformers;
- Fence, gates and lighting;
- Fire Safety System; and
- 33kV Main Transformer.

3.2.4 Construction Hours and Personnel

For the construction workforce, based on SLR experience of other BESS facilities, it is expected there will be 40 staff on-site per day (or 80 trip movements per day), which across the 12 month construction period is equivalent to 29,200 trip movements.

The proposed development construction timeframe consists of the following:

- On site construction works are anticipated to take approximately 12 months; and
- Testing and commissioning of the BESS is anticipated to take approximately 4 weeks.

The proposed construction hours are anticipated to be as follows:

- Monday to Saturday: 6:30am – 6:30pm; and
- Sunday: 8am – 1pm.

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.

3.2.5 Construction Traffic

Vehicles during construction will generally involve small/light utes and some small trucks for delivery of electrical and earth work products. Heavy vehicles will be used to deliver larger hardware.

All construction vehicles and equipment will be parked and located within the project site area. Any temporary parking and set down areas required during the construction phase will be reinstated and landscaped once the facility is operational.

3.2.6 BESS Components

A summary of the development description is detailed in Table 5 below.

Table 5: Development Description Summary

Aspect	Details
Project Name	Stoney Creek Battery Energy Storage System (BESS)
Site Address	41 Stoney Creek Road, Narrabri NSW 2390
Lot & Plan for BESS	Lot 156 in DP 754944
Lot & Plan for Transmission line	Lot 156 in DP 754944 Lot 6 in DP 224780 Lot 1 in DP 502189 Stoney Creek Road reserve
Local Government Area (LGA)	Narrabri Shire LGA
Renewable Energy Zone	No
Land Zoning	RU1 Primary Production
Maximum Output	125 MW
Battery Type	Lithium Ion
Subject Site Size (Lot 156 in DP7544944 only)	20.2 ha
Total Development Footprint	4.29 ha
Current Land Use	Agricultural

The batteries units will be stored in fully enclosed battery storage containers. The battery storage container will be within shipping or modular containers. Each battery storage container will be approximately 6m long, 2.5m wide and 3m high, similar to a typical 20-foot shipping container. The battery storage containers will be placed in rows and will industry standard separation distances.

Each section will consist of BESS containers which will run in two northeast-southwest aligned rows, with one of the rows in a side-by-side formation, along with inverters. The BESS will be supported by approximately 64 inverters which will convert the electricity from

the BESS and connect to proposed substation before connecting to the existing transmission line.

Inverters and medium voltage (MV) transformers will be required at each battery storage container. The inverters are required to convert direct current (DC) to alternating current (AC) and the transformers are required to step up the voltage to 33kV. The inverters and transformers will be housed in modular containers.

Electrical cabling connecting the onsite infrastructure (e.g. electrical cabling connecting the batteries, inverters and transformers) will be located underground in accordance with relevant Australian Standards.

A 33kV switch room will be required at the BESS facility to control the delivery of electricity to and from the existing adjacent Narrabri substation.

The BESS facility will require its own substation to transform MV to high voltage (HV), and vice versa.

3.2.6.1 Connection to Existing Substation

The proposal will involve connecting the BESS facility to the existing adjacent Narrabri 132/66kV substation via a new underground transmission line that shall traverse the site. At this stage it is anticipated that a new underground transmission line will be installed within the site to the Narrabri 132/66kV substation.

There are existing overhead transmission lines traversing the site and crossing Stoney Creek Road into the Narrabri 132/66kV substation, it is unlikely that these existing transmissions lines will be utilised to connect the BESS to the Narrabri substation. Refer to Figure 7 below.

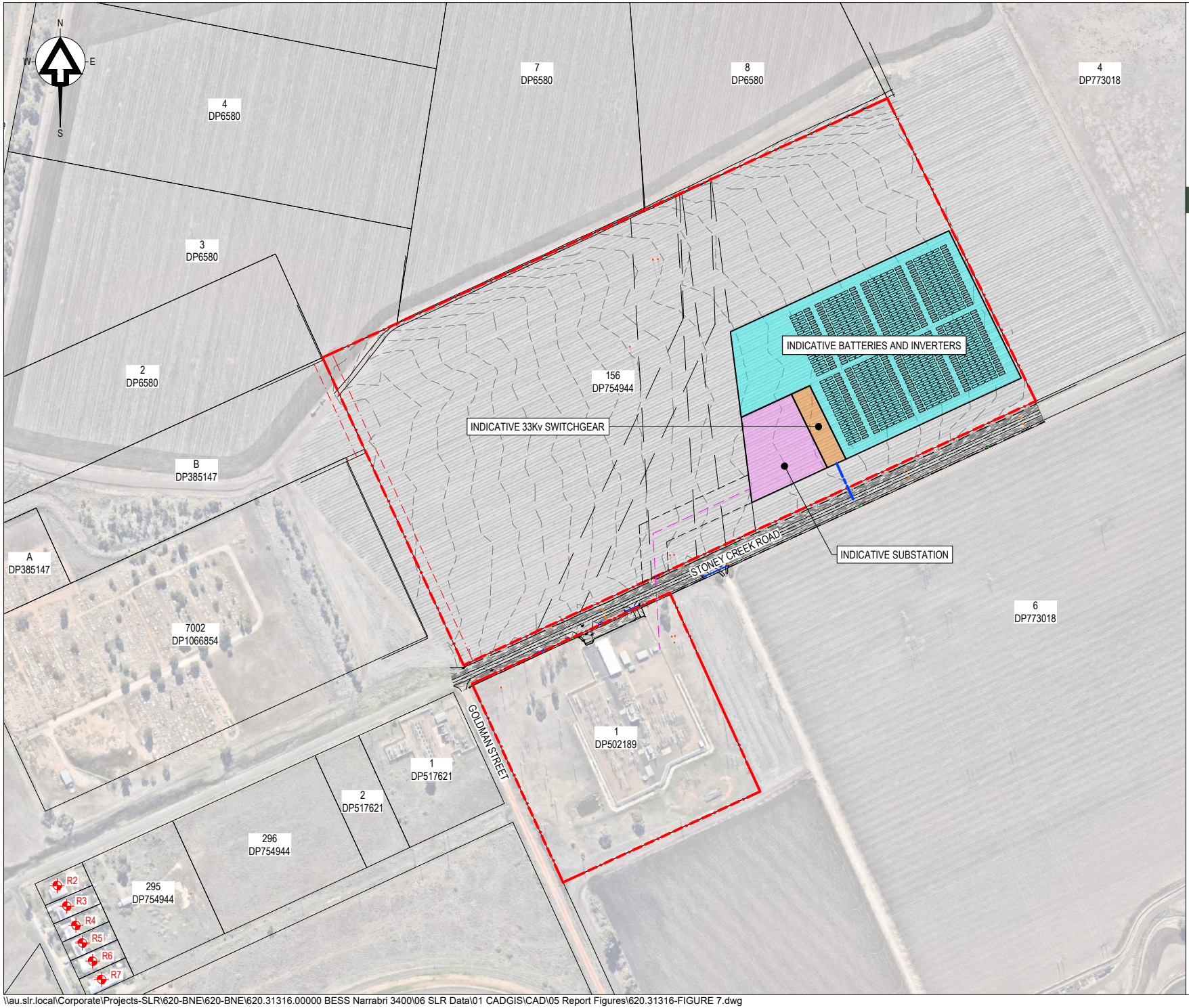
3.2.6.2 Access and Parking

Access to the site for both the construction and operational stages of the development will be from Stoney Creek Road.

Vehicle parking will be provided on site for general maintenance staff. Construction vehicles and parking will utilise a temporary laydown area.

3.2.6.3 Construction Waste

Construction waste will be removed by the contractor during construction.



PROJECT OPUS BESS
STONEY CREEK - 3400

INDICATIVE SITE LAYOUT

FIGURE 7

NOTES:

1. CONTOUR INTERVAL 1m, MGA 2020 COORDINATES.

LEGEND:

- CADASTRAL BOUNDARY
- EASEMENT BOUNDARY
- 215.0 EXISTING GROUND CONTOURS
- TRANSMISSION LINE
- ELECTRICAL INFRASTRUCTURE CORRIDOR (26m)
- PROJECT AREA
- INDICATIVE ACCESS ROUTE TO SITE
- INDICATIVE SUBSTATION LOCATION
- INDICATIVE 33Kv SWITCHGEAR LOCATION
- INDICATIVE BATTERIES AND INVERTERS LOCATIONS
- B BATTERY
- I INVERTER
- NEARBY RECEIVERS

RECEPTOR ID	ADDRESS
R2	12 BAILEY ST
R3	10 BAILEY ST
R4	8 BAILEY ST
R5	6 BAILEY ST
R6	4 BAILEY ST
R7	2 BAILEY ST

0.0 50 100 150 200
METRES

SCALE 1:5000

Coordinate System:	(GDA2020) MGA Zone 55
Scale:	1:5 000
Project Number:	620.31316
Date:	06-Sep-2024
Drawn by:	JG

SLR

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3.3 Operational Phase

3.3.1 Operational Activities

The following activities are anticipated during the operational phase of the development:

- 30 year operational period, plus an additional 10 year lease option; and
- Full servicing of the inverters and substation equipment on a quarterly basis.

3.3.2 Operations Workforce

Once operational, there will be no activities that require large numbers of workforce on-site. For the majority of the development's lifespan, operations will involve a range of preventative, corrective and condition-based maintenance activities which would entail various maintenance, inspection and servicing for the BESS, the associated electrical network and internal road infrastructure.

During operation, 1-2 permanent staff will be present on site.

For the first 6 months, maintenance visits may be required weekly to resolve any initial issue as the asset becomes fully operational. Thereafter, scheduled maintenance visits will occur quarterly for a duration of 1-3 days. These visits will occur Monday to Friday and within normal business hour and agreed ahead of time.

Reactive, unplanned maintenance visits is extremely rare. However, access to the site will be required 24hrs a day 7 days per week to manage any faults or unexpected operational issues.

3.3.3 Hours of Operation

The BESS will operate at anytime of the day depending on different energy supply and demand scenarios however, it will never operate continually 24 hours per day, 7 days per week.

3.3.4 Waste Management

Once operational, the development does not propose a site office, therefore no on-site waste facilities will be required. All rubbish will be removed by the maintenance workforce on site.

3.4 Decommissioning

The BESS is expected to operate for the duration of the 30 year lease, with a 10 year lease renew option. It will then be decommissioned and the infrastructure removed, with reinstatement works required to return the site as close as possible to its original state and use. The standard construction hours and heavy vehicles, plant, and equipment required for the construction of the Project would also apply to the decommissioning phase.

3.5 Tenure

The BESS facility footprint will be leased from the landowner on a long-term 30 year basis, with a 10 year option to renew lease. No Subdivision is proposed for this development.

3.6 Estimated Development Cost

The Estimated Development Cost (EDC) of the Project is estimated at $160 million, which exceeds the SSD criteria. Therefore the Project is classified as SSD in accordance with Schedule 1, Clause 20 'Electricity generating works and heat or co-generation' of the State Environmental Planning Policy (Planning Systems) 2021 (Planning Systems SEPP).

A detailed EDC report would be prepared as part of the SSD application process.

4.0 Statutory Context

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 requirement for development consent and various development controls are set out in environmental planning instruments (EPIs), including State Environmental Planning Policies (SEPPs) and local environmental plans (LEPs).

The relevant approval pathway, consent authority, and application requirements have been discussed in the following sections.

This EP&A Act dictates that the applicable approval pathway for the Project is through the SSD process. The Project will require SSD Approval under Part 4 of the EP&A Act 1979, as per Clause 4.36 of the Act, as follows:

> *4.36 Development that is State significant development*
>
> *(1) For the purposes of this Act, State significant development is development that is declared under this section to be State significant development.*
>
> *(2) A State environmental planning policy may declare any development, or any class or description of development, to be State significant development.*

The proposal 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 a capital investment value of more than $30 million, or*
>
> *(b) has a capital investment value of more than $10 million and is located in an environmentally sensitive area of State significance.*

As the estimated cost of works are $30 million, the proposal is required to be assessed as SSD.

4.2 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) is the consent authority for the following types of SSD:

a) *Development in respect of which the council of the area in which the development is to be carried out has duly made a submission by way of objection under the mandatory requirements for community participation in Schedule 1 to the Act,*

b) *Development in respect of which at least 50 persons (other than a council) have duly made submissions by way of objection under the mandatory requirements for community participation in Schedule 1 to the Act; and*

c) *Development the subject of a development application made by a person who has disclosed a reportable political donation under section 10.4 to the Act in connection with the development application.*

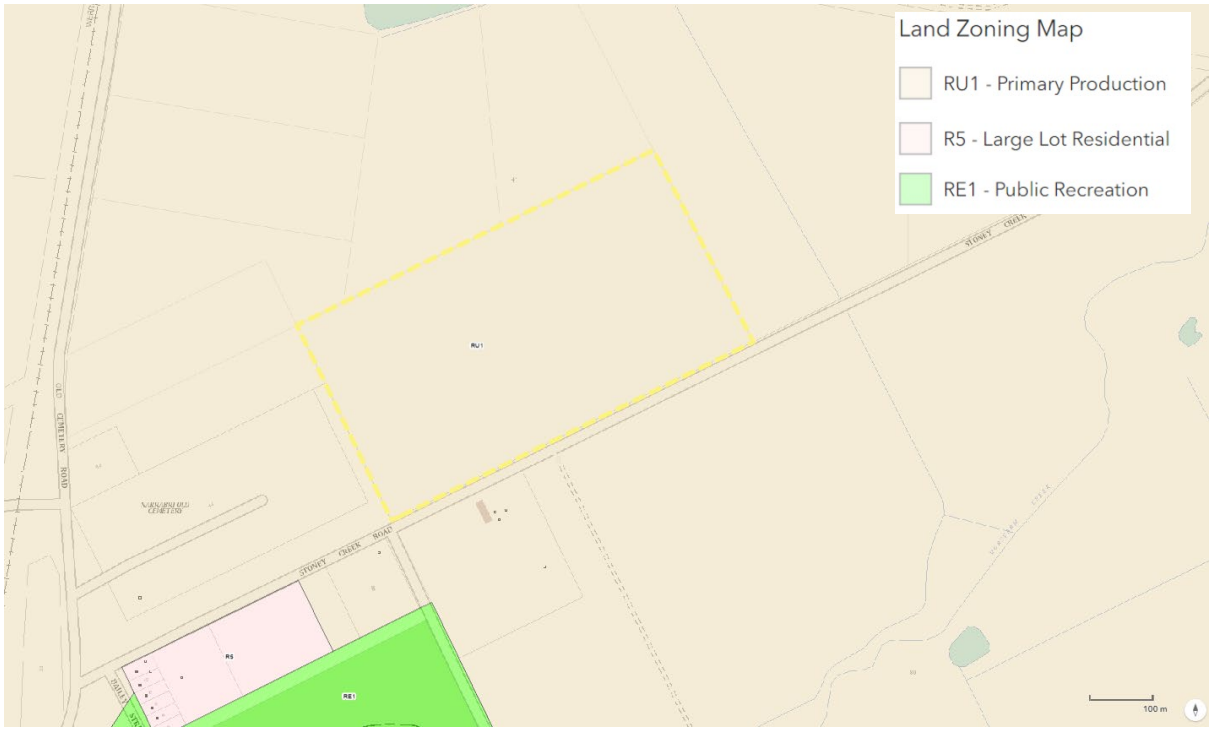
The requirement for the IPC to be the determining authority is to be confirmed following the completion of the EIS public exhibition.

4.3 Permissibility

4.3.1 Narrabri Local Environmental Plan 2012

The proposed BESS development is defined under the NSW land use planning definitions as 'Electricity Generating Works.' Pursuant to Narrabri Local Environmental Plan 2012 (LEP), the site is zoned RU1 Primary Production, as illustrated on the following LEP zoning map extract in Figure 8.

Figure 8: Zone Map Extract



Electricity generating works are a prohibited use on land zoned RU1. As such, all works associated with the BESS are proposed in accordance with the provisions of State Environmental Planning Policy (Transport and Infrastructure) 2021.

4.3.2 State Environmental Planning Policy (Transport and Infrastructure) 2021

The State Environmental Planning Policy (Transport and Infrastructure) 2021 (Transport and Infrastructure SEPP) aims to facilitate the effective delivery of infrastructure across the State by providing for the development of electricity generating works on any land in a prescribed rural, industrial or special use zone for which there is consent. Under the Standard Instrument the project falls under the definition of electricity generating works, which includes "a building or place used for the purpose of electricity storage".

Part 2.3 (Development controls), Division 4 (Electricity generation works or solar energy systems), Clause 2.36 of the SEPP Transport and Infrastructure states that:

> *(1) 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 othe*r case—any land in a prescribed non-residential zone.

Part 2.7 (Relationship to other environmental planning instruments, Clause (1) states that 'if there is an inconsistency between this Chapter and any other environmental planning instrument, whether made before or after the commencement of this Chapter, this Chapter prevails to the extent of the inconsistency.'

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

The proposed BESS will need to rely on the Transport and Infrastructure SEPP for permissibility as it is a prohibited use in the RU1 zone under the Narrabri LEP.

4.3.3 Other Relevant Legislation and Policies

The development application will be required to be in accordance with the requirements under section 4.15 of the EP&A Act.

Table 6 demonstrates the relevant legislation and information to be addressed within the Application.

Table 6: Relevant Legislation to the Proposal

Relevant Legislation	Relevant Clause(s)	Comment
The Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act)	EPBC Act is the Australian Government's central piece of environmental legislation. The EPBC Act provides a legal framework to protect and manage nationally and internationally important flora, fauna, ecological communities and heritage places – defined in the EPBC Act as matters of national environmental significance (MNES). An action that will have, or is likely to have, a significant impact on a matter of MNES must be referred to the Commonwealth Minister for a decision on whether assessment and approval is required under the EPBC Act. Assessment and approval under the EPBC Act may also be required where an action is likely to	There are three International Importance (Ramsar) sites identified as part of the EPBC Act Protected Matters Report. Of these, two are 900-1000km away, one is 1100-1200km. There are a number of threatened ecological communities and species identified in the EPBC Act Protected Matters Report. There is a lack of vegetation on the site and limited vegetation that would be required to be cleared as part of a development at the site. It is anticipated that the proposal will not have any impact on any MNES listed under the EPBC Act, and it will not result

Relevant Legislation	Relevant Clause(s)	Comment
	have a significant impact on the environment of Commonwealth land.	in any impact to the environment of Commonwealth land.
Native Title Act 1993 (Cth)	The Native Title Act 1993 (Cth) 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 National Native Title Register on 20 January 2023 identified that native title exists over the Project site. The search identified that the Gomeroi People have Native Title claim over lands containing the Project site (Tribunal No NC2011/006, Date of registration 20 Jan 2012).
Environmental Planning and Assessment Act 1979 (EP&A Act)	Development at the site is subject to the EP&A Act. Section 4.15 of the Act provides criteria which a consent authority is to take into consideration, where relevant, when considering a DA.	Preparation of a future DA for operation at the site will require a full assessment of the proposal, in accordance with the relevant matters prescribed under Section 4.15(1).
Environmental Planning and Assessment Regulation 2021	This regulation dictates development for the purposes of a battery storage facility is designated development if the facility supplies or is capable or supplying more than 30 megawatts of electrical power.	The application would be considered as designated development under the Regulations. However, the approval pathway is SSD, as the construction value triggers state significant approval.
Biodiversity Conservation Act 2016 (BC Act)	The BC Act establishes a framework for assessing and offsetting biodiversity impacts from proposed development. The associated regulations sets out threshold levels for when the Biodiversity Offsets Scheme (BOS) applies, and an accredited assessor is required to apply the Biodiversity Assessment Method to assess the impacts of the proposal. The threshold has two elements: • whether the amount of native vegetation being cleared exceeds a threshold area, or • whether the impacts occur on an area mapped on the Biodiversity Values Map. If clearing or other impacts exceeds either trigger, the BOS applies to the proposed development. If the BOS is not triggered, the Threatened Species Test of Significance must be used to determine if a local development is likely to significantly affect threatened species.	The proposed BESS is located within an area of no vegetation groundcover and are removed from significant vegetation communities, threatened species and hollow-bearing trees. As the proposal is not anticipated to pose any additional biodiversity impacts a Biodiversity Development Assessment Report (BDAR) waiver will be prepared for the application.
Contaminated Land Management Act 1997 (CLM Act)	This Act establishes a process for investigating and (where appropriate) remediating land that the Environmental Protection Agency (EPA) considers to be contaminated significantly enough to require regulation.	The site is not identified as being contaminated on the EPA contaminated lands register. Notwithstanding, a Preliminary Site Investigation will accompany the application.
Water Management Act 2000	Under Chapter 3 Water management implementation, Part 3 Approvals, if works are proposed in the vicinity of the watercourse, approval may be required for the Water Use, Water Management and Activities involving watercourses.	The BESS facility is approximately 300m from the nearest watercourse. A Controlled Activity Approval under the Water Management Act 2000 is not required for SSD.
National Parks and Wildlife Act 1974 (NPW Act)	This Act relates to the establishment, preservation and management of national parks, historic sites and certain other areas	A desktop assessment was conducted using the NSW Government's AHIMS Search Tool. The search results have

Relevant Legislation	Relevant Clause(s)	Comment
	and the protection of certain fauna, native plants and Aboriginal heritage.	identified that there are no aboriginal sites or aboriginal places recorded or declared at the site. An Aboriginal Archaeological Due Diligence assessment report has been prepared, and is attached at An ACHAR will be prepared and provided with the SSD Application.
Local Land Services Act 2013 (LLS Act)	This Act seeks to ensure the proper management of natural resources in the social, economic and environmental interests of the State, consistently with the principles of ecologically sustainable development. The Act is the primary mechanism for the regulation of native vegetation clearing on rural land.	The site is used for agricultural purposes and is cleared of all native vegetation. Investigations will occur as part of the EIS, in relation to whether the site comprises Category 1 – exempt land, as defined by the LLS Act.
Roads Act 1993	The objectives of this Act include regulating the carrying out of various activities on public roads. Section 138 of the Act requires consent to be obtained prior to disturbing or undertaking work in, on or over a public road.	Approvals will be required under Section 138 of the Roads Act 1993 for the construction of the new access point into the site.
State Environmental Planning Policy (Planning Systems) 2021	This SEPP dictates that Development for the purposes of electricity generation is declared to be State significant development for the purposes of the Act if it has an investment value of more than $30 million.	The proposal is a SSD, as prescribed by Schedule 1 of this policy.
State Environmental Planning Policy (Transport & Infrastructure) 2021	Division 4 of the SEPP aims to facilitate the effective delivery of infrastructure across the State by providing for the development of electricity generating works on any land in a prescribed zone. Under the Standard Instrument the project falls under the definition of electricity generating works, which includes "a building or place used for the purpose of electricity storage". Clause 2.48 of the Transport and Infrastructure SEPP notes the consent authority must consult with the electricity supply authority and take into account their response in relation to potential safety risks for development in close proximity to powerlines and substations.	Section 2.36 of the Transport and Infrastructure SEPP provides additional options to achieve permissibility for electricity generating works. Permissibility is available through the Transport and Infrastructure SEPP. Consultation with the relevant electricity supply authority is required under Section 2.48 due to the Project's connection to the electrical supply network. Any requirements are to be resolved with the relevant authority.
State Environmental Planning Policy (Resource and Energy) 2021	The This SEPP aims to provide for the proper management and development of mineral, petroleum and extractive material resources for the purpose of promoting the social and economic welfare of the State	The entire site is mapped as mineral and resource land. However. This SEPP relates to mining, petroleum production and extractive industries and is not considered applicable to the proposed development.
State Environmental Planning Policy (Biodiversity and Conservation) 2021	This SEPP aims to protect the biodiversity values of trees and other vegetation in non-rural areas of the State, and to preserve the amenity of non-rural areas of the State through the preservation of trees and other vegetation. Chapter 3 and 4 includes provisions in relation to the protection of Koala habitat.	As there are no significant trees on the site or surrounding the proposed development area, a detailed assessment of koala habitat is unlikely to be required. As the proposal is not anticipated to pose any additional biodiversity impacts a Biodiversity Development Assessment

Relevant Legislation	Relevant Clause(s)	Comment
		Report (BDAR) waiver will be prepared for the application.
State Environmental Planning Policy (Resilience and Hazards) 2021	Chapter 3 of this SEPP aims to ensure that in determining whether a development is a hazardous or offensive industry, any measures proposed to be employed to reduce the impact of the development are taken into account. Chapter 4 seeks a Statewide planning approach to the remediation of contaminated land for the purposes of reducing the risk of harm to human health and the environment.	The Project is not considered to be a hazardous or offensive industry. Nonetheless, the SSD will include an assessment of potential hazards and risks associated with the construction and operation of the Project. The SSD Application will include the finding of a preliminary investigation of the site in accordance with the relevant guidelines.
Narrabri LEP 2012	The following provisions of the LEP are likely to be applicable: • Clause 6.1 Earthworks • Clause 6.2 Flood planning • Clause 6.3 Airspace Operations • Clause 6.4 Development in areas subject to aircraft noise.	The SSD Application will consider the relevant provisions of this LEP.
Narrabri Development Control Plans (DCP)	All relevant clauses.	As the project is classed as SSD, it is not subject to the provisions of the DCP.

4.4 Pre-Conditions to Exercising the Power to Grant Approval

4.4.1 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 7.

Table 7: Project Approvals

Legislation	Permit / Approval	Authority
EP&A Act	Development Approval	DPHI
Roads Act	Section 138 Approval	Council/TfNSW

4.4.2 Mandatory Matter for Consideration

Table 8 outlines the mandatory matters for consideration are contained in the relevant Environmental Planning Instruments and legislation. Any further requirements will be identified within the SEARs.

Table 8: Mandatory Matters for Consideration

Mandatory Consideration
Environmental Planning and Assessment Act 1979 • Section 1.3 Objects of Act • Section 1.7 Application of Part 7 of **Biodiversity Conservation Act 2016** and Part 7A of **Fisheries *Management Act 1994***(cf previous s 5AA) • Section 4.15 Evaluation (a) The provisions of— i. any environmental planning instrument

Mandatory Consideration
ii. any draft environmental planning instrument) iii.any development control plan iii. any planning agreement or draft planning agreement iv. the regulations (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, (c) the suitability of the site for the development, (d) any submissions made in accordance with this Act or the regulations, (e) the public interest.
Environmental Planning and Assessment Regulation 2021 • Clause 28 Development applications relating to Biodiversity Conservation Act 2016 • Clause 59 Additional requirements for State significant development—the Act, s 4.39 • Clause 190 Form of environmental impact statement • Clause 191 Compliance with environmental assessment requirements • Clause 192 Content of environmental impact statement • Clause 193 Principles of ecologically sustainable development
Biodiversity Conservation Act 2016 • Section 7.9 Biodiversity assessment for State significant development or infrastructure
National Parks and Wildlife Act 1974 • Part 6 Aboriginal objects and Aboriginal places
State Environmental Planning Policy (Resilience and Hazards) 2021 • Clause 3.11 Preparation of preliminary hazard analysis • Clause 3.12 Matters for consideration by consent authorities • Clause 4.6 Contamination and remediation to be considered in determining development application
State Environmental Planning Policy (Transport and Infrastructure) 2021 • Section 2.48 Determination of development applications—other development
State Environmental Planning Policy (Biodiversity and Conservation) 2021 • Part 3.2 Development control of koala habitats
Narrabri Local Environmental Plan 2012 • Clause 6.1 Earthworks • Clause 6.2 Flood planning • Clause 6.3 Airspace Operations • Clause 6.4 Development in areas subject to aircraft noise.

5.0 Community and Stakeholder Engagement

Enervest understands that interest in the Project may not just be from directly associated landowners and neighbours but will extend to the broader community. Enervest proposes to engage groups and individuals outside the directly affected by the proposal as appropriate.

The proposed stakeholder engagement program aims to ensure that landowners, communities and stakeholders are provided with accurate information regarding the development of the Project and how they can contribute.

The Community and Stakeholder Engagement Plan (CSEP) at Appendix E outlines Enervest's commitments to the Narrabri Community and the broader region during the planning, construction, operational and decommissioning stages of the Project.

Enervest has engaged Element Environment to undertake a Social Impact Assessment (SIA) Scoping Report. A SIA scoping report has been undertaken to inform this request for SEAR's, refer to Appendix B.

5.1 Key Stakeholder and Government Engagement

On 21 October 2022, Enervest and SLR met with representatives of the DPHI to introduce this project and obtain preliminary feedback. The advice provided by the DPHI has helped to inform this scoping report and the preliminary assessment requirements, including consultation and engagement requirements.

To date, an online meeting has occurred with the local Member of Parliament (MP) along with face-to-face meetings in August 2023 with representatives of the following stakeholder groups:

- Council;
- Geni Energy (local not-for-profit community solar and battery installer);
- Narrabri Chamber of Commerce; and
- Narrabri Industrial Network.

Engagement with the Traditional Owners - the Gomeroi People via the Narrabri Local Aboriginal Land Council (LALC) has commenced with the maildrop and subsequent discussions with the CEO. Consultation will continue through the Aboriginal Cultural Heritage Assessment process and as required through targeted engagement.

The feedback received offered support for renewable energy but objected to the loss of good quality farmland. It was also recommended that Enervest engage with local businesses and undertake a presentation to the local business chamber.

The SSD Application will be further informed by engagement with the identified stakeholders detailed in the Table 9 below:

Table 9: Identified Stakeholders

Stakeholder groups	Engagement approach
Landowners	
Site owners	• Enervest owns the site
Neighbouring/ directly impacted residents	• Introduction letter/email • Door knock/flyer drop • Offer of briefing/meeting • Ongoing updates (email) at project milestones • Ongoing contact (email/phone) with key project personnel

Stakeholder groups	Engagement approach
Adjacent landowners Local farmers / agricultural businesses	• Introductory mail out/flyer drop • Offer of briefing/meeting • Project website • Project enquiry phone and email • Ongoing updates (email) at project milestones • Community pop-up/drop-ins
Township residents	• Local advertising and signage • Introductory mail out/flyer drop • newsletter at project milestones • Project website • Project email/phone general enquiry line • Community pop-up/drop-ins
Traditional owner and representative groups	• Initial introduction via phone/email • Site meeting and walk through • Ongoing contact through established relationships via phone/email as required • Coordination with Aboriginal Cultural Heritage assessment as required
Aboriginal businesses	• Initial introduction via phone/email through existing relationship, cultural heritage specialist as available • Targeted briefing and ongoing email, phone, meeting as required and as agreed • Ongoing updates (email/phone) • Offer of further briefing/meeting at project milestones
Government	
Local Government Officers	• Ongoing contact through established relationships and channels (phone, email, meetings) • Notification ahead of major engagement events and public communications • Briefings at project milestones or on request
Local Councillors	• Approach via Council officers for initial briefing and subsequent meetings at project milestones • Briefing packs • Offer of milestone briefings
State Government Departments	• Leverage existing relationships and maintain ongoing channels • As required per statutory processes and channels
State Members Federal members	• Leverage existing relationships • Introductory letter/email with offer of project briefing • Ongoing updates (email/phone) • Offer of further briefing/meeting at project milestones
Emergency Services	
• Police • Fire • Ambulance • SES	• Statutory referrals regarding Fire and Emergency Management Plan • Introduction letter/email • Offer of briefings at project milestones • Offer to circulate all public updates/newsletters

Stakeholder groups	Engagement approach
Businesses and Industry	
Business networks and local businesses	• Introduction letter/email • newsletter at project milestones • Circulate all public engagement materials and event programs • Participation in small group meetings/workshops • Procurement register expression of interest
Peak bodies	• Introduction letter/email • Offer of small group meeting/phone call • Ongoing updates (email) at project milestones • Project website • Project email/phone general enquiry line
Schools and Education Providers	
Tertiary and further education	• Introduction letter/email • Offer of briefing • Ongoing updates (as requested) • Opportunity to be involved in community benefit schemes
Primary and secondary schools	• Introduction letter/email • newsletter at project milestones • Circulate all public engagement materials and event programs
Community Groups	
Community groups	• Introduction email • Offer of small group meeting • newsletter at project milestones • Project website • Project email/phone general enquiry line
CALD communities	• Liaise with Council • Leverage existing networks and events • Translation services (as advised, in collaboration with Council)
Media	
Local newspapers and media	• Media release • Public event advertising • Project website

5.2 Community Engagement

It is proposed that all community engagement relevant to the Project will be completed during the Scoping Phase, and during the preparation of the EIS via the proposed CSEP and engagement campaign (as detailed in Section 5.2.1 below) and SIA (as detailed in Section 6.11 below).

5.2.1 Community and Stakeholder Engagement Plan (CSEP)

The CSEP has commenced, developed in accordance with the Undertaking Engagement Guidelines for State Significant Projects (DPIE, 2021) and will be routinely updated throughout the Project duration. It identifies community members and stakeholders to be engaged with through the SIA. A copy of the CSEP has been attached, refer Appendix E.

The CSEP informs the type and depth of consultation to be completed during the preparation of the Project EIS, as well as recommendations for future community and stakeholder engagement following approval. The scoping worksheet will be utilised to identify potential impacts of the Project and the parties to be consulted with respect to those impacts and will be included within the CSEP for submission to DPHI at EIS stage.

The Proponent's stakeholder engagement program aims to ensure that community and stakeholders are provided with accurate information regarding the development of the Project. The following are key objectives which have guided the development of the CSEP and its methodology:

As outlined in the CSEP, Enervest will:

- Provide clear, accurate and up-to-date information;
- Consult meaningfully with communities and stakeholders and provide suitable opportunities and channels;
- To support technical assessments undertaken as part of the Environment Impact Statement, where possible;
- Build and maintain Social and Cultural Licence with community and stakeholders to facilitate approvals, construction and operation of the Project; and
- Establish and strengthen relationships with stakeholders and communities and across the Project team.

To initiate engagement with the local community, Enervest undertook a maildrop in late February 2023 and provided an information sheet on the project. Figure 9 details the spatial extent of this maildrop. The information sheet provided:

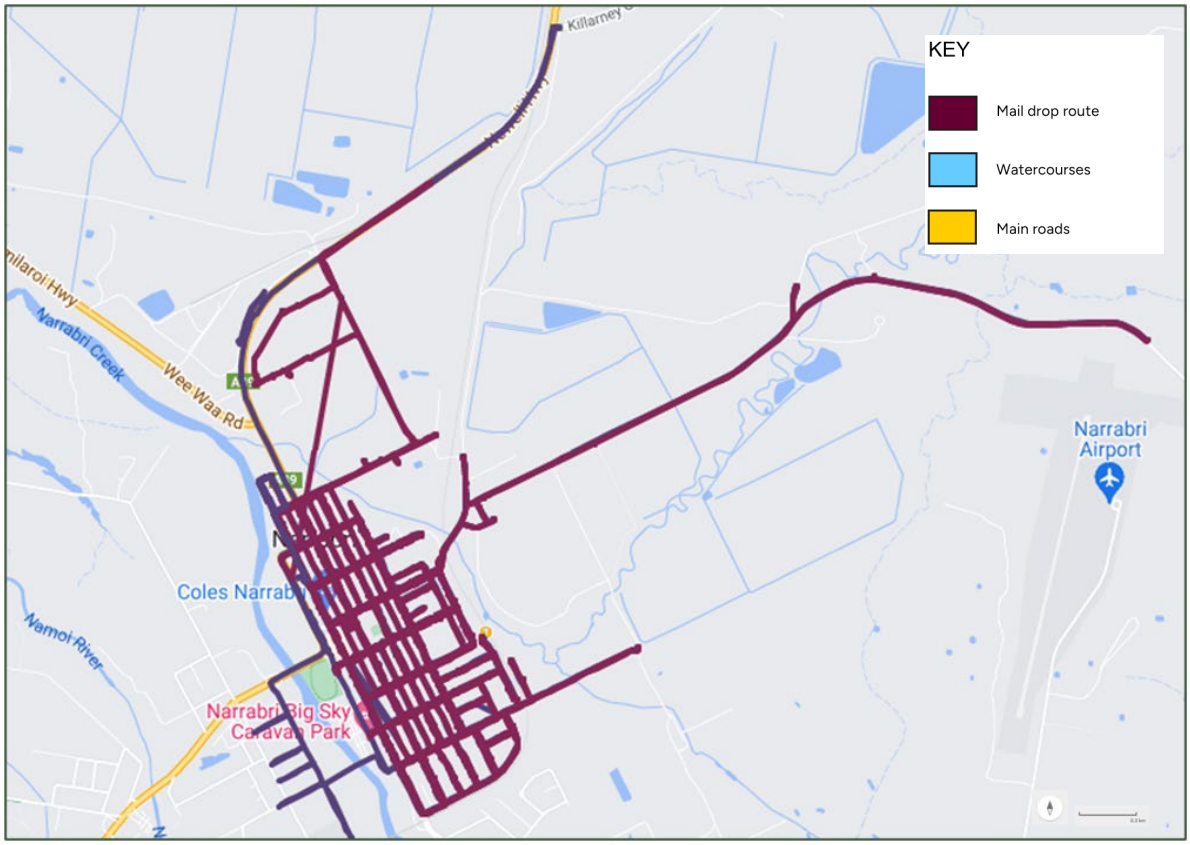
- An overview of Enervest;
- High level details on the proposal;
- Anticipated stages of the development;
- A link to an online survey for anyone that wants to provide initial feedback; and
- Confirmation that engagement activities will occur over the coming months.

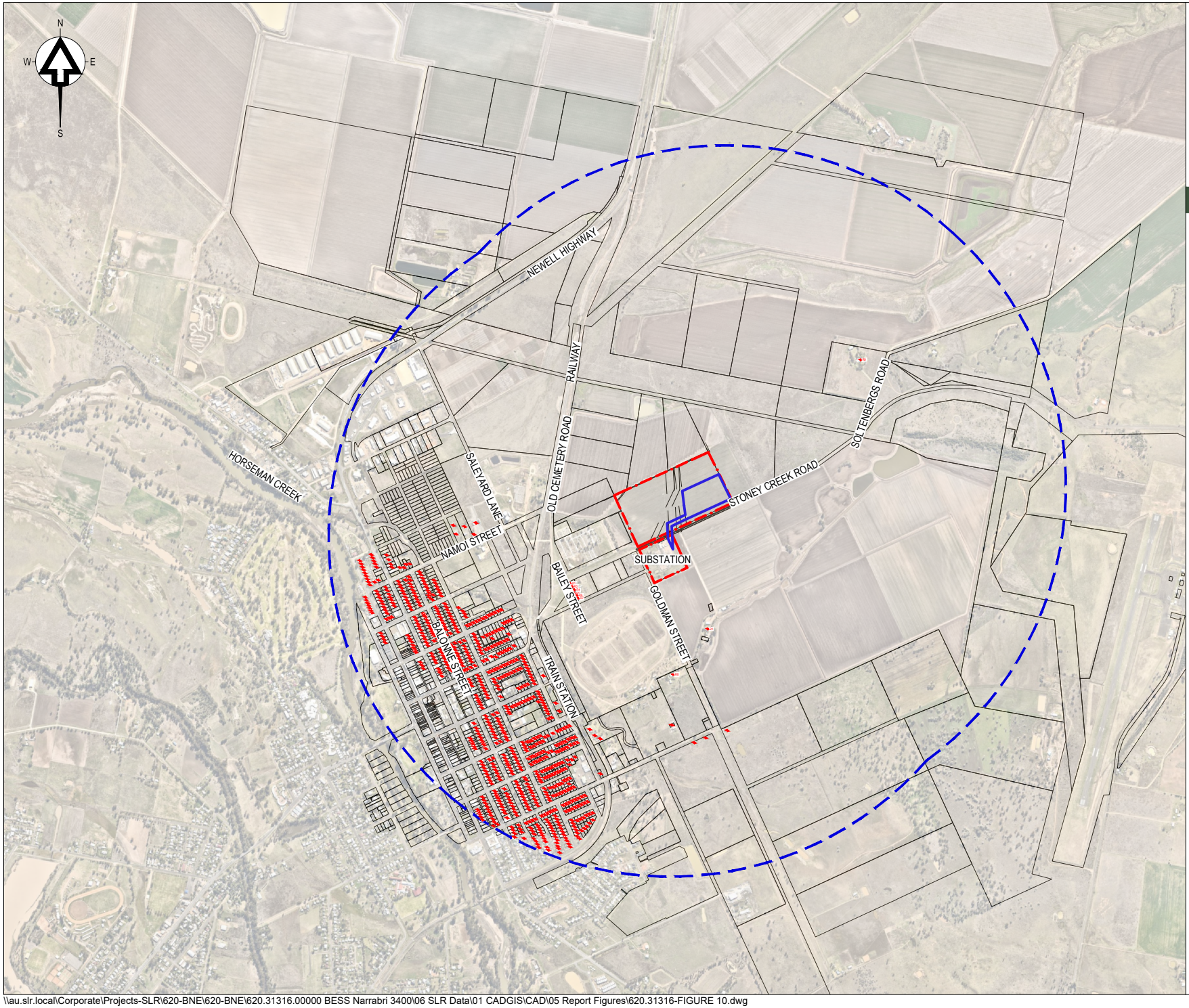
At the time of writing, eight online surveys have been undertaken. Feedback summarised below:

- Strong interest in future community information sessions;
- Key issues include protection of the natural environment, jobs and local investment;
- There is support for renewable energy outcomes;
- The subject site is mapped within a flood prone area; and
- Geni Energy has been identified as a prominent organisation. (In response Element Environmental are exploring opportunities to engage with this Geni Energy as a stakeholder).

As shown in Figure 10, a 2-kilometre radius from the project site is anticipated to capture receivers potentially impacted by the project (as noted from the initial maildrop). As part of the detailed assessment in the EIS these receptors will be considered and addressed as required, see Figure 4 for the closest identified receivers.

Figure 9: Spatial Extent of Maildrop





PROJECT OPUS BESS
STONEY CREEK - 3400

RECEIVERS WITHIN 2KM OF SITE

FIGURE 10

LEGEND:

- CADASTRAL BOUNDARY
- EASEMENT BOUNDARY
- PROJECT AREA
- DEVELOPABLE AREA
- 2KM RADIUS ZONE OF SITE
- ESTIMATED LOCATION OF NEARBY RECEIVERS

0.0 300 600 900 1200
METRES
SCALE 1:30000

Coordinate System:	(GDA2020) MGA Zone 55
Scale:	1:30 000
Project Number:	620.31316
Date:	06-Sep-2024
Drawn by:	RMC

SLR

\\au.slr.local\Corporate\Projects-SLR\620-BNE\620-BNE\620.31316.00000 BESS Narrabri 3400\06 SLR Data\01 CADGIS\CAD\05 Report Figures\620.31316-FIGURE 10.dwg

The SIA scope report outlines the social matters that require further investigation to inform the finalised SIA. A Community and Stakeholder Engagement Plan (CSEP) prepared in accordance *with Undertaking Engagement Guidelines for State Significant Projects 2024* published by DPHI and Section 3.5 of the *State Significant Guidelines – Preparing A Scoping Report* has been developed and is included at Appendix E.

The CSEP is a 'live' document and will be updated by SLR throughout the lifetime of the Project. It identifies stakeholders and outlines the appropriate associated engagement procedures and processes required for the successful delivery of this project. The CSEP will outline tailored actions including controls, mitigations, key messages, communication methods, and engagement frequency, at a minimum.

The choice of engagement tools and techniques depends on the desired outcome of the Project's engagement. If the goal is to gather information from the community such as identifying issues, opportunities, and local knowledge, the engagement methods will differ from those used to involve the community in discussions to shape or influence project outcomes. The engagement methods will be customised to meet the needs of the community and stakeholders, addressing any barriers that may prevent effective engagement.

A Detailed Delivery Plan (DDP) is outlined in Appendix B of the CSEP, and the key actions in relation to community consultation is summarised below.

- Phase 1. SEARs referral and regulatory process - Phase 1 of the DDP is well commenced, as outlined in this Scoping Report, and included a mail out as demonstrated by Figure 9.
- Phase 2. Introduction to EIS - Phase 2 of the DDP will involve further early engagement on the Project, as part of the commencement of the EIS preparation. The DDP includes door knock and letter drop to neighbouring / impacted residents, follow up phone calls after door knocks and meetings with impacted residents.
- Phase 3. Public project announcement - Phase 3 will involve a suite of public announcement formats and methods including, Project website, project email and phone line, website enquiry follow up, project flyers and media release/advertising.
- Phase 4. Public events (in person and online) -including community pop-ups and drop-in session, sit-in sessions (as required), attendance at local events, individual or small group meetings with stakeholders (as requested), follow up phone call to impacted residents (at end of engagement period) and response to media.
- Phase 5. Close the loop – ongoing updates and follow ups will occur as detailed in the DDP. To ensure that the community receive ongoing engagement, the following actions will be undertaken to ensure that the community receive a response to concerns that have been raised:
    - Email update to stakeholders engaged through technical investigations;
    - Thankyou email to info session attendees and stakeholders contacted to date;
    - Follow up contact;
    - Response to media;
    - Monitor project email / phone and website portal;
    - Public engagement summary;
    - Major website update;
    - Follow up briefing (as requested); and

- Prepare detailed engagement summary report.

5.2.2 Monitoring and Evaluation

The CSEP outlines a methodology to ensure that the project team track deliverables against the CSEP and document of how continual improvement approach is occurring. This will involve capturing feedback on how community and stakeholder input was used and demonstrated and report the nexus between feedback and project refinement.

As outlined in the CSEP, Enervest and/or SLR will record external stakeholder interactions for the Project through the consultation database platform provided by Enervest.

It is important that this platform is updated following engagement activities to ensure interactions, feedback and outcomes can be adequately monitored and reported. This assists in maintaining the principles of transparency, accountability and responsiveness and to manage engagement and Project risk.

The platform and inputs will be regularly monitored and audited to ensure accuracy, timeliness and consistency and to inform ongoing reporting. This will include:

- the number of engagement activities undertaken;
- attendance numbers at meetings and townhalls;
- level of stakeholder understanding of the Project, including potential impacts, benefits;
- and management measures;
- community support for the Project;
- community feedback provided via the website or engagement activities; and
- community grievances/complaints.

The CSEP will be revised prior to the commencement of each engagement activity to incorporate lessons learned, stakeholder feedback and any evolving issues, opportunities and risks that may have arisen.

6.0 Proposed Assessment of Impacts

Section 6.0 identifies the key environmental matters proposed to be assessed within the EIS for the construction, operation, and decommissioning of the Project, as determined by preliminary desktop assessment.

6.1 Key Matters Requiring Assessment in the EIS

Based on preliminary desktop assessments of the environmental constraints identified for the Project, the following key matters have been identified as areas of priority for further investigation within the EIS. The proposed level of assessment is also summarised in Table 10.

Table 10: Key Assessment Issues

Key Issue	Level of Assessment Proposed
Noise and vibration	Detailed Assessment.
Biodiversity	Detailed Assessment.
Aboriginal heritage	Detailed Assessment.
Traffic and access	Detailed Assessment.
Visual amenity	Detailed Assessment.
Water Impacts • Hydrology • Flooding • Stormwater	Detailed Assessment.
Land quality	Detailed Assessment.
Air quality and greenhouse gas	Standard Assessment.
Social and economic	Detailed Assessment.
Waste management	Standard Assessment.
Hazard and risk	Detailed Assessment.
Historic Environment	Standard Assessment.
Accessibility	No further assessment required.
Odour	No further assessment required.

6.2 Noise and Vibration

6.2.1 Preliminary Assessment

The Project is in a rural setting with a substation in close proximity. Nearby sensitive receivers will need to be considered and include an existing group of residential properties approximately 600m to the south of the site.

The application will need to consider noise impacts associated with the following aspects of the proposal:

- Vehicle movements during the construction and operational phases;
- Plant and heavy machinery on site during the construction phase; and

- Noise emitting from the BESS facility once operational.

The operation of the Project is unlikely to disturb surrounding residences, however there is potential for the construction and decommissioning phases of the Project to have short-term impacts to sensitive receivers that will require best practice mitigation measures to reduce potential noise disturbances, including standard hours of construction.

Vibration impacts on sensitive receivers are not expected during operation, construction, or decommissioning.

6.2.2 Proposed Level and Approach of Assessment

A Noise and Vibration Assessment (NVIA) will be prepared as part of the Project EIS. It is expected that the key elements of the NVIA of activities associated with the development proposal will include:

- Defining the assessment scenarios for the construction and operation stages of the development.
- Determination of the noise criteria for the Project and an assessment of likely noise impacts during construction, operation, and decommissioning will be undertaken in accordance with the Interim Construction Noise Guideline (ICNG), operational noise impacts in accordance with the NSW Noise Policy for Industry (2017), cumulative noise impacts (considering other developments in the area).
- Assessment of predicted noise levels for construction and operational phases of the development against the noise assessment criteria adopted from the relevant environmental legislation and acoustic guidelines.

Where required, a range of reasonable and feasible (concept level) mitigation measures would be recommended to manage potential impacts and, where reasonable and feasible, achieve compliance to all relevant noise assessment criteria.

6.3 Biodiversity

6.3.1 Preliminary Assessment

A desktop review has been undertaken, involving a review of relevant information and relevant database searches. The site does not contain any mapped biodiversity values and has been cleared for agricultural purposes. However, there are two creeks that are mapped (Horsearm Creek located approximately 500m to the south and Mulgate Creek, approximately 700m to the north and west). Given the proximity of the proposed development to these creeks it is not expected to impact the mapped terrestrial biodiversity areas.

A Protected Matters Search was undertaken on the Department of Climate Change, Energy, the Environment and Water (DCCEEW) website to ascertain if any matters of national environmental significance protected by the EPBC Act had been identified as occurring in or relating to, the proposal site.

There are three International Importance (Ramsar) sites identified as part of the EPBC Act Protected Matters Report. Of these, two are 900-1000km away, one is 1100-1200km. There are a number of threatened ecological communities and species identified in the EPBC Act Protected Matters Report. There is a lack of vegetation on the site and limited vegetation that would be required to be cleared as part of a development at the site. It is anticipated that the proposal will not have any impact on any NMES listed under the EPBC Act, and it will not result in any impact to the environment of Commonwealth land.

A search of the DPHI BioNet Atlas of NSW Wildlife was completed to ascertain if any threatened species listed in NSW under the BC Act or nationally under the EPBC Act had been recorded in a 10km radius. The search returned a total of 885 flora and fauna species within the search extent with no recorded endangered populations.

6.3.2 Proposed Level and Approach of Assessment

Either a BDAR or BDAR Waiver will be prepared as part of the Project EIS, with the following scopes of work, dependent on further preliminary investigation.

As the subject site does not contain any mapped biodiversity values and has been cleared for agricultural purposes, it is anticipated that a BDAR Waiver will be sought.

A BDAR waiver will be prepared in accordance with the DPHI guidance document How to Apply for A Biodiversity Development Assessment Report Waiver for a Major Project Application (DPIE, 2019), if following a field survey, it is determined that negligible impacts to biodiversity would occur as a result of the Project.

Investigations will occur as part of the EIS, in relation to whether the site comprises Category 1 – exempt land, as defined by the LLS Act.

6.4 Aboriginal Heritage

6.4.1 Preliminary Assessment

A preliminary Aboriginal Heritage assessment was undertaken during January 2023, refer to Appendix C.

A search of the AHIMS on 13 January 2023 for any Aboriginal heritage sites recorded within or adjacent to the project site did not identify any recorded Aboriginal object or site within the Project Area.

A search of the National Native Title Register on 20 January 2023 identified that native title exists over the Project site. The search identified that the Gomeroi People have Native Title claim over lands containing the Project site (Tribunal No NC2011/006, Date of registration 20 Jan 2012).

The absence of records on AHIMS is more likely to be a lack of prior assessment rather than indicating the absence of Aboriginal cultural values, although the project site has been modified due to agricultural land use and this will limit the likelihood of Aboriginal cultural values remaining. An early understanding of the existence of any Aboriginal cultural values can ensure the project design and site management will mitigate harm to these values.

Engagement with the Traditional Owners - the Gomeroi People via the Narrabri Local Aboriginal Land Council (LALC) has commenced. Engagement with the Traditional Owners - the Gomeroi People via the Narrabri Local Aboriginal Land Council (LALC) has commenced with the maildrop and subsequent discussions with the CEO. Consultation will continue through the Aboriginal Cultural Heritage Assessment process and as required through targeted engagement.

6.4.2 Proposed Level and Approach of Assessment

To ensure the project has full knowledge of Aboriginal cultural values at the project location and is able to mitigate any harm to these values, a detailed level of assessment is required of this specific matter and a comprehensive Aboriginal Cultural Heritage Assessment Report (ACHAR) is being prepared for the Project. This assessment will be undertaken in accordance with the following Aboriginal heritage assessment guidelines, where relevant:

- The Code of Practice for the Archaeological Investigation of Aboriginal Objects in NSW (DECCW, 2010) [the Code];
- The Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW (Office of Environment and Heritage, 2011) [the Guide]; and
- The Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010 (DECCW, 2010a).

Virtus Heritage have been engaged to undertake an ACHAR of the Project Area and the project as part of the future EIS.

An ACHAR will include consultation with the Aboriginal community with registration of interest in the Project and the gathering of the information about cultural significance.

The expected scope of works for the assessment is detailed below:

- Phase 1 – desktop analysis:
  - Undertaking of statutory heritage searches and limited background research for Aboriginal heritage.
  - The development of an appropriately detailed environmental and historical context.
  - The identification of landform sensitivity to inform the targeted survey.
- Phase 2 – Site visit for Aboriginal heritage by qualified Archaeologist, including targeted surveys of:
  - Sensitive landforms.
  - Areas of exposure.
  - Rock outcrops.
  - Mature trees.
- Phase 3 – completion of ACHA:
  - Stand-alone reports to meet the requirements of the relevant state legislation.
  - Detailed archaeological and environmental contexts, predictive model of archaeological sites, maps and plates.
  - Management recommendations for the project area.

Should the archaeological survey identify that there are areas of archaeological potential within the Project site, a notification and sampling strategy will need to be prepared. Requirement 15c of the Code states that this needs to be provided to Heritage NSW a minimum of 14 days before test excavations commencing.

Preparation of the draft ACHAR and review by Aboriginal stakeholders, with a 28 day period for review and comment. Once this timeframe elapses, the ACHAR will be finalised to include all comments and correspondence sent and received regarding the project as an appendix.

6.5 Traffic and Access

6.5.1 Preliminary Assessment

Access to the development site will be achieved from Stoney Creek Road. The location and design will be confirmed as the design of the site is finalised, and will require the ability to accommodate heavy vehicles required during construction and decommissioning.

Any significant traffic impacts associated with the development are expected to occur during the construction phase of the development only. Any temporary parking and set down areas required during the construction phase will be reinstated and landscaped once the facility is operational.

The proposed BESS facility will be managed remotely once operational, requiring minimal site attendance from maintenance staff. A Preliminary Transport Impact Assessment has been prepared to accompany this request for SEARs. At the preliminary evaluation, the proposal is unlikely to have any lasting impacts on traffic at this location. However, a Traffic Impact Assessment (TIA) will be undertaken and any mitigation methods and strategies identified in the associated report will be adopted into the proposal.

A Preliminary Transport Impact Assessment is attached at Appendix D.

6.5.2 Proposed Level and Approach of Assessment

A detailed TIA will be undertaken and the associated report provided with the SSD Application. It is expected that the key elements of the TIA of activities associated with the development proposal will include:

- Existing road conditions review;
- Future road network planning consideration;
- Assessed traffic demands (construction, operation and decommissioning phases);
- Intersection and access assessments;
- Road safety assessment;
- Road use management planning; and
- Identification of any mitigation measures.

6.6 Visual Amenity

6.6.1 Preliminary Assessment

The application will need to consider the visual impact of the proposal within the surrounding landscape, this includes nearby residents and public vistas that may be impacted. This should include temporary impacts during construction and long-term impacts once operational.

Screening in the form of strategically placed planted vegetation, or other measures, may be required to ensure visual impacts are minor.

6.6.2 Proposed Level and Approach of Assessment

The impacts on visual amenity for the nearest sensitive receivers and road users will need to be considered. Visual impacts are not expected to be a significant issue as the Project will

be consistent with the nearby substation, which is an existing element of the location's visual character. Screening in the form of planted vegetation, or other measures, may be required to ensure visual impacts are minor.

Visual Impact Assessment (VIA) will be undertaken and the associated report provided with the SSD Application. The VIA will consider the effect of the development on the physical and visual landscape which may give rise to changes in its character and the resultant effects on visual amenity. The potential visual impact will be assessed using a methodology that involves on-site assessments, Geographical Information Systems (GIS) modelling, and preparation of photomontages and an impact assessment to illustrate the predicted visual effect of the Project on the visual environment.

It is expected that the key elements of the VIA of will involve:

- Project requirements and landscape character assessment;
- Baseline visual environment consideration;
- Visual impact assessment (impact significance on landscape, consideration of key vantage points); and
- Identification of any mitigation measures.

Owing to the proposed location of BESS within the subject, there is sufficient space around the perimeter of the facility to incorporate landscaping. This will be particularly beneficial to address any amenity issues and screening requirements associated with motorists on Stoney Creek Road and the Narrabri cemetery.

6.7 Flooding

6.7.1 Preliminary assessment

The site is mapped as flood prone under the Narrabri LEP.

6.7.2 Proposed Level and Approach of Assessment

A Flood Impact Assessment will be undertaken in accordance with relevant guidelines, this includes:

- A flood study involving hydrologic and hydraulic modelling to establish baseline flooding conditions, including flood levels and extents for a range of typical annual exceedance probability events; and
- A flood risk assessment based on the results of flood modelling including the identification of flooding constraints, potential impacts and mitigation measures.

6.8 Water Quality

6.8.1 Preliminary Assessment

There is potential for surface water quality impacts during construction and decommissioning of the Project due to ground disturbance and minor earthworks.

The proposed development will result in an increase in impervious area over the site. Runoff from the impervious areas may contain suspended solids, nitrogen and phosphorous. The SSD Application will need identify risks associated with increases in runoff volume and peak flows, altered timing of flows, increases in pollutant runoff and reduced infiltration and identify potential mitigation options, if required.

Stormwater attenuation and treatments will be dependent on final materials of the pad 'hardstand' area, and to be determined through a combination of final ground levels and hardstand materials. However, given the nature of the proposed use, the development will be utilising overland flows and is anticipated to create no significant impacts on stormwater quality and quantity.

6.8.2 Proposed Level and Approach of Assessment

As part of the EIS, the following scope of works will be addressed:

- An assessment of potential surface water and groundwater impacts associated with the development;
- Details of stormwater management system including appropriate mitigation measures to adequately ameliorate environmental risk;
- Description of the proposed erosion and sediment controls during construction;
- Details of water requirements and supply arrangements for construction and operation; and
- Earthworks will be designed to propose a suitable grade for sheet flow runoff and natural on-site infiltration.

6.9 Land Quality

6.9.1 Preliminary Assessment

The site is classified by the NSW DPHI eSPADE mapping as being Australian Soil Classification soil type Vertosois, of very slight to negligible limitations and is rated as Land & Soil Capability Class 2.

The site is mapped as Biophysical Strategic Agricultural Land (BSAL), begin land with high quality soil and water resources capable of sustaining high levels of productivity.

Contaminated land is not recorded on the subject site.

6.9.2 Proposed Level and Approach of Assessment

As part of the Project EIS, the following matters will be addressed:

- Engineering report(s) to support civil earthworks, stormwater and soil condition; and
- Determine erosive potential for soil types within development footprint.

6.10 Air Quality

6.10.1 Preliminary Assessment

The project is not anticipated to generate significant air quality impacts during construction or operations. Project related traffic utilising the access road to the project site area may contribute to localised dust generation primarily during the construction phase of the project. This impact is considered to be consistent with existing sources of pollution within a local setting, primarily of dust and vehicle and machinery exhaust emissions associated with agricultural production.

An air quality assessment (AQA) is not considered to be required as part of the EIS as potential impacts will be temporary in nature and will not extend beyond the construction phase of the project.

The project will contribute Australia's emissions reduction effort, facilitating the growth of the Australian renewable energy network and will contribute to Australia's goals to achieve net zero by 2050. Accordingly, the proposal is anticipated to have positive impacts in relation to greenhouse gas emissions.

6.10.2 Proposed Level and Approach of Assessment

As the Project is not anticipated to generate significant air quality impacts, the inclusion of standard dust suppression and vehicle exhaust mitigation measures for construction and decommissioning as part of a Construction Environmental Management Plan (CEMP) will mitigate any expected increases in dust and vehicle exhaust.

6.11 Social and Economic Impact

6.11.1 Preliminary Assessment

The subject site is located on land in the northeast periphery of the township of Narrabri, within the Narrabri Shire LGA, approximately 1km northeast of the Narrabri township. The Project will provide social and economic benefits to the community through increased employment opportunities both during construction and operations (at least six full-time staff), improved energy reliability and cost, and contributing to NSW net zero targets.

6.11.2 Proposed Level and Approach of Assessment

A Social Impact Assessment (SIA) scoping report has been prepared as part of the Project EIS by Element Environmental, refer to Appendix B. The SIA scoping report has been undertaken with regard to the *Social Impact Assessment Guideline for State Significant Projects 2021.*

The SIA scoping report includes:

- Introduction and Project overview;
- Legislative and social policy context;
- Existing social baseline; and
- Preliminary SIA.
- Social impact methodology, monitoring and management.

Importantly, the SIA scoping report has been informed by early engagement with stakeholder and the local community. A scoping tool has been used to determine the social impacts the need to be considered in SIA phase, this includes:

- Community (positive and negative social impacts);
- Surroundings (positive and negative);
- Livelihoods (positive);
- Health and wellbeing (positive);and
- Access (positive).

The SIA phase will investigate these impacts further including the undertaking of desktop analysis, further stakeholder interviews, community information sessions and surveys. The finalised SIA will include recommended mitigation measures and plans, if required, to assist in the management of potential negative impacts from the project.

6.12 Waste Management

6.12.1 Preliminary Assessment

The following waste product streams are likely to be produced during the construction phase of the Project:

- Green waste generated during vegetation clearing, to be reused where possible as mulch or alternatively sent to a composting facility, with the exception of weed species which would be separated and disposed of appropriately;
- Fill material considered unsuitable to remain on site would be classified in accordance with the relevant Guideline and disposed of at an appropriately licensed facility;
- General construction litter;
- Waste oils and other materials from the maintenance of construction equipment and machinery; and
- Erosion and sediment control materials including sediment fencing and stakes.

6.12.2 Proposed Level and Approach of Assessment

The following management measures to limit impacts resulting from the Project will be included within the EIS pending comment from DPHI and relevant agencies:

- All waste generated during construction activities must be managed in accordance with the POEO Act, POEO (Waste) Regulation 2014, Waste Avoidance and Resource Recovery Act 2001 (NSW), and any relevant resource recovery orders and exemptions;
- A Waste Management Plan (WMP) should be prepared and implemented as part of the CEMP and detail the measures and controls to monitor and minimise waste generation during construction, the lawful handling and disposal of unavoidable waste, and classification of unsuitable fill material;
- General waste and recycling bins should be provided at all ancillary sites and throughout the Project boundary for the duration of construction; and
- Any uncontrolled spills of waste oils, fuels, and other materials must be contained using a spill kit and managed by a suitably qualified professional.

6.13 Hazard and Risk

6.13.1 Preliminary Assessment

The site is not mapped as bushfire prone land under the NSW Rural Fire Services Bushfire Prone Land mapping.

Potential hazardous scenarios and risks associated with the project include the presence and use of lithium batteries, fires and exposure to electromagnetic fields (EMF).

Lithium batteries are identified as Class 9 under the Australian Dangerous Goods Code (National Transport Commission 2020). Under the Hazardous and Offensive Development Application Guidelines – Applying SEPP 33 (Department of Planning 2011) given effect under Section 8 of State Environmental Planning Policy No 33 – Hazardous and Offensive Development, Class 9 goods do not exceed the screening thresholds as they "pose little threat to people or property" (Department of Planning 2011, p. 33).

Nevertheless, a perception exists that a BESS may alter the EMF within a locality and thereby cause harm to residents and the environment. As such a Preliminary Hazard Analysis (PHA) will be provided as part of the EIS.

6.13.2 Proposed Level and Approach of Assessment

The EIS will include:

- A preliminary risk screening completed in accordance with State Environmental Planning Policy No. 33 – Hazardous and Offensive Development and Applying SEPP 33 (DoP, 2011).
- Preliminary Hazard Analysis (PHA) will be prepared in accordance with the Hazardous Industry Planning Advisory Paper No. 6, 'Hazard Analysis' and Multi-Level Risk Assessment (DoP, 2011).
- Consideration 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 (DoP, 2011).
- Consideration of potential hazards and risks including but not limited to bushfires, land contamination, spontaneous ignition, EMF's or the proposed grid connection infrastructure against the International Commission on Non-Ionizing Radiation Protection Guidelines for limiting exposure to Time-varying Electric, Magnetic and EMF's.

6.13.3 Mitigation Measures

The site is not bushfire prone land. Notwithstanding, grid-scale BESS units provided currently by global manufacturers typically contain a hierarchy of fire management controls which create layers of protection. In conjunction, development siting and provision of sufficient water supply can adequately mitigate any BESS related fire risk issues.

Typical BESS hierarchy fire management controls detailed below:

- Electrical Protection is enabled via Current Interrupt Devices and Rack Level Fuse Protection.
- Mechanical protection is enabled via Pressure Relief Valves.
- Lithium ferro-phosphate (LFP) chemistry is preferred over Lithium-Nickel-Manganese-Cobalt-Oxide (NMC) because of the higher onset temperature for Thermal Runaway (270°C for LFP versus 210°C for NMC). LFP also has a significantly lower self-heating rate than NMC chemistry batteries.
- A Battery Management System (BMS) which monitors a range of variables related to the onset or incidence of a fire event (temperatures, over and under-voltage, over-currents, etc). The BMS will then trigger alarms, instigate internal fire suppression equipment and automatically disconnect each BESS unit in the event of a fire.

- A BMS's fire detection system would normally include thermal and Smoke Detectors, Explosive Gas Sensing and H2 Detection for Thermal Runaway.
- Cabinet walls which are adjacent to other units are fire-rated to EI60, which would provide a 2-hour fire wall between adjacent units.
- The roof panels of BESS packs are typically designed for blast loading to minimise the impact of any potential deflagration/explosion, including roof panel rupture.

6.14 Historic Heritage

6.14.1 Preliminary Assessment

A desktop heritage assessment of the site has been completed, comprising a search of the:

- Narrabri LEP;
- State Heritage Register;
- Commonwealth Heritage List; and
- EPBC Protected Matters Search Tool.

The Narrabri Cemetery is located south of the subject site, identified as Local Item 1018.

As a result of the distance, scale of works and with the implementation of appropriate mitigation measures, no impacts are anticipated to this local heritage item.

No State listed heritage items or places are located in the vicinity of the Project.

6.14.2 Proposed Level and Approach of Assessment

A standard assessment for historic heritage will be completed within the EIS to identify the nearest historic heritage items, as well as details of appropriate mitigation measures in the event of an unexpected find during construction. Consideration of heritage will be made as part of the VIA to be prepared for the Project.

6.15 Agricultural Impact Assessment

6.15.1 Preliminary Assessment

The construction and operation of the BESS would change the existing land use of the site from agriculture (grazing native vegetation) to electricity generating works. Areas outside Subject Area within the locality are expected to continue to support their existing land use where practicable. The existing land use is likely to return following decommissioning of the BESS.

The proposal will result in the temporary loss of 3.9ha of agricultural land. The site is mapped as BSAL, being land with high quality soil and water resources capable of sustaining high levels of productivity.

The loss of productive agricultural land has been flagged as a key concern through the initial community engagement undertaken to date.

6.15.2 Proposed Level and Approach of Assessment

A Soil and Agricultural Land Resource Assessment (SALRA) will be prepared as part of the Project EIS, with the following scope of works:

- A soil survey to determine the soil characteristics and consider the potential for erosion to occur; and:
    - ASC (Isbell, 2002) soil types across the Subject Area;
    - LSC class/es according to the Land and Soil Capability Scheme Second Approximation (OEH, 2012);
    - Determine BSAL status according to the Interim Protocol for Site Verification and Mapping of Biophysical Strategic Agricultural Land (OEH, 2013); and
    - Determine erosive potential for soil types within Subject Area.

A Land Use Conflict Risk Assessment (LUCRA) will be prepared as part of the Project EIS, with the following scope of works:

- Accurately identify and address potential land use conflict issues and risk of occurrence before a new land use proceeds or a dispute arises;
- Objectively assess the effect of a proposed land use on neighbouring land uses;
- Increase the understanding of potential land use conflict to inform and complement development control and buffer requirements; and
- Highlight or recommend strategies to help minimise the potential for land use conflicts to occur and contribute to the negotiation, proposal, implementation and evaluation of separation strategies.

This LUCRA will be prepared in accordance with the Land Use Conflict Risk Assessment Guide (DPIE, 2011).

6.16 Cumulative Impact Consideration

As noted in Section 2.5, a search for proposed or approved SSD within the LGA and surrounds that have the potential to result in a cumulative impact during the construction period of this Project.

Further analysis of the potential for cumulative impacts would be addressed in detail in the EIS in accordance with Cumulative Impact Assessment Guidelines for State Significant Projects (DPIE, 2021).

Particular regard will be given to workers availability and worker accommodation for the construction stage. Cumulative impacts may occur if the construction periods of nearby major projects overlap with the construction period of this Project. These impacts can include traffic generation, staff accommodation requirements, disposal of construction waste, stress on local business for supply and demand, and supply of local labour.

6.17 Ability to Avoid Minimise or Offset Impacts

The feasible alternatives discussion in Section 2.4 demonstrates the site specific and locational need for the BESS on the subject site. As part of the project EIS, mitigation measures will be identified, subject to technical assessment and consideration. The impact assessment will be undertaken to demonstrate whether the Project's impacts are capable of being fully mitigated.

7.0 Conclusion

Enervest seeks to establish a 125MW/8h BESS facility with a connection to the existing electricity grid via an underground cable to TransGrid's Narrabri 132/66kV substation in close proximity to the BESS area.

This report provides an overview of the proposal and the anticipated scope of assessment requirements.

The Project will have a EDC higher than $30 million and will therefore trigger the provisions for SSD under Clause 20, Schedule 1 of the Planning Systems SEPP. The Project is permissible with consent under Clause 2.36 of the Transport and Infrastructure SEPP.

The key environmental issues identified by this Scoping Report for the Project include:

Noise and Vibration	Hazard and Risk
Biodiversity	Aboriginal Heritage
Traffic and Access	Water Quality
Visual Amenity	Land Quality and Agricultural Impact
Waste Management	Social and Economic

The Project EIS is proposed to address the following:

- A detailed description of the Project including construction activities, and ancillary sites and components;
- A comprehensive assessment of the potential impacts on the key issues including a description of the existing environment and assessment of potential direct and indirect impacts of construction, operation, and decommissioning;
- Descriptions of measures to be implemented to avoid, minimise, manage, mitigate, offset, and/or monitor the potential impacts; and
- Identify and address issues raised by stakeholders and community members.

It is expected that the scale of impacts on some assessment considerations will be minimal. This includes biodiversity values due the site being cleared of all vegetation and not containing any watercourses. Similarly, it is not envisaged that there will be any significant issues associated with heritage, contaminated land or water management considerations. At this early stage, the identified critical assessment areas relate to amenity, associated with acoustic and visual impacts and to a lesser extent traffic impacts during the construction phase of the BESS facility. Early community engagement has also flagged a key concern about the loss of good quality agricultural land to enable this development.

Some assessment matters will require detailed technical reporting which will accompany the SSD Application. It is expected the recommended mitigation measure will be able to address any potential impacts and these will be taken forward in the EIS.

Importantly, the scoping report demonstrates the critical importance of this project to supports the move to renewable energy sources and to ensure the availability of power at different times of the day. The BESS is supported by both national and state renewable energy policy objectives.

Enervest are fully committed to making a positive contribution to the Narrabri community and have commenced early engagement activities in the locality.

SLR and Enervest look forward to receiving the SEARs from DPHI to enable the preparation and lodgement of the application for assessment.

8.0 References

Australian Dangerous Goods Code (2020), National Transport Commission.

AEMO (2022), National Electricity Market Integrated System Plan

DECC (2008), Managing Urban Stormwater: Soils and Construction Volume 2.

DECC (2009), Interim Construction Noise Guideline. NSW Department of Environment and Climate Change.

DECCW (undated), Powering Australia

DECCW (2022), Australia's Long Term Emissions Reduction Plan

DECCW (2010), The Code of Practice for the Archaeological Investigation of Aboriginal Objects in NSW.

DECCW (2010), The Aboriginal Cultural Heritage Consultation Requirements for Proponents

DECCW (2011), NSW Road Noise Policy.

DEWHA (2013), MNES. The Significant Impact Guidelines 1.1 – Matters of National Significance

DoP (2011), Hazardous and Offensive Development Application Guidelines – Applying SEPP 33

DoP (2011), Hazardous Industry Planning Advisory Paper No. 6, 'Hazard Analysis' and Multi-Level Risk Assessment

DoP (2011), Hazardous Industry Advisory Paper No. 4, 'Risk Criteria for Land Use Safety Planning

DPE (2022), State significant development guidelines - preparing a scoping report (Appendix A to the state significant development guidelines)

DPE (2022), New England North West Regional Plan 2041

DPE (2022), Large-Scale Solar Energy Guideline.

DPE (2022), State Vegetation Type Map of NSW

DPIE (2021), Social Impact Assessment Guideline for State Significant Projects

DPIE. (2019), NSW Electricity Strategy

DPIE (2020), Net Zero Plan Stage 1: 2020-2030

DPIE (2020), Biodiversity Assessment Method. Department of Planning, Industry and Environment.

DPIE (2019), How to Apply for A Biodiversity Development Assessment Report Waiver for a Major Project Application

DPIE (2023), Social Impact Assessment Guideline for State Significant Projects

DPIE (2022), Cumulative Impact Assessment Guidelines for State Significant Projects.

DPE (2024), Undertaking Engagement Guidelines for State Significant Projects.

DPI (2011), Land Use Conflict Risk Assessment Guide. NSW, Australia: Department of Primary Industries.

Isbell, R. (2021), The Australian Soil Classification. CSIRO Publishing.

Landcom (2004), Managing Urban Stormwater: Soils and construction (4 ed., Vol. 1). Landcom.

Narrabri Shire Council (2016), Local Strategic Planning Statement

NSW DPHI eSPADE mapping

NSW Government (2018), NSW Transmission Infrastructure Strategy (2018)

OEH (2011), The Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW

OEH (2013), Interim Protocol for Site Verification and Mapping of Biophysical Strategic Agricultural Land

RFS (2019), Planning for Bush Fire Protection 2019. Planning for Bush Fire Protection 2019.

RTA (2002), Guide to Traffic Generating Developments. NSW, Australia: Roads and Traffic Authority

State of NSW and Office of Environment and Heritage (2016), The NSW Climate Change Policy Framework

United Nations Framework Convention on Climate Change (2016), Paris Agreement (2016)

United Nations Framework Convention on Climate Change (2023), Nationally determined contributions under the Paris Agreement

Appendix A Scoping Summary Table

Request for Secretary's Environmental Assessment Requirements (SEARs)

Enervest Operations Pty Ltd

SLR Project No.: 620.31316.00000

25 August 2024

Level of Assessment	Matter	CIA	Engagement	Relevant Government Plans, Policies, and Guideline	Scoping Report Reference

Detailed	Noise and Vibration	Yes	General	• Construction Noise & Vibration:
				  ○ NSW Interim Construction Noise Guideline (DECC, 2009)
				  ○ RMS Construction Noise & Vibration Guideline (Roads and Maritime, 2016)
				  ○ NSW Assessing Vibration – A Technical Guideline (DEC, 2006)
				• Operational Road Traffic Noise:
				  ○ NSW Road Noise Policy (DECCW, 2011)
				  ○ RMS Noise Criteria Guideline (Roads and Maritime, 2015)
				  ○ RMS Noise Mitigation Guideline (Roads and Maritime, 2015)
				  ○ RMS Noise Model Validation Guideline (Roads and Maritime, 2016)
				  ○ NSW Environmental Noise Management Manual (RTA, 2001)
					Section 6.2

Standard	Biodiversity	Yes	General	• Biodiversity Conservation Act 2016 (NSW) • Biodiversity Assessment Method (BAM) (DPIE, 2020) • NSW Guidance document How to Apply for A Biodiversity Development Assessment Report Waiver for a Major Project Application (DPIE, 2019)	Section 6.3
Detailed	Aboriginal Heritage	Yes	Specific	• Aboriginal Consultation Requirements for Proponents (DECCW, 2010) • Code of Practice for Archaeological Investigations of Aboriginal Objects in NSW (the Code) (DECCW, 2010) • Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW (OEH, 2011) • Aboriginal Heritage Information Management Systems (AHIMS)	Section 6.4
Detailed	Traffic and Access	Yes	General	• Guide to Road Design Part 3 Geometric Design (Austroads, 2016) • Guide to Road Design Part 4 Intersections and Crossing General (Austroads, 2017) • Guide to Traffic Management Part 3: Traffic Studies and Analysis Methods (Austroads, 2020) • Guide to Traffic Management Part 6: Intersections, Interchanges and Crossings Management (Austroads, 2020)	Section 6.5
Detailed	Visual Amenity	No	General	• Transport for NSW Guideline for landscape character and visual impact assessment version 2.2 • Department of Planning and Environment Technical Supplement Landscape and Visual Impact Assessment; Large-scale Solar Energy Guideline	Section 6.6

Level of Assessment	Matter	CIA	Engagement	Relevant Government Plans, Policies, and Guideline	Scoping Report Reference
Detailed	Flood Impact	No	General	• NSW Flood Impact and Risk Assessment Flood Risk Management Guide LU01 (2022)	Section 6.7
Standard	Water Quality	No	General	• Managing Urban Stormwater: Soils and Construction (Landcom, 2004) • Guidelines for controlled activities on waterfront land (Natural Resource Access Regulator, 2018)	Section 6.8
Standard	Land Quality	No	General	• Managing Urban Stormwater: Soils and Construction (Landcom, 2004)	Section 6.9
Standard	Air Quality and Greenhouse Gas	No	General	• Approved Methods for the Modelling and Assessment of Air Pollutants in NSW (NSW EPA, 2017)	Section 6.10
Standard	Social and Economic	Yes	General	• Social Impact Assessment Guideline (DPIE, 2021)	Section 6.11
Standard	Waste Management	No	General	• Waste Classification Guidelines (DECCW, 2009)	Section 6.12
Standard	Hazard and Risk – Preliminary Hazard Analysis	No	General	• Hazardous Industry Planning Advisory Paper No. 4 – Risk Criteria for Land Use Safety Planning, NSW Department of Planning and Infrastructure, (HIPAP 4) • Hazardous Industry Planning Advisory Paper No. 6 – Hazard Analysis, NSW Department of Planning and Infrastructure, (HIPAP 6) • State Environmental Planning Policy No 33 – Hazardous and Offensive Development • International Commission on Non-Ionizing Radiation Protection (ICNIRP) Guidelines for limiting exposure to Time-varying Electric, Magnetic and Electromagnetic Fields	Section 6.13
Standard	Historic Heritage	No	General	• Assessing Significance for Historical Archaeological Sites and "Relics" (NSW Heritage Branch, Department of Planning, 2009)	Section 6.14
Standard	Agricultural Impact	Yes	General	• NSW Government (DPI) PrimeFact Infrastructure Proposal on Rural Land (2013) • NSW Government (DPI) Land Use Conflict Risk Assessment Guide (2011)	Section 6.15

Appendix B Social Impact Assessment Scoping Report

Request for Secretary's Environmental Assessment Requirements (SEARs)

Enervest Operations Pty Ltd

SLR Project No.: 620.31316.00000

25 August 2024

Stoney Creek Battery Energy Storage System | Social Impact Assessment

SCOPING REPORT

Prepared for SLR and Enervest | 30 May 2023

Stoney Creek Battery Energy Storage System

SOCIAL IMPACT ASSESSMENT | SCOPING REPORT

Prepared for SLR and Enervest
30 May 2023

PR264

	Prepared by	Reviewed by
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1.1 Battery Energy Storage Systems

A Battery Energy Storage System (BESS) is an energy storage technology that enables large capacity energy storage and release upon demand. Unlike many other forms of energy storage and generation, batteries are particularly valuable because they provide flexibility. A BESS can respond faster than other energy storage or generation technology and help maintain grid stability by turning on and off in fractions of a second.

Enervest integrates BESSs with renewable energy generation. This means that clean solar and wind generated energy can be stored during times of low demand and released (or dispatched) at times of peak demand. Enervest's BESS technologies will reduce Australia's reliance on fossil fuel power generation and are therefore integral to the nation's decarbonisation journey.

1.2 Project description

The BESS will be located within Lot 156 on DP754944, adjacent to Stoney Creek Road. The BESS is expected to require approximately 3.88ha of land. Refer to **Figure 1-1**.

It is intended that the BESS facility will connect to the existing substation on the opposite side of Stoney Creek Road (located on Lot 1 on DP502189).

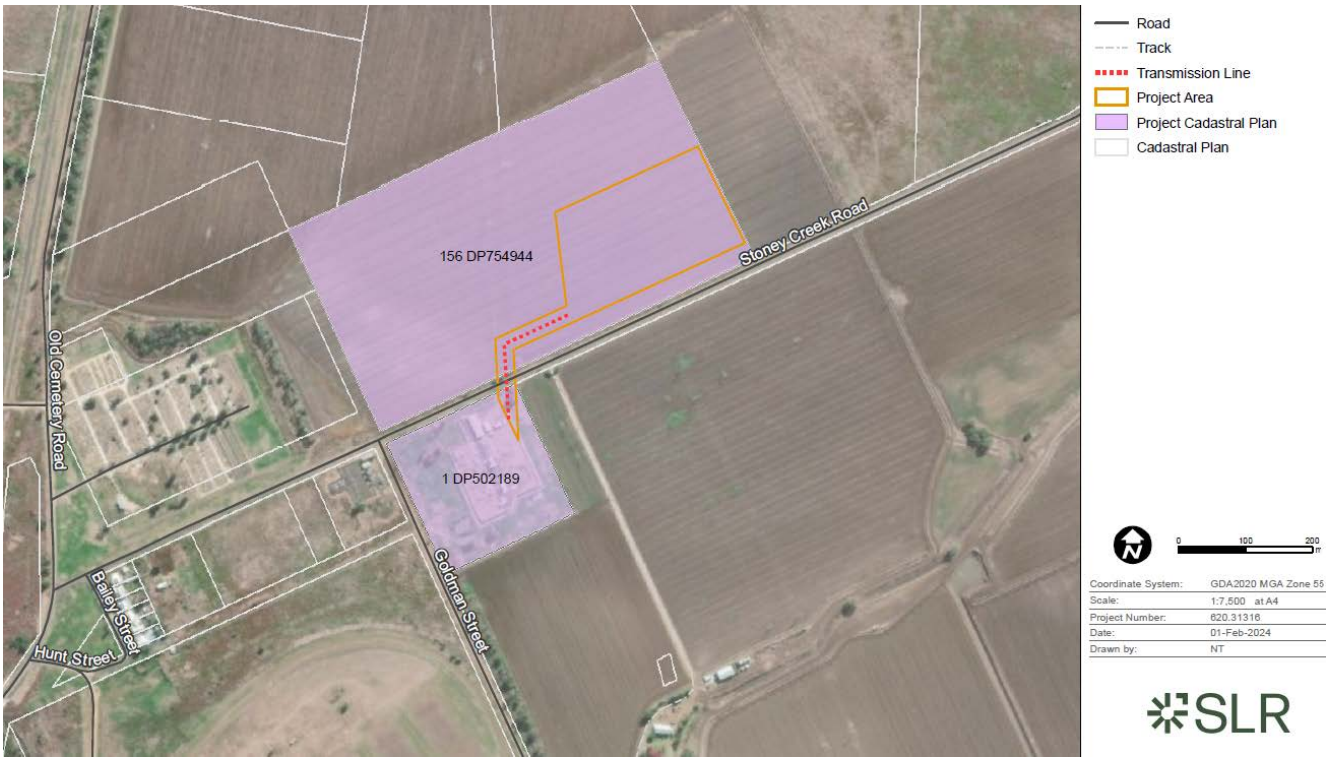

Figure 1-1 The proposed site

The key elements of the project include the following:

- Installation and operation of a 125 MW BESS including battery enclosures, inverters, and transformers
- Associated ancillary infrastructure including:

- A 33kV aboveground cable connecting a 33kV switch building to the existing Narrabri substation
- Creation of access point for heavy vehicles through to the development site
- Operations and maintenance (O&M) building
- Stormwater management infrastructure, lighting, and security fencing
- Construction laydown areas

- Decommissioning of the BESS at the end of life (EOL) include disassembly and removal of associated infrastructure from the site, to be returned as close as possible to its existing condition.

Construction of the project is anticipated to take approximately 12 months and it is expected that the operational life of the project would be minimum 30 years.

The batteries units will be stored in fully enclosed battery storage containers. The battery storage container will be within shipping or modular containers. Each battery storage container will be approximately 6m long, 2.5 m wide and 3 m high, similar to a typical 20-foot shipping container. The battery storage containers will be placed in rows and will be separated by a gravel surface.

Inverters and MV transformers will be required at each battery storage container. The inverters are required to convert direct current (DC) to alternating current (AC) and the transformers are required to step up the voltage to 33 kV. The inverters and transformers will be housed in modular containers.

Electrical cabling connecting the onsite infrastructure (eg electrical cabling connecting the batteries, inverters and transformers) will be built in accordance with relevant Australian Standards.

A 33 kV switch room will be required at the BESS facility to control the delivery of electricity to and from the existing adjacent Deniliquin substation.

The BESS facility will require its own substation to transform medium voltage (MV) to high voltage (HV), and vice versa.

To support the operation of the BESS development an operations office is proposed to be constructed on site.

Construction phase

The construction of the BESS is expected to take 12 months and will involve the following stages.

1. Preliminary site works / civil / electrical
2. Delivery of modular infrastructure and construction materials
3. Installation and Commissioning

Construction working hours are proposed as follows:

- Monday to Saturday – 6:30am to 6:30pm
- Sunday - 8am to 1pm.

A Construction Environmental Management Plan (CEMP) will be prepared, prior to construction describing how the activities will be undertaken during the construction phase of the development and how these activities will be managed to mitigate environmental impacts.

For the construction workforce, based on SLR experience of other BESS facilities, it is expected there will be a maximum of 40 staff on-site per day (or 80 trip movements per day), which across the 12 month construction period is equivalent to 28,400 trip movements.

Vehicles during construction will include small/light utes and some small trucks for delivery of electrical and earth work products during Stage 1, major heavy trucks for the delivery of the large hardware during Stage 2 and in the final stage - only persons with small/light utes will be on site, unless hardware faults require a major swap out.

Access to the development site will be achieved from the vehicular bridge off the Riverina Highway. A Traffic Assessment Report that demonstrates the proposal impacts on the surrounding road network will be provided with the SSE Application.

Any temporary parking and set down areas required during the construction phase will be reinstated and landscaped once the facility is operational.

All construction equipment for the BESS will be located in the project area. Materials and waste during the extraction and construction phases will be transported off the site using heavy machinery and disposed of at nearby waste facility. A Waste Management Plan is required for the EIS.

The proposal will involve minor earthworks to facilitate the cement foundation to be established on the site. All materials will be transported onto the site via a licensed contractor. At the stage of this scoping report the extent of the extractive materials is unknown. The topsoil is proposed to be extracted using bulldozers and heavy machinery equipment, and temporarily stored on site as stockpiles.

Operational phase

The project will have a 30 year operational period, plus an additional 10 year lease option.

During operation, 1 to 2 permanent staff will be required to be on site. During the first 6 months, visits may be weekly as teething issues are resolved and the asset is fully operational. Thereafter, scheduled visits would occur on a quarterly basis for a duration of 1-3 days. Any reactive maintenance should would not occur more than monthly.

Scheduled maintenance would occur during business hours on weekdays at an agreed date ahead of time, whilst reactive maintenance would occur at any time as required. However, this is extremely rare and typically during daylight hours.

Vehicle movements generated by the facility once operational will be minimal, limited to staff movements.

During the operational stage of the development car parking places will be provided on site for general maintenance staff, as well as truck parking spaces are proposed for on site.

Access during construction and operation would be via an access road which would connect to the existing local road network.

The BESS will operate at anytime of the day depending on certain scenarios however, due to the operational need for discharge and recharge of the batteries, they will never be running 24/7. The project is proposed to be decommissioned and the infrastructure removed following the end of life of the BESS, with works required to return the site as close as possible to its original state and use. The standard construction hours and heavy vehicles, plant, and equipment required for the construction of the project would also apply to the decommissioning phase.

1.3 Purpose of report

In accordance with the SIA Guideline (NSW Department of Planning and Environment, 2021) and Undertaking Engagement Guidelines (NSW Department of Planning and Environment, 2021a), hereafter referred to collectively as the 'SIA guideline', the purpose of this report is to:

- establish a social baseline for the project
- identify project activities that could potentially have social impacts and group them in the social impact categories in the SIA guideline
- provide a summary (scoping worksheet) of potential social impacts that require additional assessment
- establish appropriate methodologies to investigate and assess project related social impacts
- provide a brief overview of potential management measures and ongoing monitoring.

1.4 Scoping phase engagement and methodology

To scope the project the following engagement and research methods were implemented:

- inception and social locality development meetings with Enervest and SLR staff
- distribution of a project introduction letter to Narrabri businesses and residences in February 2023. 1695 project introduction letters were distributed in an area surrounding the project. The letter contained project team contact details and a link to the Enervest website
- semi-structured interviews (n=4) with key project stakeholders from Narrabri were conducted in March 2023. Representatives from the following organisations were invited to an interview but not all responded to the invite:
    - Narrabri Shire Councill
    - Narrabri Local Aboriginal Land Council
    - Narrabri Regional Visitor Information Centre
    - Narrabri Chamber of Commerce
    - Tattersalls Hotel
    - Mid-Town Inn Narrabri
- an online survey was distributed via a website link and QR code embedded in the project introduction letters
- literature review focussing on nearby projects with potential for cumulative impacts.

2 LEGISLATIVE AND SOCIAL POLICY CONTEXT

2.1 Legislation

The EP&A Act sets the legislative context for this study. The objects of the EP&A Act are 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
- facilitate ecologically sustainable development by integrating relevant economic, environmental and social considerations in decision-making about environmental planning and assessment
- promote the orderly and economic use and development of land
- promote the delivery and maintenance of affordable housing
- protect the environment, including the conservation of threatened and other species of native animals and plants, ecological communities and their habitats
- promote the sustainable management of built and cultural heritage (including Aboriginal cultural heritage)
- promote good design and amenity of the built environment
- promote the proper construction and maintenance of buildings, including the protection of the health and safety of their occupants
- promote the sharing of the responsibility for environmental planning and assessment between the different levels of government in the state
- provide increased opportunity for community participation in environmental planning and assessment.

If the project proceeds, it will require an Environmental Impact Statement (EIS) prepared in accordance with the Secretary's Environmental Assessment Requirements (SEARs). The SEARs would be issued under the provisions of the EP&A Act, and therefore set legislative requirements for the SIA.

2.2 Social framework and policies

Regional and local government bodies have developed strategic plans which reflect community, industry and government ambitions. They establish targets and sentiment that is considered when planning and development initiatives are created. The plans relate to a range of opportunities for the communities including 'place-making' and improving the socio-economic circumstances of the respective populations.

2.2.1 Premiers' priorities

The NSW government has released a range of priorities which will set the direction for decision making across all levels of government. The Premiers Priorities were updated December 2022 and aim to tackle challenges that persist across the state and improve the wellbeing of communities, the economy and the environment. The priorities include:

- a strong economy
- highest quality education
- well-connected communities with quality local environments
- putting customer at the centre of everything the government does
- breaking the cycle of disadvantage.

Each regional and local plan outlined below is influenced by the priorities set by the NSW government. Some of the plans may have been created prior to the updated list of priorities and were created with the priorities set at that time.

2.2.2 Net Zero Plan Stage 1: 2020-2030

In support of its net zero emissions by 2050 goal, the NSW Government released its *Net Zero Plan Stage 1: 2020–2030* (2020) to fast-track emissions reduction over the next decade. Plans for the second and third decades of the net zero path will be developed in the lead-up to the 2030s and 2040s respectively.

The plan is set out in four parts:

1. a global challenge with local opportunities – the trends and opportunities arising from global climate change action
2. progress and projections – progress within NSW to date to reduce emissions and future projections
3. the net zero priorities – the NSW Government's net zero priorities
4. keeping track – the Government's approach to keeping track of its progress.

The plan sets an objective to deliver a 35% emissions reduction in NSW by 2030 compared to 2005 measurements. The NSW and Commonwealth Governments will invest almost $2 billion over 10 years to reduce emissions in NSW. The plan also paves the way to achieving a net zero future by accelerating the next wave of innovative technologies.

This pan recognises that, in parts of the NSW economy, low emissions technologies are becoming a commercially viable alternative to the traditional ways of doing things. Scaling up those technologies will play a critical role in getting to net zero. It is here that the project is well-aligned to the NSW Government objectives. The project is part of Enervest's larger BESS program designed to provide large-scale renewable energy to Australia. The BESS technology proposed to be implemented by Enervest for the project will support the emissions reduction targets set out in the Net Zero Stage 1 plan.

2.2.3 New England North West Regional Plan (2036)

Narrabri Shire is becoming a modern regional growth centre. With a population of 14,000 within the bounds of 13,000sqkm, the footprint of economic capacity is large. The area has diversified from its traditional agricultural base of grain, cotton, wool, beef and prime lamb production to coal mining and gas extraction and exploration. With ease of access and connection via rail, road and air Narrabri shire and the expanding Narrabri township offer a strong economic footing for the future.

The *New England North West Regional Plan* (NENWRP) published by the NSW Department of Planning and Environment (DPE) represents the NSW government's 20-year vision for land uses in the New England North West NSW region. The vision encompasses the collective effort of the 12 LGA's which include: Armidale Regional, Glen Innes Severn, Gunnedah, Gwydir, Inverell, Liverpool Plains, Moree Plains, Narrabri, Tamworth, Tenterfield, Uralla and Walcha.

The motion for the plan is to create a strong, dynamic, and diversified economy which is founded upon the vibrant waterways and the network of connected communities that define the region. The plan recognises the natural assets that currently under pin the community and economy, with the mindset to improve and maintain them for future resilience.

The plan has a total of 4 overarching goals with 24 separate directions categorised under the Economy, Environment, Transport as well as the Community.

Direction 5 of the strategy which aims to enhance the communities and places within the New England North West, is to plan for growth as the renewable energy hub of NSW. The project would support this goal directly.

The plan also acknowledges the need for the region to progress NSW's ambition of net zero emissions by 2050 (objective 13) and aims to leverage technology within future infrastructure developments. Low emissions technology such as wind turbine, hydro and solar build vulnerabilities into the energy grid due to their reliance on weather systems. The project aims to offer energy storage solutions within these periods.

Goal 1 of the report is to strategically plan for rural industries. It acknowledges the need to balance the areas diverse rural land uses from agriculture, tourism, mining and rural residential developments. New residential developments, extractive operations and infrastructure projects will require reliable sources of electricity to accommodate the needs for growing communities. In establishing energy storage solutions within the Narrabri region, the project may support the energy resilience for the communities and industries that will rely on low emissions energy.

This NENWRP provides an avenue for ecological protection, safe and vibrant communities within a growing economic landscape for the next 20 years. The project aims to support the resilience of the region as it develops low emissions infrastructure and energy. Therefore, the project could be considered consistent the objectives of the NENWRP.

2.2.4 Narrabri Shire Community Strategic Plan 2022 – 2032

Narrabri Shire Local Council (NSLC) is one of the 12 LGA's encompassed by the New England North West region. The *Narrabri Shire Community Strategic Plan* (NSCSP) (2022) identifies the key priorities and ambitions for the next 10 years while establishing strategies to achieve them. The plan was developed through public, government and business consultation to shape the future of the community. This plan sets the tone for all other council plans and policies within the local planning hierarchy.

The strategic outcomes of the plan are:

- society – An empowered, inclusive and connected community
- environment – A sustainable and compatible natural and built environment
  economy – A strong, diverse and sustainable economy
- civic leadership – Council as strong leaders for the community.

The strategic outcomes encompass 12 objectives and 48 strategies that strive to achieve the goals of the NSCSP.

The project offers to support the NSLC strategy for delivering community assets and services. If it proceeds, the project could potentially help stabilise electricity services across the LGA and the broader region while transmission to low emissions infrastructure is developed.

2.2.5 Narrabri Shire Local Strategic Planning Statement

The purpose of the *Narrabri Shire Local Strategic Planning Statement* (2020) (NSLSPS) is to connect the strategic priorities outlined in the NENWRP and planning at a local level through the environmental and development control plans. The NSLSPS establishes a 20-year vision for land use planning in the Narrabri Shire LGA with the aim of encouraging growth while maintaining the high standard of liveability and agricultural activity that defines the area. The NSLSPS has been prepared in accordance with section 3.9 of the EP&A Act.

Council's vision for the Narrabri Shire will be achieved through 18 planning priorities within 4 categories; economy, places, infrastructure and environment. These priorities also act as a basis by which council will monitor and implement actions toward effective planning and land management.

The planning priorities of industry and infrastructure most closely relate to likely impacts that the project would have in the Narrabri Shire LGA, if it proceeds.

In terms of industry, the strategy supports existing land uses and precincts in locations that minimise amenity impacts. It investigates opportunities to expand in new and existing industries, and it encourages the co-location of agricultural enterprises to enhance the efficiency of agricultural land use.

In terms of infrastructure, NSLCs initiatives focus on two key objectives which include:

- aligning future growth and investment with water and wastewater capabilities
- investigating funding opportunities to upgrade existing utility infrastructure facilities to cater for a growing population.

The project represents a potential asset to local infrastructure, contributing to electricity stability in partnership with renewable energy sources.

3 EXISTING SOCIAL BASELINE

3.1 Regional context

The project is in the NSW New England North West region (see **Figure 3-1**). The regional city of Narrabri is positioned along the corridor linking key industrial routes between Brisbane and Newcastle / Sydney with an established transport system efficiently linking the New England Northwest.

The New England Northwest region enjoys unique advantages because of the combination of varied soil types and topography. This has helped create an economy based on agricultural production and mining. The New England North West contains both nationally and internationally important areas of environmental value including the Washpool, Gibraltar Range, Oxley Wild Rivers and New England National Parks, which are part of the World Heritage-listed Gondwana Rainforests of Australia. Near Narrabri, the ancient volcano of Mount Kaputar rises 1,400m above sea level. Near Moree, the Gwydir Wetlands State Conservation Area is one of the most significant inland wetland systems in NSW (Narrabri Shire Council, 2023).

The NSW Department of Planning and Environment (2021) states that Aboriginal people have cared for the lands and water of the New England Northwest region for thousands of years. The Anaiwan, Banbai, Bundjalung, Githabul, Gumbaynggirr, Kamilaroi, Kwaimbul, Ngoorabel, Birpai, and Dunghutti Nations make up the New England Northwest region. As of 2016, the proportion of Aboriginal people among the total proportion of the Narrabri population is 12% – representing a higher percentage than regional NSW.

With greater global demand for food and resources, the New England's well established agricultural economy draws from its reputation as one of Australia's premium growing regions. Currently the region represents 20% of NSW's total agricultural output (Narrabri Shire Council, 2020). The region is a well-connected export conduit to Brisbane and ports in NSW. Good strategic planning is minimising the challenges of the interface between residential and agricultural areas.

The population of the New England Northwest region is expected to grow from around 186,000 in 2021 to over 197,500 by 2041. This growth – forecasted in growing regional centres such as Tamworth, Moree and Armidale – acknowledges that some parts of the region may experience decline (NSW Department of Planning and Environment, 2021).

3.2 Local context

3.2.1 The project's social locality

The project is located 2.5km from the Narrabri town centre, directly adjacent the existing electrical substation for the town.

Narrabri is a key regional centre in the New England Northwest region, providing services and facilities that are accessed by a broad population base both within Narrabri LGA and beyond. For example, despite a surge in online shopping that has affected the retail sector nation-wide, Narrabri's retail services do attract customers from the surrounding villages, such as Wee Waa, Boggabri, Edgeroi and Baan Baa.

Figure 3-1 NSW Riverina region

In terms of transport connections, local and regional railway freight networks operate from Narrabri, considered one of the main freight hubs of Northern Inland NSW. The national Newell Highway links Narrabri to Moree in the north and Coonabarabran to the south. It is considered a major roadlink between South East Queensland and Victoria via Central NSW. From the west to east the Kamilaroi Highway links Narrabri to Bourke and Walgett (west) to Gunnedah and Tamworth (east).

Narrabri is the administrative heart of the second richest agricultural shire in Australia. Renowned for the production of high-quality cotton, beef, lamb and wheat and home to several research facilities, it is a regional powerhouse of innovation. The ease of access to noteworthy national parks and forest – such as the Pilliga Forest, the largest remnant temperate forest in Australia - attracts nature-seeking tourism from around Australia (Narrabri Shire Council, 2023).

Social infrastructure is strong and vibrant in the Narrabri shire. The following organisations and venues are among those which contribute to social well-being:

- Narrabri Scouts Group – *local group of national community representing ages 6yo – 15yo*
- Narrabri and District Historical Society – *aims to collect, restore and research local history*
- Narrabri Community Bushcare Group – *promoting native vegetation and working with land owners to improve property*
- Narrabri Garden Club – *part of larger Garden Club Australia*
- Namoi Valley Antique Vehicle Club Inc. – *community preserving and restoring cars, trucks, tractors and motorbikes*
- Narrabri Men's Shed – *encouraging local men to develop their skills*
- Australian Decorative & Fine Arts (ADFAS) – *monthly arts lectures at local theatre – The Crossing*
- Educational facilities including a number of childcare centres, pre-schools and primary schools, as well as parent community groups.

The nominated social locality for the project is in **Figure 3-2**.

3.2.2 Community profile

The scale adopted for the community profile is the "urban centre and locality" (UCL 114023) as defined by the Australian Bureau of Statistics. As shown in **Figure 3-2** the boundary of UCL114023 is also adopted as the social locality for the project. This decision was made because it best encompasses Narrabri and surrounds where the majority of residences and businesses exist. Note the project site is outside the boundary of UCL114023. Nevertheless, the SIA has and will continue to recognise the project's fence line and other neighbours outside the UCL114023 boundary and ensure they are comprehensively involved in the SIA consultation activities.

Community snapshot

The Narrabri township (refer **Figure 3-1**) has a population of approximately 12,703 people (Australian Bureau of Statistics, 2021), of which 50.4% were male and 49.6% were female. The median age is 40 years and the number of people per household is 2.4.

Population projections

According to the Australian census data, the population of Narrabri has experienced a decrease between 2001 and 2021 (ABS, 2021). **Figure 3-3** illustrates this data. The NSLSPS reflects the aspirational goal of over 14,000 by 2040.

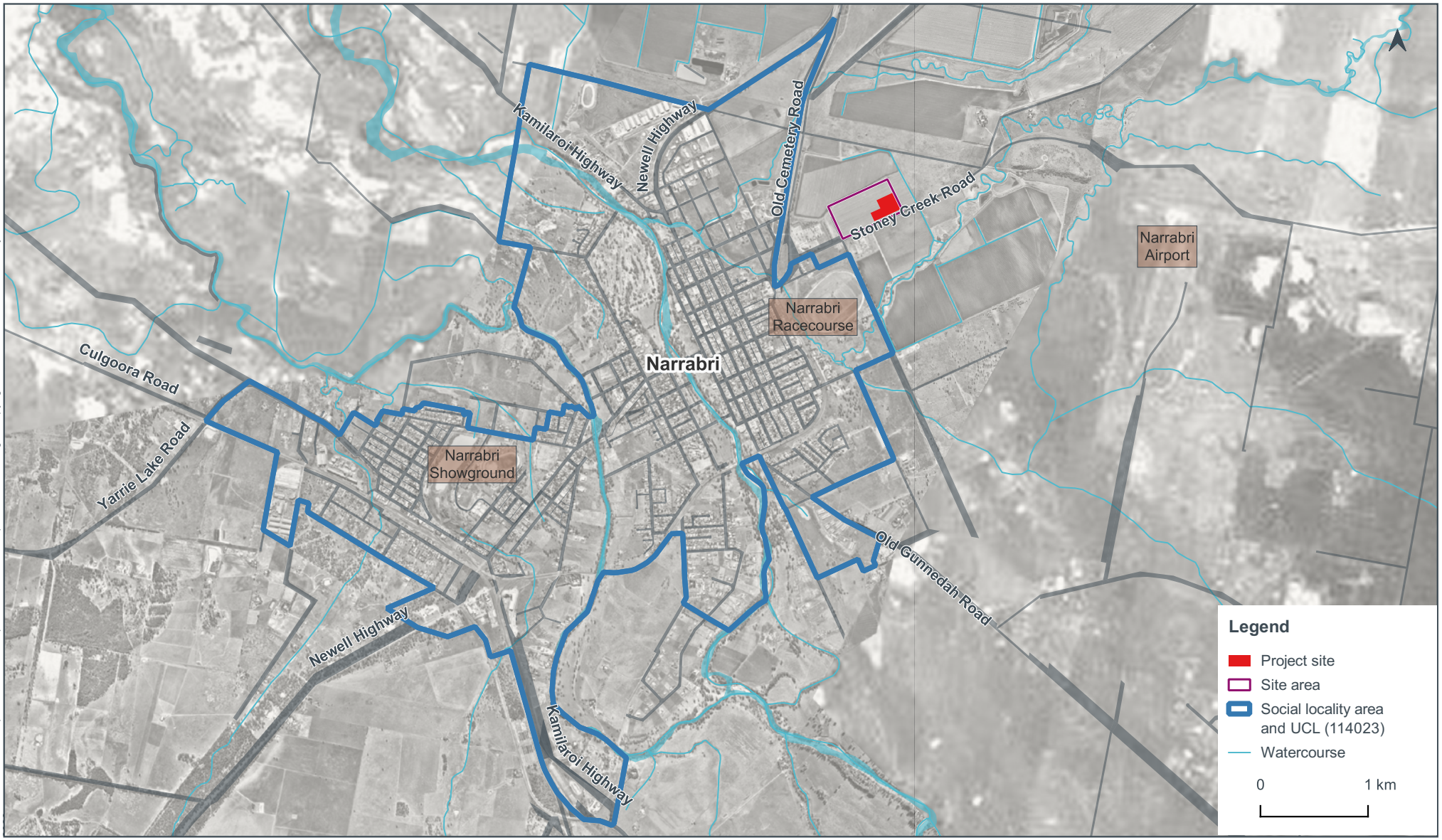

Figure 3-2 Social locality

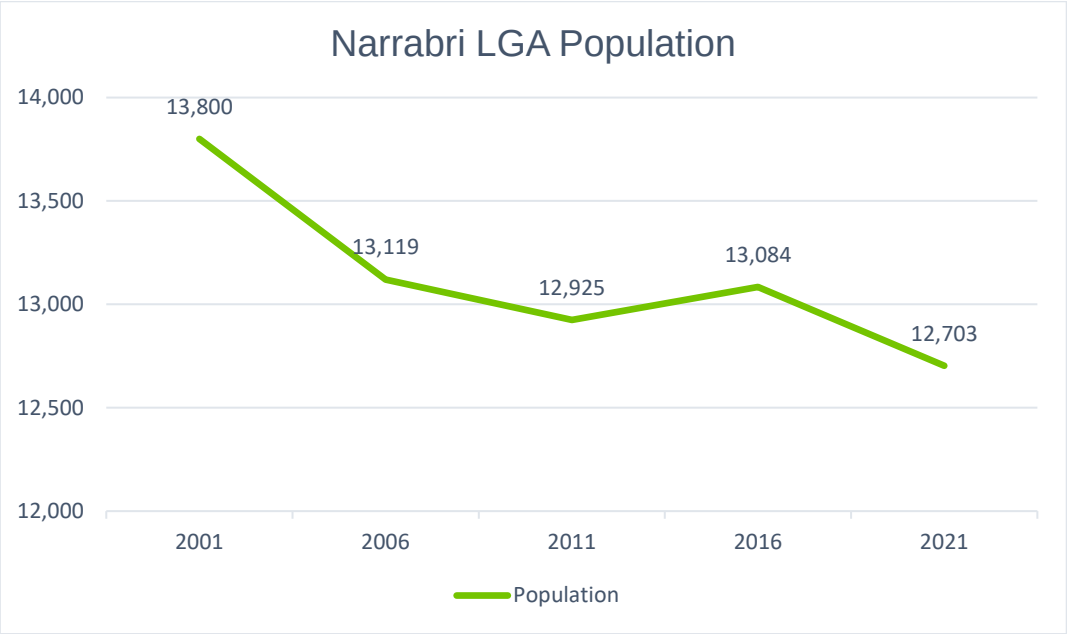

Figure 3-3 Population trend for the urban centre of Narrabri

Indigenous populations

The area was inhabited by the Kamilaroi peoples who are the traditional custodians of the land in the vicinity of Narrabri. The ancestral territory spans across the border of New South Wales and Victoria. As of June 2021, 1,881 (14.8%) people living in Narrabri identified as Aboriginal and/or Torres Strait Islander (ABS 2021). This is a higher percentage of Aboriginal representation than the state and national averages.

Place of birth

Narrabri has a higher proportion of residents born within Australia than the NSW population. Details of resident's place of birth are in detailed in **Table 3-1**.

Table 3-1 Country of birth Narrabri vs NSW

Narrabri			NSW
Country of birth	**People**	**Percentage**	**Percentage**
Australia	10,668	84.0%	65.4%
England	94	0.7%	2.9%
New Zealand	78	0.6%	1.5%
Philippines	69	0.5%	1.3%
Germany	27	0.2%	0.4%

Employment

Participation of the Narrabri population in the labour force is slightly higher than the NSW population with 59.2% of people 15 years and older currently employed compared to NSW at 58.7% (ABS, 2021). Of participants in the labour force, 63.5% are employed full time, 26.4% are employed part time and 10.1% are either away from work or unemployed and looking for work. These figures are a marginal improvement when contrasted to the population of NSW (ABS, 2021).

The main industry of employment in Narrabri is mining and agriculture. Combined it makes up more than 1/3rd of the employment base (Narrabri Shire Council, 2022). It is important to note that

though mining employment figures are high, a large percentage of this population does not live in the local area. Agriculture, forestry and fishing represent a larger percentage that permanently reside in the Narrabri LGA. Details of the industries that employ the most residents in Narrabri are outlined in **Figure 3-4**.

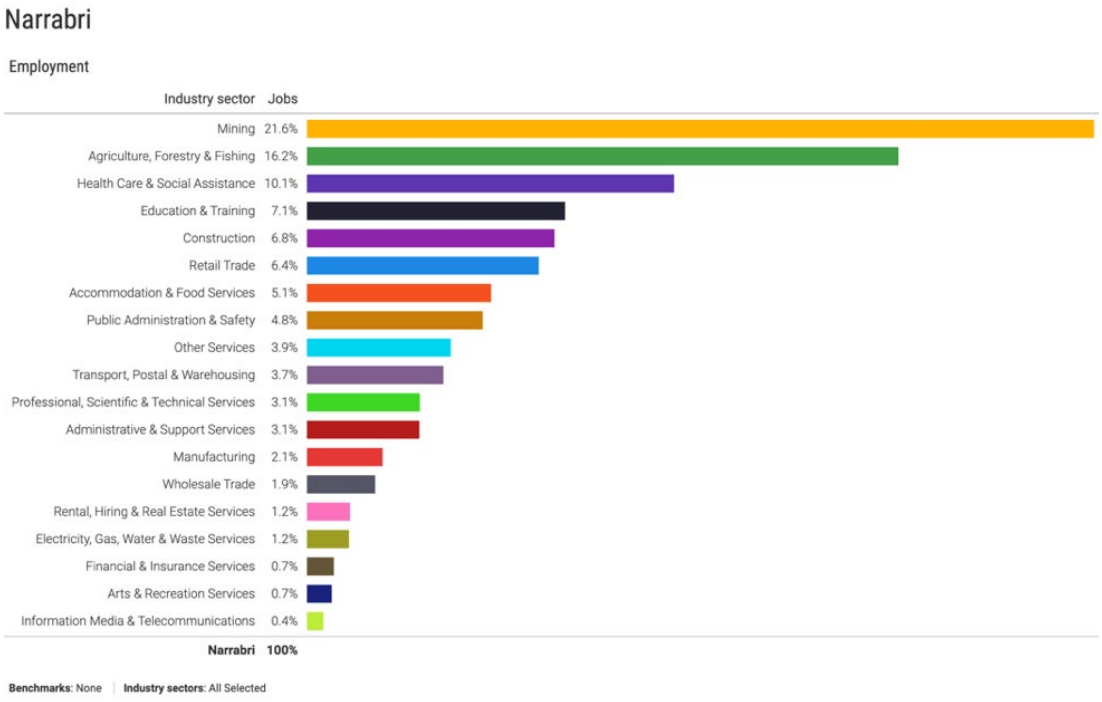

Figure 3-4 Industry of employment in Narrabri (REMPLAN, 2023)

Status of industry

Narrabri has a large farming industry which relies on crops harvesting, grazing and wool production. Dryland areas support grazing, while irrigated areas produce high-yield crops such as cotton, wheat, and processing tomatoes (Narrabri Shire Council, 2023). Narrabri is also the base for the University of Sydney Plant Breeding Institute and Australian Cotton Research Initiative – both leading researching bases for innovation in the agriculture industry.

Income

The average median weekly household income for Narrabri is $1,498 which is lower than the $1,829 NSW weekly household income. (Australian Bureau of Statistics, 2021)

Education

The proportion of Narrabri residents who finished secondary school is lower than that of the wider NSW population (Australian Bureau of Statistics, 2021). **Table 3-2** illustrates the differences in year that residents left school with a lower portion continuing through to tertiary studies. The Narrabri population has a comparatively strong interest in vocational education pathways and these statistics align with the agricultural and services based industries.

Table 3-2 Highest year of education for residents of Narrabri (Australian Bureau of Statistics, 2021)

	Narrabri	NSW
Highest Education Level	Percentage	Percentage
Bachelor Degree or above	10.9%	27.8%

	Narrabri	NSW
Cert III / IV	19.5%	15%
Yr12 or equivalent	11.8%	14.5%
Yr11 or equivalent	3.8%	3.2%
Yr10 or equivalent	18.1%	10.6%
Yr9 or below	12.5%	7.4%
Did not go to school	0.4%	1.0%

4 PRELIMINARY SOCIAL IMPACT ASSESSMENT

Major developments can impact people in many ways, both positive and negative. The SIA process assesses a project from the perspective of people - intending for a development to be more socially sustainable when this assessment is applied. The SIA identifies, predicts, evaluates and develops responses to social impacts as part of an integrated assessment that also considers a wide range of environmental impacts.

The aim of this section is to provide a preliminary assessment of the project's potential social issues that require additional assessment in the SIA phase 2, including the consideration of the likely duration, extent, sensitivity and severity of potential social impacts. This preliminary assessment has been informed by primary data collected via the methods in **section 1.3** and desktop research and analysis of the area surrounding the project.

For the purpose of this assessment, the social impact categories outlined in the SIA guideline (NSW Department of Planning and Environment, 2021) have been adopted to identify the potential social impacts. These categories are outlined in **Table 4-1**.

Table 4-1 - Social impact categories

Categories	Definition
Way of life	How people live, how they get around, how they work, how they play, and how they interact each day
Community	Community composition, cohesion, character, how the community functions, and people's sense of place
Accessibility	How people access and use infrastructure, services and facilities, whether provided by a public, private or not-for-profit organisation
Culture	Aboriginal and non-Aboriginal, including shared beliefs, customs, values and stories, and connections to Country, land, waterways, places and buildings
Health and wellbeing	Physical and mental health especially for people vulnerable to social exclusion or substantial change, psychological stress resulting from financial or other pressures, and changes to public health overall
Surroundings	Ecosystem services such as shade, pollution control, and erosion control, public safety and security, access to and use of the natural and built environment, and aesthetic value and amenity
Livelihoods	People's capacity to sustain themselves through employment or business, whether they experience personal breach or disadvantage, and the distributive equity of impacts and benefits
Decision-making systems	Whether people experience procedural fairness, can make informed decisions, can meaningfully influence decisions, and can access complaint, remedy and grievance mechanisms.

The DPE scoping tool (**Appendix A**) was populated to determine the social impacts that need to be considered in the SIA phase 2 and the SIA methodology to be used to further investigate them. As listed in the scoping tool, the impacts considered relevant to the project and worthy of further investigation in the SIA are:

- Community (positive and negative social impacts)
- Surroundings (positive and negative)
- Livelihoods (positive)
- Health and wellbeing (positive)
- Access (positive).

Other social impact matters listed in the SIA guideline that do not appear in the list above were not deemed relevant to the project and will not be assessed further in the SIA.

4.1 Positive social impacts

It is important to adequately assess the project's potential positive social impacts to gain an understanding of its net impact. The positive impacts identified in the SIA phase 1 are listed below.

4.1.1 Community

Community cohesion and function

Newly created industries and projects require a workforce. In the case where the workforce is drawn from places away from the host community (i.e. not sourced locally), an influx of workers has the potential to influence prevailing social conditions. For example, the SIA guideline suggests an influx of people to a town might alter social connections, interrelationships, networks and interactions, trust and cooperation, participation in community activities and institutions, and the potential for harmony or conflict. Lack of cohesion can result in social dislocation, alienation, division, dispossession, tensions, impoverishment, and crime.

Conversely, an influx of staff and their families may create positive social impacts by stimulating new social attributes of the communities, fostering cultural diversity, bolstering organisational capacities of business or community organisations, and contributing to the supply of services. Primary data collected about the project indicates that some Narrabri residents predict it will create positive social impacts related to community cohesion. For example, an online survey respondent referred to new companies and workforces positively impacting upon friendliness and community cohesion in Narrabri:

> *"It is always wonderful to meet and integrate with these new-comers" (online survey respondent).*

The origin of the workforce that would be required for the project will be explored in the SIA phase 2, and more thorough investigation of the potential for positive community impacts will be made.

Community character

The character of a community is primarily shaped by its people. The SIA guideline describes other factors that influence the community character such as shared identity and attributes, and natural and built features that people value. These factors must be considered in the SIA process.

In the SIA phase 1 the 'progressive' nature of the Narrabri community was identified as a shared identity that the project would positively impact. For example, an online survey respondent stated that the project (being a renewable energy proposal) would align with the progressive character of the community and its support for renewable energy. In addition, this attribute of the Narrabri community emerged in a community meeting held in October 2022 by not-for-profit organisation and renewable energy advocate Geni Energy. The meeting summary (Geni Energy, 2023) refers to the 'feel and momentum' of the community, which implies its shared support for renewable energy projects. There is potential for Enervest's BESS project to positively impact this community character.

4.1.2 Surroundings

Well-being is inherently linked to surroundings. Access to and use of the natural and built environment, and its aesthetic value and amenity, can dramatically influence the social circumstances of individuals.

When considering the preliminary details of the project, members of the Narrabri community predicted that it could potentially create social benefits for their surroundings. For example, an

online survey respondent drew a connection between the local project, inter-generational equity in relation to surroundings, and the natural environment globally:

> *"We need to move to renewable, sustainable energy sources to protect the planet for future generations" (online survey respondent).*

When commenting on the attributes of Narrabri that are valued, the same online survey respondent cited clean air and water, and healthy forests. Other survey respondents referred to "dirty" surroundings perceived to be or actually created by coal seam gas operations in Narrabri and surrounding areas.

The online survey results highlight a potential social benefit that the project would yield, if it proceeds. This would be experienced by some people who consider the renewable energy project to produce healthier surroundings compared to non-renewable projects either existing or planned in Narrabri and the broader region. The potential benefit that the project would have for people in Narrabri and the region will be explored further in the SIA phase 2.

4.1.3 Livelihoods

Major projects involve a capital investment in host communities and this investment often creates new employment or business opportunities. This scenario is relevant to the 'livelihoods' social impact category contained in the SIA guideline. Livelihood relates to the people's capacity to sustain themselves and the distributive equity of impacts and benefits, including the employment and business opportunities referred to above.

The project has the potential to create a positive social impact for the livelihoods of the people in Narrabri. Whilst the exact workforce required for the project is not yet determined, it is acknowledged that employment and business opportunities would be influenced by its:

- Construction period, which is expected to be relatively short
- Operational period, which would not require a large or full-time workforce
- Relatively small demand for labour or sub-contractors.

Despite the above expectations, two online survey participants stated that new employment opportunities derived from a BESS project in Narrabri would be beneficial for the people of Narrabri. This sentiment was also conveyed by stakeholder interview participants.

4.1.4 Access

In the SIA guideline, 'access' is a social impact category which focusses on how people access and use infrastructure, services and facilities. Access relates to a project's influence on road use, or access to schools, medical services, community services, and businesses. In regional or rural towns where the availability of this infrastructure or services might be comparatively low compared to metropolitan areas, the impact of major developments can be more prominent.

The SIA scoping investigations for the project raised potential social benefits that it might yield for energy access, if it proceeds. For example, online survey respondents referred to the potential ability of the project to improve renewable energy security (access to energy) for Narrabri's current and future population. Two interview participants predicted a similar potential impact in terms of renewable energy in Narrabri and its influence on climate change.

Secondary data collected during the SIA scoping investigation also indicates there is community support for BESS projects as a means of improving accessibility to renewable energy in Narrabri. The Geni Energy community meeting summary (refer Geni Energy, 2023) identifies improved access to battery technology as a desired outcome of BESS projects.

4.2 Vulnerable communities

The SIA guideline requires a social evaluation of the project to pay particular attention to its potential impact on vulnerable people. For example, this would include people:

- With low incomes
- Living with disabilities, chronic medical conditions or in poor health requiring access to services
- In culturally and linguistically diverse communities
- Who are homeless or in insecure housing
- People who are unable to represent themselves
- Other vulnerable people such as elderly people, children, or single-parent households.

As part of the engagement program for the SIA phase 1, interview participants identified housing supply as an issue in Narrabri. Furthermore, two groups of people were identified as being disproportionately affected by accommodation difficulties.

The first of these groups is single men who have encountered separation from their spouse. One interview respondent has noticed that a lack of accommodation options in Narrabri has rendered separated men (whom are paying child support and no longer living in family home) with nowhere to live. In some cases these men are using substandard accommodation options.

The second of these groups is elderly people who require aged care accommodation. Owing to the lack of supply and aged care places in Narrabri, this group of people is considered to be vulnerable.

The impact of the project on these vulnerable people will be further investigated in the SIA phase 2.

4.3 Negative social impacts

As part of the SIA phase 1 some potential negative impacts are predicted to arise from the project. These impacts are described below according to the social categories defined in the SIA guideline (refer **Table 4-1**).

4.3.1 Community

Community cohesion and function

Section 4.1.1 of this report described how an influx of workers has the potential to positively influence prevailing social conditions. Conversely, an influx of workers associated with major developments may create adverse social conditions, particularly in regional locations where social services and infrastructure may be relatively less available.

If the project proceeds, the potential for negative social impacts derived from the project workforce was a topic raised by some community members. It is evident this expectation is borne from past experience, particularly from the influx of workers associated with coal seam gas projects recently commenced in Narrabri. For example, an online survey respondent referred to Santos (gas operations) negatively impacting upon friendliness and community cohesion in Narrabri. This is understood to be due to the arrival of the new company and its workforce to the town:

> *"It used to be a friendly and cohesive town until Santos (Eastern Star Gas) turned up" (Interview respondent).*

Whilst the feedback from the online survey respondent is valid, it is evident at this preliminary stage of the project that the Santos Narrabri Gas Project is comparatively, a much larger scale

project requiring a large construction and operation workforce. The SIA report commissioned by Santos states that “about 1,300 workers would be directly employed [for the coal seam gas project] during the peak construction phase of the project, which would occur over a period of three to four years. About 200 workers would be directly employed for the ongoing operation of the project, being a combination of existing and new jobs mostly based in Narrabri” (GHD, 2019), where housing and accommodation demand would arise.

There is a cumulative dimension to any consideration of potential social impacts derived from the project’s construction workforce. The is due to the finding of the inland rail SIA (JacobsGHD IR Joint Venture, 2020) which states there could be minor cumulative demand for tourist accommodation and rental accommodation during construction the rail project, particularly in Narrabri where inland rail projects overlap. The same consideration will apply to the Narrabri Special Activation Precinct (NSW DPE, 2023) depending on if and when it attracts a workforce to Narrabri.

A more detailed evaluation of the potential negative impact of the project workforce on the community will be undertaken in the SIA phase 2, and the scale of the project will be thoroughly considered.

4.3.2 Surroundings

The link between surroundings and social well-being was described in **Section 4.1.2,** and a potential positive social impact of the project was identified. There is, however, the possibility that a project can yield negative social impacts for people’s surroundings.

A community member who participated in a stakeholder interview predicted that the project will negatively impact surroundings if it proceeds. The indicative project site was illustrated in the project introduction letter provided to the interview participant, and this prompted the participant to consider the project impact on surroundings. The participant emphasised:

- The potential of the project to reduce the availability of high-yield crop land in the nominated area
- The need to relocate the project to a higher, flood-immune property
- An expectation that other community members would object to the project being built in the nominated area.

It is expected that a hydrology study will be commissioned as part of the project EIS and address the potential for flooding and crop-land disturbance. The SIA phase 2 will incorporate results of this study in an evaluation of this potential social impact.

5 SOCIAL IMPACT METHODOLOGY, MONITORING AND MANAGEMENT

5.1 Social impact methodology

Results of the DPE scoping tool (refer **Appendix A**) were used to develop the social impact methodology for the SIA Phase 2. **Table 5-1** contains the social matters identified in this report and the methods selected to investigate them further.

Table 5-1 - Social impact methodology

Social matters	Social matter subset	Aspect outline	Assessment methodology in SIA Phase 2
Predicted positive social impacts			
Community	Cohesion and function	Workforce would positively influence friendliness and community cohesion, depending on construction/operational workforce requirements	Stakeholder interviews Desktop analysis of workforce requirements and ABS employment data
Community	Character	Alignment with the progressive character of the community and its support for renewables	Community information session and attendee poll/survey
Surroundings	Access to and use of the natural environment	Fostering clean air and water, healthy forests and climate as predicted advantages/improvements compared to non-renewable industries	Community information session and attendee poll/survey
Livelihoods	People's capacity to sustain themselves	Positive impact on employment in Narrabri	Stakeholder interviews Desktop analysis of workforce requirements and ABS employment data
Access	Access and use of infrastructure	Positive impacts for energy security (access to energy) for the current and future population	Stakeholder interviews Review of EIS specialist studies
Predicted negative social impacts			
Community	Cohesion and function	Workforce would negatively influence friendliness and community cohesion, depending on construction/operational workforce requirements	Stakeholder interviews Desktop analysis of workforce requirements and ABS employment data
Surroundings	Access to and use of the natural environment	Reduction of high-yield crop land, depending on the location of the project site	Review of EIS specialist studies

5.2 Potential project refinements and approaches

In response to stakeholder feedback about the project site obtained during the SIA Phase 1, two project refinements have been discussed with the project team. For both items of feedback, **Table 5-2** lists the potential refinements that have been discussed. No refinement commitments have been made by Enervest during the SIA phase 1, however these potential refinements will be given further consideration in the SIA Phase 2.

Table 5-2 – Potential project refinements

Stakeholder feedback	Potential refinement
The area being considered for the project site is flood prone. It would be beneficial to move the project to flood-immune land	Move project to alternate site
The area being considered for the project is high-yield cropping land	Move the project to an alternate site

5.3 Management and mitigation

If the project proceeds, a range of management plans will be developed as part of the project operations and they will assist with the management of some of the potential negative project impacts. The management plans may include, but not be limited to, the:

- Environmental management strategy
- Noise and vibration management plan
- Safety management plan.

Enervest is currently developing a communications and engagement strategy for an overarching BESS program it is developing. It is also proposed that a community engagement plan for the project be developed and reviewed on an annual basis. This plan would outline a clear approach to how the community and stakeholders will be engaged and consulted by Enervest through the operational life of the project and it will aim to strengthen community relationships in Narrabri.

Further consideration of management measures will occur in the SIA Phase 2 in consultation with Enervest and be described in the SIA report.

6 REFERENCES

Australian Bureau of Statistics. (2021). *2021 Census Community Profiles*. Retrieved from ABS Community Profile: https://www.abs.gov.au/census/find-census-data/quickstats/2021/LGA15750

Australian Bureau of Statistics. (2021). *2021 Census Community Profiles*. Retrieved from ABS Community Profile: https://www.abs.gov.au/census/find-census-data/quickstats/2021/LGA15750

Geni Energy. (2023, March 20). *Community Battery Info*. Retrieved from Geni. Energy: https://www.geni.energy/battery-info

GHD. (2019). *Narrabri Gas Project Social Impact Assessment.* Sydney: GHD.

JacobsGHD IR Joint Venture. (2020). *Technical Report 13 - Social Assessment.* Sydney: JacobsGHD IR Joint Venture.

Narrabri Shire Council. (2020). *Narrabri Shire Council Local Strategic Planning Statement.* Narrabri: Narrabri Shire Council.

Narrabri Shire Council. (2022). *Narrabri Community Strategic Plan.* Narrabri: Narrabri Shire Council.

Narrabri Shire Council. (2023). *https://explorenarrabriregion.com.au/*. Retrieved from Explore Narrabri: https://explorenarrabriregion.com.au/

NSW Department of Planning and Environment. (2020). *Net Zero Plan Stage 1: 2020-2030.* Sydney: NSW DPE.

NSW Department of Planning and Environment. (2021). *New England North West Regional Plan (2041).* Sydney: NSW Department of Planning and Environment.

NSW Department of Planning and Environment. (2021). *Social Impact Assessment Guideline.* Sydney: DPIE.

NSW Department of Planning and Environment. (2021a). *Undertaking Engagement Guidelines for State Significant Projects.* Sydney: NSW DPIE.

NSW DPE. (2023, March 24). *Narrabri Special Activation Precinct* . Retrieved from https://www.planning.nsw.gov.au/Plans-for-your-area/Special-Activation-Precincts/Narrabri-Special-Activation-Precinct

REMPLAN. (2023). *Narrabri Economic Profile*. Retrieved from Remplan: https://app.remplan.com.au/narrabri/economy/summary?state=BAyKi7BQ3FJOLGRc5ZrNy2i2IoIpRm

7 APPENDIX A – DPE SCOPING TOOL EXTRACT

CATEGORIES OF SOCIAL IMPACTS	POTENTIAL IMPACTS ON PEOPLE		PREVIOUS INVESTIGATION OF IMPACT		CUMULATIVE IMPACTS		ELEMENTS OF IMPACTS - Based on preliminary investigation					ASSESSMENT LEVEL FOR EACH IMPACT			
what social impact categories could be affected by the project activities	What impacts are likely, and what concerns/aspirations have people expressed about the impact? Summarise how each relevant stakeholder group might experience the impact. NB. Where there are multiple stakeholder groups affected differently by an impact, or more than one impact from the activity, please add an additional row.	Is the impact expected to be positive or negative	Has this impact previously been investigated (on this or other project/s)?	If "yes - this project," briefly describe the previous investigation. If "yes - other project," identify the other project and investigation	Will this impact combine with others from this project (think about when and where), and/or with impacts from other projects (cumulative)?	If yes, identify which other impacts and/or projects	Will the project activity (without mitigation or enhancement) cause a material social impact in terms of its: You can also consider the various magnitudes of these characteristics					Level of assessment for each social impact	What methods and data sources will be used to investigate this impact?		
							extant i.e. number of people potentially affected?	duration of expected impacts? (i.e. construction vs operational phase)	intensity of expected impacts i.e. scale or degree of change?	sensitivity or vulnerability of people potentially affected?	level of concern/interest of people potentially affected?		Secondary data	Primary Data - Consultation	Primary Data - Research
community	Online survey respondent referred to Santos (gas operations) negatively impacting upon friendliness and community cohesion in Narrabri. This is understood to be due to the arrival of a new company and its workforce to the town. There is potential for the BESS project to have a similar influence, depending on construction/operational workforce	Negative	Yes - other project	Santos Gas Project SIA	No	Not required	No	No	No	Unknown	No	Minor assessment of the impact	Required	Limited - if required (e.g. local council)	Not required
community	Online survey respondent referred to new companies and workforces positively impacting upon friendliness in Narrabri.	Positive	Yes - other project	Santos Gas Project SIA	No	Not required	No	No	No	Unknown	No	Minor assessment of the impact	Required	Limited - if required (e.g. local council)	Not required
surroundings	Online survey respondents described potential impacts such as clean air and water, healthy forests and climate as predicted advantages/improvements compared to non-renewable industries	Positive	Yes - other project	Geni Energy Community Battery Narrabri Community Meeting	Yes	Geni Energy Community Battery Narrabri Narrabri Solar Farm	Yes	Yes	Yes	Yes	Yes	Detailed assessment of the impact	Required	Broad consultation	Targeted research
community	Online survey respondents described that a project of this nature would align with the progressive character of the community and its support for renewables	Positive	Yes - other project	Geni Energy Community Battery Narrabri Community Meeting	Yes	Geni Energy Community Battery Narrabri Narrabri Solar Farm	Yes	Yes	Yes	Yes	Yes	Detailed assessment of the impact	Required	Broad consultation	Targeted research
livelihoods	Online survey respondent referred to the positive impact that the project would have for employment	Positive	Yes - other project	Geni Energy Community Battery Narrabri Community Meeting Narrabri Gas Project EIS Narrabri Solar Farm EIS	Unknown	Geni Energy Community Battery Narrabri Narrabri Gas Project Narrabri Solar Farm	No	No	No	No	No	Not relevant	Not required	Not required	Not required
access	Online survey repondents referred to the positive impacts for energy security (access to energy) for the current and future population Two interview participants predicted a similar potential impact in terms of renewable energy and its influence on climate change	Positive	Yes - other project	Geni Energy Community Battery Narrabri Community Meeting	Yes	Geni Energy Community Battery Narrabri Narrabri Solar Farm	Yes	Yes	Yes	Yes	Yes	Detailed assessment of the impact	Required	Broad consultation	Targeted research
surroundings	Online survey respondents referred to the potential of the project to reduce the availability of high-yield crop land, depending on the location of the project site Interview participant also experessed concern about this potential impact	Negative	Yes - other project	Narrabri Gas Project EIS Narrabri Solar Farm EIS	Unknown		Unknown	Unknown	Unknown	Unknown	Unknown	Detailed assessment of the impact	Required	Broad consultation	Targeted research

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Appendix C Aboriginal Archaeological Due Diligence Assessment

Request for Secretary's Environmental Assessment Requirements (SEARs)

Enervest Operations Pty Ltd

SLR Project No.: 620.31316.00000

25 August 2024

Aboriginal Archaeological Due Diligence Assessment

Stoney Creek Battery Energy Storage System (BESS)

41 Stoney Creek Road, Narrabri NSW

February 2024

Prepared for SLR Consulting Australia Pty Ltd
on behalf of Enervest Pty Ltd

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Version	Date	Prepared by	Approved by	Comments
1a-1f	27/03/2023	Tyler Beebe (Virtus Heritage)	Martin Wright (Virtus Heritage)	Draft updated for comments from SLR & issued to Gomeroi People.
1g	18/04/2023	Martin Wright (Virtus Heritage)	Martin Wright (Virtus Heritage)	Draft finalised – no changes from community.
1h	02/02/2024	Martin Wright (Virtus Heritage)	Martin Wright (Virtus Heritage)	Minor and non-substantial edits to update Project name and Project Area figures.
1g	16/02/2024	Martin Wright (Virtus Heritage)	Martin Wright (Virtus Heritage)	Finalised after consultation period expired.

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All queries related to the content, or to any use of this report must be addressed to Dr Mary-Jean Sutton.

EXECUTIVE SUMMARY

Virtus Heritage was engaged by SLR Consulting Australia Pty Ltd (SLR) to prepare an Aboriginal Archaeological Due Diligence assessment for the proposed Stoney Creek Battery Energy Storage System (BESS) located at 41 Stoney Creek Road, Narrabri NSW (hereafter referred to as the 'Project Area'). The lands subject to the project include an area of approximately 95 hectares, and has been subdivided into 11 separate lots, Lot 2-8 DP6580, Lot 3 & 4 DP773018, Lot 156 DP754944, and Lot B DP385147. The site is located within the Narrabri Local Government Area (LGA).

Consultation

The Project Area lies within lands identified as Native Title held by the Gomeroi People (Tribunal No. NC2011/066, registration date 20 January 2012). Barry Toomey and Michelle Walker from the Gomeroi People attended the site inspection to assist with identifying Aboriginal sites and objects and to provide cultural information about the Project Area. Comments made during fieldwork were recorded (refer to **Table 1, Section 3**). A copy of this draft report was provided to the Gomeroi People for review and comment – no comments were received (refer to **Appendix A**).

Environmental Context

The Project Area is located in flat farming land with a portion currently being used to grow cotton. The Project Area is located a few kilometres east of the town of Narrabri NSW. Narrabri is located in an area identified as the Brigalow Belt South Bioregion and in the Namoi subregion. The Brigalow Belt South bioregion is a large area that extends from Dubbo NSW, northward through New South Wales and into Queensland. Several major rivers flow through the bioregion including the MacIntyre, Gwydir, Namoi, Castlereagh, Goulburn, Talbragar, and Macquarie Rivers. The catchment areas of these rivers form an integral part of the Murray-Darling River Systems (NPWS, 2003)

The south eastern section of the bioregion (where the Project Area is located) is characterised as a subhumid climate with no dry season and a hot summer (NSW National Parks and Wildlife Service, 2003). A dry tropical climate dominates the northwest portion of the bioregion along the Qld coast; however, the remainder of the bioregions has subtle variation in general climate. Minor areas within the southeast of the bioregion are located within a temperate zone characterised by no dry season, and a warm summer, while regions within the far west of the bioregion can be described as hot and semi-arid (NSW National Parks and Wildlife Service, 2003).

The base geology of the project had been mapped as a bedrock comprised of horizontally bedded Jurassic and Triassic quartz sandstone and shale. The Liverpool Range (where the Project Area is located) is the largest lava field province in NSW, dated between 32 and 40 million years, with up to 400m thickness of basalt covering an area of over 6,000 km2. The lava fields did not have a central volcanic vent but erupted from multiple fissures.

Today's landscape is dominated by Quaternary sediments in the form of alluvial fans and outwash slopes that resemble the larger fans of the adjacent Darling Riverine Plains Bioregion to the west but are composed of coarser sediment and fan out at slightly steeper angles. The relative distribution of

sediment from basalt or sandstone has a major impact on soil quality and vegetation. (NSW National Parks and Wildlife Service, 2003)

Prior to European invasion, the region would have provided a rich environment for the collection and management of floral and faunal resources by Aboriginal people. The landscape would also have been subject to flooding from the many rivers and creeks within the region. Flood events would have disturbed and redistributed archaeological deposits and the resulting deep sediments may have reduced access to stone resources (NSW National Parks and Wildlife Service, 2003). After European invasion, the introduction of livestock, and the clearing, cultivation and irrigation of the landscape is likely to have disturbed and removed Aboriginal sites and objects. The Project Area reflects these observations, being situated in a heavily cleared, cultivated, irrigated, and grazed portion of the landscape. These points suggest there is low potential to find Aboriginal places and objects due to the high levels of disturbance that the Project Area and region have undergone.

Archaeological Context

The results of the background archaeological research, including heritage searches and a review of previous regional assessments indicate that the most common site types in the region are scarred trees and stone artefact sites (isolated induvial finds and artefact scatter). The studies demonstrate that scarred trees, stone artefact sites, and most other site types in the region are generally located near major water sources.

No previously recorded sites are located within the Project Area.

Site Inspection Results

The site inspection was undertaken on 15 March 2023. Tyler Beebe (Archaeologist, Virtus Heritage), and Michelle Walker and Barry Toomey from the Gomeroi People Native Title Group undertook pedestrian survey of the Project Area.

An attempt was made to survey the proposed footprint of the BESS Battery Storage Unit **(Figure 2)**, however the ground surfaces encountered were deep, wet clays, and were determined to be a potential hazard for slips and falls. As such only a partial survey of the location was possible.

The remainder of the survey focused on areas of ground exposure within the wider Project Area. Although soft, wet clays were observed, there were areas where the ground was firm. No Aboriginal objects or areas of potential archaeological deposit (PAD) were identified during the survey. The northern portion of the Project area, north of the proposed BESS location consisted of a disturbed agricultural field with deep furrow lines within the clay. Gomeroi representatives acknowledged that no Aboriginal objects had been observed in the areas where survey was possible, however, they could not say the same for the BESS unit location due to its inaccessibility. It was determined that the areas accessible for survey had low potential to contain archaeological materials or deposits.

Conclusions and Recommendations

The following conclusions and recommendations have been made based on the information provided on project impacts, consultation to date, relevant archaeological and environmental background research, and the results of the site inspection.

1. Once the identified ground conditions no longer pose a hazard, one Virtus archaeologist and two representatives of the Gomeroi People Native Title Group return to the Project Area to complete the survey.
2. If the first recommendation (1) is not feasible or if access to the property in the future is unavailable, we recommend that two representatives of the Gomeroi People Native Title Group are on site during proposed impacts as Cultural Heritage Monitors.
3. All works must be constrained to the current Project Area and any activity proposed outside of the current Project Area should also be subject to a Due Diligence assessment.
4. All site workers and personnel involved in site impact works associated with the Project Area should be inducted and briefed on unexpected finds protocols in the case of possible identification of Aboriginal sites and objects, and their responsibilities according to the provisions of the *National Parks and Wildlife Act 1974* (*NPW Act, 1974*).
    a) As part of this induction, the contact telephone numbers of Heritage NSW regional archaeologist and EnviroLine 131 555, should be given to all site workers and personnel, in case unknown objects or items are uncovered during excavation.
    b) Site workers should be made aware of their legal obligations in relation to the protection and management of Aboriginal sites under the NPW Act, 1974.
    c) As part of this induction, workers should be made aware that in the event that any suspected human remains are uncovered on site, the area of these suspected remains should be secured and cordoned off and the NSW Police notified. No further works can be undertaken until the NSW Police provide written advice. If these remains are deemed to require archaeological investigation by the NSW Police or NSW Coroner, then Heritage NSW, the relevant Aboriginal parties must be notified. A plan of management for the preservation of any identified Aboriginal human remains or for their salvage must be put in place or conducted under an AHIP methodology developed in consultation with all Aboriginal parties and Heritage NSW.
5. If any items suspected of being Aboriginal in origin are discovered during the work, all work in the immediate vicinity must stop and Heritage NSW notified. The find will need to be assessed and if found to be an Aboriginal object an AHIP may be required.
6. SLR Consulting Australia Pty Ltd or Enervest Pty Ltd may wish to consider the input and engagement of interested Aboriginal stakeholders in the development of inductions and toolbox talks for this project.
7. The draft report was made available to the Gomeroi People. Acknowledgement of the finalisation of the report was received however, no direct feedback was made on the content. If future feedback is received, where possible, it should be considered by SLR and Enervest.

CONTENTS

APPENDICES

FIGURES

TABLES

DEFINITIONS

AHD	Australian Heritage Database
AHIMS	Aboriginal Heritage Information Management System
AHIP	Aboriginal Heritage Impact Permit
Code of Practice	*Code of Practice for Archaeological Investigation of Aboriginal Objects* (NSW)
DPC	Department of Premier and Cabinet
EP&A Act	*Environmental Planning and Assessment Act 1979*
LEP	Local Environment Plan
LGA	Local Government Area
NNTT	National Native Title Tribunal
NPW Act	*National Parks and Wildlife Act 1974*
NTA	*Native Title Act 1993*
PAD	Potential Archaeological Deposit
SHI	State Heritage Inventory

1. INTRODUCTION

Virtus Heritage was engaged by SLR Consulting Australia Pty Ltd (SLR) to prepare an Aboriginal Archaeological Due Diligence assessment for the proposed Stoney Creek Battery Energy Storage System (BESS) located at 41 Stoney Creek Road, Narrabri NSW 2390 (hereafter referred to as the 'Project Area'). The lands subject to the project include an area of approximately 95 hectares and has been subdivided into 11 separate lots, Lot 2-8 DP6580, Lot 3 & 4 DP773018, Lot 156 DP754944, and Lot B DP385147 (refer to **Figure 1**). The Project Area is zoned RU1 – primary production and is located within the Narrabri Shire Council Local Government Area (LGA).

1.1 Project Description

Works for the Stoney Creek BESS site are currently in the planning stage therefore the impacts here are indicative of the final impacts. The proponent proposes to use the location for a 125MW Battery Energy Storage System (BESS). The installation of the system involves the construction of access tracks, areas of hardstand, and the installation of solar panels. The initial concept drawings for the project identify the general location of the BESS storage site and proposed impacts as being two adjoining rectangular areas approximately 100m x 85m and 170m x 180m located within the southeast section of Lot 156 DP754944 (refer to **Figure 2**). In addition, there is an 135kW utility line running approximately 150m from the Stoney Creek BESS site connecting to a substation to the southeast (Lot 1 DP502189). The wider area around the preferred BESS site location is also being assessed as our client would like the opportunity to relocate the BESS site if there are any heritage constraints identified within their preferred location.

1.2 Report Aims and Limitations

This report was compiled with reference to the *Due Diligence Code of Practice for the Protection of Aboriginal Objects in NSW* (NSW) (DECCW 2010a) and where applicable, the requirements of the *Code of Practice for Archaeological Investigation of Aboriginal Objects* (NSW) (hereafter referred to as the 'Code of Practice') (DECCW 2010b). The purpose of this report is to provide advice on Aboriginal archaeological (scientific) values of the project impact areas in relation to the proposed works to guide the proponent in its decision-making process.

In general, the aims of a due diligence assessment are to:

- identify whether or not Aboriginal objects are, or are likely to be, present in the area;
- if objects are present or likely to be present, determine whether the proposed development activities are likely to harm Aboriginal objects; and
- determine whether further assessment or an Aboriginal Heritage Impact Permit (AHIP) is required.

The *National Parks and Wildlife Act 1974* (NPW Act), the *Environmental Planning and Assessment Act*

1979 (EP&A Act) and the *Heritage Act 1977* are the relevant statutory controls protecting Aboriginal heritage within New South Wales.

This report is limited to the assessment of project impacts described in information provided by SLR and mapped in this report. Virtus Heritage takes no responsibility for errors within Aboriginal Heritage Information Management Systems (AHIMS) data, and the Heritage NSW listings and has assumed information provided by Heritage NSW is accurate.

Site inspections undertaken were confined to the project area illustrated in **Figures 1 & 2.** The areas of the Project Area that were accessible had good ground surface visibility. The soils observed appeared to be clays reducing the potential for extant Aboriginal objects to be present.

1.3 Project Team and Qualifications

This report was compiled by Tyler Beebe (Archaeologist, Virtus Heritage, MA Cultural and Environmental Heritage, Australian National University) with quality review undertaken by Martin Wright (Senior Archaeologist, Virtus Heritage, BArts Archaeology Hons, University of Sydney). Project information and description of works was provided by SLR.

1.4 Acknowledgements

We would like to acknowledge the assistance of the following individuals for the completion of this report:

- Conor Wakefield, Solicitor, NTSCorp;
- Barry Toomey and Michelle Walker, Cultural Heritage Sites Officer, Gomeroi People Native Title Group; and
- Richard Simmons (Principal – Civil and Structural Engineering) and Hugh Jones (Senior Project Consultant - Planning), SLR Consulting

Figure 1. Locality Map and Project Area

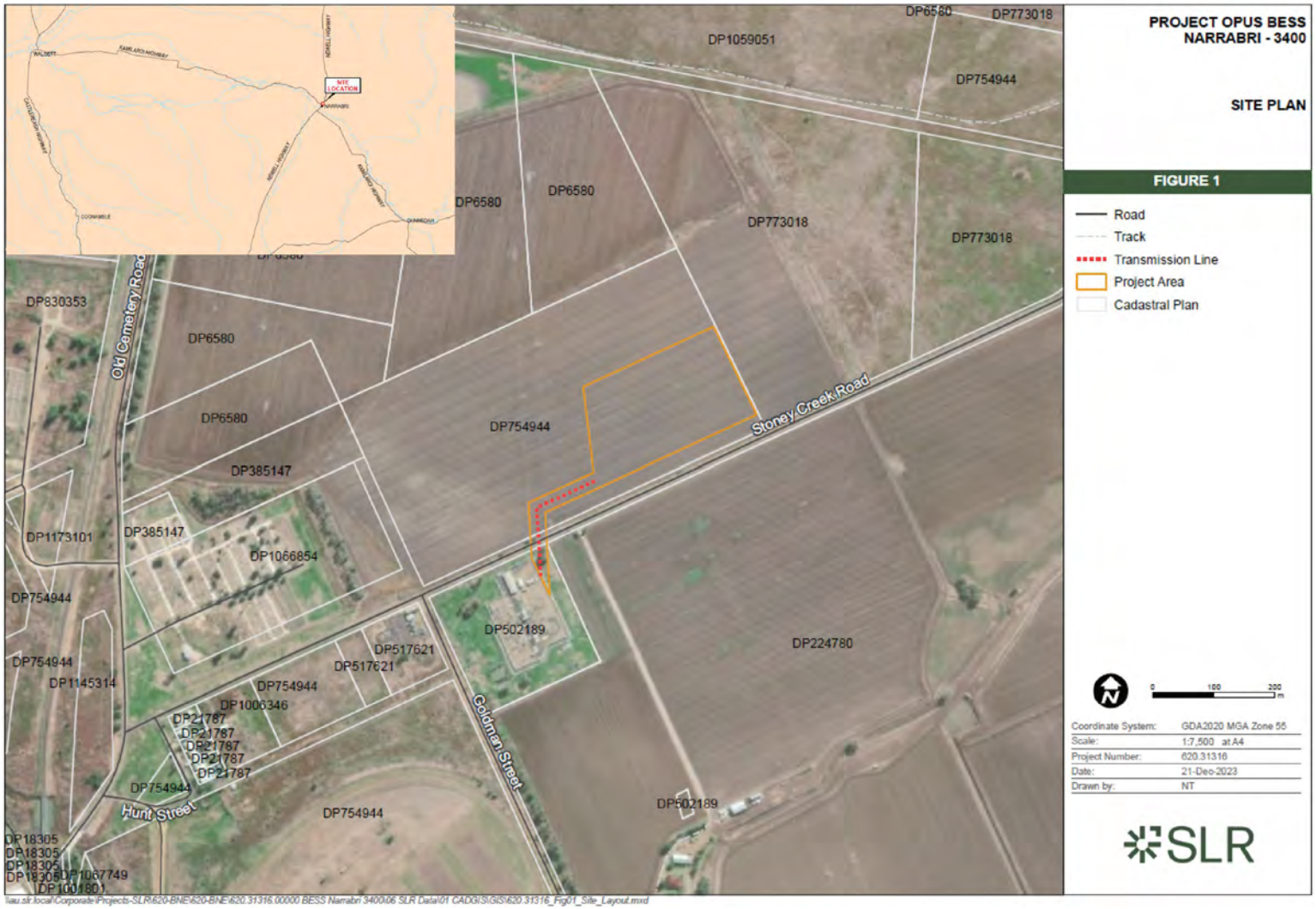


Figure 2. Narrabri Concept Layout

2. LEGISLATION

2.1 Environmental Planning and Assessment Act 1979 (EP&A Act)

The EP&A Act requires that environmental impacts are considered in land use planning and decision-making. The definition of 'environmental impacts' includes impacts on the cultural heritage of the Project Area. The Act sets out specific statutory assessment processes including:

- Part 4: Development that requires consent under consideration of environmental planning instruments.
- Part 5: An assessment process for activities undertaken by public authorities and for developments that do not require development consent but an approval under another mechanism.

The EP&A Act also gives statutory force to planning instruments. Environmental planning instruments (such as state environmental planning policies, regional environmental plans, and local environmental plans) are legal documents that regulate land use and development.

2.2 National Parks and Wildlife Act 1974 (NPW Act)

Under the provisions of the NPW Act, all Aboriginal objects are protected regardless of their significance or land tenure. Aboriginal objects are defined as *'any deposit, object, or material evidence (not being a handicraft made for sale) relating to Aboriginal habitation of the area that comprises NSW, being habitation before or concurrent with the occupation of that area by persons of non-Aboriginal extraction and includes Aboriginal remains'.*

Aboriginal objects are therefore limited to physical evidence and may also be referred to as 'Aboriginal sites', 'relics' or 'cultural material'. Aboriginal objects can include pre-contact features such as scarred trees, middens, and artefact scatters, as well as physical evidence of post-contact use of the area such as Aboriginal built fencing or stockyards and missions.

The NPW Act also protects Aboriginal Places, which are defined as *'a place that is or was of special significance to Aboriginal culture. It may or may not contain Aboriginal objects'.* Aboriginal Places can only be declared by the Minister administering Part 6 of the NPW Act. The NPW Act protects Aboriginal objects and Aboriginal places in NSW. Under the *National Parks and Wildlife Act 1974* (NPW Act), and *National Parks and Wildlife Regulation 2019*, it is an offence to harm or desecrate an Aboriginal object:

- which the person knows is an Aboriginal object (a 'knowing offence'); and
- whether or not a person knows it is an Aboriginal object (a 'strict liability offence').

From 1 October 2010, the maximum penalty for a knowing offence is $550,000 (5000 penalty units)

or imprisonment for 2 years or both for an individual or $1.1 million for a corporation. The maximum penalty for unknowingly harming offence is $110,000 (1000 penalty units) for an individual or $220,000 (2000 penalty units) for a corporation (DECCW 2010:5). A person or organisation who exercises due diligence in reasonably determining that their actions would not harm Aboriginal objects as a defence against prosecution for the s.86(2) offence if they later unknowingly harm an object without an AHIP (DECCW 2010:5). The due diligence defence (s.87(2)) is not available as a defence for any actions which harm or desecrate an Aboriginal place. The Due Diligence Code of Practice sets out a procedure which, when followed, will satisfy the due diligence requirement. If a person or company can demonstrate that they exercised due diligence and determined that it was unlikely that Aboriginal objects would be harmed, then they have a defence to prosecution under Section 86(2) of the NPW Act (DECCW 2010:5).

Harm includes activities that destroy, deface, or damage an Aboriginal object or an Aboriginal Place, and in relation to an object, moving the object from the land on which it has been situated. Under s.89A (formerly Section 91) of the Act, the Chief Executive (*now the Secretary of Department of Premier and Cabinet (DPC). Heritage NSW in the DPC)* must be informed upon the identification of all Aboriginal Objects. Failure to do this within a reasonable time is an offence under the Act. Under Section 87 of the Act, it is a defence for a person to destroy, deface, damage, or desecrate an Aboriginal Object or Aboriginal Place with a valid Aboriginal Heritage Impact Permit (AHIP) issued under section 90 of the Act. Aboriginal Heritage Impact Permits are issued by Heritage NSW, DPC. Part 6 of the NPW Act provides specific protection for Aboriginal objects and places by making it an offence to harm them. If harm to Aboriginal objects and places is anticipated an Aboriginal Heritage Impact Permit should be sought as a defence.

The Act also provides for stop-work orders under Part 6A Division 1 if an action is likely to significantly affect an Aboriginal Object or Aboriginal Place. The order may require that an action is to cease or that no action is carried out in the vicinity of the Aboriginal Object or Aboriginal Place for a period of up to 40 days.

2.3 Heritage Act 1977

The Heritage Act, 1977 (as amended in 2009) protects and aims to conserve the environmental heritage of New South Wales. Environmental heritage is broadly defined under Section 4 of the Heritage Act as consisting of "those places, buildings, works, relics, moveable objects, and precincts, of State or local heritage significance" (Heritage Branch, DoP 2009:4). Aboriginal places or objects that are recognized as having high cultural value (potentially of local and State significance) can be listed on the State Heritage Register and protected under the provisions of the Heritage Act.

Amendments to the Heritage Act made in 2009 have changed the definition of an archaeological 'relic' under the Act, so that it is no longer based on age. A relic is now an archaeological deposit, resource or feature that has heritage significance at a local or State level. This significance-based approach to identifying 'relics' is consistent with the way other heritage items such as buildings, works, precincts or landscapes are identified and managed in NSW (Heritage Branch, DoP 2009:1). Section 4(1) of the Heritage Act (as amended 2009) defines 'relic' as follows:

Relic *means any deposit, artefact, object, or material evidence that:*

a) relates to the settlement of the area that comprises New South Wales, not being Aboriginal settlement, and

b) is of State or local heritage significance (Heritage Branch, DoP, 2009:6).

Other relevant State and Commonwealth legislation are discussed below.

2.4 Native Title Legislation

The *Native Title Act 1993* (NTA) provides the legislative framework to:

- recognise and protect native title;
- establish ways in which future dealings affecting native title may proceed and to set standards for those dealings, including providing certain procedural rights for registered native title claimants and native title holders in relation to acts which affect native title;
- establish a mechanism for determining claims to native title; and
- provide for, or permit, the validation of past acts invalidated because of the existence of native title.

The *NSW Native Title Act 1994* was introduced to make sure the laws of NSW are consistent with the Commonwealth's NTA on future dealings. It validates past and intermediate acts that may have been invalidated because of the existence of native title.

The National Native Title Tribunal has a number of functions under the NTA, including maintaining the Register of Native Title Claims, the National Native Title Register and the Register of Indigenous Land Use Agreements and mediating native title claims. The Gomeroi People are the recognised Native Tile holders for the area (Tribunal No. NC2011/066, registration date 20 January 2012).

2.5 Other Acts

The Australian Government *Aboriginal and Torres Strait Islander Heritage Protection Act 1984* may be relevant if any item of Aboriginal heritage significance to an Aboriginal community or historical heritage is under threat of injury or desecration and state-based processes are unable to protect it. The *Environment Protection and Biodiversity Conservation Act 1999* is relevant to projects where there are heritage values of national significance present.

3. CONSULTATION

Aboriginal people are the primary determinants of their culture and heritage, and cultural values can only be assessed and advised by the relevant Aboriginal parties for the locality. It should be noted that Aboriginal heritage refers both to Aboriginal archaeological sites and sites/places of cultural value to Aboriginal people, protected under the *National Parks and Wildlife Act, 1974* (NPW Act, 1974) as "Aboriginal Objects" and "Aboriginal Places". Sites and places of Aboriginal cultural significance can only be identified by the relevant local Aboriginal people and are likely in many cases (for example, song lines and story places) to not contain any archaeological evidence.

This assessment was conducted by an archaeologist providing advice on the archaeological (scientific) values of the Project Area. The cultural values of the Project Area were assessed by the Gomeroi People Native Title Group (GPNTG).

A copy of the draft report was made available to the GPNTG on 13/03/2023 but after the 14-day review period, no feedback response was received. The Due Diligence report was updated on 02/02/2024 to address the change of name for the project and to include updated project area figures. The revised Due Diligence document was re-issued to Barry Toomey for his information and consideration, however, no feedback was received after the 14-day review period. The final version of the report was issued on 16/02/2024.

If future feedback is received, where possible, it should be considered by SLR and Enervest (refer to **Appendix A**).

Table 1. Summary of Consultation

Date	Comment	Method (Email, Phone)
22/02/2023	Initial contact with NTSCORP requesting contact details for the Gomeroi People Native Title Group.	Email
23/02/2023	Received an email from NTSCORP informing us that they were the legal representative of the Gomeroi People and their contact. NTSCORP asked for further details regarding project.	Email
23/02/2023	Replied to NTSCORP with requested project information.	Email
01/03/2023	Advised NTSCORP of the date and time of the planned survey.	Email
01/03/2023	Received an email from NTSCORP regarding the number of representatives required and rates.	Email
02/03/2023	Replied to NTSCORP agreeing with their request for representation on site and expected fees, advised them to	Email

	please contact the Gomeroi People.	
03/03/2023	Received confirmation from NTSCORP that two representatives of the Gomeroi People were available the date and time requested.	Email
15/03/2023	On site discussions with the representatives of the Gomeroi People resulted in the identification of no cultural value within the Project Area. Discussions revealed that Mount Kaputar, 50km east of the Project Area, is a highly significant Aboriginal cultural place used as a meeting place, Bora Ground, and Woman's Business. Closer to the Project Area it was revealed that the site of the current Gordon Trucking Co. along the Namoi River, 5km southwest of the study area, was the site of the former Aboriginal mission in Narrabri.	In person
30/03/2023	Barry Toomey from the Gomeroi People was contacted regarding who would be able to review the draft report. Barry confirmed that it should be sent to himself.	Phone call
30/03/2023	Draft Due Diligence report sent to Barry Toomey for review with feedback requested by 14/04/2023.	Email
13/04/2023	Reminder email sent to Barry Toomey asking for feedback on draft Due Diligence report.	Email
18/04/2023	Additional reminder email to Barry Toomey indicating that the report was to be finalised.	Email
18/04/2023	Acknowledgement of finalisation of the report received from Barry Toomey.	Email
02/02/2024	Updated Due Diligence report sent to to Barry Toomey for review with feedback requested by 16/02/2024.	Email
16/02/2024	No comments received after 14-day review period. The report was finalized and reissued to Barry Toomey.	Email

4. ENVIRONMENTAL CONTEXT

This section of the report details the existing geology, soils and topography, climate, fauna and flora, previous land use history and other environment factors. This information provides an environmental context for understanding the potential for Aboriginal occupation and evidence of material culture surviving within the Project Area.

The environmental context assessment is based on a number of classifications that have been made at the national and regional level for Australia. The national Interim Biogeographic Regionalisation for Australia (IBRA) system classifies Australia's landscapes into 89 geographically distinct bioregions based on their common climate, geology, landforms, native vegetation and species information (Department of Climate Change Energy the Environment and Water, 2021). These bioregions are also further refined into 419 localised and homogenous geomorphological subregions. The Project Area is located within the Brigalow Belt South bioregion and the Liverpool Plains Subregion (NSW National Parks and Wildlife Service (NPWS), 2003).

4.1 Topography, Hydrology, and Climate

The Project Area is located in the flat farming land less than a kilometre east/northeast of the town of Narrabri. The town of Narrabri is bisected north south by the Narrabri Creek. A 2nd order tributary of Narrabri Creek (Horsearm Creek) runs along the southern boundary of the Project Area and at its closest is approximately 50 metres south of the eastern most point of the Project Area, from there it deviates further south to where it is approximately 500 metres south of the Project Area. An artificial drainage line has been constructed from Horsearm Creek bisecting the Project Area and feeding a large artificial dam along the northern boundary of the Project Area. Mulgate Creek, a 1st order tributary of Narrabri Creek generally bounds the Project Area to the north with its closest point approximately 800m north of the Project Area.

The Brigalow Belt South Bioregion extends from south of Dubbo in central-western NSW to the mid-QLD coast. Several major rivers flow through the bioregion including the MacIntyre, Gwydir, Namoi, Castlereagh, Goulburn, Talbragar, and Macquarie Rivers. The catchment areas of these rivers form an integral part of the Murray-Darling River Systems (NPWS, 2003).

The south eastern section of the bioregion (where the Project Area is located) is characterised as a subhumid climate with no dry season and a hot summer (NSW National Parks and Wildlife Service, 2003). A dry tropical climate dominates the northwest portion of the bioregion along the Qld coast; however, the remainder of the bioregion has subtle variation in general climate. Minor areas within the southeast of the bioregion are located within a temperate zone characterised by no dry season, and a warm summer, while regions within the far west of the bioregion can be described as hot and semi-arid (NPWS, 2003).

4.2 Geology and Soils

The base geology of the project had been mapped as a bedrock comprised of horizontally bedded Jurassic and Triassic quartz sandstone and shale. The Liverpool Range (where the Project Area is located) is the largest lava field province in NSW, dated between 32 and 40 million years, with up to 400m thickness of basalt covering an area of over 6,000 km2. The lava fields did not have a central volcanic vent but erupted from multiple fissures.

Today's landscape is dominated by Quaternary sediments in the form of alluvial fans and outwash slopes that resemble the larger fans of the adjacent Darling Riverine Plains Bioregion to the west but are composed of coarser sediment and fan out at slightly steeper angles. The relative distribution of sediment from basalt or sandstone has a major impact on soil quality and vegetation (NPWS, 2003)

The Project Area is located within a single soil landscape, Liverpool Alluvial Plains (Mitchell 2002). Details of the soil landscapes are provided in **Table 2**.

Table 2. Soils of the Project Area

Soil landscape	Description	Relevance to Aboriginal heritage potential
Liverpool Plains Alluvial	Quaternary alluvial plains and outwash fans derived from Tertiary basalts. Permian and Triassic quartz sandstones with minor basalt caps. Undulating hills and sloping plains with alluvial channels and floodplains. General elevation 300 to 350m, local relief <10m. Extensive black earths on low angle slopes. Deep black and brown cracking clays, alluvial soils and red or brown texture-contrast soils on slopes below sandstone (Mitchell 2002).	The location of the Project Area in an alluvial riverine area reduces the potential for in-situ deposits due to fluvial transportation processes re-distributing material from their primary site of deposition (Brown, 1997: 91). Deep cracking clays also constitute a risk that Aboriginal objects may have been displaced, as cracking clays can result in artefact moving through the A horizon into the cracks with the basal B horizon.

4.3 Flora and Fauna

A detailed study of the bioregions of NSW was conducted by the NPWS in 2003 (*The Bioregions of New South Wales: their biodiversity, conservations and history*) The results of the assessment that pertain to the Liverpool Plains subregion (Project Area location) of the Brigalow Belt South bioregion are summarised here.

The vegetation community within the Liverpool Plains subregion consists of plains grass, panic, windmill grass and blue grass on black earths with occasional white box, yellow box, poplar box and

wilga. White box and white cypress pine with rough-barked apple, hill red gum, occasional belah and mulga occur on texture contrast hillslope soils (NPWS 2003).

Within the wider Brigalow Belt South bioregion there are 3 endangered ecological communities listed under Schedule 1 of the Threatened Species Conservation (TSC) Act 1995. The TSC Act has since been replaced by the Biodiversity Conservation Act 2016. These endangered ecological communities consist of the semi-evergreen vine thicket, *Cadellia pentastylis* (poline or scrub myrtle), the carabeen open forest community, and the grassy white box community (NPWS 2003).

The variety of ecological communities within the bioregion and subregion are significant to the faunal values of the region. These ecological communities are often associated with the riparian areas directly associated with the Project Area, with Mulgate Creek to the north, Horsearm Creek to the south and they dominate Narrabri Creek to the west, which is a major landscape feature within the region. Riparian ecological communities often attract a variety of faunal species. Although few systematic surveys have been conducted in the bioregion, records from a variety of surveys can be used to illustrate the vertebrate fauna of the bioregion, which consists of 18 amphibian species, 68 reptiles, 281 birds and 82 mammal species. Many of these species are considered threatened, these threatened faunal species identified within the region are summarised here.

- The endangered Malleefowl (*Leipoa ocellata*) (NPWS 2003;
- Koala (*Phascolarctos cinereus*) which has important populations in the Warrumbungles, the Pilliga and the area around Gunnedah (NPWS 2003);
- Eastern pygmy possum (*Cercartetus nanus*) which has a very patchy distribution, with more than 10 records of the species known from each of only 5 locations in NSW, the Pilliga State Forest being one of them (NPWS 2003); and
- Pilliga mouse (*Pseudomys pilligaensis*) is known only from the Pilliga State Forest (located 40km southwest of Project Area (NPWS 2003).

The birds of the bioregion are highly diverse, mainly consisting of tropical woodland species and comprising the largest number of Australian resident species of any bioregion. There are no major populations of rare or threatened birds in the bioregion and although many birds within the bioregion have restricted ranges, none is endemic. Exotic species are low in numbers and those present are located mainly around towns (NPWS 2003).

4.4 Previous Land Use History

The Liverpool Plains region was first discovered in 1817 by John Oxley, Surveyor General of NSW. By the 1830's the Liverpool Plains region became a site for European settlement and was mainly used for sheep and cattle grazing through the 1880's (NPWS 2003). By 1871, Narrabri's population was 350 and the town included stores, inns, a bank and school. The railway reached the town in 1882 and Narrabri became an official municipality the following year, when a courthouse was also built (NSW HO and DUAP 1996: 84).

The specific past land use history of the Project Area is unknown, however aerial photography shows

that is has been completely cleared of all trees and vegetation. Furrow lines associated with agricultural use are present and an existing transmission line bisects the Project Area from north to south. From the early history of the Narrabri region, it is likely that this area was used for sheep and cattle grazing and was then later used for agricultural purposes. There is a large artificial dam on the northern boundary of the property fed by an artificial drainage line from Horsearm Creek to the south. There is currently no residential property associated with the Project Area.

The previous European land use practices in the Project Area may have disturbed or removed intact deposits through clearing vegetation, and associated erosion. Scarred trees, if extant, would likely have been removed due to tree clearing activity. Increased sedimentation loads in watercourses due to accelerated erosion from clearing, may have abraded and/or covered any grinding grooves in the Project Area, if extant.

4.5 Summary

The Project Area is located to the east of Narrabri in flat farming land with occasional undulating hills and is part of the Brigalow Belt South bioregion, and specifically within the Liverpool Plains subregion. The geology and geography are dominated by Narrabri Creek and its tributaries with the discharge of alluvial fans affecting its soils, flora, and fauna. Prior to European invasion, the region would have provided a rich environment for the collection and management of floral and faunal resources by Aboriginal people. The same alluvial landscape would also have disturbed and redistributed archaeological deposits and the resulting deep sediments may have reduced access to stone resources. After European invasion, the introduction of livestock, and the clearing, cultivation, and irrigation of the alluvial soils is likely to have disturbed and removed Aboriginal sites and objects. The Project Area reflects these observations, being sited in a heavily cleared, cultivated, irrigated, and grazed portion of the landscape. These points suggest there is low potential to find Aboriginal places and objects due to the high levels of disturbance that the Project Area and region have undergone.

5. ARCHAEOLOGICAL CONTEXT

The archaeological context draws on existing heritage registers and database searches, previous archaeological research, and discussions of archaeological potential to understand and predict the potential for evidence of Aboriginal occupation in the project impact areas.

5.1 Heritage Register and Database Searches

This section of the report provides a summary of the results of relevant statutory heritage register searches.

5.1.1 National Native Title Tribunal

A search was undertaken of the National Native Title Register maintained by the National Native Title Tribunal (NNTT) on 20 January 2023 of the Project Area to identify if Native Title exist over the Project Area. The search identified that the Gomeroi People have Native Title claim over lands containing the Project Area (Tribunal No NC2011/006, Date of registration 20 Jan 2012) (refer to **Appendix B**).

5.1.2 Aboriginal Heritage Information Management System (AHIMS)

Searches were conducted on the AHIMS register on 13 January 2023 for any Aboriginal heritage sites recorded within and adjacent to the Project Area. The search covered the area datum:

- GDA Zone 55, Eastings 764187.0 – 774187.0, Northings 6637996.0.0 – 6647996.0.0

A total of 22 Aboriginal sites and Aboriginal objects were listed within the search area (refer to **Appendix B**). No identified sites are located within the Project Area. **Table 2** provides details of the frequency and proportion for each site type.

Table 2. Summary of AHIMS features within the search area

Site Type	Frequency	Percentage
Modified Tree (Carved or Scarred)	12	55%
Artefact	8	37%
Artefact, Modified Tree	1	4%
Burial	1	4%
Grand Total	**22**	**100.00%**

5.1.3 Other Database Searches

The following heritage registers and database searches were undertaken as part of this preliminary assessment:

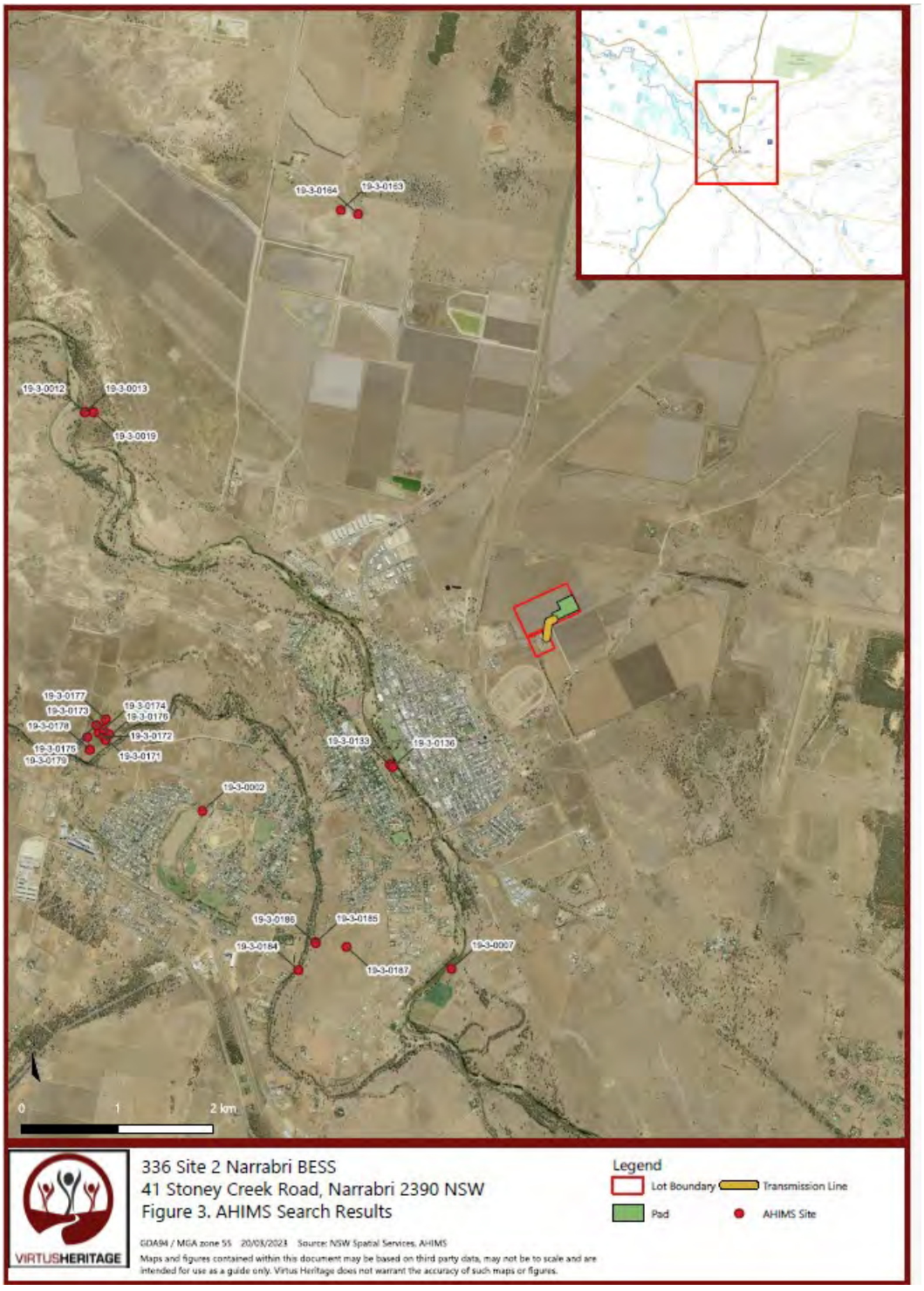
- The Australian Heritage Database (AHD);
- State Heritage Register (SHR) and Inventory (SHI); and
- Narrabri Shire Local Environment Plan (LEP).

Table 3. Heritage Databases / Registers Search Results

Heritage Database	About the Database	Search Area (LGA for example) and Search Date	Results of the Search
Australian Heritage Database	The Australian Heritage Database (AHD) is a Commonwealth administered heritage database that includes entries from the former Register of the National Estate and the current Commonwealth and National Heritage Lists.	This database was searched on the 19 January 2023 for all Indigenous heritage items within the Narrabri Shire LGA.	The search found 12 places located within the Narrabri Shire LEP No places were recorded in the in or near the Project Area.
State Heritage Inventory and State Heritage Register	The State Heritage Inventory (SHI) is a heritage database administered by the Heritage NSW (Department of Premier & Cabinet). This database includes heritage listings from local and regional planning instruments and heritage studies and State significant heritage items. Information and items listed in the State Heritage Inventory come from a number of sources. This means that there may be several entries for the same heritage item in the	A search of the SHI and SHR was conducted on 19 January 2023 for all heritage items within the Narrabri Shire LGA.	The results were as follows:

Heritage Database	About the Database	Search Area (LGA for example) and Search Date	Results of the Search
	database. Search results are divided into three sections.		
	Section 1 – Aboriginal Places – declared by the Minister for the Environment under the National Parks and Wildlife Act. This information is provided by Heritage NSW.		Section 1 – No Aboriginal Places were listed within the Narrabri Shire LGA.
	Section 2 – State Heritage Register items – listed by the Heritage Council of NSW under the Heritage Act and includes items listed in Interim Heritage Orders. This information is provided by Heritage NSW.		Section 2 – 2 items listed under the Heritage Act are located within the Narrabri Shire LGA. None are located within or adjacent to the Project Area.
	Section 3 – Heritage items listed by local councils on Local Environmental Plans under the Environmental Planning and Assessment Act, and State government agencies under s.170 of the Heritage Act. This information is provided by local councils and State government agencies.		Section 3 – 76 items were listed within the Narrabri Shire LGA. None are within or adjacent to the Project Area.
Narrabri Local Environment Plan 2012	Local Environmental Plans are planning instruments which contain provisions and listings of items of environmental heritage including heritage, conservation areas and archaeological sites within Schedule 5.	The LEP for Narrabri Shire 2012 was searched on 19 January 2023.	The Narrabri LEP 2012 lists 40 heritage items within the LGA. None of these items are located within or adjacent to the Project Area.

Figure 3. AHIMS Site Search Results



5.2 Regional and Local Character

5.2.1 Ethnohistoric Background

According to Tindale (1974) the Project Area falls within the boundary of lands occupied by the Kamilaroi People. The name Narrabri is thought to have been derived from an Aboriginal word meaning 'forked river'. The Kamilaroi tribal area extends from Walgett, NSW to Nindigully, QLD and included areas near Talwood and Garah at Moree, Mungindi, Mogil Mogil, Narrabri, Pilliga, Gunnedah, Bingara, Tamworth, Quirindi, Bundella, Barraba, Gwabegar and Come-by-Chance; on headwaters of the Hunter River (Tindale 1974). The current study area is located within the centre of the Kamilaroi tribal territory.

The Kamilaroi People practiced a hunting, gathering, and fishing economy, exploiting the resources within the Naomi and Gwydir Rivers, including the fauna drawn to the rivers. Away from the freshwater sources, the Kamilaroi people hunted kangaroos, wallabies, koalas, possums, echidnas, emus, lizards, snakes and frogs. Plant foods included grass seeds, wild orange, emu apple, melons, tubers, yams and roots (Appleton 2009).

The early 1830's saw the expansion of European settlement into New South Wales. This included Narrabri and its close surroundings with the first squatting settlement run 'Nurrabry' taken up in 1834 (Hunt 1998). This European expansion led to violent clashes between the Europeans and the Kamilaroi People. Aboriginal land was taken, and Aboriginal people were shot and often killed. The dispossession of land and destruction of native habitats and social networks, led to a rapid decline in Kamilaroi population.

5.2.2 Regional and local research

A review of the AHIMS library and online searches were undertaken to obtain copies of previous Aboriginal heritage studies and archaeological investigations within the locality of the Project Area. This section discusses a number of studies in the locality that can assist in building up a picture of the potential archaeology of the region. This in turn can help to predict the types of sites that may be expected to be present within the Project Area. **Table 4** summarises the reports from archaeological investigations undertaken in the general vicinity of the Project Area.

5.2.3 Project Area Context

Table 4. Previous Archaeological Investigations within the Locality

Author/ Date	Locality	Investigation and distance to project impact areas	Recorded Sites and site Types	Sites within project impact areas
Silcox and Bowdler (1982)	Walgett to Narrabri	*An archaeological survey of a proposed 132Kv transmission line route from Walgett to Narrabri.* The survey area was approximately 180 kilometres in length with a 45-metre easement along the entire route. A total of 15 sites were recorded during the survey	The fifteen sites consisted of isolated finds, scarred trees, open campsites and possible hearths.	nil
Australian Archaeological Survey Consultants (AASC) (2007)	Narrabri	*Narrabri Coal Project: Aboriginal Heritage Assessment* AASC completed a survey for Narrabri Coal Operations for extensions to the Narrabri Coal Project located approximately 20 kilometres south of Narrabri. The survey was concentrated on the areas known as the Pit Top Survey Area and the Ventilation Shaft Survey Area.	A total of seven sites were recorded during the survey consisting of two isolated finds, two artefact scatters, two scarred trees and one resource site exhibiting a native food resource: Wild Orange Tree.	nil
Appleton (2008)	Gunnedah	*The archaeological salvage of three open sites Under Part 3A approval Rocglen Coal Mine, north of Gunnedah,*	The salvage operation noted significant disturbance between 2002 and 2008 caused by agricultural activity	nil

Author/ Date	Locality	Investigation and distance to project impact areas	Recorded Sites and site Types	Sites within project impact areas
		northern NSW. Appleton conducted archaeological salvage excavations at the Rocglen Coal mine located approximately 25km north of Gunnedah	or storms and slope-wash. Additional artefacts were recovered at "B1" (eight stone artefacts, no cores), at "B2" (thirteen stone artefacts), and at "B3" (sixty-seven artefacts, including three cores)	
Appleton (2009)	30km southeast of Narrabri	*Narrabri Coal Mine Longwall Stage 2 Project.* Located about 30 kilometres southeast of Narrabri, nearby the Kamilaroi Highway, the assessment entailed a survey over four main areas comprising the impact zones.	A total of 121 sites were identified across all four survey areas located on a variety of landforms. Forty-three sites were recorded in the first survey area, sixty-nine sites recorded in the second, nine recorded in the third and no sites recorded within the fourth survey area. Overall, most sites comprised low density artefact scatters with only four per cent of artefact scatters containing more than twenty artefacts. A scarred tree and a hearth were also identified within the first survey area.	nil
On-Site Heritage Management	Narrabri	*Proposed Construction of Conservation Fencing and Associated*	The survey resulted in the recording of three Aboriginal sites	nil

Author/ Date	Locality	Investigation and distance to project impact areas	Recorded Sites and site Types	Sites within project impact areas
(2017)		*Infrastructure, Pilliga State Forest; Due Diligence Assessment for the Protection of Aboriginal Objects* The study area consisted of 39.6 kms within the Pilliga State Forest 46 km southwest of Narrabri within the Narrabri Shire Council LGA. The due diligence was prepared as part of a Review of Environmental Factors (REF) for the installation of proposed fence line and operations base as part of an Extinct Mammal Agreement between the NSW Government and the Australian Wildlife Conservancy.	consisting of a single grindstone fragment and two culturally modified trees.	
OzArk (2019)	Narrabri	*Aboriginal and Historic Archaeological Impact Assessment, Silverleaf Solar Farm, Narrabri LGA* The study area consisted of two sections, the solar farm, and the electricity line easement. The proposed solar farm covered an area of 450 hectares between Logans Lane and the Newell Highway, approximately five kilometres north of Narrabri. The associated	During the pedestrian survey, two Aboriginal sites were recorded: Silverleaf IF-1 (#19-3-0163) and Silverleaf IF-2 (#19-3-0164). Both sites are located approximately 4km to the northwest from the northern most boundary of the current Project Area	nil

Author/ Date	Locality	Investigation and distance to project impact areas	Recorded Sites and site Types	Sites within project impact areas
		transmission line easement consists primarily of existing road corridors or electricity easements. The existing road corridors associated with the study form the current boundary of the Project Area		

5.2.4 Analysis of Regional Context

There have been limited archaeological surveys and excavations conducted within the broader Narrabri/Liverpool Plains region. Although limited in number, these assessments continue to contribute to our understanding of the nature of Aboriginal occupation. The major relevant studies are summarised below.

Silcox and Bowdler (1982) undertook one of the earliest heritage assessments within the region, conducting a survey for the proposed 132kV transmission line route, a total area of 180 kilometres in length with 45 metre easements along the entire route. In total, they recorded 15 Aboriginal sites along the route, consisting of seven isolated artefact find spots, four culturally modified trees, two open campsites and two possible hearths. Stone artefacts recorded within the campsites consisted of flakes, blades, backed blades, cores, a scraper and a grinding stone, containing two possible grinding grooves. The dominant lithic material identified was chert (yellow, brown, pink and mottled yellow/orange), the remaining lithic material consisted of quartz, silcrete and basalt. Silcox and Bowdler returned to the area later in 1982 to conduct excavations and found that the amount and density of the material originally identified had significantly decreased due to natural and man-made disturbances.

In 2007 the Australian Archaeology Survey Consultants (AASC) completed surveys for Narrabri Coal Operations in response to request for extensions to the Narrabri Coal project located approximately 20km south of Narrabri. The survey targeted areas known as the Pit Top Survey Area and the Ventilation Shaft Survey Area. Seven sites were recorded as a result of the survey, consisting of two isolated artefact finds, two artefact scatters, two scarred trees, and one resource site consisting of a known Aboriginal food resource, the Wild Orange Tree. The majority of the sites recorded were located in close proximity to a source of freshwater, the Kurrajong Creek. The survey noted that the banks of Kurrajong Creek were observed as being least disturbed by agricultural activity and that

the sites recorded along the creek likely retained some of their archaeological integrity and context.

Following his 2002 survey of the then proposed Belmont Coal Mine site, Appleton (2008) returned to the area to conduct salvage excavations at the Rocglen Coal Mine. The salvage area was located 25km north of Gunnedah NSW (approximately 70km south of the current Project Area) between Vickery State Forest and Wean Road. In his 2002 survey, Appleton previously noted artefacts in three separate locations, a silcrete core at site 'B1', eight silcrete flakes at site 'B2', and a large scatter containing over 40 artefacts consisting of three cores, flakes and flaked pieces at 'B3'. Upon his return in 2008, Appleton noted significant disturbance from 2002 caused by agricultural activity and slope wash. Additional artefacts recovered through salvage excavations included eight flakes and flaked pieces at 'B1', 13 flakes and flaked pieces at 'B2', and an additional 67 artefacts including three cores at 'B3'. Appleton interpreted the assemblage as representing a camping area to which various groups returned over an extended period of time.

In 2009, Appleton completed a survey for the Narrabri Coal Operations "Longwall Project" located approximately 30km southeast of the Project Area, near the Kamilaroi Highway. A survey was undertaken consisting of four main areas within the proposed impact zone. A total of 121 sites were identified in the 4 survey locations across various landforms. 43 sites were recorded in the first survey location, 69 sites recorded in the second location, nine recorded in the third location, and no sites recorded within the fourth survey location. The majority of the recorded sites consisted of low-density artefact scatters with only 4% of the artefact scatters containing more than 20 artefacts. A scarred tree and a hearth were also identified within the first survey location. Higher density artefact scatters, the scarred tree and hearth were all recorded along ephemeral and permanent watercourses, including Pine Creek and Kurrajong Creek.

In 2017 On-Site Heritage undertook due diligence surveys of a portion of the Pilliga State Forest for a proposed REF as part of an Extinct Mammals Agreement between the NSW Government and the Australian Wildlife Conservancy. Approximately 39 kilometres were surveyed within the forest in advance of the installation of fencing and associated operations base. The survey resulted in the recording of three previously unidentified sites consisting of a single grindstone fragment and two culturally modified trees. The survey recommended avoidance of all recorded sites and determined that within the rest of the survey proposed works could proceed with caution.

The nearest dated location to the Project Area is located 83km to the southeast at Lime Springs dated to 19,300+/-500 BP from a swamp located south of Gunnedah containing both artefacts and megafauna. Excavations of a 7 m long trench contained cultural materials including 5218 fragments of bone (including Diprotodon, *Macropus titan*, Protemnodon sp. and Procoptodon sp.) and extant species were recovered in conjunction with 1988 artefacts. The artefacts could be divided into two assemblages, a lower one dominated by siliceous rocks and being amorphous in composition, and an upper assemblage characterised as Kartan (including large horsehoof cores and scrapers) and dominated by tuff. The authors identify the finds as a demonstrating human-megafauna interactions in the Liverpool Plain Region" (Gorecki et al., 1984)

5.2.5 Analysis of Local Context

There was limited information regarding archaeological studies both publicly available and from AHIMS. Below is a summary of a study within close vicinity to the Project Area.

In 2019 OzArk Environmental and Heritage Management (OzArk) was engaged by GHD to undertake an Aboriginal impact assessment for the proposed Silver Leaf Solar Farm. The study area for the project consisted of two areas, the solar farm and electricity easement. The proposed solar farm covered and area of 450 hectares (approximately 4km north of the Project Area), while the transmission line easement consisted primarily of existing road corridors and electricity easements. The existing road corridors surveyed for the project currently bound our Project Area, however the study area did not include the current Project Area.

During the survey two Aboriginal sites were recorded within the solar farm area. These two sites were identified as Silverleaf-IF-1 (AHIMS # 19-3-0163) and Sliverleaf-IF-2 (AHIMS # 19-3-0164). Silverleaf-IF-1 consisted of a single silcrete proximal flake fragment located 780m east of Logans Lane, south of a large artificial drainage line. Silverleaf-IF-2 consisted of a single quartzite proximal flake fragment located within a grazing paddock 970m east of Logans Lane, north of a large artificial drainage line.

Both of the isolated artefacts were located in disturbed contexts without subsurface deposits. OzArk determined that there was a low potential for further sites and subsurface deposit to be located within the remainder of the study area.

5.3 Summary of Archaeological Context

Based on the information from searches, and the previous studies within the Liverpool Plains region, the region has the following archaeological context:

- Large Aboriginal groups occupied the region taking advantage of the rivers and creeks that run through it for resource procurement. European development of the region and Narrabri in particular started from the mid 1830's resulting in the local Aboriginal population being heavily impacted by disease, starvation, displacement and conflict. Despite these hardships, today the Gomeroi People still have large populations that live on country and successfully applied for the region to be held in Native Title.
- Archaeological research for the area demonstrates that:
    - Dating from the regions shown that it has been occupied since at least 19,300 +/- 500BP;
    - Scarred trees are the most common sites identified within the region followed closely by stone artefact sites;
    - Available prior research and archaeological excavations have primarily focused on the identification and salvage of stone artefact sites; and
    - Local research has identified that heavy modification and environmental disturbance of the land around Narrabri has resulted in low to zero potential for subsurface deposits.

6. PREDICTIVE MODEL AND ARCHAEOLOGICAL POTENTIAL

A predictive model for sites includes both analysis of the most likely site types to occur in a given area and predictions about where in the landscape sites might be likely to be located.

The following summary provides an indication of the likely occurrence of various Aboriginal site types within the Project Area and surrounds. It is based on a review of limited information for the area and is, by nature, broad in scope.

6.1 Site Specific Predictive Model

Based on previous assessments and recorded site locations Aboriginal cultural heritage is known to exist in the Project Area and may be found during field surveys. Aboriginal people utilising the Project Area would have had access to resources provided by Narrabri Creek and associated tributaries, including faunal communities that may have inhabited the riparian vegetation that exists along its banks. The limiting factor for the Project Area is the high level of disturbance that has occurred from cultivation, grazing, and irrigation. The level of disturbance may have destroyed or re-distributed sites and objects if they had previously existed in the Project Area.

6.1.1 Site Types

Based on the known archaeological, environmental and landscape context of the locality, a predictive model for evidence of Aboriginal occupation for the Project Area is presented below:

Scarred trees and **carved trees** contain evidence of scars and carved patterns which can be attributed as having Aboriginal cultural origin. Scarred trees include the removal of bark from the trunk of the tree (usually with a stone axe) to make shields, canoes, implements and other types of items which leave a wound on the tree trunk. Scarred trees are the most common site type in the region. Carved trees contain carved patterns on the tree trunk and are often found in association with ceremonial grounds, burials, or cultural sites. Carved trees are a very rare and diminishing site type. Both scarred and carved trees are usually found where areas of mature trees are extant. Due to the level of past vegetation clearance, there is low to zero potential for this site type to be found in the Project Area.

Isolated artefacts and **artefact scatters** (**open campsites**) are the locations of discarded stone artefacts, often material that has been discarded as part of making stone tools or over frequent episodes of occupation/visitation in an area. Artefact scatters are most likely to be found within 200 metres of a major water course in well drained alluvial flats, river terraces and knolls, and lower slopes where the landscape has not been heavily modified—isolated artefacts can occur anywhere across most landscapes. The geology of the area does not provide ready access to raw materials for the creation of stone artefacts and the Project Area is approximately 500 m from Horsearm Creek to the south, 800m to Mulgate Creek to the north, and 2.5km to Narrabri Creek to the west. Materials in the area are likely to be imported and therefore, more likely to have been retained and re-sharpened to conserve materials. The potential for stone artefacts is low and, if they are present,

they are likely to be isolated artefacts rather than large scatters.

Middens are the accumulation of debris from fish, crustaceans, and shellfish (shells, fish bones) consumed as part of Aboriginal people's diet. Middens also often contain charcoal, stone artefacts, bone, and other types of material used by Aboriginal people. Middens often occur within close proximity to freshwater and saltwater sources which have potential to contain mussels, oysters, and other types of edible shellfish. The potential for middens is low within the Project Area due to the distance from sources of freshwater and the impacts of previous land use and clearing.

Aboriginal axe grinding grooves are grooves most often found in sandstone where Aboriginal people have sharpened or manufactured stone axes and other implements, and in some cases, ground seed and grains in the sandstone forming 'bowls. This site type may occur if suitable geology is present such as outcropping sandstone or suitable sandstone shelves in creek beds. Based on the mapped geology within the Project Area and lack of sandstone, there is low to zero potential for grinding grooves to be found in the Project Area.

Burials are considered to be a very rare site type, with no previously recorded burials located in proximity to the Project Area. As such, burials are unlikely to be found within the Project Area, in addition to the high degrees of surface disturbance from past land use activities. Burials are often associated with sandier soils due to the ease of digging. The heavy clay soils found within the Project Area are not conducive to burials.

Stone arrangements, ceremonial sites and **bora grounds** are normally rare site types, with none registered in the general area. Stone arrangements are known to be located on plateaus and bora grounds are often found on hills but are rarer on flats or creek-lines. Previous land use history and the topography of the Project Area suggests that there is low potential for these types of sites to occur.

Potential Archaeological Deposits refers to soil profiles within landforms which are predicted to contain buried evidence of Aboriginal occupation. This buried evidence is most often stone artefact scatters which survive most frequently in the archaeological record. Buried archaeological deposits are nearly always found within the A unit soils (topsoil) or in alluvial deposits at depth. Occasionally artefacts are found in the B horizon in cracking clays where artefacts have moved down from the topsoil. No areas of PAD have previously been registered in the AHIMS search area. Considering the known archaeological values of the Project Area, the environmental and landscape context, and the history of cultivation, grazing, and irrigation, the Project Area is considered to have a low potential for PAD.

How archaeological potential is defined and to be assessed in this report is provided in **Table 5.**

Table 5. Definitions of Archaeological Potential

Archaeological Potential	Definition
Low to Zero	Landforms that have been totally modified and have low to zero potential for any remaining original soil profile or intact archaeological deposits. This category includes existing roads, quarry areas or any area where the original soil profile (topsoil – A horizon) has been stripped and the landform completely modified. This landform may also include areas where there are no intact A horizon soils due to high levels of erosion.
Low	Landforms that may have been utilised by Aboriginal people in the past, but at a lower intensity relative to all surrounding landforms, resulting in a lower artefact density than all surrounding landforms. This category also includes landscape areas of low terrain integrity, where geomorphic processes or human action may have redistributed artefacts from their deposited locations, such as stripping of soil to create levees or excavation to create culverts, dams, or bridges, resulting in site disturbance or destruction.
Moderate	Landforms that are predicted to have been utilised by Aboriginal people in the past, but not intensively or repeatedly. There is therefore potential for artefactual deposition, but at a lower frequency and density than in areas of high archaeological potential. This category may also refer to landforms known to be sensitive for higher levels of Aboriginal occupation but where prior ground surface disturbances has decreased the archaeological integrity and potential of finding evidence of Aboriginal occupation (for example, creek confluences, alluvial terraces where stratigraphic integrity may have decreased due to previous land use).
High	Landscape areas predicted to have been intensively or repeatedly utilised by Aboriginal people in the past, such as creek confluences, Pleistocene terraces, floodplains or elevated landforms above major watercourses or floodplains. In these areas, site and artefact density are expected to be higher than the surrounding landscape, and sites in these areas may possibly be more complex. Terrain integrity in these areas may be variable although prior ground surface disturbance should be low or non-existent. An important characteristic of areas of high archaeological potential is the research potential or the capacity of sites to provide valuable information on past Aboriginal land use.

7. SITE INSPECTION AND RESULTS

A site inspection of the Project Area was undertaken on the 15th of March 2023. A pedestrian survey of the area was undertaken by Tyler Beebe (Virtus Heritage, Archaeologist) with assistance from two representatives of the Gomeroi People Native Title Group (Barry Toomey and Michelle Walker). The Project Area was divided into two areas: **Area 1** which consisted of the identified footprint of the BESS unit and the proposed transmission line connecting it to the local substation. **Area 2** consisted of all areas outside the impact area within the identified overall Project Area. **Area 1** is approximately 170m x 280m and is located within the southeast corner of Lot 156 DP754944. The associated transmission line is approximately 250m in length. A separate survey was taken of **Area 2** which included the remainder of the Project Area previously identified in Section 1 of this report.

Area 1 was observed to have been significantly disturbed through agricultural practices and past land use and at the time of the survey was being used to grow cotton. **Area 2** was observed to have been significantly disturbed through ground modification, flood events, erosion, drainage works, and current agricultural practices.

7.1 Site Inspection Results

Area 1 (Lot 156 DP754944) was currently being used as a productive cotton field with cotton observed on the shrubs. The cotton shrubs were oriented approximately east-west in linear furrows. An attempt was made to walk transects between the cotton rows, but it was quickly determined that the further we proceeded into Area 1, the softer, wetter, and more slippery the clay soils became. After consultation with the Gomeroi representatives on site it was determined that we would abandon this portion of the survey over safety concerns. No Aboriginal objects were identified prior to abandoning the survey **(Figure 3-6 below).**

Area 2 consisted of the remainder of the identified overall Project Area (refer to Section 1 of the report). The exposed soils within the area varied from soft, sticky clays, to generally stable cracking clays. An artificial drainage line was identified west of Area 1. It was observed that the northern boundary of the impact area (Area 1) was extremely wet with observed standing water. The remainder of the Project Area was being currently used for current unknown agricultural practices. Due to the exposed clay throughout the Project Area, it was determined that the area had been significantly disturbed through ground modification, flood events, erosion, drainage works, and current agricultural practices. Through discussion with the Gomeroi representatives on site, it was revealed that prior to the installation of flood control measures within Mulgate Creek, that the creek would often flood and cover the entirety of the Project Area. No Aboriginal objects or areas of potential were observed within the accessible area of the Project Area **(Figures 7-12 below)**.

Figure 4 Southern boundary of Project Area, view east

Figure 5 View to the north across Concept Plan

Figure 6 Area of exposure within the cotton furrows, view west

Figure 7 Average depth of clay across study area

Figure 8 Area of exposure west of Concept Plan

Figure 9 Exposed cracking clay base

Figure 10 Artificial drainage west of Concept Plan

Figure 11 Deep agricultural furrows north of Concept Plan

Figure 12 North of Concept Plan view south

Figure 13 Exposed soils west of Concept Plan

8. CONCLUSIONS AND RECOMMENDATIONS

The recommendations here are based on the following considerations:

- the proposed works;
- the legislative context for the development proposal;
- the environmental context;
- the local and regional background research for the area; and
- the results of the site inspection.

Based on above the following recommendations are:

1. Once the identified ground conditions no longer pose a hazard, one Virtus archaeologist and two representatives of the Gomeroi People Native Title Group return to the Project Area to complete the survey.
2. If the first recommendation (1) is not feasible or if access to the property in the future is unavailable, we recommend that two representatives of the Gomeroi People Native Title Group are on site during proposed impacts as Cultural Heritage Monitors.
3. All works must be constrained to the current Project Area and any activity proposed outside of the current Project Area should also be subject to a Due Diligence assessment.
4. All site workers and personnel involved in site impact works associated with the Project Area should be inducted and briefed on unexpected finds protocols in the case of possible identification of Aboriginal sites and objects, and their responsibilities according to the provisions of the *National Parks and Wildlife Act 1974* (*NPW Act, 1974*).
    d) As part of this induction, the contact telephone numbers of Heritage NSW regional archaeologist and EnviroLine 131 555, should be given to all site workers and personnel, in case unknown objects or items are uncovered during excavation.
    e) Site workers should be made aware of their legal obligations in relation to the protection and management of Aboriginal sites under the NPW Act, 1974.
    f) As part of this induction, workers should be made aware that in the event that any suspected human remains are uncovered on site, the area of these suspected remains should be secured and cordoned off and the NSW Police notified. No further works can be undertaken until the NSW Police provide written advice. If these remains are deemed to require archaeological investigation by the NSW Police or NSW Coroner, then Heritage NSW, the relevant Aboriginal parties must be notified. A plan of management for the preservation of any identified Aboriginal human remains or for their salvage must be put in place or conducted under an AHIP methodology developed in consultation with all Aboriginal parties and Heritage NSW.
5. If any items suspected of being Aboriginal in origin are discovered during the work, all work in the immediate vicinity must stop and Heritage NSW notified. The find will need to be assessed and if found to be an Aboriginal object an AHIP may be required.

6. SLR Consulting Australia Pty Ltd or Enervest Pty Ltd may wish to consider the input and engagement of interested Aboriginal stakeholders in the development of inductions and toolbox talks for this project.
7. The draft report was made available to the Gomeroi People. Acknowledgement of the finalisation of the report was received however, no direct feedback was made on the content. If future feedback is received, where possible, it should be considered by SLR and Enervest.

REFERENCES

AASC (2007) *Narrabri Coal Project: Aboriginal Heritage Assessment*. Report for Narrabri Coal Pty Ltd.

Appleton (2008) *The archaeological salvage of three open sites Under Part 3A approval Rocglen Coal Mine, north of Gunnedah, northern NSW.* Report for Whitehaven Coal Mining Ltd.

Appleton (2009) *Narrabri Coal Mine Longwall Stage 2 Project*. Report for Whitehaven Coal Mining Ltd.

Brown AG (1997) Alluvial Geoarchaeology. Cambridge: Cambridge University Press.

Department of Environment, Climate Change and Water 2010a. *Due diligence code of practice for the protection of Aboriginal objects in New South Wales*. Sydney, N.S.W., NSW Department of Environment, Climate Change and Water.

Department of Environment, Climate Change and Water 2010b. *Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW*. Sydney, N.S.W., NSW Department of Environment, Climate Change and Water.

Gorecki, P.P, Horton, D.R., Stern, N., Wright, R.V.S. (1984) *Coexistence of humans and megafauna in Australia, improved stratified evidence*. Archaeology in Oceania, 19(3): 117-119

Hunt (1998) *When Narrabri was young: A history of Narrabri 1818–1900*. Narrabri Municipal Council.

Isbell R (2002) The Australian soil classification. CSIRO publishing.

Mitchell P (2002) Descriptions for NSW (Mitchell) Landscapes Version 2. online: Department of Environment and Climate Change NSW.

NSW National Parks and Wildlife Service (2003) The Bioregions of New South Wales their biodiversity, conservation, and history. Huntsville: New South Wales National Parks and Wildlife Service.

NSW HO and DUAP (1996) NSW Heritage Office and Department of Urban Affairs and Planning 1996. *Regional Histories: Regional Histories of New South Wales. NSW Heritage Office and Department of Urban Affairs and Planning*, Sydney.

On-Site Cultural Heritage Management (2017*) Proposed Construction of Conservation Fencing and Associated Infrastructure, Pillaga State Forest: Due Diligence Assessment*. Report prepared for Australian Wildlife Conservancy on behalf of NSW Office of Environment and Heritage.

OzArk Environmental and Heritage Management (2019) *Aboriginal and Historic Archaeological Impact Assessment: Silverleaf Solar Farm, Narrabri*. Report prepared for GHD on behalf of ENGIE Energy.

Silcox and Bowdler (1982) *An archaeological survey of a proposed 132Kv transmission line route from Walgett to Narrabri. Part 1*. Report for Electricity Commission of New South Wales.

Tindale (1974) *Aboriginal Tribes of Australia*. University of California Berkeley.

Appendix A Consultation with Gomeroi People Native Title Group

From:	Martin Wright
To:	Barry Toomey
Cc:	Virtus Consultation; Hugh Jones
Subject:	RE: 336 SLR BESS - Narrabri Due Diligence
Date:	16 February 2024 16:14:00
Attachments:	image001.png image002.png image003.png image004.png image005.png image006.png

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Hi Barry

Just following up on this report as the review period is about to end. If you have any comments to make about it, please let me know by close of business today, otherwise I will finalise the document in its current state.

Thanks again for your help with this.

Regards

Martin Wright *(he/ him)*
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B.Bus Economics (Queensland University of Technology);
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Suite 17/11-13 Pearl St, Kingscliff 2487 NSW
(02) 6676 4354

VIRTUSHERITAGE.COM.AU

From: Martin Wright
Sent: Friday, February 2, 2024 3:14 PM
To: Barry Toomey <barrytoomey64@gmail.com>
Cc: Virtus Consultation <consultation@virtusheritage.com.au>; Hugh Jones <hcjones@slrconsulting.com>

Subject: RE: 336 SLR BESS - Narrabri Due Diligence

Hi Barry

Last year you and Michelle went out with Tyler from Virtus Heritage and surveyed the site of a proposed Battery Energy Storage Solution (BESS) at Narrabri. In April last year we sent you the Due Diligence Report (see the email chain below).

There has been a couple of tiny changes to the Due Diligence report, namely, they have renamed the project and have made some small changes to the figures 1 and 2 in the document. The changes to the figures are minor and do not change the outcomes of the report.

Attached is a copy of the updated report. Could you have a look and get back to me by the 16th of February if you have any concerns.

cheers

Martin Wright *(he/him)*
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B.Bus Economics (Queensland University of Technology);
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From: Barry Toomey <barrytoomey64@gmail.com>
Sent: Tuesday, April 18, 2023 9:35 AM
To: Martin Wright <m.wright@virtusheritage.com.au>
Cc: Virtus Consultation <consultation@virtusheritage.com.au>
Subject: Re: 336 SLR BESS - Narrabri Due Diligence

That's great, thanks for the update.

On Tue, 18 Apr 2023, 8:45 am Martin Wright, <m.wright@virtusheritage.com.au> wrote:

> Hi Barry
>
> Just letting you know that we will be finalising the report today. If you want to add any additional information please let me know.
>
> Regards
> Martin
>
> ---
>
> **From:** Martin Wright
> **Sent:** Thursday, April 13, 2023 6:08 PM
> **To:** barrytoomey64@gmail.com
> **Cc:** Virtus Consultation <consultation@virtusheritage.com.au>
> **Subject:** RE: 336 SLR BESS - Narrabri Due Diligence
>
> Hi Barry
>
> Just following this up to see if you have any feedback for us.
>
> Cheers
> Martin
>
> ---
>
> **From:** Martin Wright <m.wright@virtusheritage.com.au>
> **Sent:** Thursday, March 30, 2023 4:13 PM
> **To:** barrytoomey64@gmail.com
> **Cc:** Virtus Consultation <consultation@virtusheritage.com.au>
> **Subject:** 336 SLR BESS - Narrabri Due Diligence
>
> Hi Barry
>
> Thanks for talking to me just now. Here's the draft report. If you could let me know if you agree with what's in the report or whether you think changes are required that would be great.
>
> If you could get back to me by the 14th of April it would be appreciated.
>
> Regards
> **Martin Wright**
> Senior Archaeologist
> Mobile: 0413 457 093
> Email: m.wright@virtusheritage.com.au
> Website: www.virtusheritage.com.au
>
> 

Appendix B
Search Results (AHIMS, Native Title Vision, AHD, SHI)

AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : 336 SLR BESS Site 2

Client Service ID : 745117

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
19-3-0007	Narrabri Junction;Namoi Farm;	AGD	55	767955	6639171	Open site	Valid	Artefact : -	Open Camp Site	
Contact		Recorders	Brown					Permits		
19-3-0012	WN24 Narrabri;	AGD	55	764133	6644981	Open site	Valid	Modified Tree (Carved or Scarred) : -	Scarred Tree	84
Contact		Recorders	Rex Silcox					Permits		
19-3-0019	WN25 Narrabri;	AGD	55	764224	6644978	Open site	Valid	Artefact : -	Open Camp Site	84
Contact		Recorders	Rex Silcox					Permits		
19-3-0171	NRST1	GDA	55	764392	6641819	Open site	Valid	Modified Tree (Carved or Scarred) : -		
Contact		Recorders	Jacobs Group (Australia) Pty Ltd - Newcastle,Mr.Andy Roberts					Permits		
19-3-0172	NRST2	GDA	55	764440	6641785	Open site	Valid	Modified Tree (Carved or Scarred) : -		
Contact		Recorders	Jacobs Group (Australia) Pty Ltd - Newcastle,Mr.Andy Roberts					Permits		
19-3-0173	NRST3	GDA	55	764500	6641803	Open site	Valid	Modified Tree (Carved or Scarred) : -		
Contact		Recorders	Jacobs Group (Australia) Pty Ltd - Newcastle,Mr.Andy Roberts					Permits		
19-3-0174	NRST4	GDA	55	764439	6641854	Open site	Valid	Modified Tree (Carved or Scarred) : -		
Contact		Recorders	Jacobs Group (Australia) Pty Ltd - Newcastle,Mr.Andy Roberts					Permits		
19-3-0175	NRST5	GDA	55	764366	6641898	Open site	Valid	Modified Tree (Carved or Scarred) : -		
Contact		Recorders	Jacobs Group (Australia) Pty Ltd - Newcastle,Mr.Andy Roberts					Permits		
19-3-0176	NRST6	GDA	55	764464	6641742	Open site	Valid	Modified Tree (Carved or Scarred) : -		
Contact		Recorders	Jacobs Group (Australia) Pty Ltd - Newcastle,Mr.Andy Roberts					Permits		
19-3-0177	NRST9	GDA	55	764464	6641958	Open site	Valid	Modified Tree (Carved or Scarred) : -		
Contact		Recorders	Jacobs Group (Australia) Pty Ltd - Newcastle,Mr.Andy Roberts					Permits		
19-3-0178	NRST8	GDA	55	764297	6641643	Open site	Valid	Modified Tree (Carved or Scarred) : -		
Contact		Recorders	Jacobs Group (Australia) Pty Ltd - Newcastle,Mr.Andy Roberts					Permits		

Report generated by AHIMS Web Service on 13/01/2023 for Martin Wright for the following area at Datum :GDA, Zone : 55, Eastings : 764187.0 - 774187.0, Northings : 6637996.0 - 6647996.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 22

AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : 336 SLR BESS Site 2

Client Service ID : 745117

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
19-3-0179	NRST7	GDA	55	764271	6641773	Open site	Valid	Modified Tree (Carved or Scarred) : -		
	Contact	**Recorders**	Jacobs Group (Australia) Pty Ltd - Newcastle,Mr.Andy Roberts					**Permits**		
19-3-0002	Dangar Village Narrabri	AGD	55	765359	6640819	Open site	Valid	Burial : -	Burial/s	
	Contact	**Recorders**	Harry Creamer					**Permits**		
19-3-0013	WN23 Narrabri;	AGD	55	764133	6644981	Open site	Valid	Modified Tree (Carved or Scarred) : -	Scarred Tree	84
	Contact	**Recorders**	Rex Silcox					**Permits**		
19-3-0133	Collins Park site 2 artefacts	GDA	55	767429	6641486	Open site	Valid	Artefact : 5, Modified Tree (Carved or Scarred) : 1		
	Contact	**Recorders**	Mr.Allison Stewart					**Permits**		
19-3-0136	Collins Park site 1 artefact	GDA	55	767458	6641465	Open site	Valid	Artefact : 1		
	Contact	**Recorders**	Mr.Allison Stewart					**Permits**		
19-3-0163	Silverleaf IF-1	GDA	55	766916	6647274	Open site	Valid	Artefact : -		104286
	Contact	**Recorders**	OzArk Environmental and Heritage Management - Dubbo,Doctor.Alyce Cameron					**Permits**		
19-3-0164	Silverleaf IF-2	GDA	55	767094	6647233	Open site	Valid	Artefact : -		104286
	Contact	**Recorders**	OzArk Environmental and Heritage Management - Dubbo,Doctor.Alyce Cameron					**Permits**		
19-3-0184	Namoi River Scar tree	GDA	55	766474	6639342	Open site	Valid	Modified Tree (Carved or Scarred) : 1		
	Contact	**Recorders**	Paul Houston,Mr.Steven Booby					**Permits**		
19-3-0185	Namoi River IF	GDA	55	766653	6639633	Open site	Valid	Artefact : 1		
	Contact	**Recorders**	Paul Houston,Mr.Steven Booby					**Permits**		
19-3-0186	Namoi River IF 2	GDA	55	766653	6639625	Open site	Valid	Artefact : 1		
	Contact	**Recorders**	Paul Houston,Mr.Steven Booby					**Permits**		
19-3-0187	Namoi River Artefact with Pattern	GDA	55	766975	6639584	Open site	Valid	Artefact : 1		
	Contact	**Recorders**	Paul Houston,Mr.Steven Booby					**Permits**		

**** Site Status**

Valid - The site has been recorded and accepted onto the system as valid

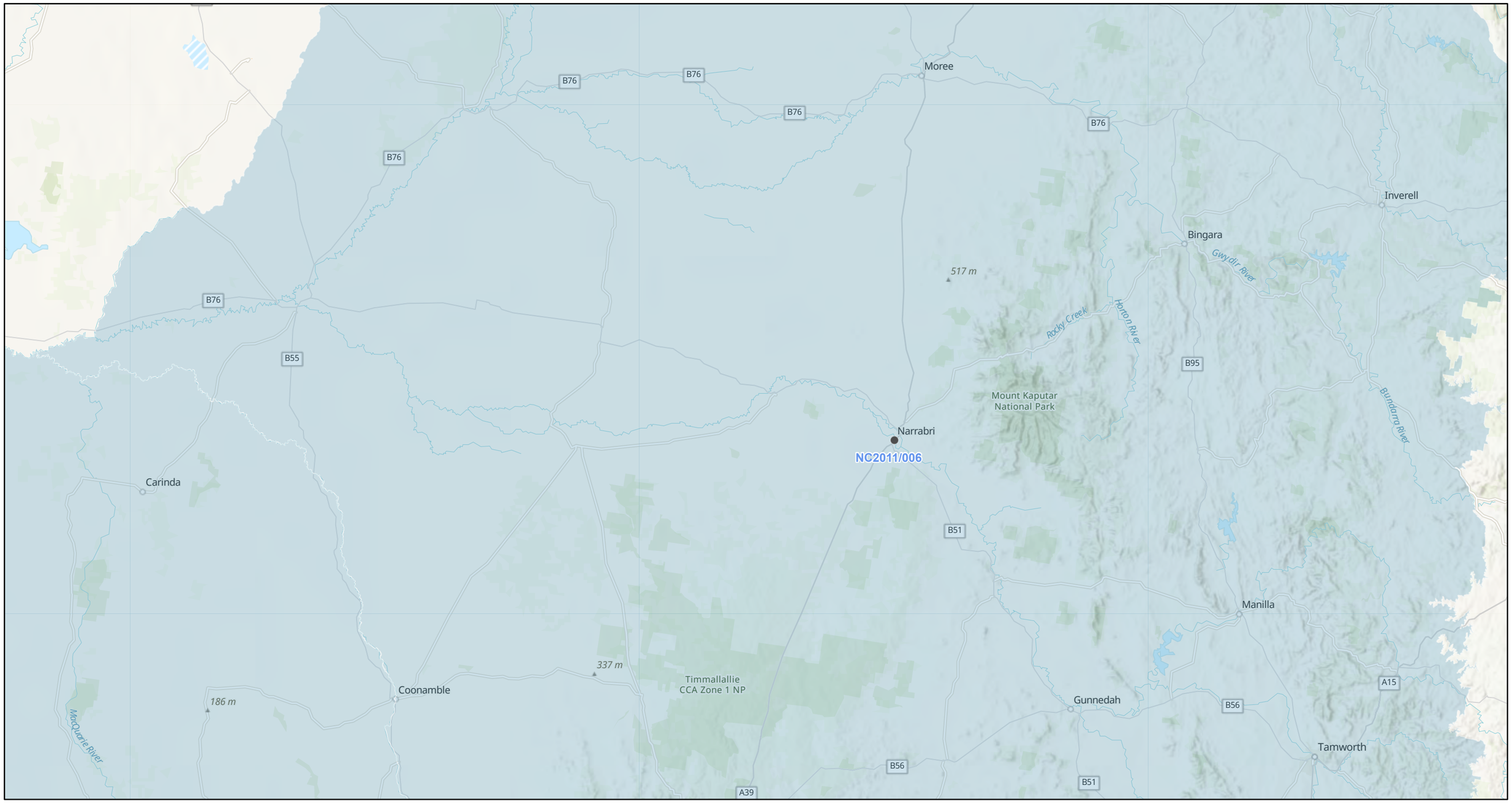
Destroyed - The site has been completely impacted or harmed usually as consequence of permit activity but sometimes also after natural events. There is nothing left of the site on the ground but proponents should proceed with caution.

Partially Destroyed - The site has been only partially impacted or harmed usually as consequence of permit activity but sometimes also after natural events. There might be parts or sections of the original site still present on the ground

Not a site - The site has been originally entered and accepted onto AHIMS as a valid site but after further investigations it was decided it is NOT an aboriginal site. Impact of this type of site does not require permit but Heritage NSW should be notified

Report generated by AHIMS Web Service on 13/01/2023 for Martin Wright for the following area at Datum :GDA, Zone : 55, Eastings : 764187.0 - 774187.0, Northings : 6637996.0 - 6647996.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 22

Narrabri Native TitleVision Web Map



1/20/2023, 11:52:27 AM

Determinations

In effect - Finalised

Determined Outcomes

Native title does not exist

Applications (Schedule)

1:1,155,581

0 12.5 25 50 mi

0 20 40 80 km

Esri, HERE, Garmin, Foursquare, FAO, METI/NASA, USGS, Esri, CGIAR

Native TitleVision

Esri, USGS | Esri, HERE, Garmin, FAO, NOAA, USGS | © State of New South Wales | National Native Title Tribunal, © Commonwealth of Australia |

Search Results

12 results found.

Collins Park Grandstand Tibbereena St	Narrabri, NSW, Australia	(Indicative Place) Register of the National Estate (Non-statutory archive)
Indigenous Place	Bullawa Creek, NSW, Australia	(Registered) Register of the National Estate (Non-statutory archive)
Indigenous Place	Bunna Bunna via Rowena, NSW, Australia	(Indicative Place) Register of the National Estate (Non-statutory archive)
Indigenous Place	Pilliga, NSW, Australia	(Registered) Register of the National Estate (Non-statutory archive)
Mount Kaputar National Park Narrabri Bingara Rd	Narrabri, NSW, Australia	(Registered) Register of the National Estate (Non-statutory archive)
Narrabri Gaol (former) Barwan St	Narrabri, NSW, Australia	(Registered) Register of the National Estate (Non-statutory archive)
Narrabri Post Office and former Telegraph Office 138-140 Maitland St	Narrabri, NSW, Australia	(Registered) Register of the National Estate (Non-statutory archive)
Narrabri Post Office and former Telegraph Office 138-140 Maitland St	Narrabri, NSW, Australia	(Listed place) Commonwealth Heritage List
Narrabri Public School 90 Barwan St	Narrabri, NSW, Australia	(Registered) Register of the National Estate (Non-statutory archive)
Pilliga Nature Reserve (1980 boundary) Newell Hwy	Coonabarabran, NSW, Australia	(Registered) Register of the National Estate (Non-statutory archive)

Police Residence 50 Maitland St	Narrabri, NSW, Australia	(Registered) Register of the National Estate (Non-statutory archive)
Wee Waa Courthouse Rose St	Wee Waa, NSW, Australia	(Registered) Register of the National Estate (Non-statutory archive)

Report Produced: Thu Jan 19 10:31:50 2023

Heritage NSW

Heritage Search Result

Date: 19/01/2023

Item Name	Location	LGA	SHR Id	Item Type	Record Owner
Agricultural Cotton Research Institute	21888 Kamililaroi Highway NARRABRI NSW 2390	Narrabri		Complex / Group	LGOV
Bank of New South Wales	104 Maitland Street NARRABRI NSW 2390	Narrabri		Unknown	GAZ
Bank of New South Wales (former)	104 Maitland Street NARRABRI NSW 2390	Narrabri		Built	LGOV
Cemetery	44 Old Cemetery Road NARRABRI NSW 2390	Narrabri		Landscape	LGOV
Club House Hotel	87-97 Maitland Street NARRABRI NSW 2390	Narrabri		Built	LGOV
Collins Park Cade-Memorial Gates	53-71 Tibbereena Street NARRABRI NSW 2390	Narrabri		Built	LGOV
Collins Park-Ticket Box	53-71 Tibbereena Street NARRABRI NSW 2390	Narrabri		Built	LGOV
Cotton Seed Collection	Myallvale Wee Waa Road NARRABRI NSW 2390	Narrabri		Unknown	SGOV
Courthouse Group	Barwan Street NARRABRI NSW 2390	Narrabri		Unknown	GAZ
Courthouse Group	54 Maitland Street NARRABRI NSW 2390	Narrabri		Built	LGOV
Faulkners Cordial Factory, ice works and cold store	43 Maitland Street NARRABRI NSW 2390	Narrabri		Built	LGOV
Gallipoli House	Bowen Street NARRABRI NSW 2390	Narrabri		Unknown	GAZ

Gallipoli House	1 Bowen Street NARRABRI NSW 2390	Narrabri		Built	LGOV
Lodge Namoi	47 Maitland Street NARRABRI NSW 2390	Narrabri		Built	LGOV
Maitland Street Group	Maitland Street NARRABRI NSW 2390	Narrabri		Unknown	GAZ
Memorial Clock	Tibbereena Street (between Leitch and Hogan Ovals) NARRABRI NSW 2390	Narrabri		Built	LGOV
Memorial Pool	37-49 Tibbereena Street NARRABRI NSW 2390	Narrabri		Built	LGOV
Mollee Weir	Namoi River NARRABRI NSW 2390	Narrabri		Built	SGOV
Narrabri Agricultural Cotton Research Institute	Myallvale, Wee Waa Road NARRABRI NSW 2390	Narrabri		Complex / Group	SGOV
Narrabri Courthouse and Court Offices	Maitland Street NARRABRI NSW 2390	Narrabri		Built	SGOV
Narrabri Creek Bridge	Newell Highway NARRABRI NSW 2390	Narrabri		Built	SGOV
Narrabri Field Service Centre	1 Logan Street NARRABRI NSW 2390	Narrabri		Complex / Group	SGOV
Narrabri Field Service Centre - Country Energy	23 Fitzroy Street NARRABRI NSW 2390	Narrabri		Complex / Group	LGOV
Narrabri Fire Station	4 Doyle Street NARRABRI NSW 2390	Narrabri		Built	LGOV
Narrabri Fire Station	2 Doyle Street NARRABRI NSW 2390	Narrabri		Built	SGOV
Narrabri Gaol and Residence	Bowen Street NARRABRI NSW 2390	Narrabri		Built	LGOV
Narrabri Gaol and Residence	Bowen Street NARRABRI NSW 2390	Narrabri	00344	Built	HNSW
Narrabri Official Residence 1	1A Denison Street NARRABRI NSW 2390	Narrabri		Built	SGOV
Narrabri Official Residence 2	50 Maitland Street NARRABRI NSW 2390	Narrabri		Built	SGOV

Narrabri Post Office	140 Maitland Street NARRABRI NSW 2390	Narrabri		Built	LGOV
Narrabri Post Office & Quarters	140 Maitland Street NARRABRI NSW 2390	Narrabri		Unknown	GAZ
Narrabri Public School	88 Barwan Street NARRABRI NSW 2390	Narrabri		Built	LGOV
Narrabri Public School - Building B00A (Demolished)	88 Barwan Street NARRABRI NSW 2390	Narrabri		Built	SGOV
Narrabri Railway Station	Logan & Bowen Streets NARRABRI NSW 2390	Narrabri		Built	LGOV
Narrabri Railway Station	Bowen Street NARRABRI NSW 2390	Narrabri		Built	SGOV
Narrabri West Railway Station & Residence	NARRABRI NSW 2390	Narrabri		Unknown	GAZ
Public School	Barwan Street NARRABRI NSW 2390	Narrabri		Unknown	GAZ
Railway Station Precinct	Buri & Mooloobar Streets NARRABRI NSW 2390	Narrabri		Built	LGOV
St. Cyprian's Anglican Church	NARRABRI NSW 2390	Narrabri		Unknown	GAZ
St. Cyprian's Anglican Church	13 Dewhurst Street NARRABRI NSW 2390	Narrabri		Built	LGOV
War Memorial, Narrabri West	37 Mooloobar Street NARRABRI NSW 2390	Narrabri		Built	LGOV

New South Wales Consolidated Regulations

NARRABRI LOCAL ENVIRONMENTAL PLAN 2012 - SCHEDULE 5

SCHEDULE 5 – Environmental heritage

(Clause 5.10)

Locality	Item	Address	Property description	Significance	Item no
Bellata	Bellata Cemetery	300 Berrigal Road	Lots 7304 and 7305, DP 1137898	Local	I010
Bellata	"Dobikin" Homestead	559 Millie Road	Lots 22 and 23, DP 753964	Local	I009
Bellata	Bellata Police Station	24 Railway Parade	Lot 4, Section 1, DP 758081	Local	I016
Bellata	Oldhams Smallgoods	26 Railway Parade	Lot 1, DP 574841; Lots 11 and 12, Section 1, DP 758081	Local	I015
Bellata	Bellata Post Office	28 Railway Parade	Lot 1, DP 172046	Local	I014
Bellata	AB Meppem & Co	30 Railway Parade	Lot A, DP 957953	Local	I013
Bellata	LS Rowe Stock and Station Agents	40 Railway Parade	Lot 1, DP 653382	Local	I012
Boggabri	War Memorial	77 Brent Street	Lots 1-3, Section 41, DP 758128	Local	I039
Boggabri	General Cemetery	69 Denman Street	Lot 7017, DP 1028506; Lots 1-5, DP 724168	Local	I037
Boggabri	Iron Bridge	14224 Kamilaroi Highway	Lot 7003, DP 1050545	Local	I017
Boggabri	Boggabri Railway Station	90 Oakham Street	Railway land	Local	I038
Cuttabri	Cuttabri Wine Shanty	2325 Pilliga Road	Lot 51, DP 878793	Local	I006
Drildool	Drildool Private Cemetery	3347 Middle Route Road	Lot 9, DP 75392	Local	I005
Gwabegar	General Cemetery Gwabegar	3999 Gwabegar Road	Lot 7005, DP 1029992	Local	I008
Jews Lagoon	Cemetery Millie	2665 Millie Road		Local	I001

Narrabri	Narrabri Public School	88 Barwan Street	Lot 1, DP 930714; Lot 531, DP 821007; Lot 71, DP 962550; Lot 6, Section 11, DP 758755; Lot 1, DP 168344; Lot 1, DP 34355; Lot 1, DP 34298; Lots 1 and 2, DP 782780; Lot 1, DP 782504; Lot 5, DP 193900	Local	I022
Narrabri	Narrabri Gaol and Residence	Bowen Street	Lot 1, Section 6, DP 758755	State	I040
Narrabri	Gallipoli House	1 Bowen Street	Lots 1 and 2, DP 1093826	Local	I029
Narrabri	Railway Station Precinct	Buri and Mooloobar Streets	Lots 21 and 22, DP 543782; Lots 11-13, Section 2, DP 758756; Lots 4 and 5, Section 3, DP 758756	Local	I035
Narrabri	St Cyprians Anglican Church	13 Dewhurst Street	Lot 53, DP 843155	Local	I023
Narrabri	Narrabri Fire Station	4 Doyle Street	Lot 22, Section 4, DP 758755	Local	I021
Narrabri	Narrabri Field Service Centre--Country Energy	23 Fitzroy Street	Lot C, DP 368064; Lot D, DP 417463; Lot B, DP 349003; Lot C, DP 383751; Lots 1-3, DP 931815; Lot 1, DP 322957; Lots 5-7, DP 538150; Lot 1, DP 338859; Lot 3, DP 517212; Lot 1, DP 219886; Lot 1, DP 970023; Lot 2, DP 223377; Lot 1, DP 334559	Local	I034
Narrabri	Agricultural Cotton Research Institute	21888 Kamilaroi Highway	Lots 3 and 4, DP 236238; Lots 86 and 95, DP 753934	Local	I011
Narrabri	Narrabri Railway Station	Logan and Bowen Streets		Local	I024
Narrabri	Faulkners Cordial Factory, ice works and cold store	43 Maitland Street	Lot 5, Section 23, DP 758755	Local	I032
Narrabri	Lodge Namoi	47 Maitland Street	Lot 1, DP 112375	Local	I031
Narrabri	Courthouse Group	54 Maitland Street	Lots 1-3, Section 6, DP 758755	Local	I033
Narrabri	Club House Hotel	87-97 Maitland Street	SP 22051	Local	I025
Narrabri	Bank of NSW	104 Maitland Street	Lot 1, DP 512890	Local	I026
Narrabri	Narrabri Post Office	140 Maitland Street	Lot 21, DP 775501	Local	I020
Narrabri	War Memorial, Narrabri West	37 Mooloobar Street (on footpath)	Lot 3, DP 1006722	Local	I036
Narrabri	Cemetery	44 Old Cemetery Road	Lot A, DP 385147; Lot 7002, DP 1066854	Local	I018

Narrabri	Memorial Clock	Tibbereena Street (between Leitch and Hogan Ovals)	Lot 19, DP 1060622	Local	I019
Narrabri	Memorial Pool	37-49 Tibbereena Street	Lot 16, DP 1060622	Local	I030
Narrabri	Collins Park--Ticket Box	53-71 Tibbereena Street	Lot 14, DP 1060622	Local	I027
Narrabri	Collins Park--Cade Memorial Gates	53-71 Tibbereena Street	Lot 14, DP 1060622	Local	I028
Pilliga	General Cemetery	5647 Pilliga Road	Lots 18-24 and 88, DP 750305	Local	I007
Wee Waa	Pioneer Tree	Cowper and George Streets (southern corner)		Local	I002
Wee Waa	Wee Waa General Cemetery	3134 Culgoora Road	Lot 1, DP 734724; Lots 1 and 2, DP 1041461; Lot 7303, DP 1138584	Local	I004
Wee Waa	Wee Waa Court House	124 Rose Street	Lots 11-13, Section 4, DP 759063	Local	I003

Appendix D Preliminary Transport Assessment

Request for Secretary's Environmental Assessment Requirements (SEARs)

Enervest Operations Pty Ltd

SLR Project No.: 620.31316.00000

25 August 2024

Preliminary Transport Impact Assessment

Stoney Creek Battery Energy Storage System (BESS)

Enervest Pty Ltd

Level 6, 627 Chapel Street
SOUTH YARRA VIC 3141

Prepared by:

SLR Consulting Australia

Tenancy 202 Submarine School, Sub Base Platypus, 120 High Street, North Sydney NSW 2060, Australia

SLR Project No.: 620.31316.00000

14 February 2024

Revision: 1.3

Revision Record

Revision	Date	Prepared By	Checked By	Authorised By
1.0	21 December 2023	Gareth Davies	Charlie Seventekin	Jeffrey Baczynski
1.1	8 January 2024	Gareth Davies	Charlie Seventekin	Jeffrey Baczynski
1.3	14 February 2024	Gareth Davies	Charlie Seventekin	Jeffrey Baczynski
1.3	14 February 2024	Gareth Davies	Charlie Seventekin	Jeffrey Baczynski

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 Enervest 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.

Executive Summary

SLR Consulting Australia Pty Ltd (SLR) has been engaged by Enervest Pty Ltd (Enervest) to prepare a preliminary Traffic Impact Assessment (TIA) for a Battery Energy Storage System (BESS) facility in Narrabri, New South Wales.

Based on the analysis and discussion documented in this report, the following is concluded:

- It is proposed that access to/ from the development will be provided via Stoney Creek Road. The location and design will be confirmed as the site's design is finalised, and it will be able to accommodate heavy vehicles required during construction, operation, and decommissioning.
- The proposed heavy vehicle route utilises the State Road network where possible, except for access through Narrabri town centre.
- It is anticipated that one rail crossing will need to be assessed at the TIA stage.
- No planned major transport infrastructure upgrades by TfNSW and Council were identified within the vicinity of the proposed project; however, several SSD projects were identified as will be considered at the TIA stage.
- The proposed development will generate approximately 14,917 return trips over 365 business days (twelve months) during the construction period.
- The peak daily traffic generation will be in the order of 45 return trips a day (40 light vehicle trips, five heavy vehicle trips).
- Any significant traffic impacts associated with the development are expected to occur only during the construction phase of the development. Any temporary parking and set-down areas required during construction will be reinstated and landscaped once the facility is operational.
- The proposed BESS facility will be managed with 1-2 full time employees once operational, requiring minimal site attendance from maintenance staff. The proposal is unlikely to have any lasting impacts on traffic at this location. However, a Traffic Impact Assessment (TIA) will be undertaken, and any mitigation methods and strategies identified in the associated report will be adopted into the proposal.

A comprehensive TIA will accompany the State Significant Development (SSD) application. It is expected that the key elements of this TIA will include:

- Existing road conditions review and future road network planning consideration.
- Assessed traffic demands (construction, operation and decommissioning phases).
- Intersection and access assessments.
- Road safety assessment and road use management planning.
- Identification of any mitigation measures.

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1.0 Introduction

1.1 Context

SLR Consulting Australia Pty Ltd (SLR) has been engaged by Enervest Pty Ltd (Enervest) to prepare a preliminary Traffic Impact Assessment (TIA) for a Battery Energy Storage System (BESS) facility in Narrabri, New South Wales. Preliminary plans for the development are provided in **Appendix A**.

The proposal involves the installation of a Battery Energy Storage System (BESS) facility located at 41 Stoney Creek Road, Narrabri NSW 2390, adjacent to an existing substation facility. For all intents and purposes, the project will be referred to as the 'The Stoney Creek BESS'.

The Stoney Creek BESS will involve the development, construction, operation, and eventual decommissioning of a Battery Energy Storage System (BESS) with a capacity of 125 Megawatts (MW) connecting via transmission line directly to the existing NARRABRI 132/66kV substation operated by TransGrid, (henceforth referred to as 'the Project'). The proposed facility will consist of BESS containers (or enclosures), with each container having dimensions of approximately 20ft with an approximate weight of 35,000kg. The BESS facility will be supported by inverters that will convert the electricity from the BESS and connect it to the existing TransGrid substation via approximately 320m of overhead lines.

The proposal is considered a State Significant Development (SSD) under the State Environmental Planning Policy (Planning Systems) 2021, as the proposed Electricity generating works are estimated to cost more than $30 million.

1.2 Application

This preliminary TIA has been prepared to inform a scoping report for the Department of Planning and Environment (DPE) for the Secretary's Environmental Assessment Requirements (SEARS), which will inform a Traffic Impact Assessment (TIA) to accompany an SSD application.

1.3 Assessment Scope

This preliminary TIA report assesses the consistency of the development with Council and State planning and evaluates the impacts of the Proposal on the surrounding transport network at a high level. This preliminary TIA identifies any significant transport infrastructure improvements required to support the development while a more detailed TIA will inform any additional works needed. This assessment considers the traffic and transport-specific aspects of the development against the requirements of the following relevant authorities:

- Narrabri Shire Council (Council).
- Transport for New South Wales (TfNSW).

2.0 Project Description

2.1 Overview

The subject site is located on land in the northeast periphery of the township of Narrabri, within the Narrabri Shire Council Local Government Area (LGA). It is located approximately 320km west of Coffs Harbour and 135km northwest of Tamworth.

Narrabri Shire is strategically positioned at the crossroads of two major highways, the Newell and Kamilaroi Highways, midway between Sydney and Brisbane. It is also considered the main freight hub in the Northern Inland Region of NSW.

The site is generally regular in shape and is zoned RU1 Primary Production in accordance with the Narrabri Local Environment Plan 2012 (Narrabri LEP). The site is relatively flat and approximately 20ha in size and contains no existing built development. The neighbouring lots are predominantly large rural lots and generally cleared land.

Access to the site is provided via Stoney Creek Road, which runs along the southern extent of the site, with an existing substation located on the opposite side of this road.

The Proposal includes the construction of a BESS facility with a capacity of 125 Megawatts (MW) near the NARRABRI 132/66kV substation operated by TransGrid.

Figure 1 shows the site location in the regional context.

Figure 1 Site Location in the Regional Context

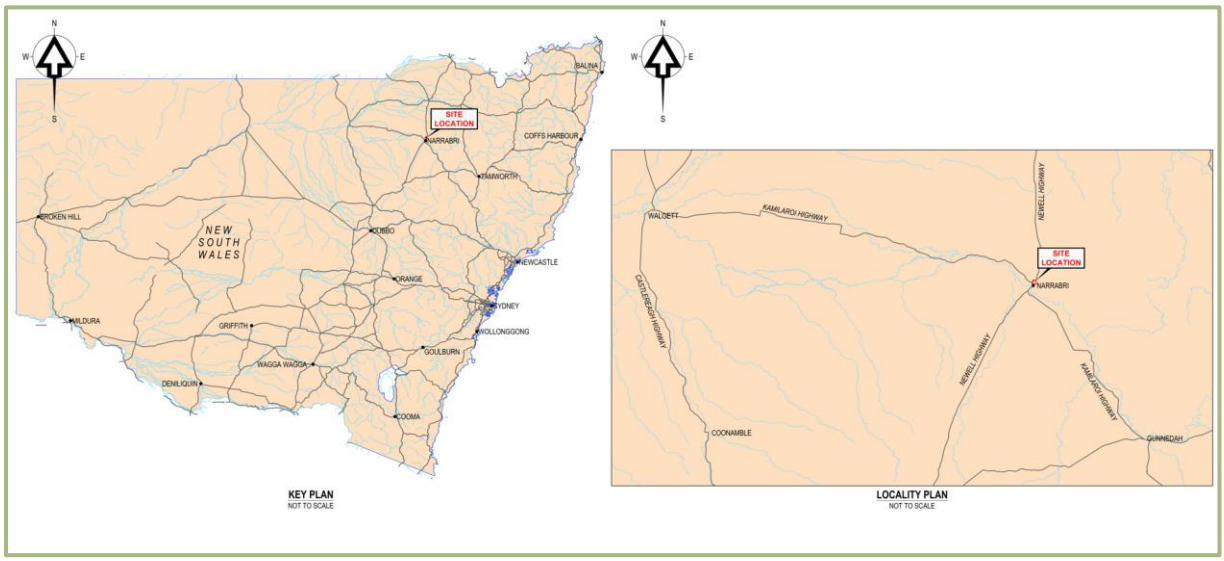


Figure 2 illustrates the site location in the local context.

Figure 2 Site Location in the Local Context

2.2 Project Program

2.2.1 Construction Phase

Enervest has advised that the development will be constructed over a 12-month period. A linear traffic generation estimate has been applied for construction movements associated with material, equipment and workforce mobilisation and decommissioning. This assumption is conservative and will be refined as the project progresses and the construction phasing and sequencing are finalised.

2.2.2 Operational and Decommissioning Phase

The development is expected to operate for approximately 20-30 years, providing short-, medium- and long-term local employment opportunities. It is anticipated that the proponent will be obliged to decommission the site and rehabilitate it at the end of its operational life (EOL). Decommissioning of the BESS EOL would include the disassembly and removal of associated infrastructure from the site, returning the land to its original use.

The operation and decommissioning processes will generate much less traffic than during the construction period, as BESS facilities are low-maintenance investments. However, adequate provisions will be made to accommodate an 8.8m long rigid vehicle (MRV).

It is important to note that the construction scenario of any BESS facility would have the largest traffic impacts compared to their impacts during the operation and demobilisation phases. Based on this, no detailed assessments will be undertaken for the operational and demobilisation phases, provided that sufficient infrastructure is developed for the construction phase.

2.3 Site Access

Access to the site for both the construction and operational stages of the development will be from Stoney Creek Road. The location and design will be confirmed when the SSD Application is submitted.

Vehicle parking will be provided on site for general maintenance staff. Construction vehicles and parking will utilise a temporary laydown area.

2.4 Transport Routes

2.4.1 Proposed Heavy Vehicle Route

The BESS facility, along with the other materials and the construction fleet, will be transported to the site from either the Port of Newcastle, Port of Brisbane, and/or the Port of Melbourne. In any case, most of the route taken will be via the State Road network, which can accommodate the nominated heavy vehicle fleet. The critical path considered is through the Narrabri town centre and is discussed in detail in **Section 2.4.1.1**.

The construction fleet is to be finalised; however, at the preliminary stage, we anticipate a composition of the following fleet:

- 20m long AVs.
- 20m long low loaders.
- 26m long B-Doubles.
- 17m long truck & dog combinations.
- An Over Size Over Mass (OSOM) Vehicle (one-off trip) for the transformer.

The largest heavy vehicle in the project fleet will be an Over Size Over Mass (OSOM) vehicle which will carry the Large Power Transformer to site. The dimensions of the transformer and OSOM vehicle are to be determined with the anticipated OSOM vehicle trips summarised in **Section 4.1.1.1**.

2.4.1.1 Heavy Vehicle Route Through Narrabri Town Centre

The route through the Narrabri town centre has several restrictions. Heavy vehicle access is restricted in the following road segments:

- Lloyd Street.
- Doyle Street.
- Dewhurst Street.
- Bowen Street.
- Denison Street.

The access restrictions are illustrated in **Figure 3**.

Figure 3 Heavy Vehicle Route Access Restrictions Through Narrabri

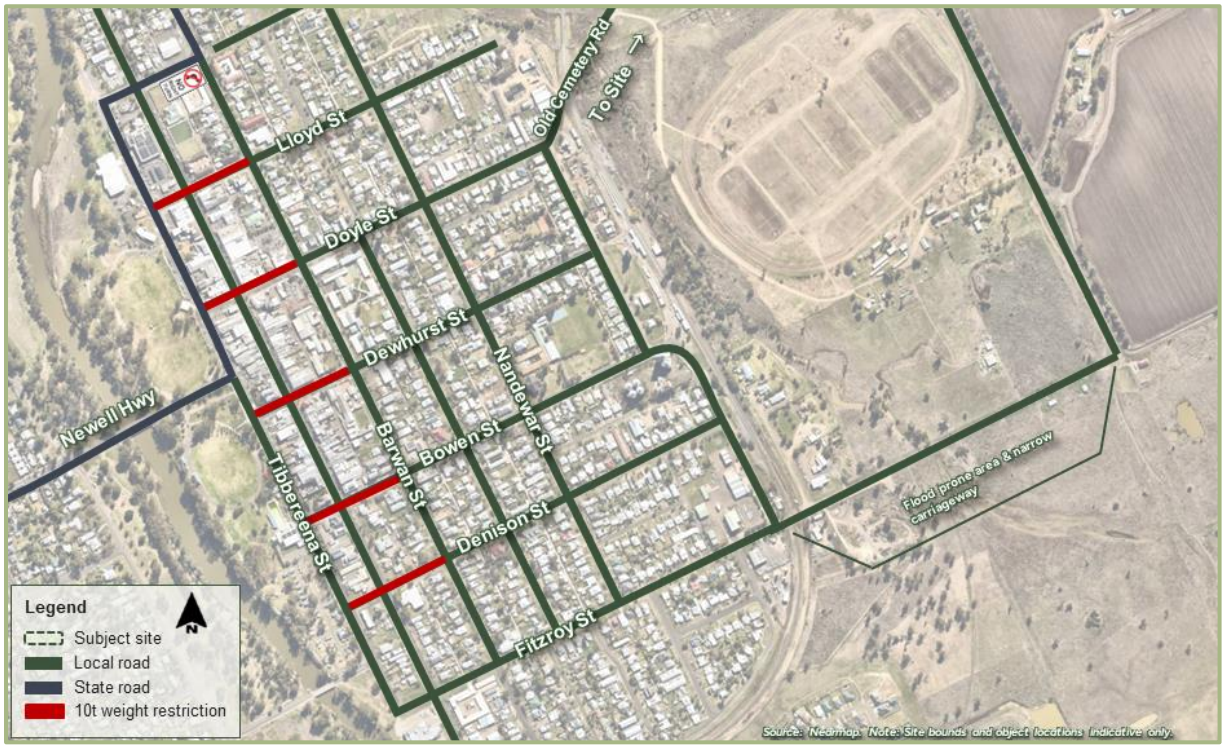


Figure 3 also illustrates the location of a right-turn ban in the area (on the west approach along Newell Highway into Barwan Street). This means that the only viable east-west route through Narrrabri can be achieved via Fitzroy Street.

The eastern end of Fitzroy Street is flood-prone and has a narrow carriageway, as shown in **Figure 4**. Hence, vehicles will need to turn left at Barwan Street to travel in the northbound direction and then turn right into Doyle Street to travel in the eastbound direction.

The proposed route through the town centre is shown in **Figure 5**.

Figure 4 Fitzroy Street Flood Prone Carriageway

Source: maps.google.com.au

Figure 5 Proposed Heavy Vehicle Route Through Narrabri

The proposed route is also consistent with the NSW Combined Higher Mass Limits (HML) and Restricted Access Vehicle (RAV) Map,[1] as shown in **Figure 6**.

Figure 6 NSW HML and RAV Map

SLR will include swept path assessments of the turning movements on the proposed route to confirm the road network can accommodate the anticipated largest construction vehicle and ensure the safety and efficiency of the intersections are maintained.

2.4.2 Railway Corridors and Level Crossings

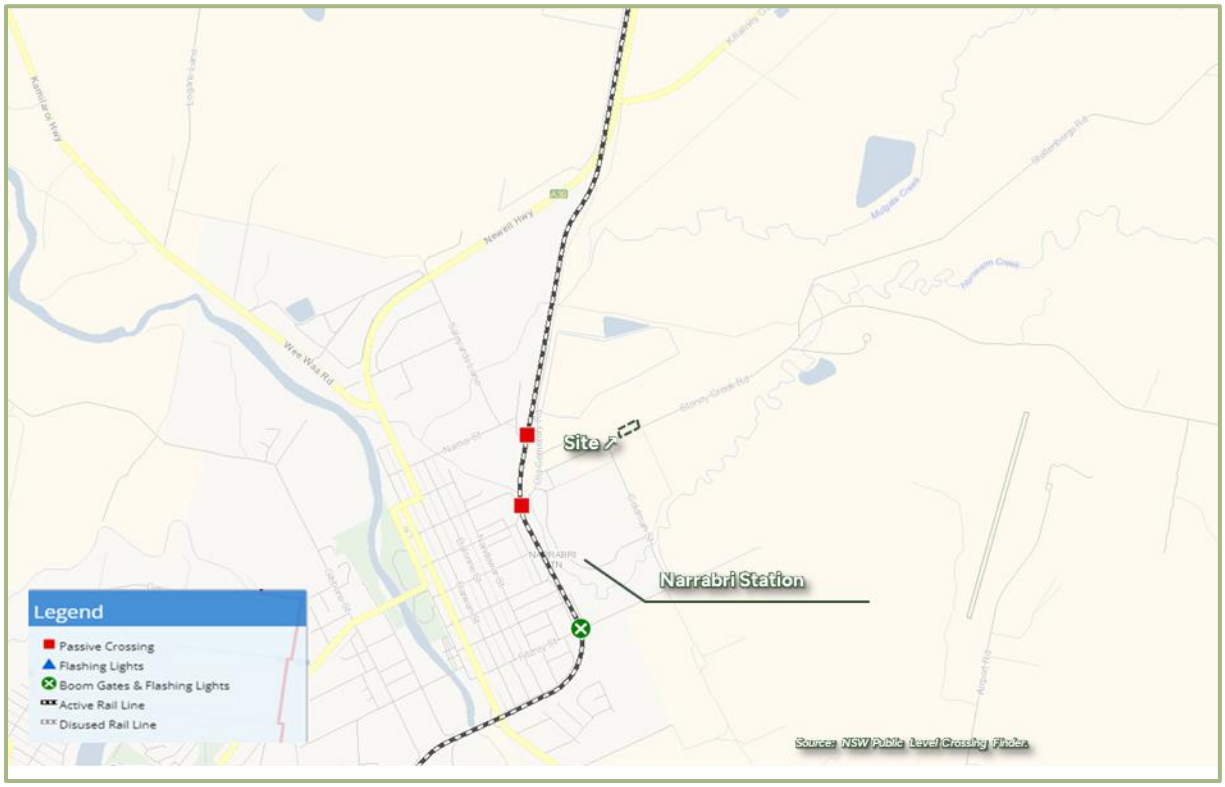
SLR reviewed the NSW Public Level Crossing finder[2] and identified that there is one level rail crossing and corridor that would be used along the route to/ from the site.

Figure 7 provides an overview of the area in proximity to the site and illustrates the level rail crossing on Doyle Street that the proposed route will use.

[1] NSW Combined Higher Mass Limits (HML) and Restricted Access Vehicle (RAV) Map

[2] NSW Public Level Crossing Finder

Figure 7 Nearby Railway Corridors or Level Crossings



Source: https://appln.transport.nsw.gov.au/mapservices/proxy/levelCrossings/map.html

The level rail crossing has a passive Stop-Control with good sight lines and a large queuing space. The Doyle Street level railway crossing north approach (looking south) is shown in **Figure 8,** while the south approach (looking north) is shown in **Figure 9**. The crossing is located near the Narrabri Station.

Figure 8 Doyle Street Level Railway Crossing North Approach

Figure 9 Doyle Street Level Railway Crossing South Approach

2.5 Construction Phase

2.5.1 Activities

For the purposes of forecasting peak development traffic demands associated with the construction stage, the following construction activities are anticipated to generate traffic on the external road network:

- Site clearance and establishment.
- Construction machinery deliveries.
- Equipment and material deliveries.
- Workforce transportation.

2.5.2 Workforce

During construction, it is anticipated that approximately 40 full-time equivalent (FTE) jobs will be required during the peak of site activity. Employment numbers will fluctuate, starting with about 15 workers on site for one to two months. Worker numbers then progressively increase to 40 staff at about the 65% completion stage for several months before tailing off toward completion and the start of commissioning. About 5-10 staff are required for commissioning.

It is expected the peak period will extend for approximately three months. Outside of this period, approximately 10-15 workers will be required at any one time.

To be conservative, we have assumed the maximum number of workers for the longest indicative period, i.e. 15 workers for two months, 40 workers for three months, and then 15 workers for three months.

2.6 Operation Phase

2.6.1 Activities

Once the proposed development is operational, there will be no activities that require large numbers of workforce on site. It is understood that for most of the development's life, operations will involve a range of preventative, corrective, and condition-based maintenance activities, which would entail various maintenance, inspection and servicing for the Stoney Creek BESS facility, the associated electrical network and internal road infrastructure. The external movements associated with these tasks will generally be performed by 5.2m long VANs, 6.4m long small rigid vehicles (SRVs) and 8.8m long medium rigid vehicles (MRVs).

2.6.2 Workforce

During operation, 1-2 permanent staff will be required to be on site. For the first six months, maintenance visits may be required weekly to resolve any initial issue as the asset becomes fully operational. Thereafter, scheduled maintenance visits will occur quarterly for a duration of 1-3 days. These visits will occur Monday to Friday and within normal business hours and agreed ahead of time.

Reactive, unplanned maintenance visits are extremely rare. However, access to the site will be required 24 hours a day and seven days a week to manage any faults or unexpected operational issues.

The BESS facility will operate at any time of the day depending on different energy supply and demand scenarios; however, it will never require staff continually 24 hours a day, 7 days a week. The development proposes a site office for permanent staff however all rubbish will be removed by the maintenance workforce on site.

3.0 Existing Conditions Appraisal

3.1 Road Network

The characteristics of the road network surrounding the Site are summarised in **Table 1**.

Table 1 Surrounding Road Network

Road Name	Jurisdiction	Average Daily Traffic	Average Daily Heavy Vehicle Percentage	Posted Speed Limit	Road Classification
Stoney Creek Rd	Narrabri Shire Council	N/A	N/A	50km/h to 100km/h	Local Road
Newell Hwy	TfNSW	N/A	N/A	50km/h	State Road
Kamilaroi Hwy		1553 (from 2011)	23% (from 2011)	50km/h to 80km/h	

It is important to note that automated tube count (ATC) surveys will be commissioned during the TIA stage to refresh the necessary traffic volume information.

3.2 Traffic Surveys

To ascertain the existing traffic demands on the road network surrounding the site and to assess the impact of the proposed development, SLR will commission automated tube count (ATC) surveys and, if required, intersection count surveys within the vicinity of the site as a part of the future TIA.

3.3 Crash History

A brief safety review of the surrounding road network has been carried out to highlight any immediate deficiencies.

There have been a number of reported crashes within the vicinity of the Site and/ or along the proposed route for the construction vehicles. A detailed review of these historic crashes will be undertaken as part of a future TIA.

3.4 Cumulative Traffic Impacts

To determine the location and nature of any planned upgrades of the surrounding network, SLR carried out a review of the publicly available material. The review indicated that several SSDs could impact the surrounding road network within the vicinity of the proposed development.

These projects are provided in **Table 2**.

Table 2 Other SSD Projects in the Narrabri LGA with Possible Traffic Implications

Project	Status	Project Summary
Department of Planning & Environment (SSD)		
Maules Creek Solar Farm SSD-6244372	EIS Preparation	100 MW solar farm, a 120 MW / 240 MWh BESS, and an electrical substation
Silverleaf Solar Farm SSD-9358	Determined (Approved)	Construction and operation of a photovoltaic (PV) generation facility with an estimated capacity of 120 MW and associated infrastructure
Narrabri South Solar Farm SSD-8387	Determined (Approved)	60MW solar PV system with a footprint of approximately 152Ha on a site with an area of approximately 190H Subsequent modifications (powerline realignment and battery system) are being prepared.
Joint Regional Planning Panel (Northern Region)		
PPSNTH-98	Determined (Approved)	Establishment of a 5MW Solar PV Electricity Generation Facility with Associated Infrastructure

Further analysis of the potential for cumulative impacts will be addressed in detail as part of a future TIA/ EIS in accordance with the Guidelines for State Significant Projects (DPIE 2021).

4.0 Project Traffic Demands

4.1 Traffic Generation

4.1.1 Construction Phase Traffic Assumptions

Traffic that will be generated during the construction of the Proposal will be associated with the transportation of materials/ equipment and the workforce. To simplify the construction traffic calculations, SLR has disaggregated the traffic-generating elements of the proposed works into two classes:

- Construction workforce.
- Construction heavy vehicle traffic.

SLR has estimated the trip generation rates from similar projects in which SLR has been involved and Enervest where available. These will be refined as the project progresses and more information becomes available.

The anticipated construction workforce assumptions and associated traffic generation potential are summarised in **Table 3**.

Table 3 Anticipated Traffic Generated by Construction Workforce

Element	Assumption	Source
Roster	Seven days	The Applicant (Enervest)
Construction hours	Monday to Saturday: 6:30 am – 6:30 pm Sunday: 8 am – 1 pm	
Construction Duration	Twelve Months	
Workforce	40 persons	SLR Analysis & Assumption
Construction Deliveries	Linear progress across twelve months	
Travel Arrangements	Workforce via private vehicle (i.e. UTEs and VANs)	
Light vehicle occupancy	Conservatively, one driver and no passenger per vehicle	
Total Staff Movements	**14,600 return trips in total (over twelve months)**	
Staff Movements per day	40 light vehicle return trips per day (average)	
Workforce Distribution	100% to/ from Narrabri	

Table 3 anticipates that 14,600 return trips associated with the workforce are expected to occur during the construction of the Proposal across twelve months, 52 weeks and 365 business days.

Table 4 summarises the anticipated traffic associated with the material and fleet delivery demands for the construction of the Proposal and ancillary facilities.

Table 4 Anticipated Heavy Vehicle Traffic

Element	Location	Assumption	Vehicle Type	Source
BESS Containers	Port TBC	192 return trips	B-Double (26m long)	The Applicant (Enervest)
Ancillary equipment (cable, substation equipment, etc.)	Port TBC	20 return trips	AV (20m long)	SLR Analysis & Assumption
Ancillary equipment (switch room and O&M Building)	Port TBC	Four return trips	Low Loader (approx. 20m)	SLR Analysis & Assumption
Aggregates/ Concrete	Port TBC	100 return trips	Truck and Dog (approx. 17m)	SLR Analysis & Assumption
Transformer	Port TBC	1 return trip	Class 1 OSOM Vehicle	SLR Analysis & Assumption
Total		**317 return trips in 12 months**		

As summarised in **Table 4** above, a maximum of 317 heavy vehicle return trips are anticipated to occur during the construction of the proposed development (across twelve months, 52 weeks, 365 business days).

Based on the information and assumptions provided in **Table 3** and **Table 4**, it is anticipated that the total traffic generated by the construction of the proposed development will be in the order of 14,917 return trips across a construction duration of 365 business days.

Table 5 summarises the anticipated cumulative traffic during the peak construction period based on a single occupancy private vehicle trip by all workers.

Table 5 Cumulative Maximum Peak Traffic

Direction	Light vehicles (Peak)	Heavy vehicles (Peak)	Total (Peak)
Inbound	40	5	45
Outbound	40	5	45

Accordingly, it is anticipated that peak daily traffic generation will be in the order of 45 return trips a day (40 light vehicles and five heavy vehicle return trips).

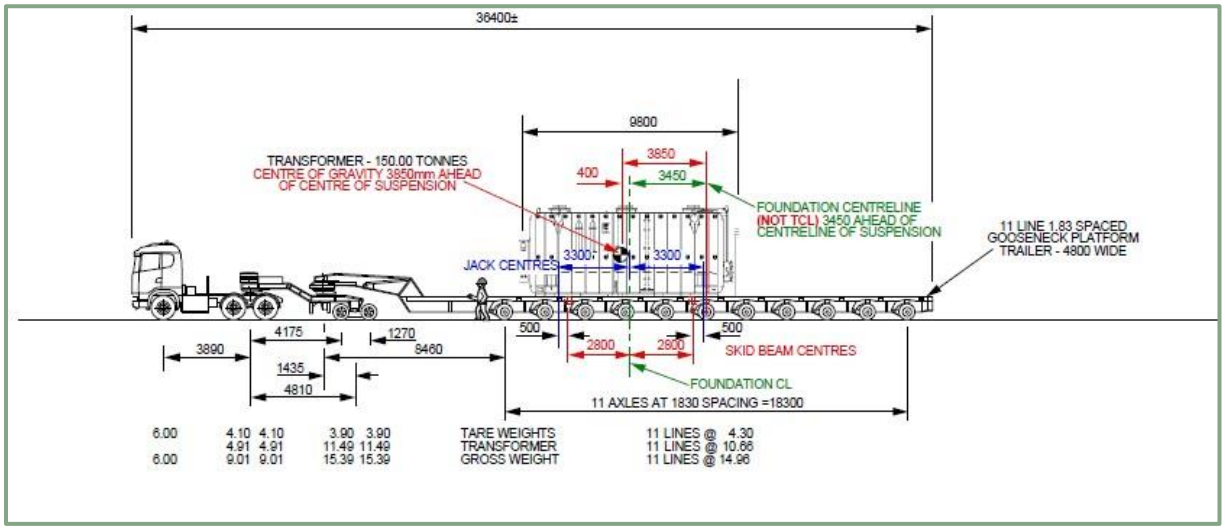
4.1.1.1 Transportation of the Transformer

In addition to the discussions above in relation to the anticipated construction phase traffic generation potential of the proposal, it is worth noting that there will be a one-off trip for the transportation of the transformer.

It is proposed that the transformer will also be transported via the same route as other elements for the BESS facility.

Figure 10 provides an overview of the anticipated transformer and associated heavy vehicle specifications. We have assumed the size of the heavy vehicle based on similar proposals SLR has been involved in. This will be refined as the project progresses.

Figure 10 Transformer Specifications



4.1.2 Operational Phase Traffic Assumptions

BESS facilities typically need limited equipment maintenance. Therefore, the operational traffic demands associated with the Proposal are minimal and limited to minor servicing activities. The operational traffic is not considered a critical element within this traffic assessment.

We have summarised the operational workforce traffic generation assumptions in **Table 6** below.

Table 6 Operational Workforce

Element	Assumption	Source
Workforce	Six persons maximum on-site (with ad-hoc maintenance crew)	SLR Analysis & Assumption
Roster	Seven days on	The Applicant (Enervest)
Permanent Workforce	1-2 person(s)	The Applicant (Enervest)
Contractor Workforce	Four persons (conservative maximum, irregular)	SLR Analysis & Assumption
Anticipated Fleet	Light vehicles, disposal trucks (Small & Medium Rigid)	SLR Analysis & Assumption
Distribution	100% to/ from Narrabri	SLR Analysis & Assumption

Note: Maximum operational workforce calculated by adopting a 'worst-case' scenario with all permanent and sub-contracted personnel being on-site at a given time.

4.1.3 Decommissioning Phase Traffic Assumptions

The site is proposed to be decommissioned and the infrastructure removed following the end of the life of the project. Works will be undertaken to return the site as close as possible to its original state and use. SLR has not considered potential traffic demands associated with the decommissioning of the project, as this is expected to occur after the typical design horizon (10 years) for the assessment of traffic impacts.

4.2 Traffic Volumes

The peak hour development traffic volumes will be determined using the traffic volumes outlined in **Section 4.1**. The construction traffic generation was considered in terms of light and heavy vehicle movements.

The construction traffic generation was assumed to progress linearly over the 12-month period, with all materials arriving from the State Road Network (except roads as discussed in **Section 2.4.1.1**). With this assumption, daily construction traffic generation was determined by adopting a 7-day work week. For conservatism, a peak hour estimate was established by assuming that all construction vehicles were to arrive at the site within one hour instead of spreading out equally across the day (eight hours).

The peak traffic generated by the workforce was determined by considering a maximum of 40 workers on site, all travelling privately in light vehicles (e.g. UTES, VANs). It is also assumed that all staff will accommodate at and travel from/ to Narrabri, so a shuttle bus service could likely be provided to reduce private vehicle travel; however, this will be determined by a Traffic Management Plan.

5.0 Traffic Engineering Considerations

5.1 Sight Distance Assessment

SLR has carried out a sight distance assessment at the access locations in accordance with the Austroads Guide to Road Design (AGRD) Part 3: Geometric Design.

Stopping sight distance is the minimum sight distance for a driver of a vehicle travelling at the design speed on wet pavement to perceive, react and brake to a stop prior to collision with a hazard.

The stopping sight distance was calculated for the access locations as per *Section 5.3 Stopping Sight Distance* of AGRD Part 3.

The formula applied is illustrated in **Equation 1**.

Equation 1 Stopping Sight Distance (SSD) Formula

$$SSD = \frac{R_T V}{3.6} + \frac{V^2}{254(d + 0.01a)}$$

where

R_T = reaction time (sec)

V = operating speed (km/h)

d = coefficient of deceleration (longitudinal friction factor)

a = longitudinal grade (%, + for upgrades and – for downgrades)

5.1.1 Stopping Sight Distance Calculations

Table 7 summarises the heavy vehicle stopping sight distance for the access locations utilising **Equation 1**. We have conservatively assumed the design speed to be 10km/h above the posted speed limit prior to traffic surveys being completed to identify the 85th percentile operating speed.

Table 7 Access Location Stopping Sight Distance and Parameters

Approach	R_T (s)	V (km/h)	d	a (%)	SISD (m)
West	2	110	0.29	0	225.38
East	2	110	0.29	0	225.38

Table 8 below provides a justification for the applied parameters in the stopping sight distance calculations adopted in **Table 7**.

Table 8 Stopping Sight Distance Parameter Justification

Parameter	Justification
R_T (s)	A reaction time of 2 seconds was adopted as the operation is usually from a stopped position.
V (km/h)	The 85th percentile operating speed at the access is assumed to be 10km/h above the posted limit. Based on this, an 85th percentile speed of 110km/h was adopted.
d	*Austroads Guide to Road Design, Part 3: Guide to Road Design, Section 5.2.3 (Longitudinal Deceleration* specifies that a coefficient of deceleration of 0.29 is the "Maximum value for calculating truck stopping sight distance for most urban and rural road types, and level crossings".

Parameter	Justification
	Therefore, a deceleration coefficient rate of 0.29 was adopted for the purposes of the stopping sight distance calculations.
a (%)	The following average longitudinal grades were assumed prior to topographical data being available: • West Approach: 0%. • East Approach: 0%.

Based on a desktop review of Stoney Creek Road, SLR identified that there is sufficient stopping sight distance at the proposed access location due to the straight nature of Stoney Creek Road.

6.0 Conclusions

SLR Consulting Australia Pty Ltd (SLR) has been engaged by Enervest Pty Ltd (Enervest) to prepare a preliminary Traffic Impact Assessment (TIA) for a Battery Energy Storage System (BESS) facility in Narrabri, New South Wales.

Based on the analysis and discussion documented in this report, the following is concluded:

- It is proposed that access to/ from the development will be provided via Stoney Creek Road. The location and design will be confirmed as the site's design is finalised, and it will be able to accommodate heavy vehicles required during construction, operation, and decommissioning.
- The proposed heavy vehicle route utilises the State Road network where possible, except for access through Narrabri town centre.
- It is anticipated that one rail crossing will need to be assessed at the TIA stage.
- No planned major transport infrastructure upgrades by TfNSW and Council were identified within the vicinity of the proposed project; however, several SSD projects were identified as will be considered at the TIA stage.
- The proposed development will generate approximately 14,917 return trips during the construction period over 365 business days (twelve months).
- The peak daily traffic generation will be in the order of 45 return trips a day (40 light vehicle trips, five heavy vehicle trips).
- Any significant traffic impacts associated with the development are expected to occur only during the construction phase of the development. Any temporary parking and set-down areas required during construction will be reinstated and landscaped once the facility is operational.
- The proposed BESS facility will be managed with 1-2 full time employees once operational, requiring minimal site attendance from maintenance staff. The proposal is unlikely to have any lasting impacts on traffic at this location. However, a Traffic Impact Assessment (TIA) will be undertaken, and any mitigation methods and strategies identified in the associated report will be adopted into the proposal.

A comprehensive TIA will accompany the State Significant Development (SSD) application. It is expected that the key elements of this TIA will include:

- Existing road conditions review and future road network planning consideration.
- Assessed traffic demands (construction, operation and decommissioning phases).
- Intersection and access assessments.
- Road safety assessment and road use management planning.
- Identification of any mitigation measures.

Appendix A Preliminary Site Plans

Preliminary Transport Impact Assessment

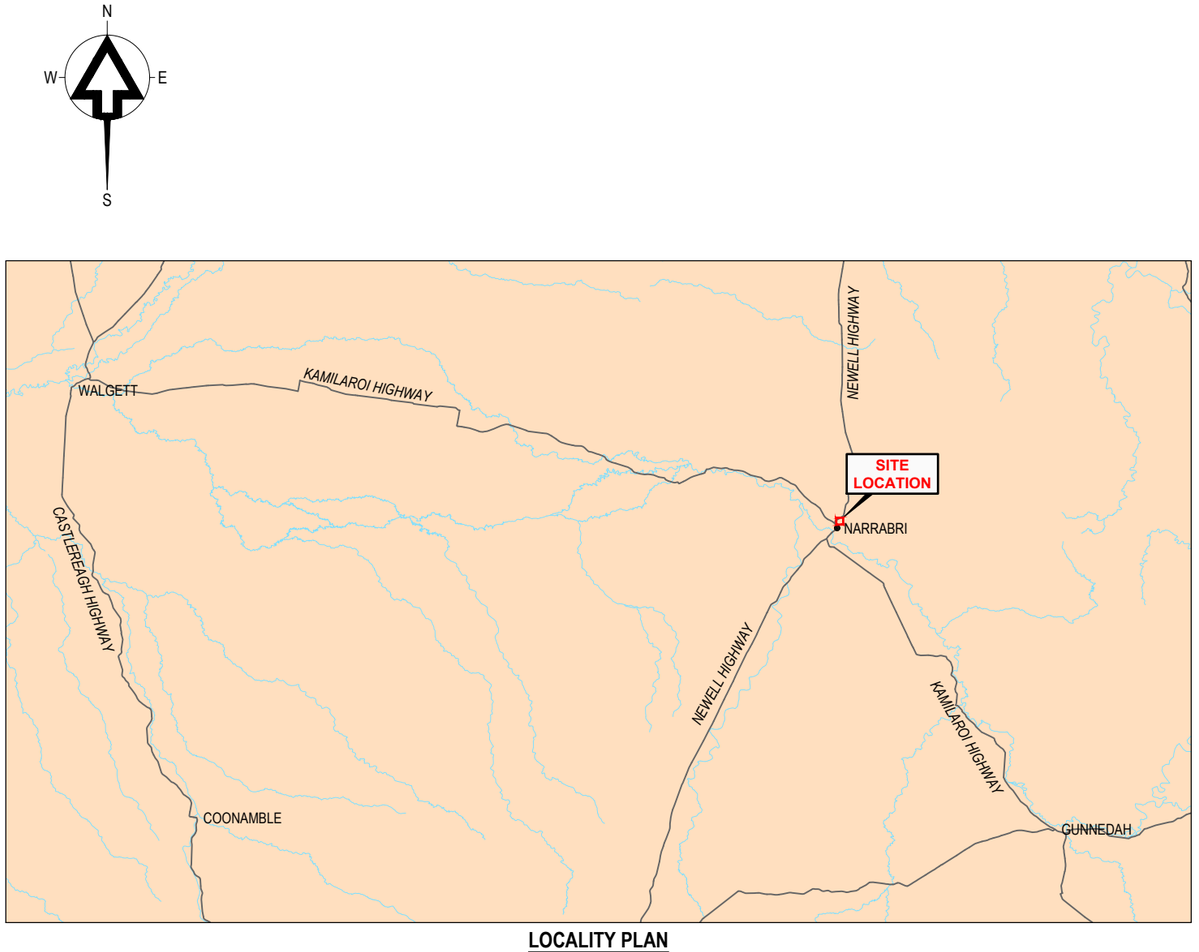
Stoney Creek Battery Energy Storage System (BESS)

Enervest Pty Ltd

SLR Project No.: 620.31316.00000

14 February 2024

KEY PLAN
NOT TO SCALE



LOCALITY PLAN
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B	22-12-2023	FOR REVIEW		
A	21-04-2023	FOR REVIEW		
	DATE	DESCRIPTION	APPROVED	

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DWG. CHECK:	RS	DATE:	21-04-2023
DES. CHECK:	RS	DATE:	21-04-2023
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SLR
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www.slrconsulting.com

CLIENT: ENERVEST PTY LTD

PROJECT: BESS FEASIBILITY

DRAWING TITLE: 41 STONEY CREEK ROAD NARRABRI 2390 SITE LOCATION PLAN

SIZE: A1

STATUS: FOR APPROVAL

SCALE: N.T.S.

DATUM: GDA2020 Z55

DRAWING NUMBER: 630.31316-CI-1000

REVISION: C

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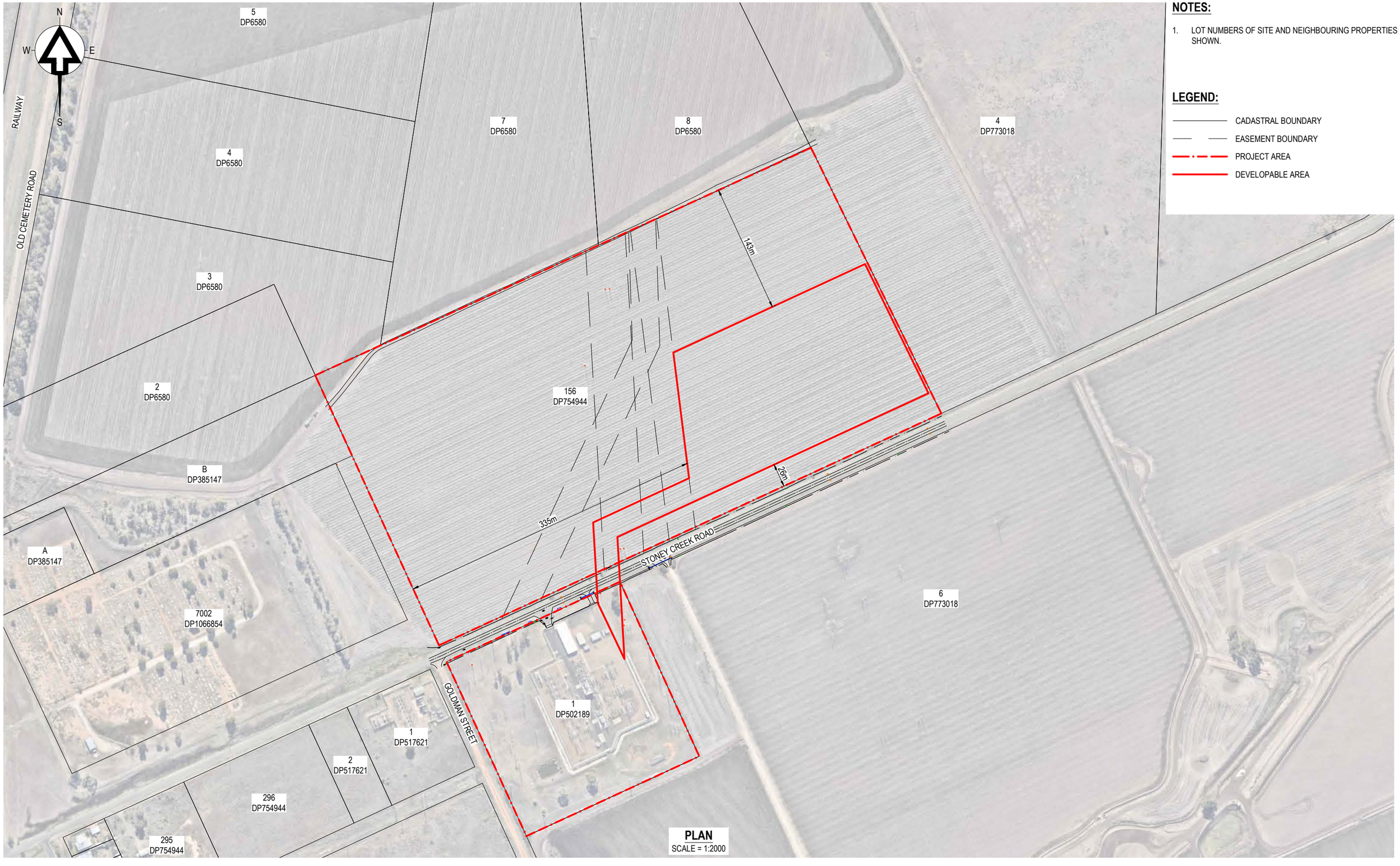

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NOTES:

1. LOT NUMBERS OF SITE AND NEIGHBOURING PROPERTIES SHOWN.

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- CADASTRAL BOUNDARY
- EASEMENT BOUNDARY
- PROJECT AREA
- DEVELOPABLE AREA

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B	22-12-2023	FOR REVIEW		
A	21-04-2023	FOR REVIEW		
	DATE	DESCRIPTION	APPROVED	

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CLIENT: ENERVEST PTY LTD

PROJECT: BESS FEASIBILITY

DRAWING TITLE: 41 STONEY CREEK ROAD NARRABRI 2390 LOT LOCATION PLAN

SIZE: A1

STATUS: FOR APPROVAL

SCALE: 1:2000

DATUM: GDA2020 Z55

DRAWING NUMBER: 630.31316-CI-1001

REVISION: C

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156
DP754944

4
DP773018

6
DP773018

INDICATIVE BATTERIES AND INVERTERS

INDICATIVE 33Kv SWITCHGEAR

INDICATIVE SUBSTATION

STONEY CREEK ROAD

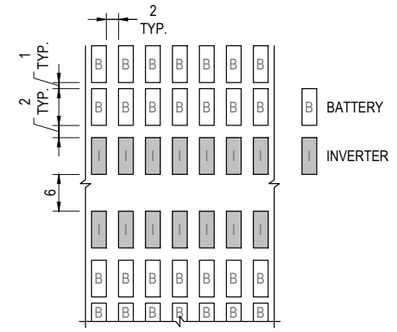
215.6
215.5
215.4
215.3
215.2
215.1
215.0
214.9
214.8

NOTES:

1. CONTOUR INTERVAL 1m, MGA 2020 COORDINATES.

LEGEND:

- CADASTRAL BOUNDARY
- EASEMENT BOUNDARY
- 215.0 EXISTING GROUND CONTOURS
- TRANSMISSION LINE
- ELECTRICAL INFRASTRUCTURE CORRIDOR (26m)
- PROJECT AREA



INDICATIVE BATTERY AND INVERTER LAYOUT
SCALE = 1:500

PLAN
SCALE = 1:750

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	DATE	DESCRIPTION	APPROVED	

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CLIENT: ENERVEST PTY LTD

PROJECT: BESS FEASIBILITY

DRAWING TITLE: 41 STONEY CREEK ROAD NARRABRI 2390 INDICATIVE SITE LAYOUT

SIZE: A1

STATUS: FOR APPROVAL

SCALE: 1:750

DATUM: GDA2020 Z55

DRAWING NUMBER: 630.31316-CI-1002

REVISION: C

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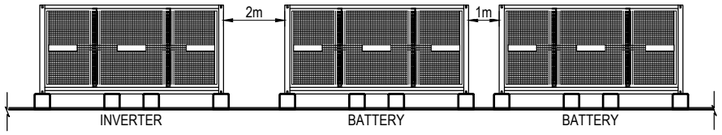
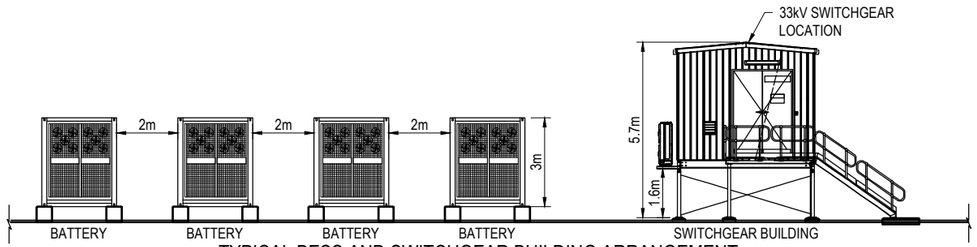


TYPICAL BESS BATTERY ARRANGEMENT

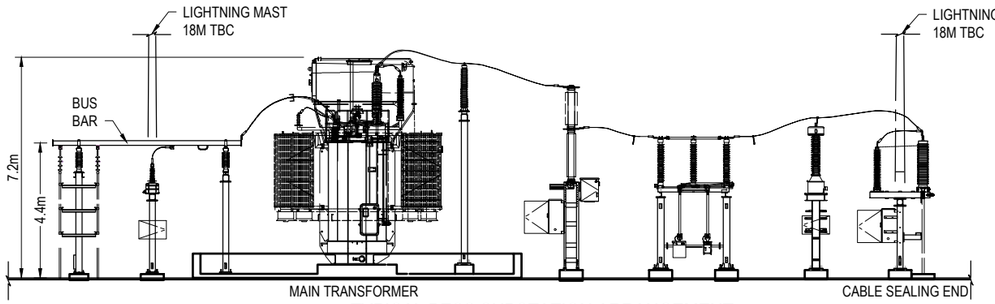
SCALE 1:100



TYPICAL BESS AND SWITCHGEAR BUILDING ARRANGEMENT

SCALE 1:100

*AUXILIARY TRANSFORMER NOT SHOWN FOR CLARITY



TYPICAL BESS SUBSTATION ARRANGEMENT

SCALE 1:100

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A	21-04-2023	FOR REVIEW		
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DES. CHECK:	RS	DATE:	21-04-2023
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www.slrconsulting.com

CLIENT: ENERVEST PTY LTD

PROJECT: BESS FEASIBILITY

DRAWING TITLE: 41 STONEY CREEK ROAD NARRABRI 2390 CROSS SECTIONS AND DETAILS - SHEET 1

SIZE: A1

STATUS: FOR APPROVAL

SCALE: 1:100

DATUM: GDA2020 Z55

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REVISION: C

PLOT DATE: 29-Jan-2024 12:35:27 PM

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Appendix B Property Report

Preliminary Transport Impact Assessment

Stoney Creek Battery Energy Storage System (BESS)

Enervest Pty Ltd

SLR Project No.: 620.31316.00000

14 February 2024

Property Report

41 STONEY CREEK ROAD NARRABRI 2390

Property Details

Address:	41 STONEY CREEK ROAD NARRABRI 2390		
Lot/Section /Plan No:	156/-/DP754944	2/-/DP6580	3/-/DP6580
	3/-/DP773018	4/-/DP6580	4/-/DP773018
	5/-/DP6580	6/-/DP6580	7/-/DP6580
	8/-/DP6580	B/-/DP385147	
Council:	NARRABRI SHIRE COUNCIL		

Summary of planning controls

Planning controls held within the Planning Database are summarised below. The property may be affected by additional planning controls not outlined in this report. Please contact your council for more information.

Local Environmental Plans	Narrabri Local Environmental Plan 2012 (pub. 21-12-2012)
Land Zoning	RU1 - Primary Production: (pub. 24-2-2023)
Height Of Building	NA
Floor Space Ratio	NA
Minimum Lot Size	100 ha
	40 ha
Heritage	NA
Land Reservation Acquisition	NA
Foreshore Building Line	NA
Mineral and Resource Land	Subject Land

Detailed planning information

State Environmental Planning Policies which apply to this property

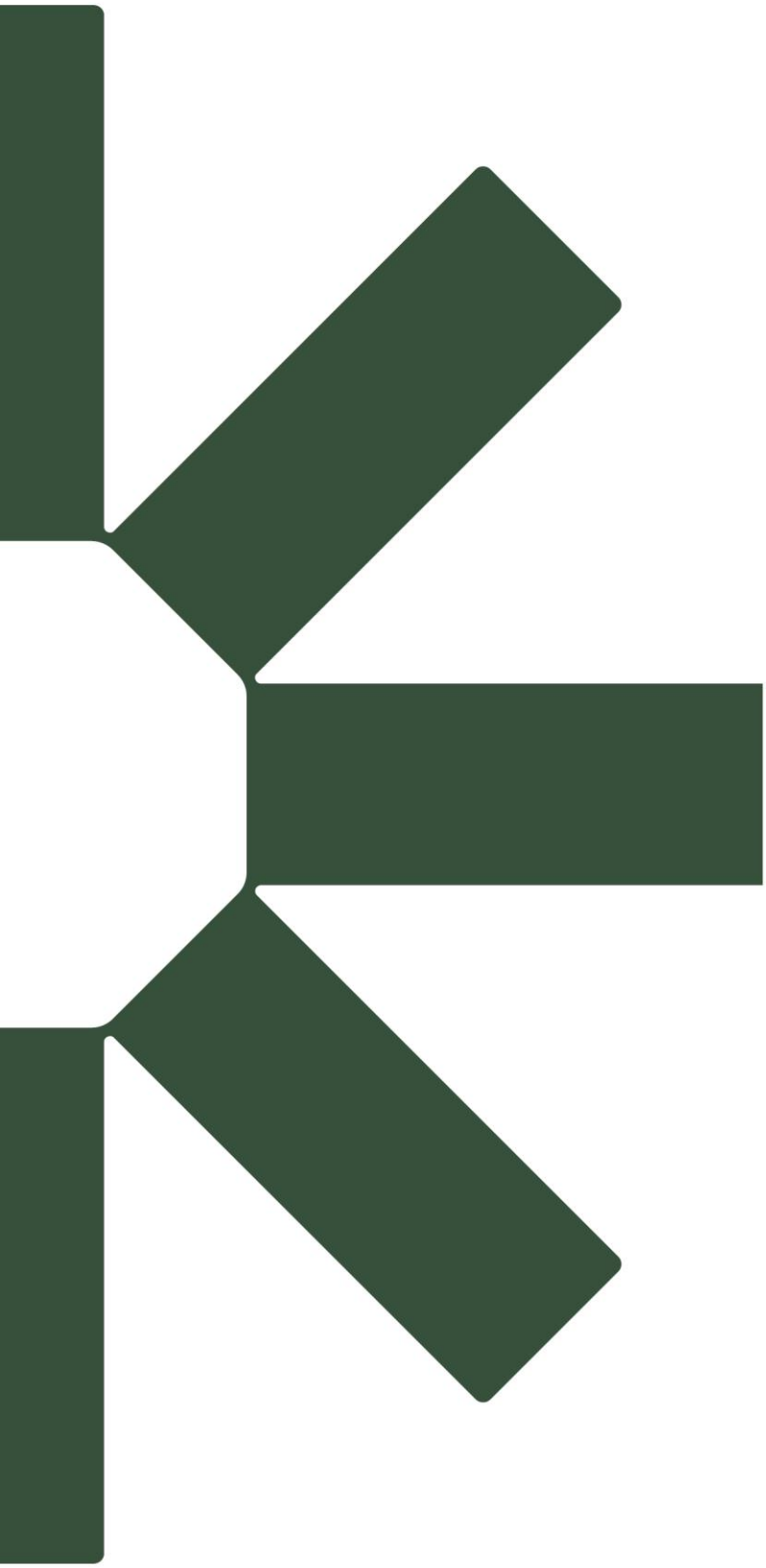
State Environmental Planning Policies can specify planning controls for certain areas and/or types of development. They can also identify the development assessment system that applies and the type of environmental assessment that is required.

- State Environmental Planning Policy (Biodiversity and Conservation) 2021: Allowable Clearing Area (pub. 21-10-2022)
- State Environmental Planning Policy (Biodiversity and Conservation) 2021: Land Application (pub. 2-12-2021)
- State Environmental Planning Policy (Exempt and Complying Development Codes) 2008: Land Application (pub. 12-12-2008)
- State Environmental Planning Policy (Housing) 2021: Land Application (pub. 26-11-2021)
- State Environmental Planning Policy (Industry and Employment) 2021: Land Application (pub. 2-12-2021)
- State Environmental Planning Policy (Planning Systems) 2021: Land Application (pub. 2-12-2021)
- State Environmental Planning Policy (Primary Production) 2021: Land Application (pub. 2-12-2021)
- State Environmental Planning Policy (Resilience and Hazards) 2021: Land Application (pub. 2 -12-2021)
- State Environmental Planning Policy (Resources and Energy) 2021: Land Application (pub. 2-12-2021)
- State Environmental Planning Policy (Sustainable Buildings) 2022: Land Application (pub. 29-8-2022)
- State Environmental Planning Policy (Transport and Infrastructure) 2021: Land Application (pub. 2-12-2021)
- State Environmental Planning Policy No 65—Design Quality of Residential Apartment Development: Land Application (pub. 26-7-2002)

Other matters affecting the property

Information held in the Planning Database about other matters affecting the property appears below. The property may also be affected by additional planning controls not outlined in this report. Please speak to your council for more information

Biodiversity Value (BV) Map	Clearing native vegetation for a development on an area on the BV Map may require a Biodiversity Development Assessment Report. Consult your local council.
Land near Electrical Infrastructure	This property may be located near electrical infrastructure and could be subject to requirements listed under ISEPP Clause 45. Please contact Essential Energy for more information.
Local Aboriginal Land Council	NARRABRI
Regional Plan Boundary	New England North West



Making Sustainability Happen

Appendix E Community and Stakeholder Engagement Plan

Request for Secretary's Environmental Assessment Requirements (SEARs)

Enervest Operations Pty Ltd

SLR Project No.: 620.31316.00000

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Community and Stakeholder Engagement Plan

Stoney Creek Battery Energy Storage System (BESS)

Enervest Pty Ltd

Prepared by:

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Revision Record

Revision	Date	Prepared By	Checked By	Authorised By
1.1	3 June 2024	Astrid Ruban	Esther Diffey	
2	14 June 2024	Astrid Ruban	Esther Diffey	

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 Enervest 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.

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1.0 Introduction

1.1 Project Background and Overview

Enervest Pty Ltd (Enervest) seeks to establish a 125-Megawatt (MW) Battery Energy Storage System (BESS) and an underground cable connection to TransGrid's Narrabri 132/66kV substation with an estimated investment of $300 million.

The Project is proposed on Lot 156 in DP 754944 at 41 Stoney Creek Road, Narrabri NSW 2390. The existing Narrabri 132/66kV substation is located on Lot 1 in DP 502189, 70 Stoney Creek Road, Narrabri NSW 2390, approximately 40m south of the site.

1.2 Site location

The site and surrounds are on the northeastern outskirts of the Narrabri township on land currently used for farming. **Figure 1** shows the site location (in red) in relation to the Narrabri township and surrounds.

Narrabri straddles the Namoi River and Narrabri Creek as well as the Newell Highway. The Gamilaraay/Gamilaroi/Gomeroi/Kamilaroi Nation are Traditional Owners of the area.

The Narrabri River corridor also hosts a range of recreational assets including golf courses and sports fields. Narrabri Airport lies to the east of the site with the majority of local services, and residential population concentrated in the township area. Industrial and extractive industries are typically located to the west and north of the township. A workforce accommodation village is located south of the township.

Figure 1 Site location

Project Overview

The proposed development comprises of approximately 192 batteries, each contained individually within a shipping container. Approximately 64 inverters (one per every three batteries) are located externally to the shipping containers. Batteries and inverters are fixed to hardstand, and 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 single demountable building used for storage.

The development is self-operating and only requires minor periodic visitation by an authorised person. The facility is otherwise restricted to the public.

Table 1 Project Summary

Project Element	Description
Proposed Development - Construction and Operation Summary	The Project would generally involve the following components: • Mobilisation and establishment of access, temporary construction facilities and laydown area; • Transport of construction personnel, associated heavy and light vehicles, and materials to and from site on a day-to-day basis, dependent on construction schedule; • Road works to formalise internal site access road to accommodate heavy vehicles, including a new driveway crossover to Stoney Creek Road; • Clearing and grubbing, cut, fill and compaction activities to create level pads; • Installation of drainage; • Installation of concrete footings or pads to support transformers, BESS battery packs, control building and other outdoor electrical infrastructure; • Delivery and placement of all equipment on the footings/pads; • Trenching, installation and backfilling of underground cabling between equipment on the pad including the BESS battery packs, transformers, auxiliary electrical equipment and the control room; • Construction of gravel hardstand, gravel internal roads, control room/switchgear, transformers, circuit breakers, harmonic filters, auxiliary underground transmission lines, car parking, lay down area, landscaping, security fencing/lighting, and a single demountable building used for storage; • Acoustic attenuation measures, to be determined as part of detailed assessment; • Removal of temporary construction facilities, and rehabilitation of disturbed areas following completion of construction of the Project.
Site Access	Access to the Project Area is proposed to be via Stoney Creek Road via a new driveway crossing. The internal access road is planned to be gravel formalised to accommodate heavy vehicles associated with the construction of the BESS.
Grid Connection	A new underground transmission line will be constructed to connect the BESS substation, to the existing TransGrid Narrabri 132/66kV substation to the immediate southwest of the BESS footprint area. The transmission line will transect the Project Area and connect to the Narrabri 132/66kV substation to the southwest via underground transmission lines. Following further consultation with TransGrid, the transmission line will run southwest from the southern portion of the BESS footprint, crossing the Stoney Creek Road reserve, then entering the Narrabri 132/66kV substation land.
Construction Duration	Construction of the Project is anticipated to take approximately 12 months.

Project Element	Description
Operation Life Expectancy	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 20-30 years. It is expected that the successive lease terms will be executed under the Lease contract. This will be leased from the landowner on a long-term 30-year basis, with a 10 year option to renew lease. No Subdivision is proposed for this development.
Decommissioning	The Project would be decommissioned, and the infrastructure removed, returning the site to its original use following the approximate 20–30-year life expectancy. However, the Project may continue beyond 30 years if it is deemed viable to extend the lifespan of the development.

1.3 Project messages

The following outlines the key messages guiding engagement for the Stoney Creek BESS. It is supported by detailed messaging addressing local context and concerns to be outlined in the respective detailed delivery plans.

1.3.1 Key messages

About the project

- The Stoney Creek Battery Energy Storage System is a $300 million State Significant investment proposed to be developed in Narrabri.
- The Project is owned by Enervest, an Australian owned and operated leader in the renewable energy industry since 2008.
- The proposed 125-Megawatt (MW) battery will connect to the existing electricity grid via a short underground cable to TransGrid's Narrabri 132/66kV substation.
- The proposed development comprises of approximately 192 batteries, each contained individually within a shipping container.
- BESS projects use innovative technology to store excess electricity for later release into the grid.
- Large-scale batteries play a crucial role in the integration of renewable energy sources to the grid, which results in enhanced network stability, economic generation and increased environmental sustainability.
- Stoney Creek is one of several Battery Energy Storage System (BESS) projects being developed by Enervest in Australia.

Project approvals and investigations

- Stoney Creek BESS is a State Significant project and will be assessed by the NSW Government.
- Enervest are preparing a range of detailed technical investigations to support the development application of Stoney Creek BESS.

Delivering local benefits

- The Stoney Creek BESS could attract investment of around $300 million.

- Based on previous similar projects, up to $30 million is expected to stay in Narrabri Shire through jobs, workforce accommodation, meals, entertainment, transport, fuel and other local procurement and supply chains.
- The Project expects to create approximately 200 full-time equivalent jobs during construction.
- The Project will allow the continued sustainable growth of Narrabri, supporting the transition to a renewable energy future.

Working with local businesses

- The Project will capitalise on the procurement of local goods and services assisting to grow local businesses
- Enervest is creating an online register of local businesses, where owners can enter their details and capabilities.
- Enervest and its contractors can use this information to meet their needs locally where solutions are possible and competitive.

Working with local communities

- Enervest proposes to create the Narrabri Development Fund in consultation with the local Council, land council, local business and community groups.
- The Fund will invest at least $1.2 million into the local community over the 40-year life of the Project.
- Proud of its Indigenous heritage, Enervest commits to investing at least 1% of the total budget with Indigenous service providers over the life of the Project where providers are registered, suitable and available.
- Enervest want to work with the Narrabri community to identify opportunities to deliver community benefits through this Project.
- Enervest is creating an online register of community organisations and charities where local groups can enter their details and capabilities and propose opportunities to work with Enervest to contribute to local community programs and initiatives.
- We will engage with local community and stakeholders to hear your thoughts, understand any concerns and answer your questions about the Project.

Find out more or get in touch

- We are holding a series of public engagement events throughout Narrabri where you can find out more about the Project, meet and ask questions of the project team, and provide feedback.
- You can find out more about the project and how you can get involved via our project website.
- You can get in touch with the project team via the project website, phoneline or email.

1.3.2 Project negotiables

Table **2** summarises the Project elements that can be influenced by community and stakeholder feedback, as well as the Project constraints or non-negotiables that cannot be influenced.

Table 2 Project negotiables and non-negotiables

Category	Negotiables	Constraints / Non-negotiables
Project design	• Attractive design with potential impact mitigation measures • Landscape elements and visual treatments (pending consultation with Council) • Contribution of local knowledge • Design treatment of any walls required	• Battery design • Hours of operation • Vegetation removal for site access routes • Commitment to minimise vegetation loss wherever practicable
Statutory and technical requirements	• Appetite to go above and beyond minimum requirements set out under Council or other approvals	• Council approvals • Statutory processes and requirements
Community impacts and opportunities	• Local Content and Services Opportunities • Traditional Owner involvement and procurement • How community is engaged • Project naming (public facing) • Education partnerships • Community benefits models and co-design process • Community sponsorship opportunities • Construction scheduling (having consideration of major community events and activities)	• Grid constraints on official project naming

1.4 Purpose of this Document

This Community and Stakeholder Engagement Plan (CSEP) seeks to outline the communication and engagement needs and activities for genuine and transparent engagement required for the successful delivery of this project.

This CSEP has been prepared in accordance *with* *Undertaking Engagement Guidelines for State Significant Projects 2024* published by Department of Planning, Housing and Infrastructure (DPHI) and Section 3.5 of the *State Significant Guidelines – Preparing A Scoping Report*.

This CSEP is a 'live' document and will be updated by SLR throughout the lifetime of the Project. It identifies stakeholders and outlines the appropriate associated engagement procedures and processes required for the successful delivery of this project. The CSEP will outline tailored actions including controls, mitigations, key messages, communication methods, and engagement frequency, at a minimum.

1.5 Consultation to Date

On 21 October 2022, Enervest and SLR met with representatives of DPHI to introduce the project and obtain preliminary feedback. Enervest provided DPHI with a high-level concept plan and briefing letter which outlined the proposal and key items of consideration. The DPHI provided guidance on the preparation of the future SSD Application and identified areas for further investigation, including transmission connections and potential environmental impacts of the connection.

It is acknowledged that during the assessment process the application will be referred to several State agencies as well as Narrabri Shire Council (Council). The anticipated referrals include Transport for New South Wales (TfNSW), TransGrid, NSW Environment and Heritage and Environmental Protection Authority (EPA).

Enervest is proud of its Indigenous heritage. Engagement with the local Traditional Owners - the Gomeroi People via the Narrabri Local Aboriginal Land Council (LALC) has commenced with the maildrop and subsequent discussions with the CEO. Consultation will continue through the Aboriginal Cultural Heritage Assessment process and as required through targeted engagement.

1.6 Social Impact Scoping report

Element Environment prepared a Social Impact Assessment (SIA) Scoping Report in May 2023. This SIA Scoping Report was prepared in accordance with the *Social Impact Assessment Guideline 2021* and *Undertaking Engagement Guidelines for State Significant Projects 2021* published by the Department of Planning, Housing and Infrastructure (DPHI, formerly the Department of Planning and Environment).

The purpose of the SIA Scoping Report was to:

- establish a social baseline for the project
- identify project activities that could potentially have social impacts and group them in the social impact categories in the SIA guideline
- provide a summary (scoping worksheet) of potential social impacts that require additional assessment
- establish appropriate methodologies to investigate and assess project related social impacts
- provide a brief overview of potential management measures and ongoing monitoring.

It is noted that these guiding documents were revised and updated in 2023 and 2024 respectively. However, the SIA Scoping Report included some preliminary engagement with local community and stakeholder which has been considered in the preparation of this CSEP.

1.6.1 Engagement to inform SIA Scoping

Through the SIA Scoping Report, engagement with the local community and stakeholders commenced in February 2023, by way of mail out to residents and businesses of Narrabri, providing a project information sheet, project team contact details, and a link to the website and an online survey. In total 1,695 letters were distributed.

An online meeting has been held with the local Member of Parliament (MP) along with face-to-face meetings throughout August 2023 with representatives of the following stakeholders:

- Narrabri Shire Councill
- Geni Energy (local not-for-profit community solar and battery installer)
- Narrabri Chamber of Commerce
- Narrabri Industrial Network.

Invitations to meet were also extended to the following stakeholders, but at the time no response was received.

- Narrabri Local Aboriginal Land Council

- Narrabri Regional Visitor Information Centre
- Narrabri Chamber of Commerce
- Tattersalls Hotel
- Mid-Town Inn Narrabri.

1.6.2 Preliminary assessment of impacts and opportunities

The SIA Scoping Report identified and described a series of potential impacts arising from the project – both positive and negative – along with recommended engagement to support detailed investigation through the EIS phase.

Table 3 summarises the impacts identified and, where appropriate, has informed the design of the proposed engagement program for the EIS stage of the project.

Table 3 Summary of preliminary social impacts identified through SIA Scoping Report (2023)

Impact category	Potential impact	Description of impact	Anticipated outcome	Further engagement recommended
Community	Cohesion and function	Workforce would positively influence friendliness and community cohesion, depending on construction/operational workforce requirements	Positive	Stakeholder interviews
Community	Cohesion and function	Workforce would negatively influence friendliness and community cohesion, depending on construction/operational workforce requirements	Negative	Stakeholder interviews
Community	Character	Alignment with the progressive character of the community and its support for renewables	Positive	Community information session and attendee poll/survey
Surroundings	Access to and use of the natural environment	Fostering clean air and water, healthy forests and climate as predicted advantages/ improvements compared to non-renewable industries	Positive	Community information session and attendee poll/survey
Surroundings	Access to and use of the natural environment	Reduction of high-yield crop land, depending on the location of the project site	Negative	N/A (To be addressed through other technical investigations)
Livelihoods	People's capacity to sustain themselves	Positive impact on employment in Narrabri	Positive	Stakeholder interviews
Access	Access and use of infrastructure	Positive impacts for energy security (access to energy) for the current and future population	Positive	Stakeholder interviews

2.0 Engagement Approach and Principles

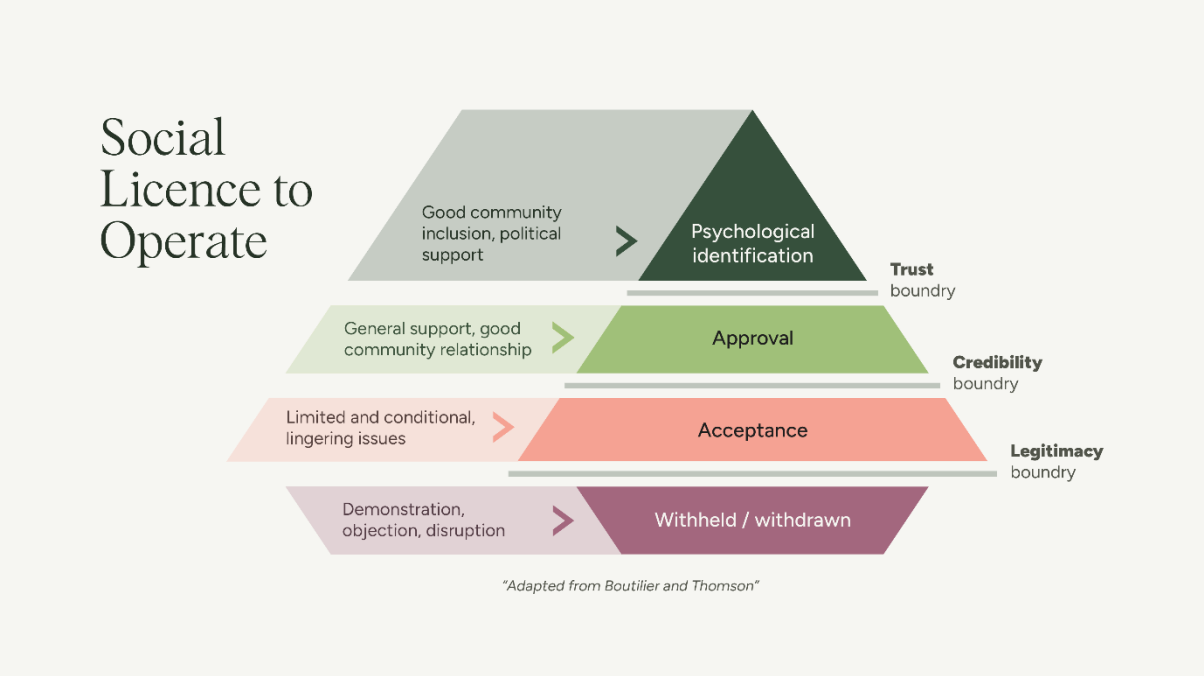
2.1 Approach

This CSEP has been prepared to include national and international best practice principles and guidelines, including the following:

- International Association for Public Participation (IAP2)
- AA1000SES: International standard for stakeholder engagement
- Renewables industry and Government recommendations such as those identified by the Australian Energy Infrastructure Commissioner.

In addition, ensuring that a Social Licence to Operate is attained and retained throughout the Project's lifecycle is key to the Project's ongoing success.

Figure 2 Social Licence to Operate, adapted from Boutilier and Thomson



Enervest will have regard to the landowners, communities and stakeholders who may be directly impacted by the Project, and will seek to identify the level of, and ways of, mitigating any impacts and implement agreed mitigation strategies.

The engagement approach outlined in this Plan is guided by the core principles of **transparency, responsiveness** and **accountability**.

2.1.1 Integration with Social Impact Assessment

This CSEP also acknowledges the interplay of community engagement and the Social Impact Assessment (SIA) that will be prepared concurrently and guided by the SEARs process.

Early engagement or pre-SEARs engagement sets the foundation for a sound EIS process.

Broad pre-SEARs engagement is not mandatory. However, the Department of Planning and Environment (DPE) positively views proactive engagement with stakeholders and affected

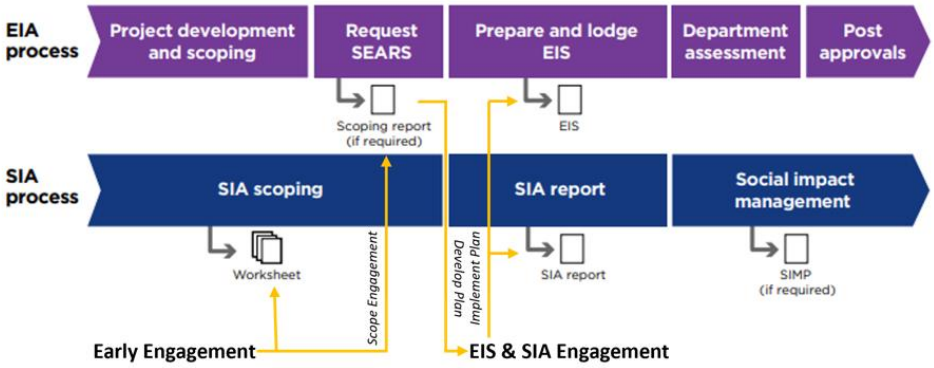
communities. It also leads to a more robust scoping report and a de-risked EIS consultation process.

Approximately 70% of projects in Australia experience delays due to stakeholder issues, according to a 2022 report by the Australian Institute of Project Management (AIPM). A 2020 study by the University of New South Wales found that 39% of Australian projects fail due to stakeholder issues such as poor communication, unrealistic expectations, and conflicts.

Early engagement is a crucial step in any project, as it helps to keep stakeholders and communities informed and prevent mistrust that could hinder the establishment of Social Licence. For SSDAs, it also gives project proponents the opportunity to gain insight into any potential concerns or issues that may arise throughout the project's lifecycle.

We understand that in order to develop an effective EIS consultation plan that meets the objectives of *Undertaking Engagement Guidelines for State Significant Projects*, it's crucial to have a robust scoping report with an accurate mapping of stakeholder issues. This will enable your EIS delivery team to allocate adequate and realistic time for project delivery planning. As such this CSEP seeks to maximise the opportunity for and value of engagement early in the EIS process.

Figure 3 Opportunities for early engagement within the EIS process



Early engagement also provides a valuable opportunity to understand community context and identify issues for inclusion in early phases of impact assessment. In particular, early engagement can meaningfully inform:

- An understanding of the social context and initial community sentiment towards potential impacts to be investigated through the EIS
- An understanding of whom you will consult with to better understand those impacts
- An understanding of how best to approach community and stakeholders as part of the broad public engagement program and to support technical investigations.

2.2 Key Objectives

This stakeholder engagement program aims to ensure that landowners, communities and stakeholders are provided with accurate information regarding the development of the Project and how they can contribute. It also seeks to support concurrent technical assessments, including a Social Impact Assessment, to meet statutory requirements of the SSDA process and facilitate a successful outcome.

The following are key objectives which have guided the development of the CSEP and its methodology:

- Provide clear, accurate and up-to-date information:
    - To introduce Enervest, the Project, benefits and drivers
    - To familiarise the community and build awareness around the SSDA process and project approvals
    - To build awareness and understanding of BESS technology and the broader, longer-term benefits of transition to renewables and contribution to Net Zero
    - To demonstrate an understanding of interests and concerns of communities and stakeholders and how feedback has informed Project refinement
    - To promote opportunities to be involved in the project and establish realistic expectations about how community and stakeholder feedback may be incorporated
    - To articulate Project negotiables that can be influenced through community and stakeholder contribution and Project constraints and decisions that cannot be influenced
    - To explain Project timeframes and processes to establish realistic expectations and build community empowerment.
- Consult meaningfully with communities and stakeholders and provide suitable opportunities and channels:
    - To ensure their interests, values and concerns are understood
    - To drive productive conversations
    - To seek informed input into Project negotiables and refine project design in conjunction with the front-end engineering design (FEED) process
    - To capture meaningful feedback to inform Project decisions and promote mutually beneficial outcomes
    - To identify opportunities and methods to deliver community benefits.
- To support technical assessments undertaken as part of the Environment Impact Statement, where possible, by
    - Promoting awareness of technical investigations, methodology and findings
    - Exploring potential impacts and mitigations
    - Aligning community and stakeholder consultation with technical investigations to minimise stakeholder fatigue or confusion
- Build and maintain Social and Cultural Licence with community and stakeholders to facilitate approvals, construction and operation of the Project
- Establish and strengthen relationships with stakeholders and communities and across the Project team:

- To work collaboratively with First Nations groups, social enterprises and Indigenous businesses
- To establish acceptance and trust in the Project through responsiveness, consistency and accountability
- To establish and maintain positive and productive relationships with approval authorities and decision makers
- To build internal capture of engagement across the Enervest Project team and encourage for continual improvement of engagement practices.

2.3 IAP2 Core Values

The proposed engagement methodology will follow the principles and values outlined in the International Association of Public Participation's (IAP2) Quality Assurance Standard.

These high-level frameworks and standards outline best-practice expectations of principle, process and value, and provide a consistent model for design and delivery of engagement. The proposed level of engagement will be to *inform, consult, collaborate* and *empower,* depending on the stakeholder segment, as per the IAP2 Spectrum in **Figure 4**.

Figure 4 IAP2 Spectrum

Increasing level of public impact

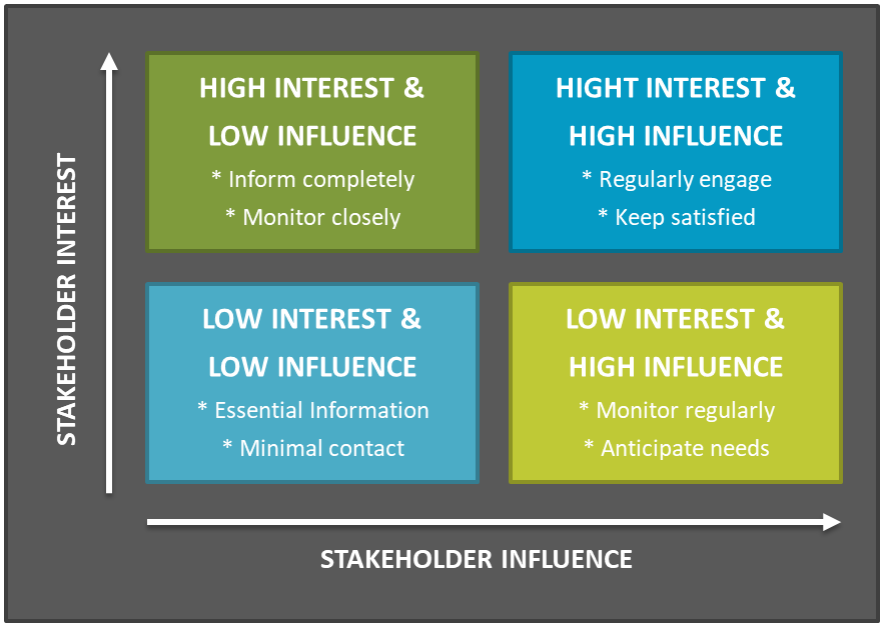
	Inform	Consult	Involve	Collaborate	Empower
Goal	To provide balanced and objective information in a timely manner.	To obtain feedback on analysis, issues, alternatives and decisions.	To work with the public to make sure that concerns and aspirations are considered and understood.	To partner with the public in each aspect of the decision-making.	To place final decision-making in the hands of the public.
Promise	"We will keep you informed."	"We will listen to and acknowledge your concerns."	"We will work with you to ensure your concerns and aspirations are directly reflected in the decisions made."	"We will look to you for advice and innovation and incorporate this in decisions as much as possible."	"We will implement what you decide"

3.0 Stakeholder Identification and Analysis

Stakeholders refer to any person or group of persons who have or feel they have an interest or can affect/be affected by an issue or decision. The Project covers diverse stakeholders with varying levels of interest, influence, power, or impact relative to any issue. The level of influence/interest of a stakeholder group should be a consideration in shaping their level of participation in the engagement process, timing of engagement and the methodology for the engagement.

The interest/influence matrix shown in **Figure 5** is a strategic tool used in stakeholder management to categorise stakeholders based on their level of interest in a project or organisation and their level of influence or power to affect the project's outcomes. The matrix supports the prioritisation of engagement efforts and the development appropriate strategies for managing and communicating with stakeholders.

Figure 5 Interest/Influence Matrix for Stakeholder Prioritisation



3.1 Stakeholder Analysis

Table 4 summarises the stakeholder groups identified through mapping and outlines the engagement activities proposed to consult with these groups.

A detailed list of individual stakeholders and their interests is attached as Appendix C of this Plan. This stakeholder list will be reviewed and updated at each phase of the Project, as new activities are undertaken, and new stakeholders are identified.

Table 4 Stakeholder summary table

Stakeholder groups	Engagement approach
Landowners	
Site owners	• Enervest owns the site
Neighbouring/ directly impacted residents	• Introduction letter/email • Door knock/flyer drop • Offer of briefing/meeting • Ongoing updates (email) at project milestones • Ongoing contact (email/phone) with key project personnel

Stakeholder groups	Engagement approach
Adjacent landowners Local farmers / agricultural businesses	• Introductory mail out/flyer drop • Offer of briefing/meeting • Project website • Project enquiry phone and email • Ongoing updates (email) at project milestones • Community pop-up/drop-ins
Township residents	• Local advertising and signage • Introductory mail out/flyer drop • newsletter at project milestones • Project website • Project email/phone general enquiry line • Community pop-up/drop-ins
Traditional owner and representative groups	• Initial introduction via phone/email • Site meeting and walk through • Ongoing contact through established relationships via phone/email as required • Coordination with Aboriginal Cultural Heritage assessment as required
Aboriginal businesses	• Initial introduction via phone/email through existing relationship, cultural heritage specialist as available • Targeted briefing and ongoing email, phone, meeting as required and as agreed • Ongoing updates (email/phone) • Offer of further briefing/meeting at project milestones
Government	
Local Government Officers	• Ongoing contact through established relationships and channels (phone, email, meetings) • Notification ahead of major engagement events and public communications • Briefings at project milestones or on request
Local Councillors	• Approach via Council officers for initial briefing and subsequent meetings at project milestones • Briefing packs • Offer of milestone briefings
State Government Departments	• Leverage existing relationships and maintain ongoing channels • As required per statutory processes and channels
State Members Federal members	• Leverage existing relationships • Introductory letter/email with offer of project briefing • Ongoing updates (email/phone) • Offer of further briefing/meeting at project milestones
Emergency Services	
• Police • Fire • Ambulance • SES	• Statutory referrals regarding Fire and Emergency Management Plan • Introduction letter/email • Offer of briefings at project milestones • Offer to circulate all public updates/newsletters
Businesses and industry	
Business networks and local businesses	• Introduction letter/email • newsletter at project milestones • Circulate all public engagement materials and event programs • Participation in small group meetings/workshops • Procurement register expression of interest
Peak bodies	• Introduction letter/email • Offer of small group meeting/phone call • Ongoing updates (email) at project milestones • Project website • Project email/phone general enquiry line
Schools and education providers	
Tertiary and further education	• Introduction letter/email • Offer of briefing • Ongoing updates (as requested) • Opportunity to be involved in community benefit schemes

Stakeholder groups	Engagement approach
Primary and secondary schools	• Introduction letter/email • newsletter at project milestones • Circulate all public engagement materials and event programs
Community groups	
Community groups	• Introduction email • Offer of small group meeting • newsletter at project milestones • Project website • Project email/phone general enquiry line
CALD communities	• Liaise with Council • Leverage existing networks and events • Translation services (as advised, in collaboration with Council)
Media	
Local newspapers and media	• Media release • Public event advertising • Project website

4.0 Potential Risks and Mitigations

Outlined below in **Table 5** are key project risks, and mitigations to these risks. This risk analysis will be subject to ongoing review and revision as engagement progresses.

Table 5 Main Risks and Mitigations

Risk	Mitigation/s
Community uncertainty and low levels of awareness could result in community concern and opposition.	• Detailed early investigation of social context and risk • Early and ongoing engagement with Council • Maintain visible in-community presence and regular communication • Incorporate community education into engagement phases and activities
Spread of misinformation could undermine project messaging and derail productive conversations	• Engage early and throughout • Accurate, concise and consistent project messaging • Respond to known or anticipated concerns identified through preliminary investigation • Ongoing response to issues emerging through engagement • Maintain principles of transparency and responsiveness • Targeted consultation to address known sources of misinformation
Community opposition could leak from one project to another	• Pre-emptive planning to identify and address concerns and opposition before escalation to outrage • Targeted consultation with key opponents • Discrete project branding to disambiguate between projects
Community mistrust or legacy issues (such as frustration with previous projects that didn't proceed or realise commitments)	• Early and ongoing engagement with Council • Maintain visible in-community presence and regular communication • Respond to known or anticipated concerns identified through preliminary investigation
Project impacts and changes could generate community division	• Detailed early investigation of social context and risk • Early and ongoing engagement with Council • Maintain principles of transparency, responsiveness and consistency • Pre-emptive planning and mitigations regarding community risk
Community and stakeholder resistance to change or new technology (such as the transition to renewables)	• Public awareness and education campaign incorporated in engagement program • Incorporate explorations of community benefit opportunities • Encourage participation in consultation for concerned groups • Maintain visible in-community presence and regular communication • Prepare case studies to demonstrate outcomes and impacts • Highlight and encourage input into social procurement opportunities
Low levels of regulatory (Council) or political (Council, State Member) interest at project outset may not reflect real levels of community interest/concern about the project.	• Detailed stakeholder mapping to inform scan of likely political interest and angle • Proactively offer briefing to Council and State Members to ensure that they are informed of the project ahead of community interest • Demonstrate understanding of potential community interest developed through desktop sentiment review and similar project experience • Demonstrate alignment with relevant policy and strategic vision where possible • Demonstrate potential communit6y benefits to drive positive interest and advocacy • Invite Councillors and/or State Members to engagement events • Proactively provide regular updates to Council and State Members • Seek feedback from Councillors and State Members regarding issues identified, likely sentiment and proposed engagement approach.
Community or stakeholder face barriers to access and/or inclusion in engagement opportunities	• Provide multiple opportunities and channels to gather information and provide feedback • Promote opportunities and project information through local community networks • Maintain principles of inclusion and accessibility • Detailed early investigation of social context and risk • Early and ongoing engagement with Council
Uncontrolled information leaks compromise engagement objectives and processes	• Maintain visible in-community presence and regular communication • Maintain and promote direct project information channels such as web portal, email and phone lines

Risk	Mitigation/s
	• Maintain principles of transparency, responsiveness and consistency • Ongoing response to issues emerging through engagement
Community opposition or impacts result in reputational damage for Enervest	• Early and ongoing engagement with Council • Maintain visible in-community presence and regular communication • Maintain principles of transparency, responsiveness and consistency • Pre-emptive planning and mitigations regarding community risk
Communities and stakeholders experience engagement fatigue as a result of ongoing projects and cumulative impacts	• Capitalise on existing channels and community activity programs • Clear and detailed engagement objectives for each phase and activity • Messaging and branding clearly distinguished from other projects
Proposed community benefits and commitments are not realised	• Continuity through later project stages • Incorporate delivery and management processes into design of benefit programs
Interactions with members of the public during engagement activities resulting in conflict, including the potential for aggressive, threatening, violent behaviours.	• Safe Work Method Statement developed prior to all site visits and face-to-face interactions. • All staff to be aware of their surroundings at all times. • Ensure all staff are thoroughly briefed prior to any face-to-face engagement activities. • Notify local police of any events prior to the date of commencement. • Ensure all door-knock, letterbox drop and face-to-face meetings are undertaken with a minimum of two staff present. • Staff to follow escalation protocols as outlined in event plans. • All staff to carry project communication details if available and refer all public questions to official sources of information such as project website and fact sheets. • All staff to walk away if confronted by members of the public and avoid conflict. • Report any incidents to the Project Manager. • If feeling imminently threatened or at risk of injury/assault, notify police.

4.1 Managing issue escalation

We acknowledge that change is challenging for communities. This includes the introduction of new concepts and technologies and change to established ways of life that can arise from significant infrastructure projects.

All major projects should anticipate a degree of community concern and/or opposition as a result of uncertainty, fear, discomfort, distrust, or any number of legacy issues.

Where concern and opposition escalate, projects may encounter community outrage that can threaten the social license or reputation of the project. Outrage is an unproductive state that inhibits productive conversations and relationship building. It breeds mistrust and can result in misinformation which can be hard to undo.

Concern and opposition are hard to avoid, but through proactive analysis and management we can minimise the risk of escalation to outrage. While we seek to avoid community outrage through community and stakeholder mapping, detailed planning, and sentiment analysis, it is vital to ensure that any engagement approach includes strategies to rapidly address and respond to outrage if and when it emerges.

Mitigating or minimising the escalation of community concern to outrage often requires a project ‘reset’. This significantly impacts project timeframes, programs, and costs. However, ensuring that project planning includes strategies to manage outrage can make the signs of outrage easier to identify and rapidly address by implementing agreed strategies.

This CSEP incorporates the following principles to minimise the risk of outrage escalation:

- Social risk-informed engagement design

- Community focused listening
- Mythbusting using up-to-date project information relevant to the local context and reflecting currently available technical information and community capacity to engage in complex concepts.
- Detailed and ongoing government and project stakeholder briefing
- Detailed event planning including staff briefings, and safety and security protocols
- Regular debriefing, review and revision of planned engagement program to include upscaled resourcing and detailed response plan as required
- Internal review of organisational culture and capacity
- A coordinated campaign of public messaging to redress reputational impacts
- Responsive, transparent and accurate communications and reporting.

5.0 Stakeholder Engagement Overview

5.1 Communication and Engagement Tools and Activities

The choice of engagement tools and techniques depends on the desired outcome of the Project's engagement. If the goal is to gather information from the community such as identifying issues, opportunities, and local knowledge, the engagement methods will differ from those used to involve the community in discussions to shape or influence project outcomes. The engagement methods will be customised to meet the needs of the community and stakeholders, addressing any barriers that may prevent effective engagement. A list of engagement tools and activities and their application is provided in **Table 6**.

Table 6 Engagement Tools and Activities

Tool	Description
Face-to-face meetings	Face-to-face meetings with local Councils, landowners and other key stakeholders to discuss the Project and its objectives.
Stakeholder briefings	Targeted meetings (online or in-person) to provide project introductions and updates relevant to specific stakeholder interests.
Kitchen table	One-on-one meetings by arrangement with directly impacted stakeholders to discuss specific impacts and potential mitigations or negotiate compensation.
Letter drops	Letter drops to directly impacted properties to introduce the project and offer a meeting or discussion.
Public engagement events (drop-in sessions)	In-person, informal drop-in sessions to build awareness of the Project, inform and educate the community on the Project. These sessions provide an opportunity for all stakeholders to meet with the Project team and raise any concerns or questions about the project and provide feedback through appropriate feedback channels.
Pop-ups	Informal activations in public sites to promote the project and engagement opportunities and information and feedback channels.
Webinars	Online information sessions providing project updates and the opportunity to hear from technical specialists and members of the project team.
Project enquiry phoneline/email	A direct contact point for the community and stakeholders to ask questions and seek support to participate in the process.
Business procurement register	An online portal to collect information and register businesses expressing an interest to be included on the local procurement panel for construction and operation phases. This register would be promoted through project collateral and website.
Project enquiry portal	An online, public portal hosted on the project website to collect feedback, questions and ideas from community and stakeholders.
Project website	A central hub of project information and interactive opportunities to participate through digital engagement tools. Written materials such as e-updates and printed communication materials and advertising will direct people to the online engagement hub on the website as a central project resource.
Surveys and feedback portal	Feedback forms, surveys (online or hard copy) and interactive maps to capture feedback from stakeholders to inform project designs and contribute to community benefit opportunities. Feedback tools will be made available at all engagement events.
Printed communication materials	Including project factsheets, posters and flyers distributed to key locations and made available at engagement events and in digital formats on all online engagement platforms.
Local newspaper and media	Traditional media campaign to promote the project, share information and advertise engagement platforms, events and opportunities.

Tool	Description
Community benefit model	The Narrabri Development Fund will invest $1.2m in the community over the 40-year Project life. At least 1% of the Project Budget will be invested with suitable Indigenous service providers. Enervest strives to deliver lasting community benefits through community programs, sponsorships or funds. Enervest will work with Council, stakeholders and community representatives to design an appropriate model and approach to delivering community benefits through the Stoney Creek BESS.

5.2 Media Enquiries

Project employees are required to direct all media enquiries to the Enervest media representative. They must not provide any information/comment regarding the Project to any media or political representatives.

Media contact: Luke Scott
Email: stoneycreek@enervest.com.au

A brief media release will be prepared prior to key events sessions or public announcement of the project. It is recommended that this be reviewed prior to issue to ensure is reflects emerging themes and the local context where appropriate.

Any comment prepared for media must be reviewed against existing approved project messaging. FAQs and collateral to ensure consistency. Where new information is provided, this should be reflected in updated website copy and messaging as practicable.

Note: Public media messaging is designed to supplement ongoing, direct consultation such as phone calls, emails, meetings and briefings. Media messaging does not constitute a response to enquiries and issues raised through direct conversations with individual stakeholders or groups.

5.3 Phone call and email enquiries

The following outlines the procedures and protocols for managing enquiries via the public email or phone line. Both of these channels will be managed by Enervest in the first instance, with contributions from specialists or the broader team as required.

5.3.1 Email

A public enquiry email address will be created for each project:

stoneycreek@enervest.com.au

Accounts will be monitored regularly throughout business hours. All emails to this address will receive an automated response confirming receipt and commitment to reply in a specified timeframe where a response is required – typically **2 business days**.

All responses to public emails should be issued via the project email account.

Account managers

The email account will be monitored by the following Enervest Project team members:

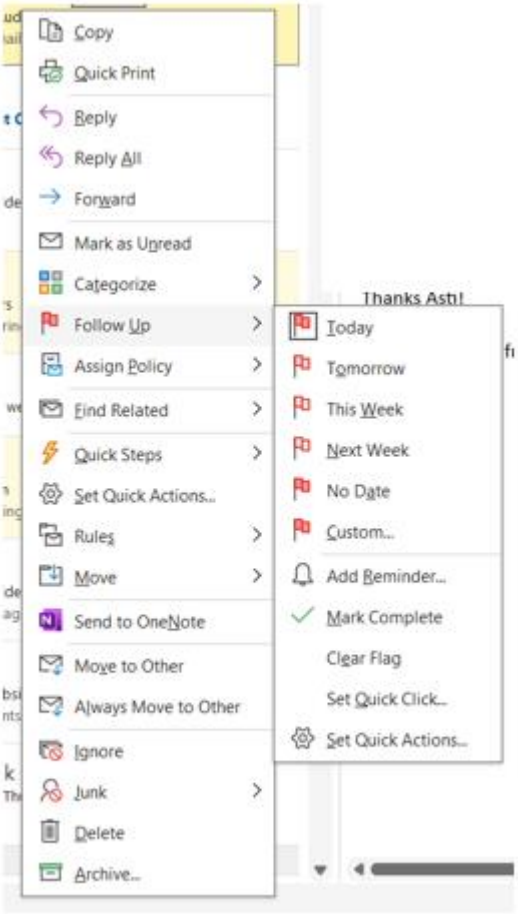
Name 1, email

Name 2, email

Email protocols

The following outlines the process for emails received via the public enquiry address.

1. Incoming emails receive automated response acknowledging receipt and committing to response within two business days (where a response if required)
2. Email account is checked at least three times per day (morning, midday, afternoon)
3. All junk and spam emails will be deleted
4. All new legitimate emails are opened and recorded in Consultation Manager
5. Emails not requiring a response are marked as complete (right click, follow up, green tick)



6. Emails requiring response that can be provided through established messaging or FAQs will be replied within 48 hours.
   a) Ensuring that email reply is captured on Consultation Manager and event closed out
   b) Marked as complete
7. Emails requiring additional information or response from a third party (technical specialists etc) will be marked with a red flag:
   a) Enervest protect team member will reply to email to acknowledge receipt and provide progress update to sender
   b) Forward email to relevant team member/specialist requesting confirmation of receipt and estimated response timeframe
   c) Record email and assign actions in Consultation Manager
   d) Compile response and reply to sender via project email account OR follow up with phone call or direct email where further discussion is required.

5.3.2 Phone enquiry line

A public enquiry phone line will be established to receive public enquiries.

Calls to this line will be forwarded to a digital message bank using the voxbox platform.

Callers will hear a recorded messages (provided by Enervest) acknowledging receipt and committing to a response time frame – typically **1 business day**

Callers will then be asked to record a message including any relevant information and contact details

An automated email will be sent to the following nominated project team members including the originating phone number, a transcript and an audio recording of any messages received:

- Name1, title, email
- Name2, title, email
- Consultation Manager inbound email

Phone protocol

The following outlines the process for emails received via the public enquiry address.

1. Nominated team member to record call and transcript in consultation manager
   a) Close out entry where no response in required
2. Where a response is required and can be provided using approved messaging, the nominated team member will return the call using their direct line with called ID hidden (or via a nominated line as required)
   a) Record enquiry and response in consultation manager
3. Where a response requires additional information or contribution from a third party. The nominated team member will:
   a) Forward the enquiry to the relevant team member/specialist and seek confirmation of receipt and an estimated response timeframe
   b) Provide an update to the caller including estimated response time
   c) Record enquiry and actions in Consultation Manager.

5.4 Media enquiries and events

Project employees are required to direct all media enquiries to the Enervest media representative. They must not provide any information/comment regarding the Project to any media or political representatives.

Media contact: Luke Scott
Email: stoneycreek@enervest.com.au

5.5 Feedback, Complaints and Grievances

The established internal Complaints Investigation and Response Plan (CIRP) will apply to any complaints or grievances received.

5.6 Roles and responsibilities

Table 7 outlines the key project team members and their respective roles and responsibilities.

Table 7 Project team roles and responsibilities

Organisation	Project role	Responsibilities	Name
Enervest	Project lead - Opus	Program oversight Technical oversight Risk review Key stakeholder contact	Julian Voller
	Project Manager – Stoney Creek		Julian Hampton
SLR	Engagement Lead (PM)	Strategy development Engagement risk	Conor Dwyer

Organisation	Project role	Responsibilities	Name
		Engagement program Content drafting and review Reporting structure and review	
	Engagement delivery support	Material drafting Logistics Engagement delivery support Community benefits Report drafting	Stephanie Skordas / Marco Biamonti
	Engagement review (PD)	Review and QA Risk review Social procurement	Esther Diffey
	Planning	Planning package oversight Project program Client liaison	Hugh Jones

6.0 Monitoring and Evaluation

Enervest and/or SLR will record external stakeholder interactions for the Project through the consultation database platform provided by Enervest.

It is important that this platform is updated following engagement activities to ensure interactions, feedback and outcomes can be adequately monitored and reported. This assists in maintaining the principles of transparency, accountability and responsiveness and to manage engagement and Project risk.

The platform and inputs will be regularly monitored and audited to ensure accuracy, timeliness and consistency and to inform ongoing reporting. This will include:

- the number of engagement activities undertaken
- attendance numbers at meetings and townhalls
- level of stakeholder understanding of the Project, including potential impacts, benefits and management measures
- community support for the Project
- community feedback provided via the website or engagement activities
- community grievances/complaints.

This Community and Stakeholder Engagement Plan will be revised prior to the commencement of each engagement activity to incorporate lessons learned, stakeholder feedback and any evolving issues, opportunities and risks that may have arisen.

Any review should consider feedback from the landowners, agricultural businesses, key stakeholders, and Project team members.

The monitoring metrics for this Plan are outlined in Table 8and respond to the Project objectives outlined in Section 6.0.

Table 8 Community and Stakeholder Engagement Plan monitoring criteria

Objective	What will be measured	How it will be measured
Provide clear, accurate and up-to-date information	• How aware the community and stakeholders are of the project • Incidence of misinformation • The timeliness of information to community and stakeholders • Transparency around what the public can influence and what cannot be influenced	• Number and rate of website visits • Number of participants • Comparison of participation to the stakeholder analysis • Capture participant feedback during engagement activities • Monitor issues/complaints recorded through stakeholder interactions
Consult meaningfully with communities and stakeholders and provide suitable opportunities and channels	• The extent to which the community and stakeholder feedback contributes to impact mitigations • Timely delivery of engagement activities to maximise opportunities to influence design and planning • Closing the loop with participants about how findings have informed project decision-making • Participant satisfaction with delivery of engagement activities • Community and stakeholders interested in the project can	• Demonstrated consideration of community and stakeholder input in project development and decision-making incorporated into reporting • Public summary to report back to the community and stakeholders • Track stakeholder conversations and issue themes progress with Project decisions • Capture participant feedback during engagement activities

Objective	What will be measured	How it will be measured
	contribute feedback to inform the project	• Gather feedback from the project team on how community and stakeholder input was used
Build and maintain Social and Cultural Licence with community and stakeholders to facilitate approvals, construction and operation of the Project	• How effectively was the engagement delivered in line with this Plan • Emergence and incidence of concern, opposition and/or outrage • Demonstrated adaptation and improvement of engagement program and practice in response to lessons learnt	• Track deliverables against the Plan • Document of how continual improvement approach is occurring • Capture feedback on how community and stakeholder input was used • Demonstrated and reported nexus between feedback and project refinement • Monitor issues and complaints recorded through stakeholder interactions
Establish and strengthen relationships with stakeholders and communities and across the Project team	• How effectively the project has engaged with affected/interested stakeholders and community • How effective was the project in identifying stakeholders and their engagement needs • Responsiveness to issues and complaints	• Number of calls logged • Number of meetings held • Number of enquiries managed positively • Number of enquiries • Anecdotal feedback and sentiment • Effective resolution of stakeholder actions

7.0 References

Department of Planning, Housing and Infrastructure 2022 *State Significant Development Guidelines: Preparing a scoping report.*
Appendix A to the state significant development guidelines
https://www.planning.nsw.gov.au/sites/default/files/2023-03/ssd-guidelines-preparing-a-scoping-report.pdf

Department of Planning, Housing and Infrastructure 2023 *Social Impact Assessment Guideline*
https://www.planningportal.nsw.gov.au/sites/default/files/documents/2023/GD1944%20SIA%20Guideline_NEW%20VI_14_02_23.pdf

Department of Planning, Housing and Infrastructure 2024 *Undertaking Engagement Guidelines for State Significant Projects*
https://www.planning.nsw.gov.au/sites/default/files/2023-03/undertaking-engagement-guidelines-for-ssp.pdf

International Association for Public Participation (IAP2) 2015 *Quality Assurance Standard for Community and Stakeholder Engagement*, viewed 25 September 2023, Available: International Association for Public Participation Australasia, IAP2_Quality+Assurance+Standard.pdf (iap2content.s3-ap-southeast-2.amazonaws.com)

IAP2 2014, *Public Participation Spectrum*, viewed 25 September 2023, Available: International Association for Public Participation Australasia, IAP2_Public_Participation_Spectrum.pdf

Attachment A Stakeholder Mapping

Community and Stakeholder Engagement Plan

Stoney Creek Battery Energy Storage System (BESS)

Enervest Pty Ltd

SLR Project No.: 620.31316.00000

14 June 2024

Table 9 Detailed Stakeholder Map

Stakeholder Group	Stakeholder/s	Potential Interests/Concerns	Engagement tools	IAP2 Level of Engagement
Enervest	• CEO • General Manager • Communications and Engagement	• Whole of project • Progress and budget • Approvals • Issues and reputational risks for the organisation	• Briefings • Ongoing internal reporting	Collaborate/ Empower
BESS Project Team	• Project Manger • Project Director		• Weekly project meetings • Regular email/phone contact as required	
Registered Aboriginal Party	• Gomeroi People via the Narrabri Local Aboriginal Land Council (LALC)	• Aboriginal Cultural Heritage assessment and management • Native Title issues • Procurement opportunities • Environmental management	• Ongoing via Aboriginal Cultural Heritage Management Assessment process • Initial introduction via phone/email through existing relationship, cultural heritage specialist as available • Ongoing email, phone, meeting as required	Collaborate
Aboriginal organisations	• NSW Indigenous Chamber of Commerce	• Social impacts • Community partnership opportunities • Employment opportunities • Impacts/benefits to Aboriginal owned businesses • Renewables education and awareness	• Ongoing • Initial introduction via phone/email through existing relationship, cultural heritage specialist as available • Ongoing email, phone, meeting as required	Involve / Collaborate
Landowners	• Site owners	• Community opposition/concern • Community division	• Ongoing direct contact through dedicated land agent	Collaborate
	• Neighbouring/ directly impacted residents	• Land access • local traffic • hazard • biosecurity • Amenity impacts • Compensation • Impact mitigation	• Introduction letter/email • Door knock/flyer drop • Offer of briefing/meeting • Ongoing updates (email) at project milestones • Dedicated landowner liaison	Involve
	• Adjacent landowners	• Land access • local traffic • hazard • biosecurity • Amenity impacts	• Introduction letter/email • Door knock/flyer drop • Offer of briefing/meeting • Ongoing updates (email) at project milestones	Consult / Involve

Stakeholder Group	Stakeholder/s	Potential Interests/Concerns	Engagement tools	IAP2 Level of Engagement
	• Local farmers / businesses	• Land access • local traffic • hazard • biosecurity • loss of/ change to Agricultural land		Consult
	• Township residents	• Local and regional access routes Economic opportunities and enhancing existing infrastructure Employment and training opportunities • Post development land use • Land management (weed, feral animals, fire) • Community engagement opportunities • Community benefit funds/programs	• Local advertising and signage • Introductory mail out/ flyer drop • newsletter at project milestones • Project website • Project email/phone general enquiry line • Community pop-up/ drop-ins	Inform / Consult

Narrabri Shire Council	Council officers
	• Infrastructure Delivery
	  ○ Projects and assets
	  ○ Road services
	  ○ Waste
	  ○ Water Services
	• Planning and Sustainability
	  ○ Economic Development
	  ○ Planning and development
	  ○ Regulatory compliance
	  ○ Tourism and cultural services
		• Planning
		• Economic development
		• Infrastructure
		• Community development
		• Local benefits
		• Jobs and investment
		• Training and procurement
		• Amenity and traffic/access impacts
		• Community concern and opportunities
		• Community engagement opportunities
			• Ongoing contact through established relationships
			• Notification ahead of major engagement events and public communications
			• Briefings at project milestones
				Involve / Collaborate

	Councillors • Mayor – Darrel Tiemens • Deputy Mayor – Brett Dickinson • Ward councillors	• Local benefits • Jobs and investment • Amenity and traffic/access impacts • Community concern and opportunities • Community engagement opportunities • Community sentiment	• Approach via Councillors for initial briefing and subsequent meetings at project milestones	Consult / Involve
	Council committees • Floodplain Management Advisory Committee • Joint Regional Planning Pane • Narrabri Airport Advisory Committee (Internal)	• Special interest areas • Impacts and benefits • Partnership opportunities • Community engagement opportunities • Community benefit opportunities • Cumulative impacts and benefits	• Offer of project briefings • Project updates • Project website and collateral • Approach via council officers	Inform / Consult

Stakeholder Group	Stakeholder/s	Potential Interests/Concerns	Engagement tools	IAP2 Level of Engagement
	• Narrabri Bush Fire Management Committee • Public Art Advisory Committee (Internal)			
State Government	New South Wales Minister for Planning and Public Spaces – Paul Scully	• Request for State Significant Infrastructure Status • SSI assessment process and regulatory requirements • Community and stakeholder sentiment and feedback • Alignment with State policy and strategic directions	• Ongoing as required via regulatory process • Briefings and targeted meetings • Email and phone	Consult
	State Member • Member for Barwon - (Roy) Royal Francis BUTLER	• Community and stakeholder sentiment and feedback • Community impacts and benefits • Economic impacts and benefits • Environmental impacts and mitigations • Employment and training opportunities and procurement • Cumulative impacts and opportunities for coordinated benefit sharing • Community and stakeholder engagement opportunities and outcomes	• Ongoing contact through established relationships • Email and phone • Offer of briefing • Notification ahead of major engagement events and public communications •	Inform / Consult

	• Department of Primary Industries
	  ○ Biodiversity Conservation NSW
	  ○ Water NSW
	• Department of Planning and Environment
	  ○ Heritage NSW
	  ○ Crown Lands NSW
	  ○ Development Assessment NSW
	• Transport for NSW (TfNSW)
	• Service NSW
		• Regulatory referral body
		• Regulatory approvals process, requirements and compliance
		• Environmental and social impacts
		• Agricultural land impacts
		• Impacts to fish habitats
		• Traffic and transport impacts
		• Impacts to Aboriginal and non-Aboriginal cultural heritage
		• Reputational risk to government
			• Ongoing as required via regulatory process
			• Face-to-face meetings
			• Letters/emails/phone calls
				Consult / Involve

Federal Government	Federal Member • Member for Parkes - Mark Coulton	• Whole of project/progress of project • Environmental management • Cultural heritage impacts	• Ongoing contact through established relationships	Inform/ Consult

Stakeholder Group	Stakeholder/s	Potential Interests/Concerns	Engagement tools	IAP2 Level of Engagement
		• Social impacts/procurement • Community partnership opportunities for Traditional Owners • Economic benefit/job opportunities in the region • Partner opportunities with training providers to create job-ready workers • Community sentiment	• Notification ahead of major engagement events and public communications • Briefings at project milestones	
	Federal Departments • Department of Agriculture, Fisheries and Forestry • Department of Infrastructure, Transport, Regional Development, Communications and the Arts	• Energy transition and policy alignment • Community sentiment and awareness • Agricultural land impacts • Impacts to biodiversity and habitat • Impacts to Aboriginal and non-Aboriginal cultural heritage • Reputational risk to government	• Ongoing contact through established relationships •	Inform
Peak Bodies	Agriculture • National Farmers Federation • NSW Farmers • Namoi Water	• Impacts/benefits to farmers in the region with potential land procurement and future procurement • Water licencing • Financial impact/benefit to farmers in the region	• Introduction letter/email • Offer of small group meeting/phone call • Ongoing updates (email) at project milestones • Project website • Project email/phone general	
	Renewables • Clean Energy council • Climate Council • Australian Energy Storage Council • Climate change authority	• Policy development on issues impacting the sector • Promotes value of the sector to the community		
Authorities, regulators and policy-makers	Federal • Australian Energy Infrastructure Commissioner • Australian Energy Market Operator • Australian Energy Regulator • Clean Energy Regulator • Energy Users Association of Australia	• Impact/benefit to local environment • Well-being and safety of local flora and fauna • Impacts on/disturbance to areas of cultural heritage • Water quality and conservation • Regulatory compliance and reporting	• Ongoing contact through established relationships • As required and advised through regulatory process • Notification (and briefing as requested) of project milestones and major engagement activities • Participation in focussed workshops	Involve
	State • Water NSW • NSW Ombudsman • Murray-Darling Basin Authority			

Stakeholder Group	Stakeholder/s	Potential Interests/Concerns	Engagement tools	IAP2 Level of Engagement
Emergency Services	• Narrabri Police Station • NSW Rural Fire Service • Fire and rescue NSW Narrabri • NSW State Emergency Service • VRA Rescue NSW – Narrabri • Narrabri District Health Service Hospital	• Bushfire risk • Bushfire risk management plans • Worker accommodation and population fluctuation • Crime and public safety management • Hazard management •	• Introduction letter/email • Offer of small group meeting/phone call • Circulate all public engagement materials and event programs • newsletter at project milestones • Representation on consultative committee (if required)	Consult
Transmission network Providers	• TransGrid	• Connections and infrastructure • Substation owner	• Ongoing contact through established relationships • As required and advised through regulatory process • Notification (and briefing as requested) of project milestones and major engagement activities	Consult
Local Media	• The Narrabri Courier • Border News • Country Leader • Cotton Magazine	• Local interest or community concern • Impact to local character /identity • Jobs and investment • Worker populations and accommodation • Environmental impacts/management • Value of agricultural land • Social impacts • Aboriginal cultural heritage impacts • Partnership/employment opportunities • Advertising opportunities	• Project website • Project communications and publications • Media release • Public event advertising	Inform
Business networks and local businesses	• Narrabri Industrial Network • Narrabri Chamber of Commerce • Geni.Energy (Community Engagement Manager – Lucinda Barrett) • Narrabri Airport • Shell Narrabri Truck Stop • Australian Recycled Plastics • WTC Group (Civil Construction) • Petrie Excavation • Coles Narrabri • Woolworths Narrabri North	• Opportunities and benefits for local businesses through procurement, employment, training and supply chain • NFP focussed on jobs and investment in renewables in Narrabri • Narrabri community battery trial project • Impact/benefit to business in pivot from traditional farming • Partnership and procurement opportunities • Engagement opportunities • Promotion of project and events • Agribusiness impacts and industry change	• Introduction letter/email • newsletter at project milestones • Circulate all public engagement materials and event programs • Project website, email and phone • Surveys and feedback forms • Themed round table discussions/workshops • Representation on consultative committee (if required)	Inform / Consult

Stakeholder Group	Stakeholder/s	Potential Interests/Concerns	Engagement tools	IAP2 Level of Engagement
	Local real estate agents • Jacob and Anderson • Henessy Real Estate • KR Property • Carla Baxter Real Estate • Rural Property NSW • Harcourts Narrabri Agricultural agents • Elders Narrabri Workforce accommodation • Civeo Narrabri Village	• Diversity in agricultural income • Change in land use and industry trends		
Community groups and facilities	• Narrabri Library • Narrabri Region Visitor Information Centre • Narrabri Community Kiosk • The Crossing Theatre • Narrabri Saleyards • Narrabri Golf Course • Narrabri Pistol Club • Narrabri Dirt Bike Club • Narrabri Speedway (Northwest Speedway) • Narrabri Jockey Club • Narrabri Showgrounds	• Engagement venues • Local interest • Amenity impacts • Employment and training opportunities • changes to local land use • Local history • Changes / disruption to local and regional transport/access • Local environmental impacts • Public education • Community benefit sharing opportunities • Opportunities to learn and contribute to the Project • Sustainability outcomes	• Introduction letter/email • newsletter at project milestones • Circulate all public engagement materials and event programs • Project website, email and phone • Surveys and feedback forms	Inform / Consult
	Social media (public) • Narrabri notice board • Namoi Noticeboard • Narrabri Business Classifieds Group	• Community sentiment • Sharing of public info	• Monitor only	n/a

Stakeholder Group	Stakeholder/s	Potential Interests/Concerns	Engagement tools	IAP2 Level of Engagement
Enviro groups	• Narrabri Community Battery Trial project (Sally Hunter – Geni Energy) • Narrabri Community Bush Care Group • Namoi River Community Group	• Climate change and sustainability • Investment in renewables • Training and employment opportunities • Public education • Community benefit sharing opportunities • Opportunities to learn and contribute to the Project • Volunteer opportunities	• Introduction letter/email • newsletter at project milestones • Circulate all public engagement materials and event programs • Project website, email and phone • Surveys and feedback forms	Consult
Tertiary and further education providers	• TAFE NSW – Narrabri • Narrabri - Community College • The University of Sydney Plant Breeding Institute • Country Universities Centre North West	• Curriculum opportunities • Education and training • Procurement • Research and development	• Introduction letter/email and offer of Project briefing • Newsletter at project milestones • Circulate all public engagement materials and event programs	Inform / Consult
Schools	Primary and secondary schools • Narrabri Public School • Narrabri West Public School • St Fracis Xavier Primary • Little Crocs • Narrabri High School	• Curriculum opportunities • Promotion through school networks	• Introduction letter/email and offer of Project briefing • Newsletter at project milestones • Circulate all public engagement materials and event programs	Inform (with potential to consult in later phases)

Attachment B Detailed Delivery Plan

Community and Stakeholder Engagement Plan

Stoney Creek Battery Energy Storage System (BESS)

Enervest Pty Ltd

SLR Project No.: 620.31316.00000

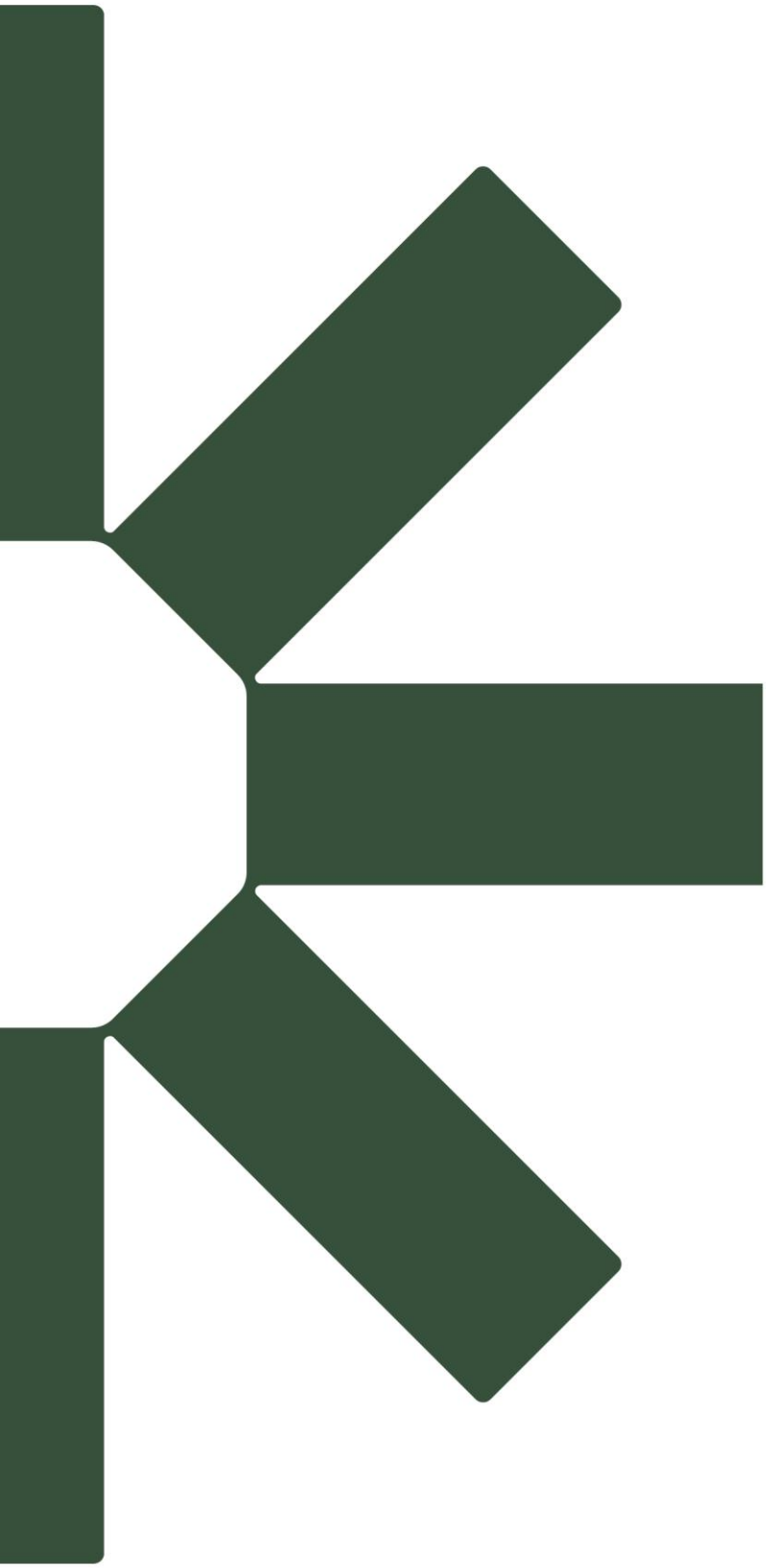
14 June 2024

Table 10 Detailed Delivery Plan (proposed)

Phase	Activity	Location	Purpose	Responsibility TBC	Outstanding actions TBC	Timeframe (proposed **TBC**)
1. SEARs referral and regulatory process	a) Scoping meeting with DPHI	Online	• Introduce the project with high-level concept plan and briefing letter • DPHI guidance on the preparation of the future SSD Application and identified areas for further investigation • Confirm referral authorities: Transport for New South Wales (TfNSW), TransGrid, NSW Environment and Heritage and Environmental Protection Authority (EPA), Narrabri Shire Council • Confirm consultation and technical investigations required • Confirm next steps and preferred method of ongoing consultation	Enervest SLR Planning	Complete – ongoing	October 2022
	b) Preliminary engagement to inform scoping reports	Subject to individual specialists	• Contact with relevant stakeholder and referral authorities to introduce the project and capture preliminary feedback to inform: ○ Aboriginal Archaeological Due Diligence Assessment ○ Preliminary Transport Impact Assessment ○ Social Impact Assessment Scoping Report	Technical specialists, overseen by SLR and Enervest	Complete – ongoing	2023
	c) Preliminary engagement with Traditional Owner groups	Mailout and meetings	• Introduction to Gomeroi People via the Narrabri Local Aboriginal Land Council (LALC) • Confirm best approach for ongoing engagement	Enervest	Complete – ongoing	2023
	d) Preliminary community engagement to inform SIA Scoping	Mail out (letter and survey)	• Public introduction to project • Seek preliminary feedback regarding community values and local sentiment • Inform impact scoping and potential mitigations	Element	Complete	2023
	e) Meeting with NSW Minister for Planning	Meeting (in person or online)	• Discuss proposal for expanded project scale • Request State Significant Infrastructure (SSI) status	Enervest	TBC	Mid – late 2024
2. Introduction to EIS	a) Phone call/email call to Council	Phone / email	• Introductory meeting with Council planners to discuss proposal • Identify appropriate contacts within Council • Offer introduction meeting to brief relevant Council officers • Confirm next steps, expectations and preferred method for future project updates/communications	Enervest / SLR	TBC	TBC
	b) Council officer briefing **As requested**	Council offices or online	• Provide project overview, update and proposes approval pathways • Outline engagement to date • Confirm understanding of community sentiment and likely concerns • Confirm available resources, references and contacts for technical investigations	Enervest	TBC	TBC
	c) Councillor and local member introduction and offer of briefing	Phone / email	• Introduction to project and Enervest • Offer of briefing including proposed agenda • Confirm any other information requirements • Confirm date, location and attendees	Enervest	TBC	TBC
	d) Councillor and local member briefing **As requested**	Offices / online	• Brief project introduction and overview of approval process • Overview of community and stakeholder engagement approach and technical assessment • Review of community understanding, likely issues, impacts and mitigations • Capture any insights into local context or community preferences • Confirm expectations regarding ongoing contact and preferred methods	Enervest to lead wit SLR support as required	TBC	TBC
	e) Door knock and letter drop to neighbouring / impacted residents	On site	• Confirm names and contact details • Is there anything in particular you would like to know about the project? • Do you have any specific concerns about the Project? • What is the best way to keep in contact with you?	Enervest and SLR	TBC	TBC
	f) Follow up phone call after door knocks f) **As requested**	Phone/ / email	• Do you have any questions about the project or the information provided? • Would you like to arrange a time to meet on site or in-person? • Is there any more information we can provide for you? • Are you interested in attending upcoming Community Engagement events we are holding?	Enervest	TBC	TBC
	g) Follow up meetings with impacted residents **As requested**	On location. As per individual stakeholder arrangement	• Provide information to address specific concerns (as raised at doorknock/ email/phone contact) • Provide information about project program and upcoming announcements • Is there anything else we should know about?	Enervest	TBC	TBC

Phase	Activity	Location	Purpose	Responsibility TBC	Outstanding actions TBC	Timeframe (proposed TBC)
			• What are your thoughts about the project? • Is there anything we can to do mitigate your specific concerns? • How would you prefer to work with us going forward?			
	h) Letter to stakeholder s previously engaged through technical assessment	Letter / email (pending established contact details and preferences)	• Reestablish contact following initial engagement • Re-introduce the project • Confirm accurate details and communication preferences • Outline process going forward • Invite for follow up engagement as required	Technical specialists with oversight from SLR/Enervest	TBC	TBC
3. Public project announcement	a) Project website content update and launch	Online Council website Email databases	• How would you like to be kept up-to-date on the project and engagement activities? • Register for online engagement activities • Tell us what's important to you about your local area	SLR with support (review/approvals, on ground support) by Enervest	TBC	TBC
	b) Launch project email and phone line					TBC
	c) Website enquiry follow up	Email/ phone call				TBC
	d) Distribute project flyers	Mail out to Local residents and business (Postal distribution area TBC) Community hubs and high traffic areas				TBC
	e) Email invitation / notification to stakeholders engaged to date through public interest or technical investigations	Campaign email (from project address) Direct email from technical specialists or relationship owner				TBC
	f) Distribute project posters	Community hubs and high traffic areas				TBC
	g) Media release	Local media Online Email				TBC
	h) Local media advertising **(project and event promotion)**	Local papers				TBC
	i) Monitor local social media activity	online	• Monitor only for level of interest, sentient and emerging issues. No interaction	All	TBC	TBC
	j) Project notification **(per statutory requirement)**	Local papers Site signage	• N/a. Statutory process	SLR planning Enervest to review	TBC	TBC
4. Public events (in person and online) Subject to detailed planning	a) Community pop-ups x 2	TBC – high traffic areas and local events	• How would you like to be kept up to date on the project and engagement activities? • What is important to you about your local area? • What would you like to know about renewables/BESS technology? • What are you concerns about the project? • How would you like to see these concerns/impacts addressed? • What would you like to know more about? • What do you think are the opportunities that we can provide local community benefit through this project? • What are the opportunities for us to work with local businesses? • Is there anything else we should know? /Can you share any local knowledge with us?	**SLR to plan and prepare SLR and Enervest to attend**	TBC	TBC
	b) Drop-in session #2	TBC		SLR to plan and prepare Delivered by SLR and Enervest		TBC
	c) Sit-in sessions **(as required)**	TBC		SLR to plan and prepare as contingency Enervest to determine need	TBC	TBC
	d) Attendance at local events (eg. Business chamber events) **As available**	TBC		Enervest to attend SLR to support as required	TBC	TBC

Phase	Activity	Location	Purpose	Responsibility TBC	Outstanding actions TBC	Timeframe (proposed TBC)
	e) Offer of individual or small group meeting (up to 4x1 hour) with stakeholders (as requested)	Online or at location agreed		Enervest with support from SLR as required	TBC	TBC
	f) Follow up phone call to impacted residents (at end of engagement period)	On location / as requested	• Have we answered your question/responded to your concerns? • Outline program for additional technical investigations/refinements as required • How would you like to keep in touch? • Outline approach for ongoing negotiation where required	Enervest with support from SLR as required	TBC	TBC
	g) Response to media	Email / phone	• N/a. Response to enquiry only	Enervest with support from SLR	TBC	TBC
5. Close the loop	a) Email update to stakeholders engaged through technical investigations	Email / phone	• Project update • Summary of relevant engagements undertaken • Overview of engagement outcomes (relevant to stakeholder interests) • Overview of next steps • Invitation for follow up phone call or meeting as required	Technical specialists with oversight from SLR/Enervest	TBC	TBC
	b) Thankyou email to info session attendees and stakeholders contacted to date	email	• Do you have any other questions about the project? • Do you have any ideas about how we can work together to provide benefits to the local community or businesses? • How would you like to be contacted with regard to ongoing or future project news?	SLR to draft Enervest to distribute	TBC	TBC
	c) Follow up contact	Phone / meeting	• Is there any further information we can provide? • Does this information satisfy your enquiry? • Does this amendment address your concern? • How would you like to be contacted with regard to ongoing or future project news?	Enervest with support from SLR as required	TBC	TBC
	d) Response to media	Phone / email / website	• N/a. Response to enquiry and promotion only	Enervest with support from SLR	TBC	TBC
	e) Monitor project email / phone and website portal	Email / phone / website	• N/a. Response to enquiry	Enervest with support from SLR	TBC	TBC
	f) Public engagement summary	Online	• Thank you for your contributions • Do you have any further questions? • How would you like to be kept up to date with the project? • Would you like to be involved in future discussions about community benefits?	SLR to draft. Enervest review	TBC	TBC
	g) Major website update	Online	• Would you like to register your interest for our local supplier panel? • Is there anything you'd like to know about the project? • Do you have any ideas about how we can work together to provide benefits to the local community or businesses? • How would you like to be contacted with regard to ongoing or future project news?	SLR to draft. Enervest review	TBC	TBC
	h) Follow up briefing **As requested**	Council offices or online	• Do you have any further questions? • How would you like to be kept up to date with the project? • Would you like to be involved in future discussions about community benefits?	Enervest to lead SLR to support as required	TBC	TBC
	i) Prepare detailed engagement summary report	Internal document issued to project team	• n/a. Internal document for Enervest reporting and monitoring.	SLR	TBC	TBC



Making Sustainability Happen

Appendix F Development Plans

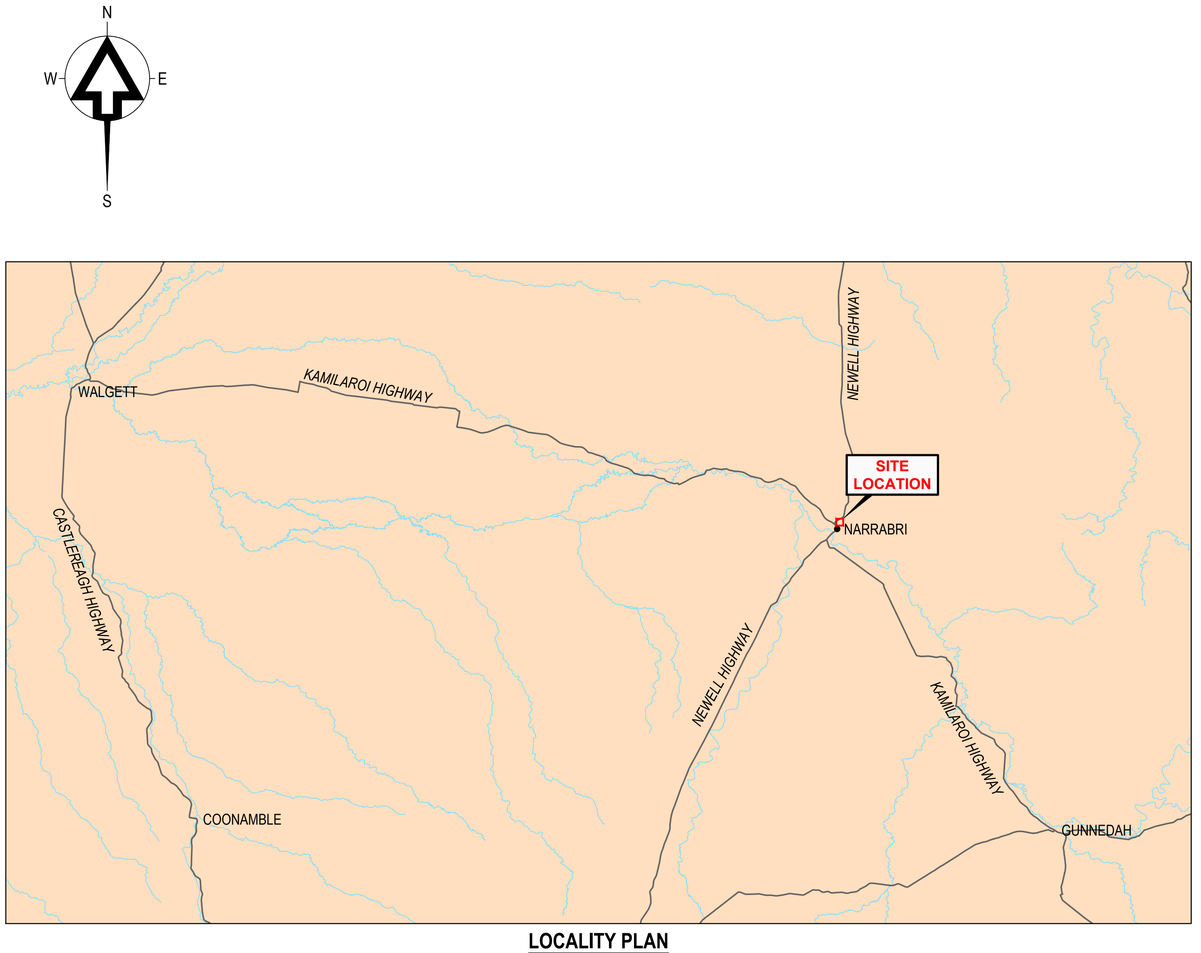
Request for Secretary's Environmental Assessment Requirements (SEARs)

Enervest Operations Pty Ltd

SLR Project No.: 620.31316.00000

25 August 2024

KEY PLAN
NOT TO SCALE



LOCALITY PLAN
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B	22-12-2023	FOR REVIEW	
A	21-04-2023	FOR REVIEW	
DATE		DESCRIPTION	APPROVED

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www.slrconsulting.com

CLIENT: ENERVEST PTY LTD

PROJECT: BESS FEASIBILITY

DRAWING TITLE: 41 STONEY CREEK ROAD NARRABRI 2390 SITE LOCATION PLAN

SIZE: A1

STATUS: FOR APPROVAL

SCALE: N.T.S.

DATUM: GDA2020 Z55

DRAWING NUMBER: 630.31316-CI-1000

REVISION: C

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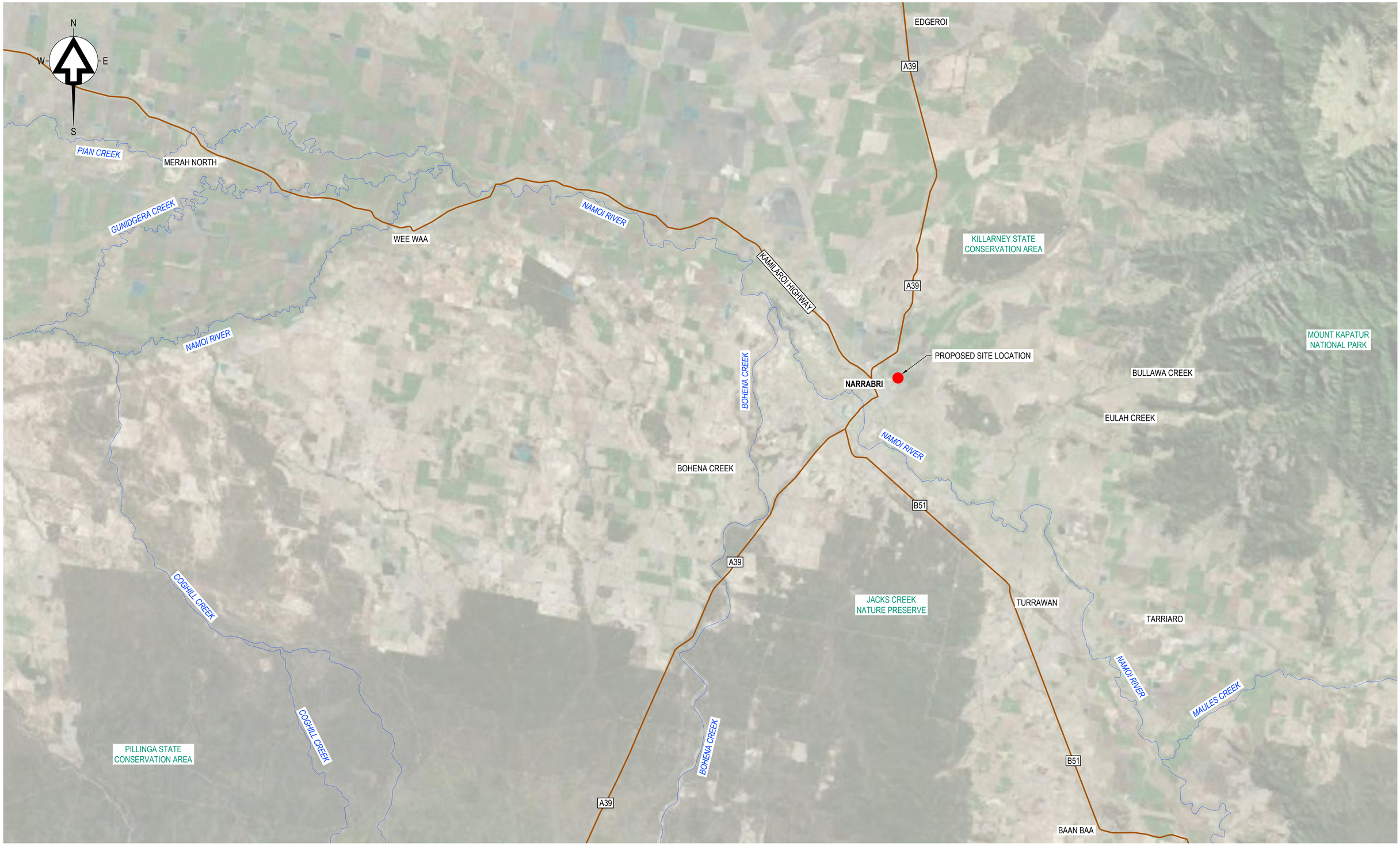

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CLIENT:	ENERVEST PTY LTD		
PROJECT: BESS FEASIBILITY	DRAWING TITLE: 41 STONEY CREEK ROAD NARRABRI 2390 LOCAL CONTEXT PLAN		SIZE: A1
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	DATUM: GDA2020 Z55		

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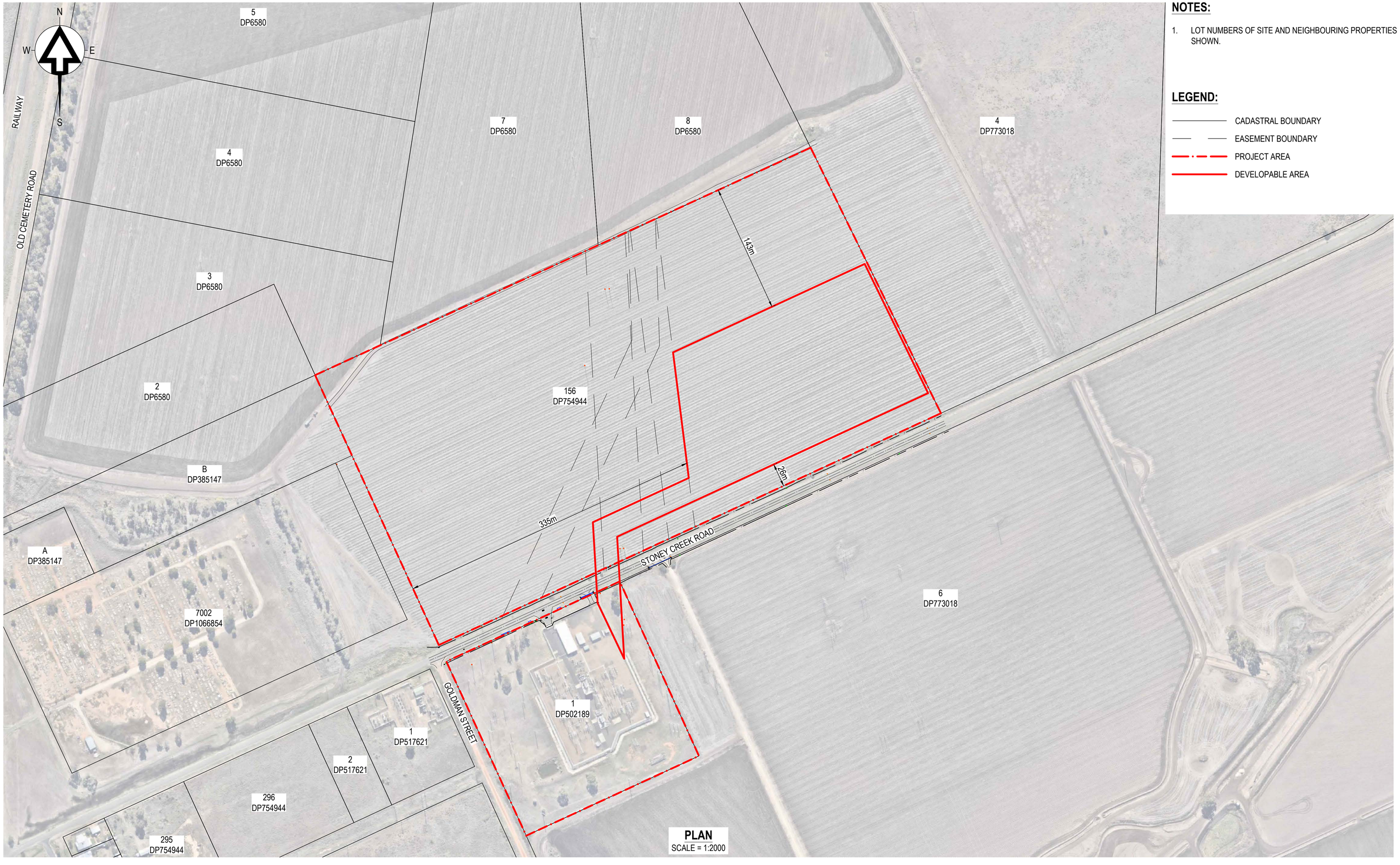

PLAN
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NOTES:

1. LOT NUMBERS OF SITE AND NEIGHBOURING PROPERTIES SHOWN.

LEGEND:

- CADASTRAL BOUNDARY
- EASEMENT BOUNDARY
- PROJECT AREA
- DEVELOPABLE AREA

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CLIENT: ENERVEST PTY LTD

PROJECT: BESS FEASIBILITY

DRAWING TITLE: 41 STONEY CREEK ROAD NARRABRI 2390 LOT LOCATION PLAN

SIZE: A1

STATUS: FOR APPROVAL

SCALE: 1:2000

DATUM: GDA2020 Z55

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REVISION: C

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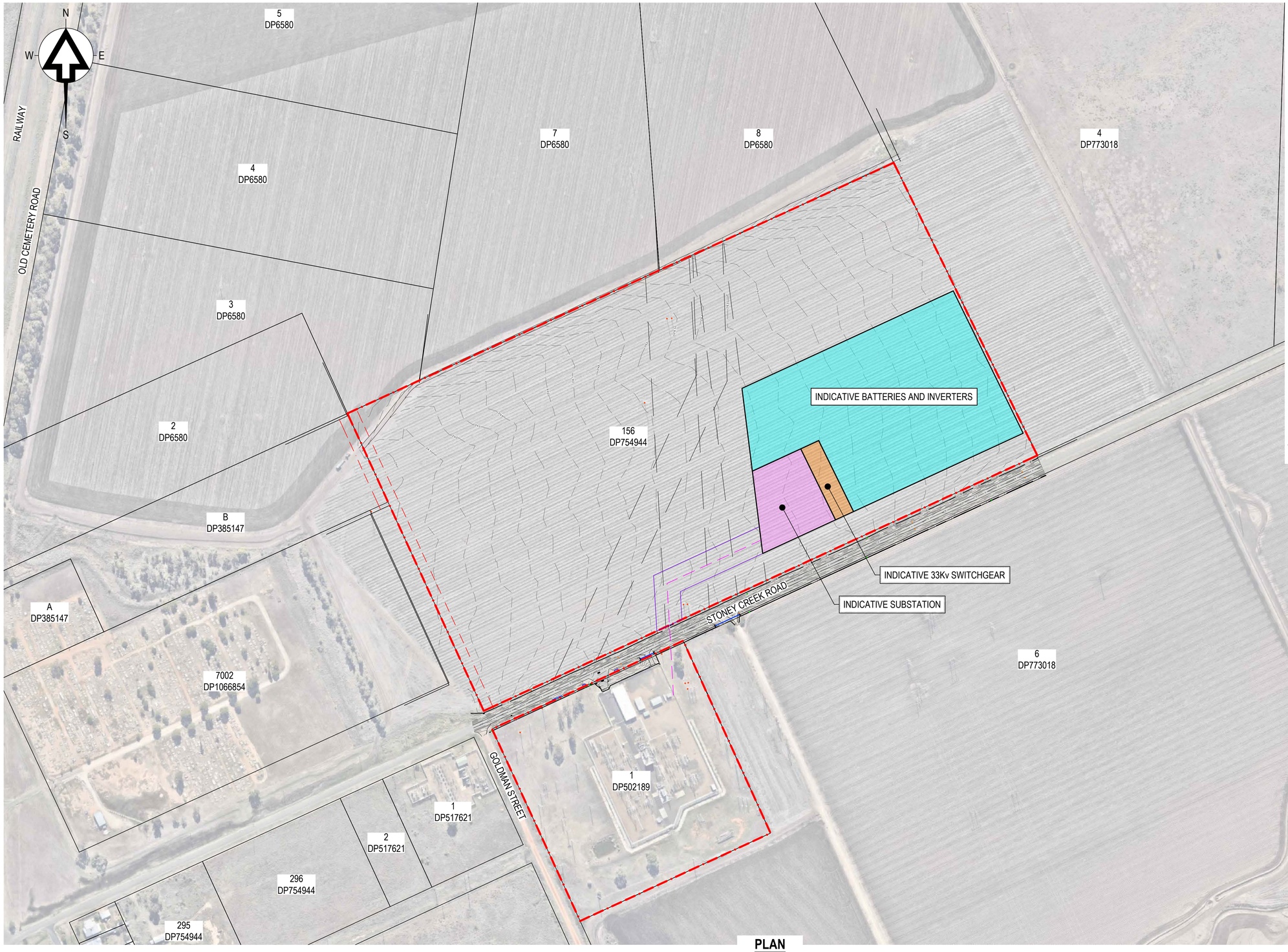

PLAN
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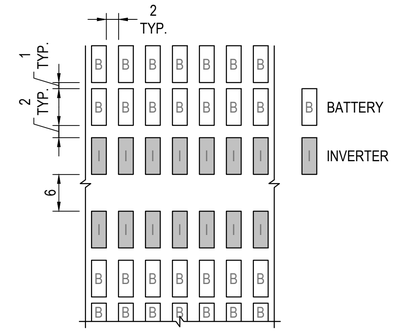
NOTES:

1. CONTOUR INTERVAL 1m, MGA 2020 COORDINATES.

LEGEND:

- CADASTRAL BOUNDARY
- EASEMENT BOUNDARY
- EXISTING GROUND CONTOURS (215.0)
- TRANSMISSION LINE
- ELECTRICAL INFRASTRUCTURE CORRIDOR (26m)
- PROJECT AREA



INDICATIVE BATTERY AND INVERTER LAYOUT
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PROJECT: BESS FEASIBILITY

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SIZE: A1

STATUS: FOR APPROVAL

SCALE: 1:2000

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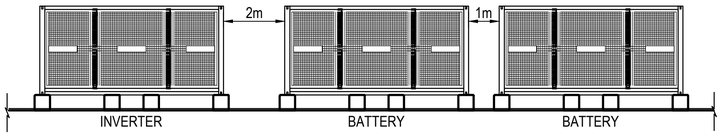

TYPICAL BESS BATTERY ARRANGEMENT

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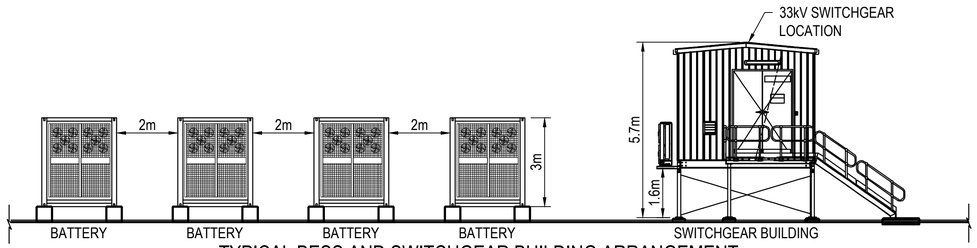

TYPICAL BESS AND SWITCHGEAR BUILDING ARRANGEMENT

SCALE 1:100

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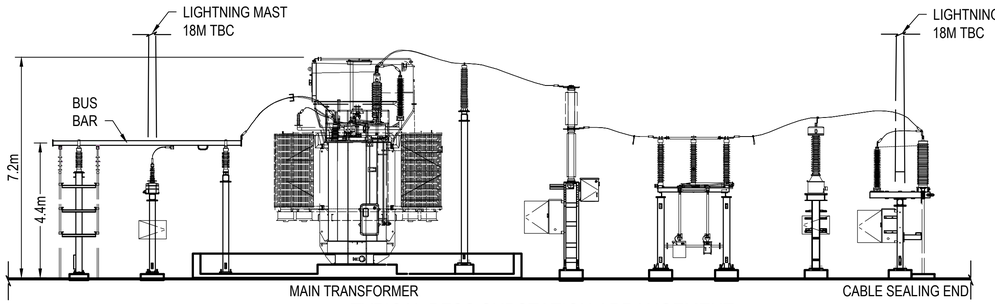

TYPICAL BESS SUBSTATION ARRANGEMENT

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SIZE: A1

STATUS: FOR APPROVAL

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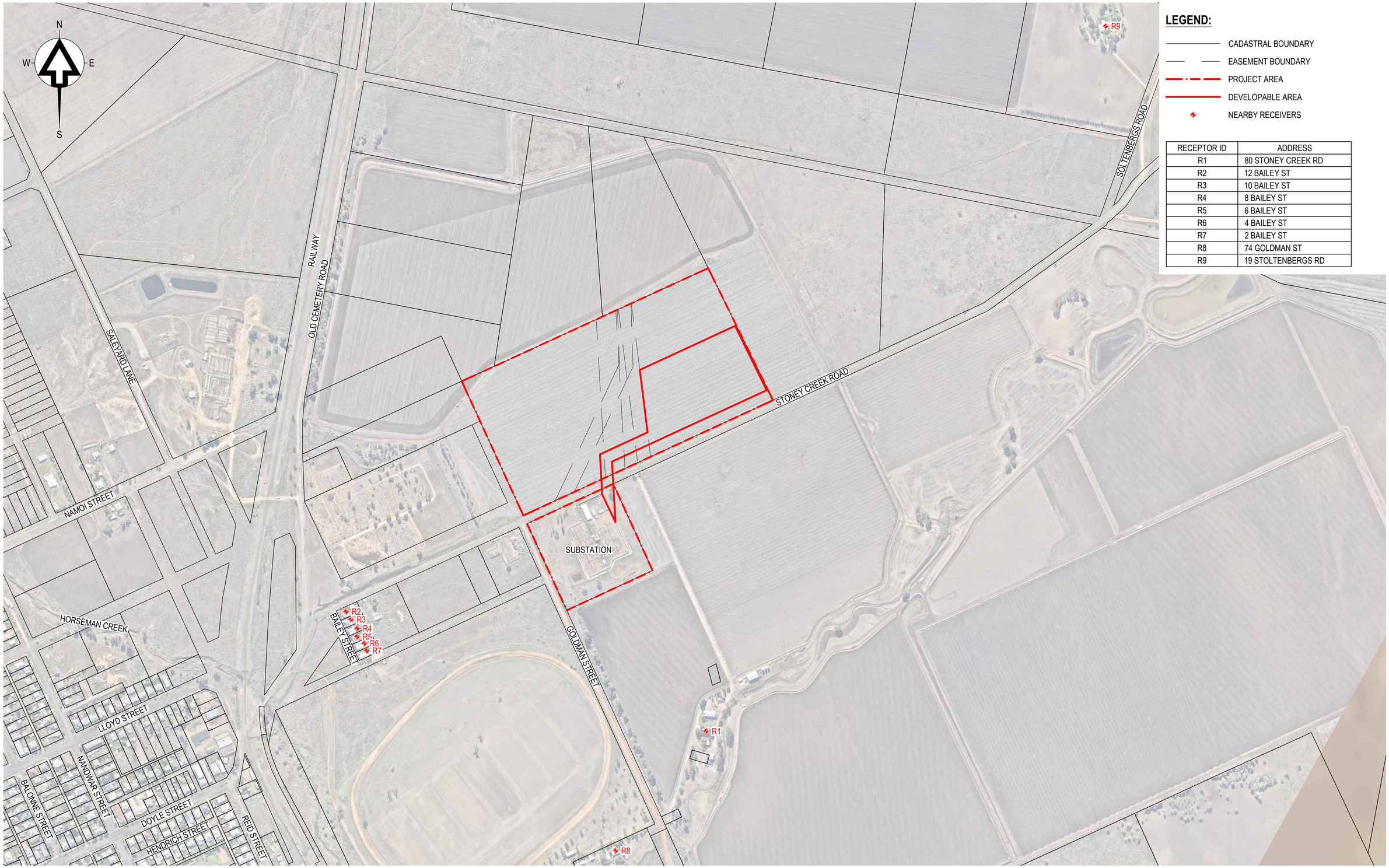

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SIZE: A1

STATUS: FOR APPROVAL

SCALE: 1:4000

DATUM: GDA2020 Z55

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REVISION: A

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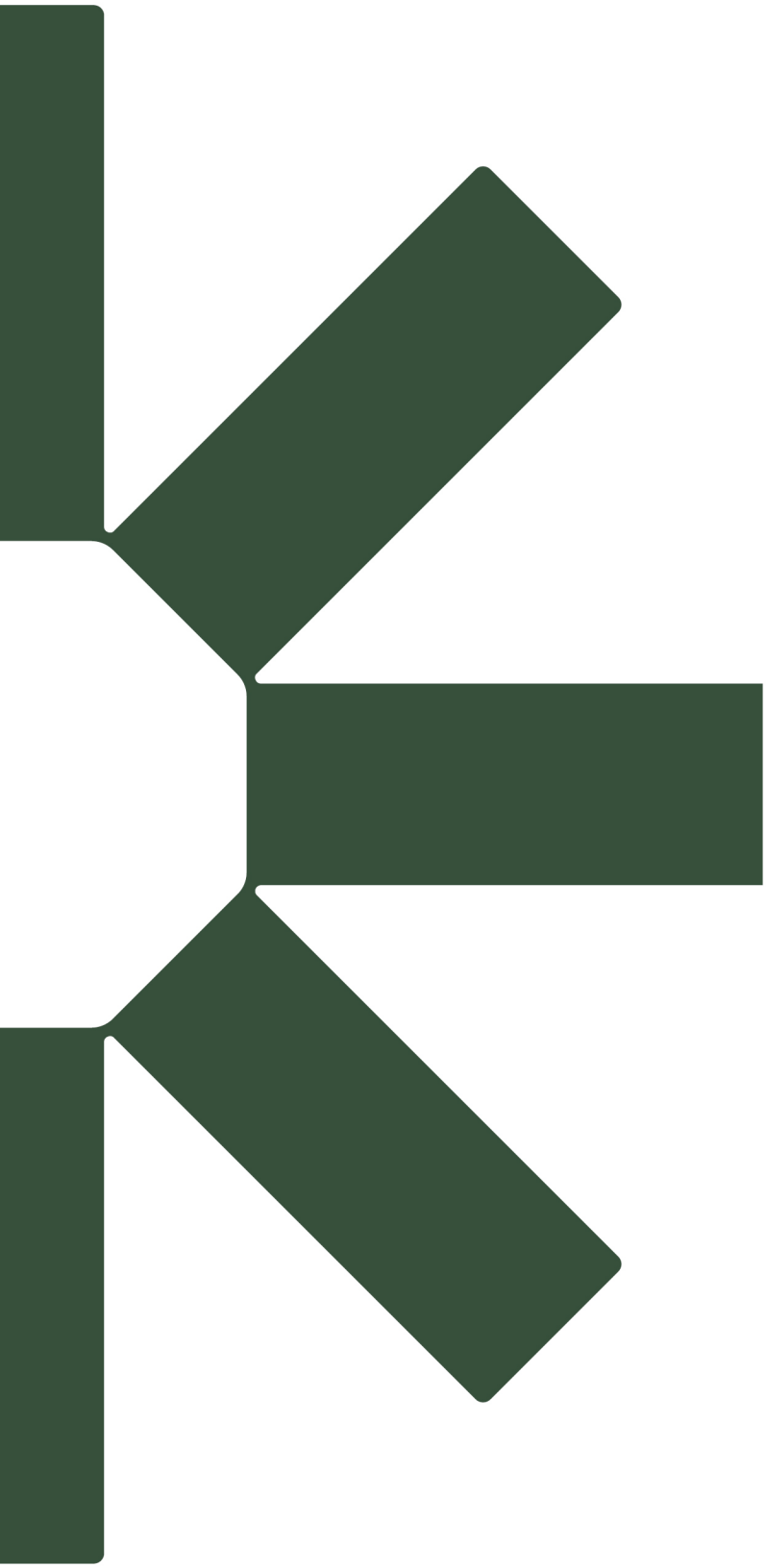

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