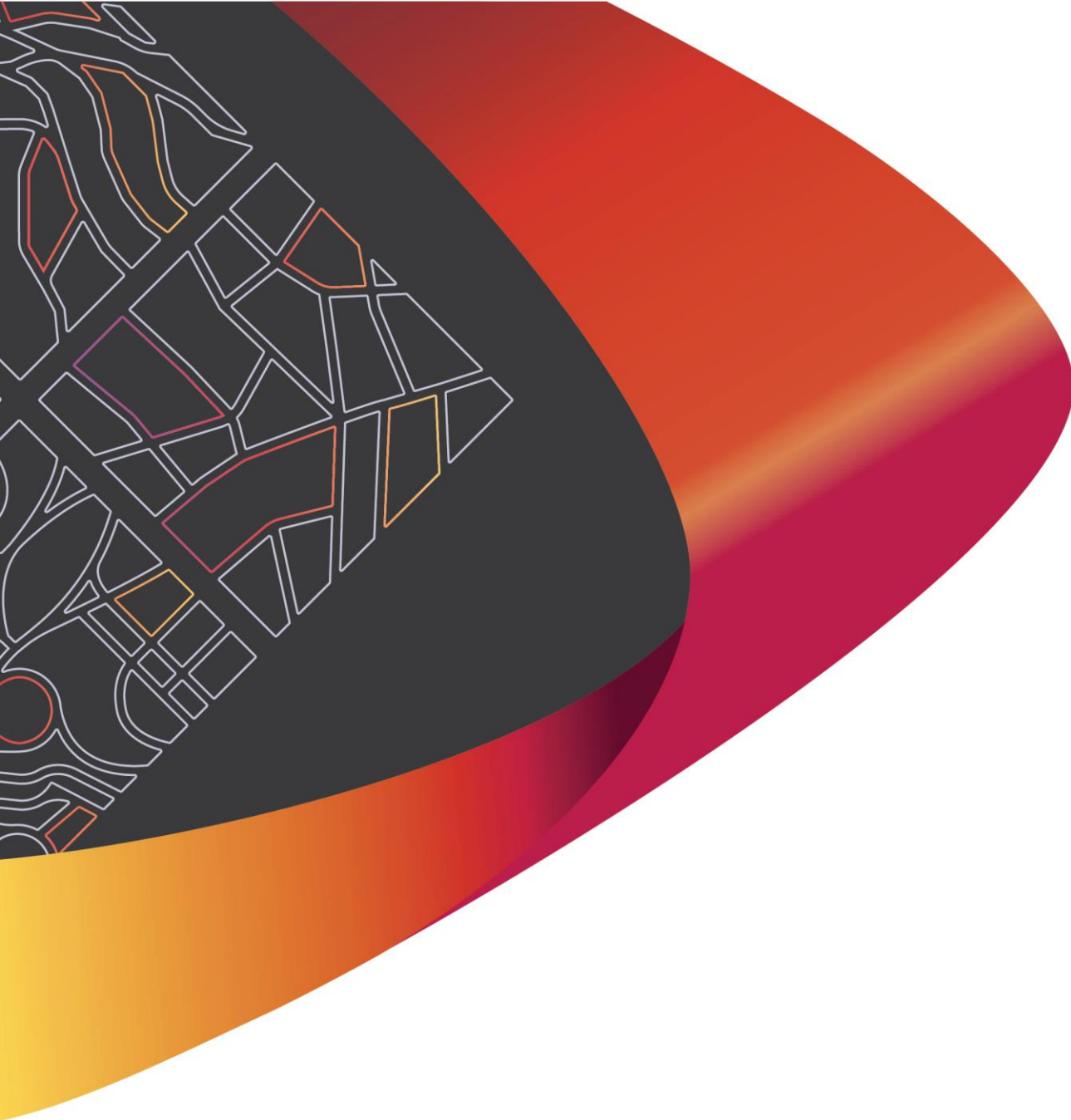




ACENERGY PTY LTD ON BEHALF OF ENERGY STORAGE
PROJECT NO 11 PTY LTD

Gara Battery Energy Storage System

SCOPING REPORT

Report No: P000974/REP

Rev: 001B

28 May 2024



Premise

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1. INTRODUCTION

1.1 Overview

ACEnergy Pty Ltd (the Applicant) is proposing to develop an approximately 400 Megawatt_{AC} (MW_{AC}), 1,760 MW hour (MWh) Battery Energy Storage System (BESS) at 86 Woodlands Road, Armidale NSW 2350 (Lot 1 DP246878; Lot 1 DP573787; Lot 7003 DP1060212; Lot 7009 DP1060213 and Lots 144, 145 and 153 DP755826). The development site would be part located Lot 1 DP246878 and Lot 1 DP753787 and would occupy an area of approximately of fourteen (14) hectares. Access would be provided from Waterfall Way/Grafton Road involving works affecting the road reserve and impacting Lot 7003 DP1060212 and Lot 7009 DP1060213. Subject to final design, the proposed transmission easement would impact Lot 1 DP246878 and Lots 144, 145 and 153 DP755826, together with an unconstructed Crown road reserve located between Lots 144 and 145.

The development site is in the Armidale Local Government Area (LGA) and is within the New England Renewable Energy Zone (REZ). The project is to be known as the Gara BESS. The Gara BESS is named for the Gara River, located near to the development site, and which was the host of an early hydro-electric scheme.

This scoping report has been prepared by Premise Australia Pty Ltd (Premise) to support a request to the Department of Housing, Planning and Infrastructure (DHPI) for the Secretary's Environmental Assessment Requirements (SEARs). The SEARs will inform preparation of an Environmental Impact Statement (EIS) submitted under Part 4 of the *Environmental Planning and Assessment Act 1979* (the EP&A Act). A Scoping Summary Table is provided in **Appendix A**.

ACEnergy's approach for selecting locations for large-scale battery storage projects begins with investigation of existing and potential renewable energy generators, proximity to and available capacity of terminal stations, and the grid's physical characteristics, utilising publicly available information and site surveys. AEnergy conduct extensive internal environmental due diligence on a site before proceeding with land acquisition. Consideration is given to each site's environmental impacts and overlays, distance to neighbouring dwellings, topographical location, access rights, current easements, and encumbrances. AEnergy's in-house design team produces concept plans supporting dynamic due diligence assessments.

The proposed Gara BESS includes:

- > Installation of containerised lithium-ion batteries with a capacity of up to 400 MW, 1,760 MWh, with associated power conversion systems, switchgear and a control building;
- > An overhead transmission line to connect the BESS to the existing 330 kV network;
- > Cabling and collector units, site office, storage area, internal access tracks, on-site parking, security fencing, switching station, and temporary construction laydown area; and
- > Utilisation of existing site access arrangements via Waterfall Way/Grafton Road.

The proposed BESS, associated infrastructure and development footprint will align with, and be contained within, the development site shown in **Figure 7**. A conceptual layout of the BESS and associated infrastructure will be detailed in the EIS for the project.

ACEnergy are securing the land and will be the landholder. It is possible that the BESS will be leased via a lease of premises.

The project is an SSD as declared by Section 2.6(1)(b) and under Section 20, Schedule 1 of *the State Environmental Planning Policy (Planning Systems) 2021* (Systems SEPP). The applicable consent authority for the proposal is the NSW Minister for Planning or the Minister's delegate.

A core objective of the project is to ensure a complete understanding of site sensitivities and to prioritise a strategy of avoid, minimise, and offset. Strategies for key impact areas in this respect are as follows:

Table 1 – Impact minimisation strategy

Key impact areas	Avoid	Minimise	Offset
Access	Prioritise the use of existing road infrastructure, subject to agreement with the roads authorities	Where impacts cannot be avoided, negotiate with regulators to ensure that designs minimise impact where possible	Any residual impacts (such as to native vegetation associated with road works) would be assessed via the project BDAR and residual liability would be discharged prior to works commencing.
Amenity, building environment and land use	The positioning of the facility has been carefully conceived to avoid impacts to nearby non-associated receivers.	Residual impacts would be identified through detailed assessment and measures taken to avoid and minimise these.	Where impacts cannot be avoided or minimised to an acceptable extent, agreements with neighbours would be negotiated to offset residual impacts.
Biodiversity	Prioritise development of lands that have been cleared of native vegetation	Where impacts cannot be avoided, negotiate with regulators to ensure that designs minimise impact where possible	Any residual impacts (such as to native vegetation associated with road works) would be assessed via the project BDAR and residual liability would be discharged prior to works commencing.
Economic	Economic impacts are largely positive.	Harm is minimised through ensuring the adoption of best practise principles in construction and operation.	No residual impacts requiring offsetting are predicted.
Hazard and Risks	Avoidance and minimisation of the risks of hazard would be delivered through a strong understanding of project risks, through specialist investigations, and adoption of key recommendations.		No residual impacts requiring offsetting are predicted.
Aboriginal Heritage	Known sites of Aboriginal	Where avoidance cannot be achieved,	Any unavoidable impacts (not expected) would be assessed

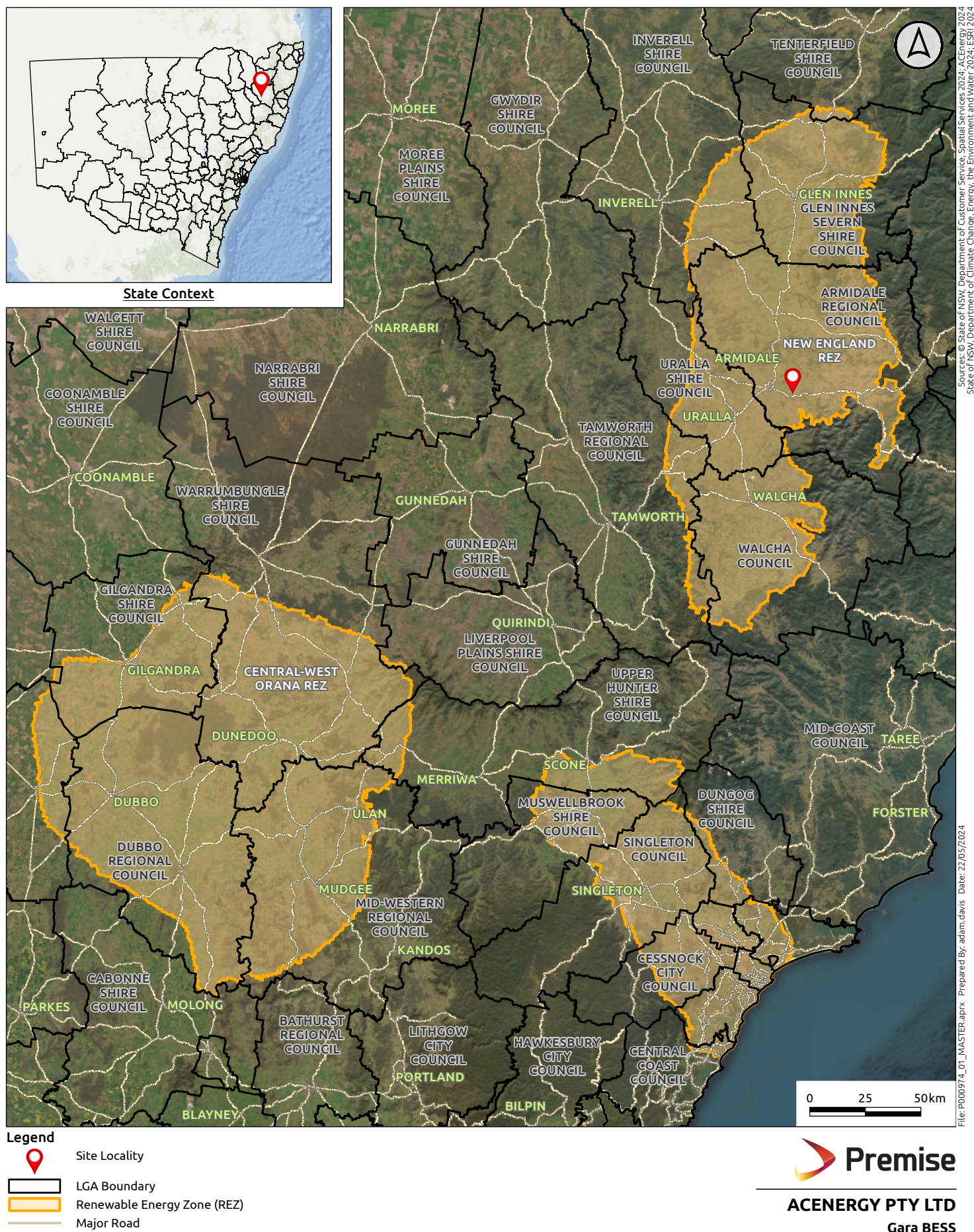
Key impact areas	Avoid	Minimise	Offset
	significance will be avoided. Sufficient investigations will be completed to identify any previously unidentified sites and these would also be avoided where possible.	impacts would be minimised through discussion with Registered Aboriginal Parties to agree to acceptable methods of minimisation. This will be delivered through the project ACHA.	and agreed with RAPs and Heritage NSW in advance and documented in the project ACHA.
Social Impact	A clear understanding of potential social impacts would be determined through effective, proactive, and genuine engagement with community stakeholders. Once these issues are clearly understood, strategies will be adopted via the project EIS to ensure avoidance and minimisation.		To the extent that residual impacts are identified, impacts would be offset by the overarching positive benefit associated with the delivery of the project, to meet the State and Federal goals around decarbonisation of the energy industry.
Water	Impacts to surface water are avoided through ensuring appropriate offsets between project infrastructure and mapped waterways.	Harm minimisation would be delivered through adoption of best practise principles outlined in adopted DPE Water riparian corridor guidelines	Offsetting, if required, would be completed in accordance with the average rule outlined in the DPE Water riparian corridor guidelines
Air quality	Impacts to air quality would be avoided/minimised through adopting standard mitigation measures, to be outlined in a project CEMP.		No residual impacts requiring offsetting are predicted.
Historic heritage	Site selection has avoided/minimised direct impacts through ensuring adequate separation to sites of historic heritage importance.		No residual impacts requiring offsetting are predicted.

Key features of the project are summarised in **Table 2**. Regional context is reflected in **Figure 1** and the local context is reflected in **Figure 2**. Site constraints are reflected in **Figure 5**.

Table 2 – Project summary

Project Element	Summary of the Project
Development site	Development Site: approximately 14.2 ha
Site details	86 Woodlands Road, Armidale NSW 2350 (Lot 1 DP246878; Lot 1 DP573787; Lot 7003 DP1060212; Lot 7009 DP1060213 and Lots 144, 145 and 153 DP755826, together with works with the Waterfall Way/Grafton Road reserve and an unconstructed Crown road reserve)
Development site	The development site of the BESS and associated operational and construction infrastructure, the transmission line to connect to grid infrastructure and any necessary road upgrade works.
Battery storage capacity and duration	Up to 400 MW/1,760 MWh, 4 hours storage
Project lifespan	40 years, with the possibility of upgrades to extend the operational life
Infrastructure	• An approximately 400 MW/1,760 MWh, 4 hour BESS • Underground cabling connecting BESS and MVPS; • An overhead transmission line of up to approximately 1 kilometre long connecting the BESS substation to existing 330kV transmission line to the north; • Control rooms, switch rooms and switching station; • Temporary construction compound including material laydown areas, site offices, vehicle parking, and amenities; • Construction of a new property access from Waterfall Way/Grafton Road; • Chain-link/barbed-wire security fence up to 1.8 metres in height; and • Specific native vegetation screening from identified visual impact locations if required.
Site Access	> Provide a site access from Waterfall Way/Grafton Road – to be assessed via the project traffic impact assessment
Access route	> Vehicles would access the development site via the New England Highway and Waterfall Way/Grafton Road, utilising a proposed access location. • It is anticipated that project infrastructure would be delivered to either the Port of Botany or Port Kembla and transported to the development site via roads approved for heavy vehicle use and then the existing access driveway (refer Figure 3 and Figure 7).
Construction	> Construction is expected to commence in late-2025 and occur over an 11 month period, including a peak period of 4.5 months. > Construction would occur during standard construction hours. However, it is anticipated that some activities that are inaudible, and would not result in amenity impacts to surrounding receivers, may be required to occur outside of standard hours in accordance with an Out-of-Hours Construction Protocol.

Project Element	Summary of the Project
Operations and maintenance	The project would be operated remotely with occasional maintenance activities generally be undertaken by up to five (5) personnel.
Decommissioning and rehabilitation	> The development site would be progressively rehabilitated during the decommissioning period, including removal of the temporary construction facilities. > At the end of operational life, components above ground and below ground (with depth subject to agreement with landowner) would be removed and land rehabilitated to pre-development conditions.
Workforce	Up to 70 construction jobs and 5 operational jobs
Hours of Operation	24 hours, 7 days a week





Legend

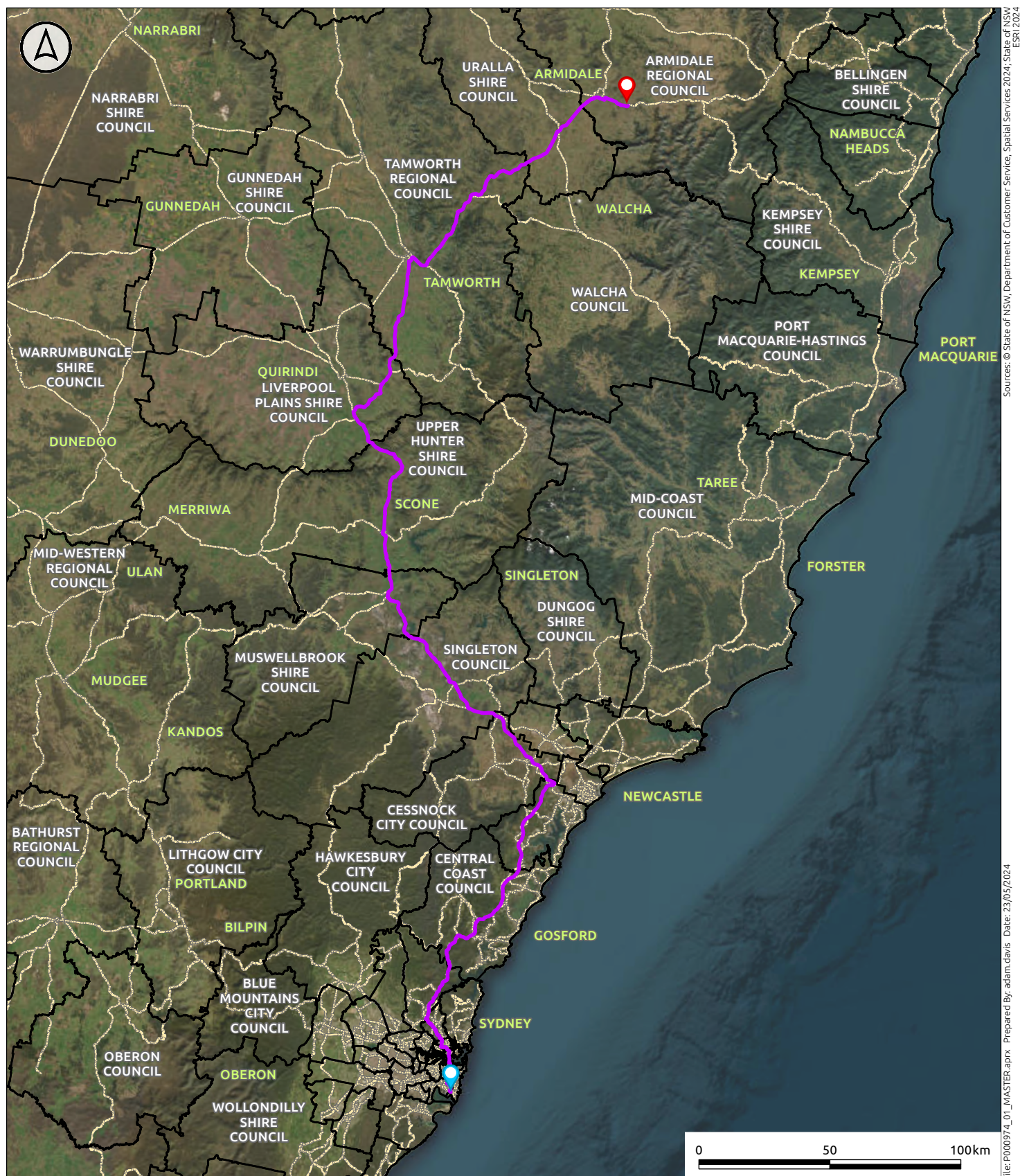
- Development Site
- LGA Boundary
- Renewable Energy Zone (REZ)
- Major Road
- Railway
- Major Water Body
- Major Watercourse

- State Forest
- NPWS Reserve
- Electricity Transmission Line**
- 66 kV
- 132 kV
- 330 kV

- Major Projects
- Renewable Energy Projects**
- Approved
- In planning
- Operational

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Figure 2



Sources: © State of NSW, Department of Customer Service, Spatial Services 2024; State of NSW, ESRI 2024
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Legend

- Port Botany
- Site Locality
- LGA Boundary
- Materials Transport Route
- Major Road

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Figure 3

1.2 Applicant

ACEnergy was founded out of the growing demand for renewable energy developments across Australia. ACEnergy's goal is to develop high quality utility-scale solar farm and BESS projects which will work towards a future of decarbonization.

ACEnergy have experience and capabilities in development of land and site acquisition, project planning and management, grid connections, design and engineering, offtake agreements and financial services. ACEnergy is based in Melbourne, Victoria, its head office is located at Level 3, 689 Burke Road, Camberwell, 3124, VIC and its ABN is 628 883 447.

1.3 Planning framework

The proposed BESS is defined as *electricity generating works* under the *Armidale Regional Local Environmental Plan 2012* (the ARLEP 2012) as it is:

"A building or place used for the purpose of—

(a) making or generating electricity, or

(b) electricity storage."

The proposed BESS development is a State Significant Development (SSD), pursuant to Section 20, Schedule 1 of the Systems SEPP as it is for the purposes of electricity generating works with an estimated cost of development (EDC) of more than \$30 million, and it is permitted with consent.

As the proposed development contains a BESS with a capacity of greater than 30 MW, the development represents designated development by reference to Section 7 of Schedule 3 of the EP&A Regulations. However, Section 4.10(2) of the EP&A Act provides that state significant development is not designated development. In any event, the requirement in relation to the designated development is to prepare an EIS in support of the DA. This is also a requirement of the SSD process, and thus there is no demonstrable difference in the approach.

The development site is zoned RU1 – Primary Production pursuant to the ALEP 2012 and within the RU1 zone electricity generating works are prohibited. However, Section 2.36 of the *State Environmental Planning Policy (Transport and Infrastructure) 2021* (Infrastructure SEPP) permits electricity generating works within prescribed rural zones, including the RU1. The Infrastructure SEPP prevails to the extent of any inconsistency with another environmental planning instrument, including the ALEP 2012. Thus the project is permitted with consent.

1.4 Report structure

Consistent with the requirements of the *State Significant Development Guidelines – Preparing a Scoping Report* (DPIE 2022), the report is structured as follows:

- > **Section 1** introduces the development site, its location, the proposed development, and the planning framework.
- > **Section 2** details the development's strategic context.
- > **Section 3** provides a description of the proposed project.

- > **Section 4** provides the statutory context.
- > **Section 5** provides details of community engagement completed during the scoping phase.
- > **Section 6** provides a summary of the proposed level of assessment of project impacts in the project EIS.

2. STRATEGIC CONTEXT

2.1 Policy

2.1.1 NSW 2021 PLAN (NSW GOVERNMENT 2011) AND RENEWABLE ENERGY ACTION PLAN (NSW GOVERNMENT 2013)

The NSW 2021 plan, released in 2011, sets state-wide priorities for action and guides resource allocation. Goal 22 of this plan seeks to protect the natural environment and includes a specific target to increase renewable energy. The plan states:

"We will contribute to the national renewable energy target by promoting energy security through a more diverse energy mix, reducing coal dependence, increasing energy efficiency, and moving to lower emission energy sources. Specific initiatives include:

- *Building the Moree solar power plant in partnership with the Commonwealth Government under the Solar Flagship Program*
- *Establishing a Joint Industry Government Taskforce to develop a Renewable Energy Action Plan for NSW to identify opportunities for investment in renewable energy sources."*

Since release of the 2021 plan, the NSW Government has overseen the development of the NSW Renewable Energy Action Plan (REAP). The vision of the plan is a 'secure, affordable and clean future for NSW'. Goal 1 of the REAP is to attract renewable energy investment, including to 'support mid-scale solar PV to enable an uptake of solar technologies where they are most cost effective'.

The proposed BESS sits comfortably within this state-led objective and is consistent with the goal and intent of the REAP. Large scale battery systems represent a fundamental component of the REAP, facilitating greater flexibility in electrical generation and stabilising the grid such that further deployment of renewables can be made possible.

Through assisting the expansion of renewable forms of electrical generation, the proposed BESS further supports the *NSW Government's Climate Change Policy Framework* (NSW, 2016). This framework is committed to effective action on climate change, outlining long term objectives to achieve net-zero emissions by 2050 and to make New South Wales more resilient to a changing climate. The achievement of net zero emissions by 2050 is reliant on transitions towards more sustainable and renewable forms of electrical production.

The project supports this objective by improving the reliability and stability of the electrical grid. The ability of the proposed BESS system to balance electrical demand and supply assists the management of variations in electrical demand and supply which are expected to increase with transitions to more sustainable and renewable forms of electrical production. The proposed development is consequently

consistent with the objective of the *NSW Government's Climate Change Policy Framework* (NSW, 2016), supporting transitions toward lower emissions and improving the resilience of NSW to a changing climate.

2.1.2 NSW NEW ZERO PLAN

Since release of the 2021 plan, the NSW Government has overseen the development of the NSW Net Zero Plan. The objective of the plan is to achieve net zero emissions by 2050 by creating new jobs, butting household costs and attracting investment. Net Zero Plan Stage 1: 2020-2030. The Net Zero Plan identifies four priority areas for action to achieve this objective which include:

1. Drive uptake of proven emissions reduction technologies that grow the economy, create new jobs or reduce the cost of living
2. Empower consumers and businesses to make sustainable choices
3. Invest in the next wave of emissions reduction innovation to ensure economic prosperity from decarbonisation beyond 2030
4. Ensure the NSW Government leads by example

The proposed BESS is consistent with the state-led priorities, particularly Priority 1 and Priority 4, by creating new jobs and supporting the growing renewable energy market. Large scale battery systems are a new proven technology that is contributing to the stability and reliability of the Australian electrical network. The battery systems have been developed to support the increased number of renewable energy sources that are emerging across Australia to support the objective to achieve net zero emissions.

2.1.3 NSW ELECTRICITY STRATEGY (NSW GOVERNMENT 2019)

The NSW Electricity Strategy 2019 is a state-wide plan to ensure a reliable, affordable, and sustainable electricity future. The purpose of the NSW Electricity Strategy is to:

"Improve the efficiency and competitiveness of the NSW electricity market and encourage investment in new price reducing generation and energy saving technology."

The strategy is underpinned by the following four important principles:

- *New market-driven electricity generation should drive down prices and help protect the environment. This is because firmed renewables are the cheapest form of new reliable generation and cheaper than the current wholesale price*
- *As electricity is an essential service, state and Commonwealth governments are ultimately responsible for reliable electricity*
- *Government action should limit costs to households, businesses and taxpayers*
- *Government action should be consistent with the nature of the national electricity system and NSW policy objectives.*

In relevance to meeting the State's Energy Security Target the Electricity Strategy also states that:

NSW is projected to experience its tightest reserve conditions in 2023-2024 after the Liddell power station closes in April 2023.

The proposed BESS project supports the objectives of NSW Electricity Strategy, improving the reliability and affordability of electricity through its ability to balance electrical supply and demand. Large-scale energy storage is a core component of the NSW Electricity Strategy due to its ability to enhance the dispatchability of renewable energy generation and provide firming capacity to the broader NSW market.

2.1.4 NSW ELECTRICITY INFRASTRUCTURE ROADMAP (DPIE 2020)

DPIE released the NSW Electricity Infrastructure Roadmap in November 2020. Key actions from the Roadmap include:

- > Renewable Energy Zones (REZs);
- > Transmissions development scheme;
- > Electricity Infrastructure Investment Safeguard;
- > Pumped Hydro Recoverable Grants Program; and
- > Internationally competitive NSW industries.

Five REZs are at various stages of development including in the Central West-Orana, New England, South-West, Hunter-Central Coast, and Illawarra, selected based on the availability of resources and existing connecting infrastructure. The development site is located within the New England REZ, which supports the establishment of electricity generating infrastructure.

2.1.5 ENERGY SECURITY SAFEGUARD (NSW GOVERNMENT 2020)

The Energy Security Safeguard is part of the NSW Electricity Strategy and legislation to establish the Safeguard was passed by Parliament in May 2020 with an objective to improve the affordability, reliability, and sustainability of energy through the creation of financial incentives for energy activities.

Under the *Electricity Supply Amendment (Peak Demand Reduction Scheme) Regulation 2021*, the Government will establish a new Peak Demand Reduction Scheme (PDRS) to support activities that reduce demand at peak times, including flexible demand response.

Coupled with the Energy Saving Scheme (ESS), the PDRS is expected to deliver a net economic benefit for New South Wales of \$1.2 billion.

The proposed BESS project supports the objectives of the Energy Security Safeguard by providing capacity to reduce peak demand during summer periods and assists NSW in meeting its peak demand reduction targets, especially with the scheduled closure of Liddell Power Station in 2023.

2.1.6 DRAFT ENERGY POLICY FRAMEWORK

The Draft Energy Policy Framework was released for comment in November 2023 and was on exhibition until 29 January 2024. The guide to the proposed framework does not specifically address the delivery of battery storage however BESS projects are consistent with the intent of the draft framework, which seeks to support the transition to renewable energy, reduce emissions and secure an affordable supply of electricity for the people of NSW. The development of battery storage projects sits comfortably within this framework, as these assist to provide firming capacity to the network and improve the uptake of renewable forms of energy, particularly solar.

The draft framework includes draft documents to assist with agreed benefit sharing and neighbour agreements. Given the changing situation with the benefit sharing position, it is proposed to continue engaging with Council on this matter to reach a point of alignment that can be clearly articulated in the project EIS.

2.1.7 ARMIDALE PLAN 2040

The Armidale Plan 2040 is the Armidale Regional Council's strategy for guiding land use planning decisions for the Armidale Region for the next 20 years. The Armidale Plan acknowledged the following key renewable energy focussed outcomes:

"Promote Renewable Energy - A Solar Farm is proposed to the north of the UNE. There is the potential for a research and development hub focusing on renewable energy."

"The EcoARC Environmental Sustainability Strategy provides a 'Greenprint' for the improvement of sustainability in the Armidale region. The Strategy has as its starting point the UN's 17 Sustainable Development Goals and sets in place key success indicators, and strategic, advocacy and educational objectives. ARC has set a zero emissions target for the Armidale LGA of 2030."

The proposed BESS project supports the net-zero emissions by 2030 goal for the Armidale LGA by providing capacity to reduce the Region's reliance on fossil fuels and increase electricity storage for reuse during peak consumption periods.

2.1.8 ARMIDALE LOCAL STRATEGIC PLANNING STATEMENT

Armidale Regional Council adopted the Armidale Local Strategic Planning Statement (LSPS) in October 2020. The LSPS sets out eight (8) planning priorities for the Armidale LGA to improve the social, environmental, and economic development of the Armidale LGA. These planning priorities include housing, health services, tourism, transport, employment, business, agriculture, arts, and renewable energy.

Planning Priority eight is relevant to the proposed development:

"Promote wind, solar and other renewable energy production opportunities."

Via planning priority eight, the Armidale Regional Council is committed to promoting renewable energy production including the development of BESS.

The development is consistent with the vision of planning priority eight under the Armidale LSPS.

2.2 Local context

The development site is located approximately 12 km east of the CBD of Armidale in the Northern Tablelands of NSW. The development site is in the Armidale Local Government Area (LGA) and is within the New England Renewable Energy Zone (REZ).

In 2021, Armidale had a total population of 23,967 people (Australian Bureau of Statistics). It is a regional centre and includes residential properties, schools, TAFE, a university, museums, sporting grounds, health services, and several business and retail properties as well as the Armidale Airport and train station.

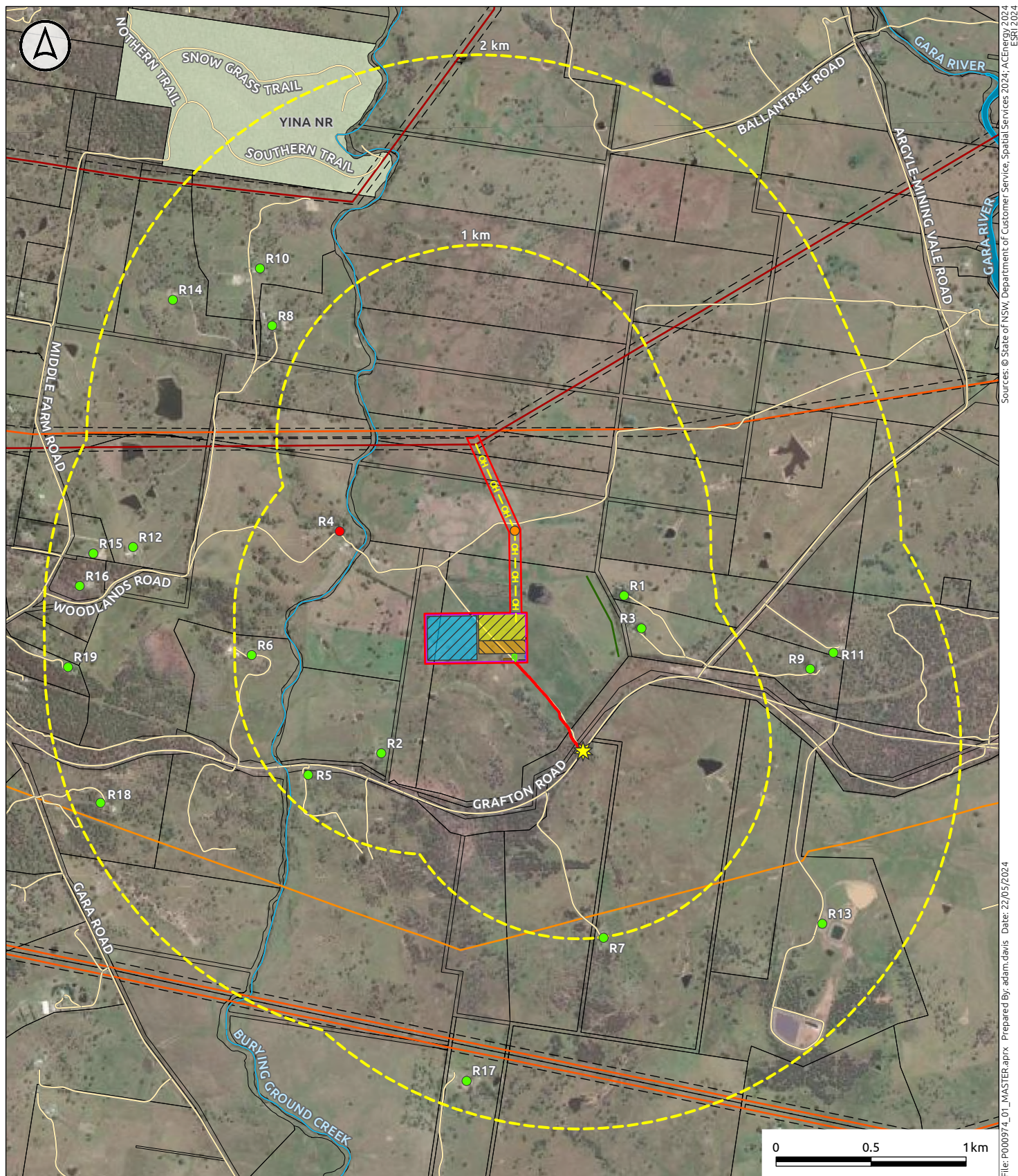
Armidale is a major agricultural centre in the New England Region and is roughly halfway between Brisbane and Sydney. The University of New England (UNE) and the DPI Armidale Livestock Industries Centre are located approximately 14 km northwest of the development site, with focus on rural research and education.

Several nature reserves are situated around the development site, including Gara Dam (2km east of the development site), Yina Nature Reserve (3km northwest of the development site), and Imbota Nature Reserve (5km south east of the development site). Waterways in the area include Burying Ground Creek to the east of the development site, Gara River to the west of the development site, and Commissioners Waters to the south of the development site.

The Oxley solar farm (approved) is located to the south of the development site across Waterfall Way/Grafton Road and the development site is not far from other solar projects including the Metz, New England, Uralla and Tilbuster solar projects.

There are five (5) non-associated residential receivers located within 1km of the development site. The closest zoned residential land is located approximately 6 km east of the development site.

Receiver locations are depicted in **Figure 4**.



Legend

- Development Site
- ★ Site Access
- Indicative BESS Area
- Indicative Switching Station
- Indicative Connection Asset
- OH — O Indicative OH Connection Route
- Indicative Power Pole

- Lot
- Road
- Major Water Body
- Major Watercourse
- NPWS Reserve
- Easement

- Electricity Transmission Line**
- 66 kV
- 132 kV
- 330 kV
- Receivers**
- Associated
- Non Associated

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Figure 4

2.3 Site description

The development site is located at 86 Woodlands Road, Armidale NSW 2350 (Lot 1 DP246878 and Lot 145 DP755826). The development site is bound by Waterfall Way/Grafton Road in the south, and agricultural lands in the west, north and east. The development site is located on land zoned as RU1 - Primary Production under the ARLEP 2012 and is used primarily for agricultural activities such as dryland grazing. The development site has an area of approximately 14 hectares, located in the eastern extent of Lot 1 DP246878.

The development site is generally cleared of vegetation due to historic agricultural activities. Elsewhere in the host landholding is planted vegetation located towards the north of the development site and along Waterfall Way/Grafton Road. There is also farming infrastructure and several farm dams. Lot 1 DP246878 does not contain any dwellings. There will be some impacts to exotic and native vegetation on site, to be assessed by a BDAR. A number of environmental constraints apply to the land, including mapped bushfire prone land in the southern extent of Lot 1 DP246878 (refer **Figure 5**).

The development site does not contain any mapped items of heritage significance and is not mapped as containing sensitive biodiversity. The development site is not mapped as a flood planning area via the ARLEP, however this is pending a detailed review of available flood information for this site during the preparation of an EIS.

Waterways in the area include Burying Ground Creek to the east of the development site, Gara River to the west of the development site, and Commissioners Waters to the south of the development site.

One 132kV and one 330kV electricity transmission line run to the north of Lot 1 DP246878, and two 132kV lines run to the south of Waterfall Way/Grafton Road adjacent to Lot 1 DP246878.

Lot 1 DP246878 has a frontage to Waterfall Way/Grafton Road to the south, which will be the point of access for construction and operation via a new access point. The current access to Lot 1 DP246878 is through a dirt driveway off Waterfall Way/Grafton Road, which will be upgraded in the development.

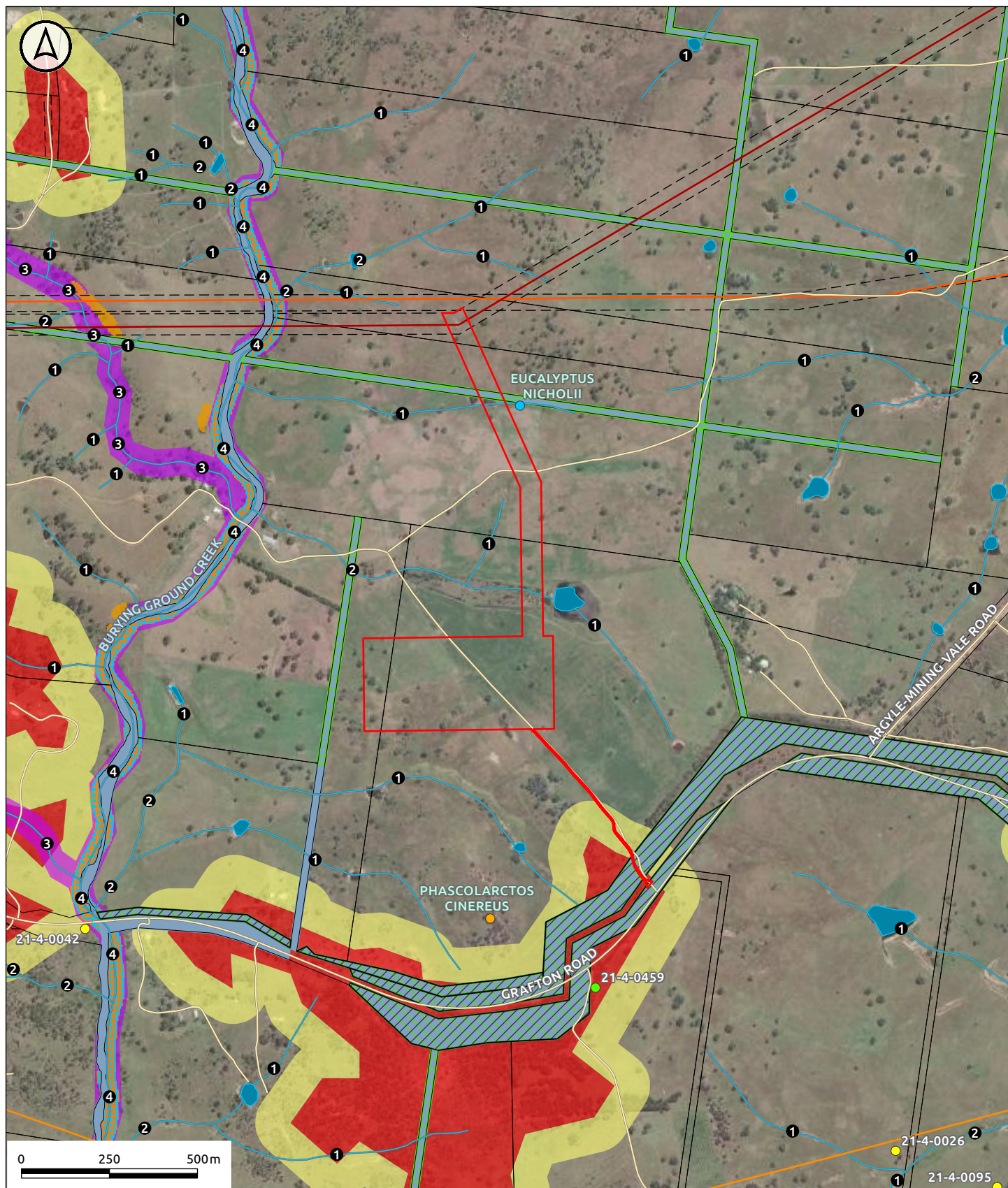
The development site is located in an undulating, rural area (refer **Figure 6**).

A review of the land titles for the development site confirms the following restrictions and easements:

- > Lot 1 DP246878
 - 1 Land excludes minerals and is subject to reservations and conditions in favour of the Crown - see Crown grant(s)
 - 2 DP649687 easement for pipeline 2 wide affecting the part(s) shown so burdened in DP649687
 - 3 AK259106 mortgage to Greater Bank Limited
 - notations-----
 - NOTE: this folio may be associated with a Crown tenure which is subject to payment of an annual rent. for further details contact Crown lands.
 - Unregistered dealings: nil
- > Lot 1 DP573787
 - 1 Land excludes minerals and is subject to reservations and conditions in favour of the Crown - see Crown grant(s)

- 2 X943590 easement for transmission line affecting the part of the land within described shown in DP639829 2012497 easement vested in New South Wales Electricity Transmission Authority
- 3 DP860147 right of carriageway variable width affecting the part(s) shown so burdened in DP860147
- 4 L298467 easement for transmission line 45.72 wide affecting the part of the land shown in plan marked b in DP939930 3415544 easement now vested in NEW SOUTH WALES ELECTRICITY TRANSMISSION AUTHORITY
- 5 AK259106 mortgage to Greater Bank Limited
- * 6 AT724759 caveat by Acenergy Pty Ltd
- note: this folio may be associated with a crown tenure which is subject to payment of an annual rent. for further details contact crown lands.
- unregistered dealings: nil
- > Lot 7003 DP1060212
 - The land is a reserve within the meaning of part 5 of the *Crown Lands Act 1989* and there are restrictions on transfer and other dealings in the land under that act, which may require consent of the Minister.
 - Limited title. limitation pursuant to section 28t(4) of the *Real Property Act, 1900*. the boundaries of the land comprised herein have not been investigated by the Registrar General.
 - The plan defining the land in this folio which was prepared for identification purposes is now suitable for title issue. it is not a current plan in terms of section 7a of the *Conveyancing Act 1919*.
- > Lot 7009 DP1060213
 - The land is a reserve within the meaning of part 5 of the *Crown Lands Act 1989* and there are restrictions on transfer and other dealings in the land under that act, which may require consent of the Minister.
 - Limited title. limitation pursuant to section 28t(4) of the *Real Property Act, 1900*. the boundaries of the land comprised herein have not been investigated by the Registrar General.
 - The plan defining the land in this folio which was prepared for identification purposes is now suitable for title issue. it is not a current plan in terms of section 7a of the *Conveyancing Act 1919*.
- > Lot 144 DP755826
 - 1 Land excludes minerals and is subject to reservations and conditions in favour of the Crown - see Crown grant(s)
 - 2 L298467 easement for transmission line affecting the part of the lot 152 & lot 153 above described shown so burdened in vol 2002 fol 168 O896511 easement vested in New South Wales Electricity Transmission Authority
 - 3 AE707828 easement for energy transmission line affecting Lots 144 & 151 to 153 shown as "proposed easement 60 wide" in DP639301
 - NOTE: This folio may be associated with a crown tenure which is subject to payment of an annual rent. for further details contact crown lands.
 - Unregistered dealings: nil
- > Lot 145 DP755826

- 1 Land excludes minerals and is subject to reservations and conditions in favour of the Crown
- see Crown grant(s)
 - 2 X943590 easement for transmission line affecting the part of the land within described shown in DP639829 2012497 easement vested in New South Wales Electricity Transmission Authority
 - 3 DP860147 right of carriageway variable width affecting the part(s) shown so burdened in DP860147
 - 4 L298467 easement for transmission line 45.72 wide affecting the part of the land shown in plan marked b in DP939930 3415544 easement now vested in New South Wales Electricity Transmission Authority
 - 5 AK259106 mortgage to greater bank limited * 6 AT724759 caveat by Acenergy Pty Ltd
 - note: this folio may be associated with a crown tenure which is subject to payment of an annual rent. for further details contact crown lands.
 - Unregistered dealings: nil
- > Lot 153 DP755826
- 1 Land excludes minerals and is subject to reservations and conditions in favour of the Crown
- see Crown grant(s)
 - 2 L298467 easement for transmission line affecting the part of the lot 152 & lot 153 above described shown so burdened in vol 2002 fol 168 o896511 easement vested in New South Wales Electricity Transmission Authority
 - 3 AE707828 easement for energy transmission line affecting Lots 144 & 151 to 153 shown as "proposed easement 60 wide" in DP639301
 - NOTE: This folio may be associated with a crown tenure which is subject to payment of an annual rent. for further details contact crown lands.
 - Unregistered dealings: nil



Legend

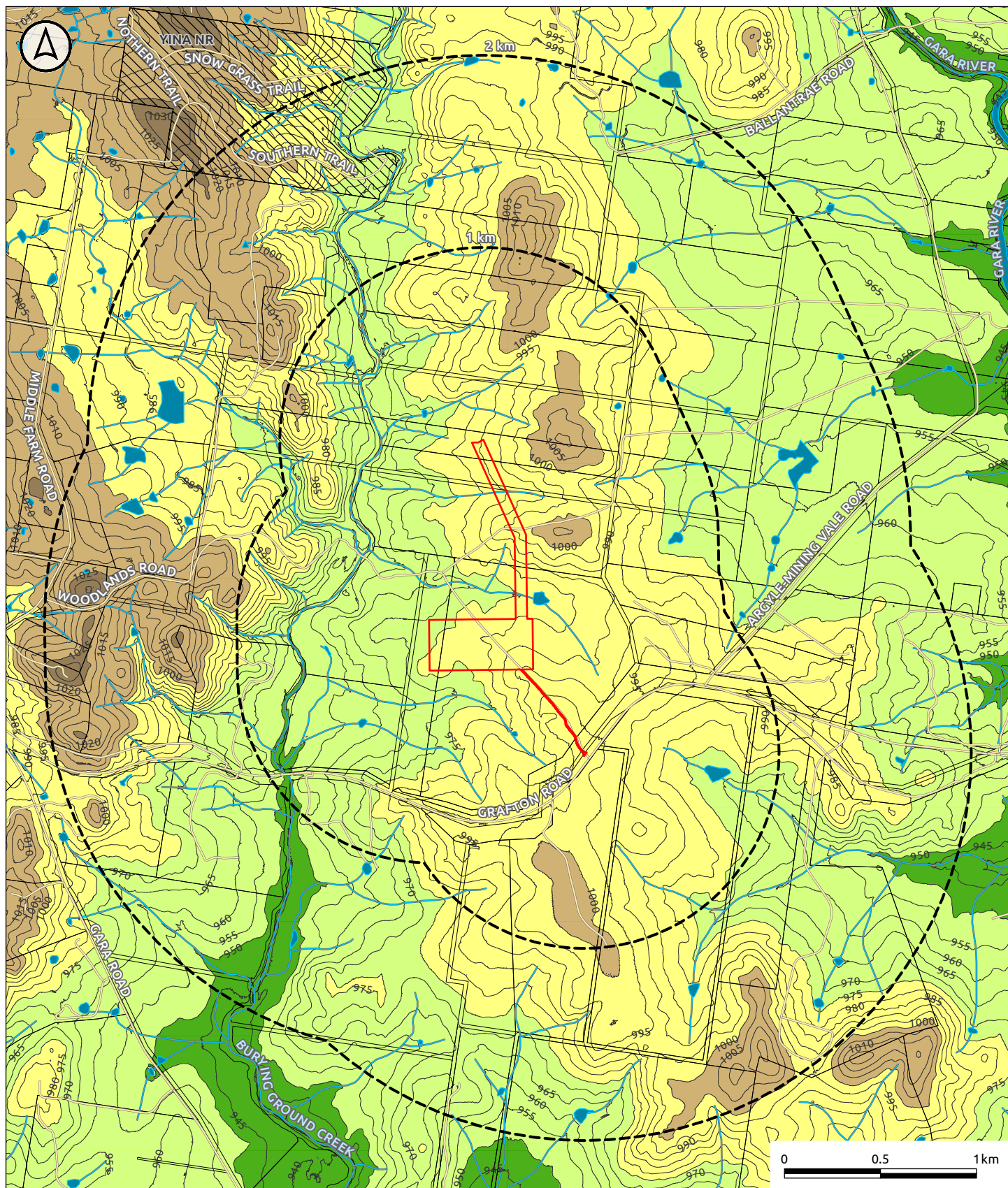
- Development Site
- Lot
- State Government Land Parcel
- Crown Land
- Crown Enclosure Permit
- Crown Reserves
- Easement
- Road
- Water Body

- Watercourse (Strahler Stream Order)
- Key Fish Habitat - Northern Rivers
- Biodiverse riparian land
- Native Vegetation Regulatory Map**
- Vulnerable Regulated Land
- Bush Fire Prone Land**
- Vegetation Category 1
- Vegetation Buffer

- Electricity Transmission Line**
- 66 kV
- 132 kV
- 330 kV
- Threatened Species Records**
- Fauna
- Flora
- Aboriginal Heritage Sites**
- Artefact
- Modified Tree (Carved or Scarred)

Premise
ACENERGY PTY LTD
Gara BESS

Figure 5



- Legend**
- Development Site
 - Lot
 - Road
 - Water Body
 - Watercourse
 - NPWS Reserve
 - Natural Contours (5m Interval)

Elevation (m)	
	925 - 950
	950 - 975
	975 - 1,000
	1,000 - 1,025
	1,025 - 1,050



ACENERGY PTY LTD
Gara BESS

Figure 6

3. PROJECT DESCRIPTION

3.1 Proposed development overview

The proposed BESS will align with and be contained within the development site located in the eastern extent of Lot 1 DP246878, as shown in **Figure 7**. The connection route to connect to the 330kV transmission line to the north is also within the development site, affecting Lot 1 DP246878 and Lot 145 DP755826.

A BESS is a type of energy storage system which makes use of batteries to store and then distribute energy in the form of electricity. The batteries are charged through the storage of excess energy created in nearby wind or solar farms or, through grid connections.

Proposed development includes an up to 400 MW/1,760 MWh BESS, as well as on site energy storage containers, MVPS containers, and a connection station including control rooms. The development site will have an area of approximately 14 hectares.

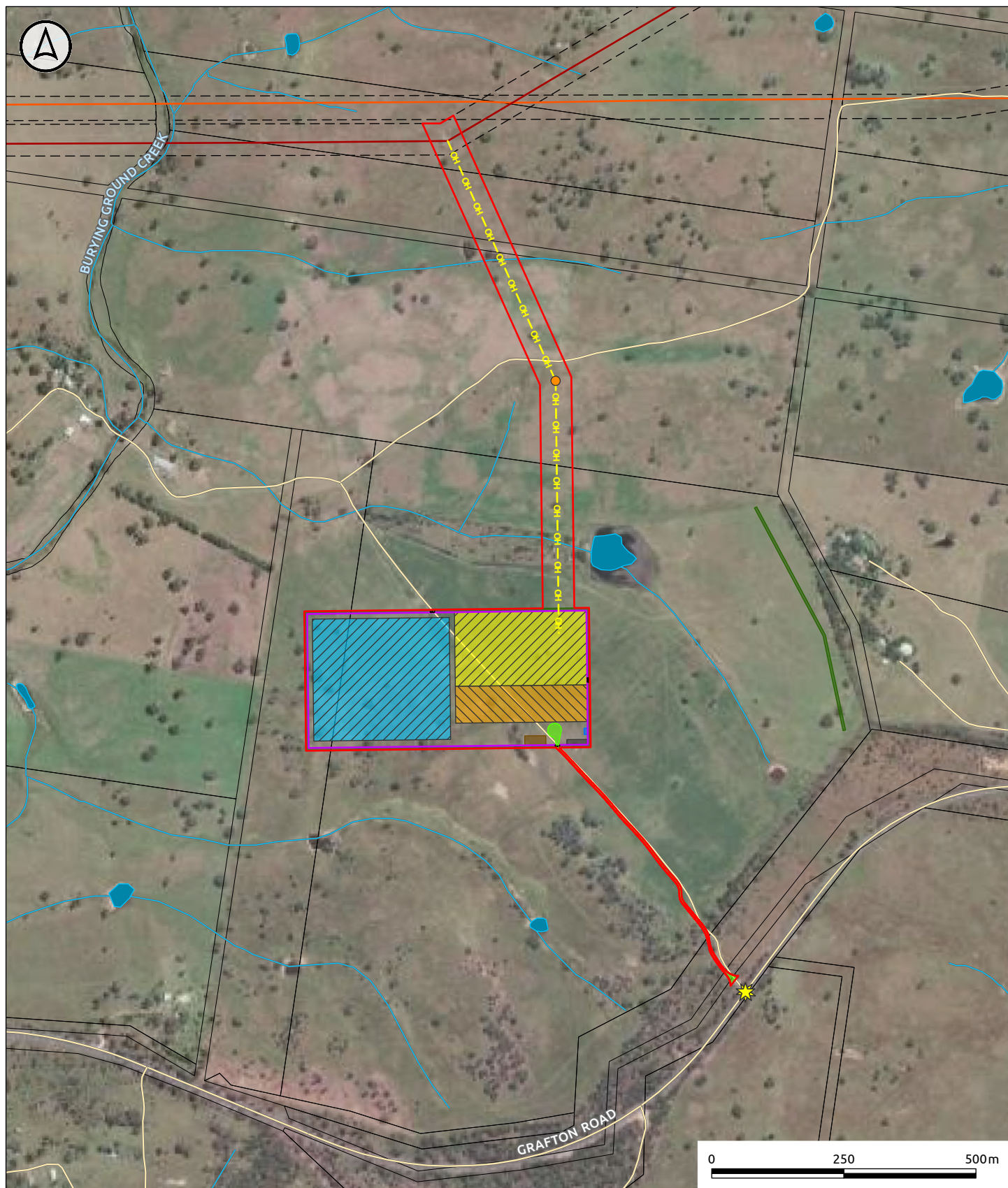
The development site entrance and an access road will be located at the southern corner of the Lot 1 DP246878 entering from Waterfall Way/Grafton Road. A security fence will be constructed around the development site along with vegetation screening outside of the fence to screen the BESS from nearby receivers.

The Gara BESS will comprise of the following key components:

- > Enclosed lithium-ion batteries;
- > Power conversion systems including associated transformers;
- > Underground power and fibre optic cabling interconnecting the equipment;
- > Grid connection equipment including switchgear, protection and control equipment, metering, reactive power equipment, filtering equipment, auxiliary transformers and enclosures/buildings for housing equipment;
- > An underground or overhead transmission line of up to approximately 1 kilometre long to connect the BESS to the existing 330kV transmission line;
- > Earthing and lightning protection systems;
- > Site office, storage area/enclosure, internal access tracks, on-site parking, security fencing, CCTV, and temporary construction laydown area;
- > Switching station;
- > Vegetation screening;
- > Upgrade of the existing site access from Waterfall Way/Grafton Road to the south.

The primary components associated with the installation of the BESS are as follows:

- > Site investigations, vegetation clearing, levelling, access way construction, drainage system installation and installation of foundations/supports to install equipment on;
- > Transport to site and installation of equipment;
- > Testing and commissioning of the equipment;
- > Operation and maintenance.



Legend

- Development Site
- Site Access
- Indicative Site Access Road
- Indicative Security Fence
- Indicative Site Office
- Indicative Car Park
- Indicative Construction Hard Stand
- Indicative Landscaping

- Indicative BESS Area
- Indicative Switching Station
- Indicative Connection Asset
- Indicative OH Connection Route
- Indicative Power Pole
- Electricity Transmission Line
 - 132 kV
 - 330 kV

- Easement
- Lot
- Road
- Water Body
- Watercourse


Premise
ACENERGY PTY LTD
Gara BESS

Figure 7

3.2 Project phases

3.2.1 CONSTRUCTION

The construction period is estimated to be 11 months and is expected to commence late-2025. Duration of peak construction period is approximately 4.5 months.

Construction or upgrading activities would occur during standard construction hours (7 am to 6 pm Monday to Friday, 8 am to 1 pm Saturdays; and at no time on Sundays and NSW public holidays.)

Some construction and upgrading activities that are inaudible and would not result in amenity impacts to surrounding receivers may be undertaken outside of standard hours in accordance with construction noise protocol.

A security fence will be installed on the development site boundary and access tracks will be constructed. Construction will require the use of water trucks, graders, flatbed trucks, skid steers, front end loaders, roller compactors, trenchers, backhoes, gravel trucks and aerial lifts.

Batteries required for the development would be manufactured offsite and delivered for installation following completion of concrete footing installation. Deliveries of other equipment will be made via flatbed trucks on the approved route and via the approved site entrances. The nominated route is Port Botany > Friendship Road > M1 > M15 > New England Highway > Urall Rd > Kentucky St > Canambe St > Waterfall Way/Grafton Road.

Seven key construction stages (stages 3, 4, 5, 6 overlap during the 4.5 month peak construction period):

1. Establishment, drainage, roads & fencing
2. Footing installation
3. Delivery and installation of cabling
4. Steel platform installation
5. MVPS & BESS delivery & installation, including electrical installation
6. Control room, transformer & switchgear delivery & installation
7. Commissioning & demobilisation

The primary components associated with the installation of the BESS are as follows:

- > Off-site manufacture of the BESS equipment.
- > Vegetation clearing to provide a constructable site.
- > Installation of fencing and gates to secure the development site, connection station and BESS area.
- > Levelling the development site as needed.
- > Installation of concrete footings and steel platforms on which to install the BESS, MVPS containers and switching station.
- > Delivery and installation of BESS.
- > Underground cabling and construction of earthing system.
- > Auxiliary power protection, indication and control systems.
- > Lighting inside BESS and MVPS containers to provide illumination for operation and/or maintenance, when needed, at night.

- > Control rooms and connection station.
- > Ancillary high voltage equipment, such as circuit breakers, switching equipment, filters, transformers, and other electrical protection equipment.
- > Connection of the BESS to existing transmission network.
- > Testing and commissioning.

The project is expected to generate up to 70 Full Time Equivalent (FTE) jobs during construction.

3.2.2 OPERATION

It is anticipated that the BESS would be operational for a period of approximately 40 years, operating 24 hours a day, seven days a week. The area of the BESS would be leased for the duration of the development from the associated landowners.

Once operational the BESS will be operated by site-based staff whose routine work generally involves:

- > Monitoring, testing and maintenance of onsite equipment;
- > Receipt of goods;
- > Removal of waste; and
- > Other general site maintenance (e.g. vegetation management).

The above activities are expected to generate up to five (5) FTE jobs during operation, associated with operation, maintenance, and vegetation management.

The remainder of Lot 1 DP246878 could continue to be used for agricultural purposes surrounding the BESS development site, such as livestock grazing or cropping. This would assist to control fuel loads surrounding the development and maximise economic output from the subject land.

3.2.3 DECOMMISSIONING

It is anticipated that the BESS would be operational for a period of approximately 40 years after which time the existing BESS would be removed and the development site would be decommissioned, noting that the switching station may remain on site after decommissioning subject to a decision by the electricity authority. Upon decommissioning, the following indicative steps would occur:

- > BESS and associated infrastructure would be unbolted from concrete slabs and removed by crane onto transporters. All site infrastructure would be taken away from site for resale or to an appropriate recycling or waste facility;
- > Underground services would be cut back to below ground level and capped, with the agreement of landowners; and
- > The development site would then be landscaped to a safe, clean, and stable state enabling it to return to an unhindered use for agricultural or other permissible purpose.

It is possible that the infrastructure may be upgraded rather than decommissioned and the lifespan extended, subject to necessary approvals and agreements with landowners.

3.3 Cumulative impacts

Cumulative impacts, as defined by the *Cumulative impact assessment guideline* (DPIE, 2022) (the 'CIA guideline'), are a result of incremental, sustained, and combined effects of human action and natural variations over time and can be both positive and negative.

The development of any project has the potential to lead to an accumulation of impacts, either associated with the nature of construction or operation activities occurring on site, or in conjunction with other projects being developed in the locality or region.

An initial review of renewable SSD projects within close proximity to the development site, registered via the Major Projects Portal (NSW DPE, 2022), has been conducted to determine the scope for potential for cumulative impacts. This review has identified several other SSD projects that are currently seeking approval including Armidale BESS (SSD-23515853), Armidale East BESS (SSD-65058714), and Eathorpe BESS. There were also two projects that have existing approvals which include Oxley Solar Farm (SSD-10346) which was approved on 11 December 2023, and Metz Solar Farm (SSD-49505734), which was approved on 18 July 2017.

Cumulative impact assessment levels for each assessment matter, as defined by the CIA guideline, are reproduced in **Table 3**.

Table 3 – Cumulative Impact Assessment Level Definitions

Assessment Level	Description (refer to Appendix B of the CIA Guidelines (DPIE 2022))
Detailed assessment (D)	The project may result in significant impacts on the matter, including cumulative impacts. Detailed assessment is characterised by: > Potential overlap in impacts between a future project (e.g. Project A) and the proposed project > Potential for significant cumulative impacts as a result of the overlap, requiring detailed technical studies to assess the impacts > Sufficient data is available on the future project to allow a detailed assessment of cumulative impacts with the proposed project for the relevant matter Uncertainties exist with respect to data, mitigation, assessment methods and criteria
Standard assessment (s)	The project is unlikely to result in significant impacts on the matter, including cumulative impacts. Standard assessments are characterised by: > Impacts are well understood > Impacts are relatively easy to predict using standard methods > Impacts are capable of being mitigated to comply with relevant standards or performance measures The assessment is unlikely to involve any significant uncertainties or require any detailed cumulative impact assessment.

No applicable (N/A)	No potential overlap in impacts between a future project (e.g. Project A) and the proposed project that would warrant any consideration in the cumulative impact assessment.
---------------------	--

Initial cumulative impacts are anticipated to be minor and would only occur should the timing of construction occur simultaneously. As detailed above, there are several other renewable state significant developments within the region which have been considered in the assessment of potential cumulative impacts, particularly in relation to traffic impacts (**Appendix F**). The proposed BESS would provide storage capacity for the used of electricity generated by the neighbouring Oxley solar farms.

Further consideration of impacts on agricultural productivity and visual amenity would be addressed in detail within the EIS.

4. STATUTORY CONTEXT

The key statutory requirements for the project are set out in **Table 4**.

Table 4 – Statutory considerations

Matter	Comment
Power to grant consent	Section 4.5 of the EP&A Act provides that the consent authority is the Independent Planning Commission or the Minister based on the development type. Section 4.36(2) of the EP&A Act provides that a State Environmental Planning Policy may declare any development, or any class or description of development, to be State significant development. The proposed development is for the purposes of electricity generating works that has an estimated development cost of more than \$30 million and is therefore declared to be State significant in accordance with Section 20 of Schedule 1 of the SEPP. On this basis the consent authority for the proposed development is likely to be the Minister. However it is noted that if any of the following occurs the consent authority will become the Independent Planning Commission in accordance with Section 2.7(1) of the Systems SEPP: > The council of the area in which the development is to be carried out (RVC) has duly made a submission by way of objection under the mandatory requirements for community participation in Schedule 1 of the EP&A Act; > At least 50 unique submissions (other than from a council) have duly been made by way of objection under the mandatory requirements for community participation in Schedule 1 to the Act; and > The development application is made by a person who has disclosed a reportable political donation under section 10.4 to the Act in connection with the development application.
Permissibility	Electricity generating works are prohibited in the RU1 Primary Production zone which applies to the subject land. Notwithstanding, the development is permitted with consent on the following grounds: • The proposed development satisfies Section 2.6(1)(a) of the Systems SEPP as electricity generating works are permitted with consent within prescribed rural zones under Section 2.36(1)(b) of the Infrastructure SEPP. Under Section 2.35 of the Infrastructure SEPP, prescribed rural zones include the RU1 Primary Production zone which applies to the development site under the ARLEP 2012.

Matter	Comment
	The proposed development satisfies Section 2.6(1)(b) of the Systems SEPP on the grounds that it is for the purposes of electricity generating works which have an estimated cost of development of more than \$30 million in accordance with Section 20, Schedule 1 of the Systems SEPP.
Other approvals	Commonwealth approvals may be required for the following reasons:
Pre-existing conditions to exercising the power to grant consent	- A search for potential matters of national environmental significance (MNES) that may trigger the need for referral to the Australian Department of Climate Change, Energy, the Environment and Water (DCCEEW) via the online Protected Matters Search Tool (PMST) - (results shown in Appendix C): - Identified no World Heritage Properties or National Heritage Places protected by the Commonwealth <i>Environment Protection and Biodiversity Conservation Act 1999</i> (EPBC Act). - Identified two (2) threatened ecological communities with the potential to occur in or within proximity to the development site. - Identified forty (40) threatened species which may be present in or within proximity to the development site. - Identified eleven (11) migratory bird species which may be present in or within proximity to the development site. - A review of the National Native Title Tribunal's Native Title Register did not identify any Native Title claims or applications, or Indigenous Land Use Agreements applying to the development site under the <i>Commonwealth Native Title Act 1993</i> (the Native Title Act).
Mandatory matters for consideration	Pursuant to Section 4.15 of the EP&A Act, the following mandatory matters for consideration apply: > Relevant environmental planning instruments, including: – <i>State Environmental Planning Policy (Resilience and Hazards) 2021</i> (the Hazards SEPP): - Chapter 3 Hazardous and offensive development; and - Chapter 4 Remediation of land. – <i>State Environmental Planning Policy (Transport and Infrastructure) 2021</i> (the Infrastructure SEPP): > Chapter 2 Infrastructure. – <i>State Environmental Planning Policy (Planning Systems) 2021</i> (the Systems SEPP): > Chapter 2 State and regional development. – <i>State Environmental Planning Policy (Biodiversity and Conservation) 2021</i> (the Biodiversity SEPP):

Matter	Comment
	> Chapter 3 Koala habitat protection 2020 – ARLEP 2012. • The relevant Development Control Plan (DCP) (the Armidale Dumaresq DCP 2012). It should be noted that the application of a DCP is excluded from SSD under Section 2.10 of the Systems SEPP. • The likely impacts of the development including environmental impacts on natural and built environments and social and economic impacts in the locality. • The suitability of the development site for the development. • The public interest.

4.1 State Environmental Planning Policies

4.1.1 STATE ENVIRONMENTAL PLANNING POLICY (RESILIENCE AND HAZARDS) 2021

The *State Environmental planning Policy (Resilience and Hazards) 2021* (the Hazards SEPP) comprises several chapters including Chapter 3 - Hazardous and Offensive Development and Chapter 4 – Remediation of Land, which both apply to the state. These chapters have been addressed below.

4.1.1.1 Chapter 3 Hazardous and offensive development

Section 3.7 of the Hazards SEPP requires the consideration of current circulars or guidelines prepared by the Department of Planning in determining whether a development is:

- > hazardous storage establishment, hazardous industry, or other potentially hazardous industry; or
- > offensive storage establishment, offensive industry, or other potentially offensive industry.

The current and most recent guidelines prepared by the Department of Planning, the *Hazardous and Offensive Development Application Guidelines – Applying SEPP 33* (Applying SEPP 33 Guideline; Department of Planning 2011), includes the screening tests to be used to determine whether a development is potentially hazardous development. If the screening tests indicate that a development is potentially hazardous development, a preliminary hazard analysis (PHA) is required to be provided as part of the DA. The type of screening test to be used is dependent upon the class, as categorised under the Australian Dangerous Goods Code (ADG; National Transport Commission 2020) of dangerous goods proposed to be accommodated on-site.

The dangerous good associated with BESS are lithium batteries which are a class 9 dangerous good under the ADG Code. Class 9 goods do not exceed the screening thresholds under the guidelines under the Applying SEPP 33 Guideline as they “pose little threat to people or property” (Department of Planning 2011, p. 33).

Notwithstanding, a Preliminary Hazard Analysis (PHA) would be prepared to support the project EIS to consider risks associated with the batteries.

4.1.1.2 Chapter 4 Remediation of Land

Section 4.6(1) of the Hazards SEPP states that a consent authority must not consent to the carrying out of development unless it has considered whether the land is contaminated. If the land is contaminated, the consent authority must not consent to the carrying out of development unless it is suitable for the proposed use in its contaminated state or will be suitably remediated before the land is used for that purpose.

A search of the NSW EPA Contaminated land record was completed for contaminated land within the Armidale Regional LGA on 01 February 2024. Six (6) sites are noted within the LGA however these sites are all located within Armidale and Tilbuster, which are 12 kms and 17kms away respectively.

The history of the use of Lot 1 DP246878 has been for agricultural purposes and therefore there is some limited potential for contamination on site.

Based on the above, the project EIS will contain a preliminary contamination investigation to assess and advise on potential contamination impacts on the development.

4.1.2 STATE ENVIRONMENTAL PLANNING POLICY (TRANSPORT AND INFRASTRUCTURE) 2021

The Infrastructure SEPP comprises several chapters, including Chapter 2 – Infrastructure.

Development for the purposes of electricity generating works is prohibited in the RU1 zone under the ARLEP 2012. However, Section 2.36(1)(b) of the Infrastructure SEPP permits electricity generating works in prescribed rural zones, including the RU1 zone.

The development is therefore permitted with consent via the Infrastructure SEPP.

4.1.2.1 Infrastructure SEPP - Section 2.42

Section 2.42 states that development consent must not be granted for a state or regionally significant development for the purposes of electricity generating works, where the project is located in close proximity to a regional city. As per the Regional Cities Map contained within the Infrastructure SEPP, Armidale is a regional city. The development site is located on the boundary of the Regional Cities mapping of Armidale, however the development site is well distanced from existing residential and commercial developments and is located on RU1 land. As discussed in this scoping report, suitable measures can be undertaken to mitigate impacts on scenic quality and landscape character and these will be addressed and discussed in detail in the project visual assessment in support of the EIS. Due to these factors it is considered unlikely that the proposed development will cause conflicts with surrounding land uses, or adversely impact on the city's growth or the scenic quality and landscape character of the area.

4.1.3 STATE ENVIRONMENTAL PLANNING POLICY (PLANNING SYSTEMS) 2021

The *State Environmental Planning Policy (Planning Systems) 2021* (the Planning Systems SEPP):

- *identifies State or regionally significant development, State significant Infrastructure, and critical State significant infrastructure.*
- *provides for consideration of development delivery plans by local Aboriginal land councils in planning assessment.*

- *allows the Planning Secretary to elect to be the concurrence authority for certain development that requires concurrence under nominated State environmental planning policies.*

Chapter 2 of the Planning Systems SEPP relates to SSD, Chapter 3 relates to Aboriginal Land and Chapter 4 relates to concurrences and consents.

Schedule 1 provides a summary of project and project specific triggers that meet the general requirements of SSD.

Section 20 of Schedule 1 confirms that electricity generating works and heat or co-generation projects with an estimated development cost (EDC) of more than \$30 million (or more than \$10 million where located on an environmentally sensitive area of state significance) is an SSD project. As the project EDC exceeds \$30 million, the project is SSD.

4.1.4 STATE ENVIRONMENTAL PLANNING POLICY (BIODIVERSITY AND CONSERVATION) 2021

The *State Environmental Planning Policy (Biodiversity and Conservation) 2021* (the Biodiversity SEPP) comprises several chapters, including Koala Habitat Protection which is discussed below:

4.1.4.1 Chapter 3: Koala Habitat Protection 2020

Under Section 3.3(1) of the Biodiversity SEPP, the SEPP applies to land within the RU1 Primary Production, RU2 Rural Landscape and RU3 Forestry and equivalent zones in an LGA not marked with a '*' in Schedule 2 of the SEPP. A three-step process applies where the SEPP applies and Lot 1 DP246878 (including adjoining land in the same ownership) has an area of more than one hectare.

The development site is located within the RU1 zone and therefore, Chapter 3 applies to the proposed development. The preliminary biodiversity assessment did not identify likely Koala habitat on site however more detailed analysis would be completed in relation to the project Biodiversity Development Assessment Report (BDAR) and provided as part of the EIS to address any potential impacts to Koala.

4.1.4.2 Chapter 4 Koala habitat protection 2021

Under Section 4.4(1) of the Biodiversity SEPP, the Chapter applies to the LGAs listed in Schedule 2 of the SEPP, unless the site is located within the RU1 Primary Production, RU2 Rural Landscape or RU3 Forestry zone in an LGA that isn't marked with a '*' in Schedule 1.

The development site is located within the RU1 zone. Chapter 4 therefore does not apply.

4.2 Other environmental planning policies

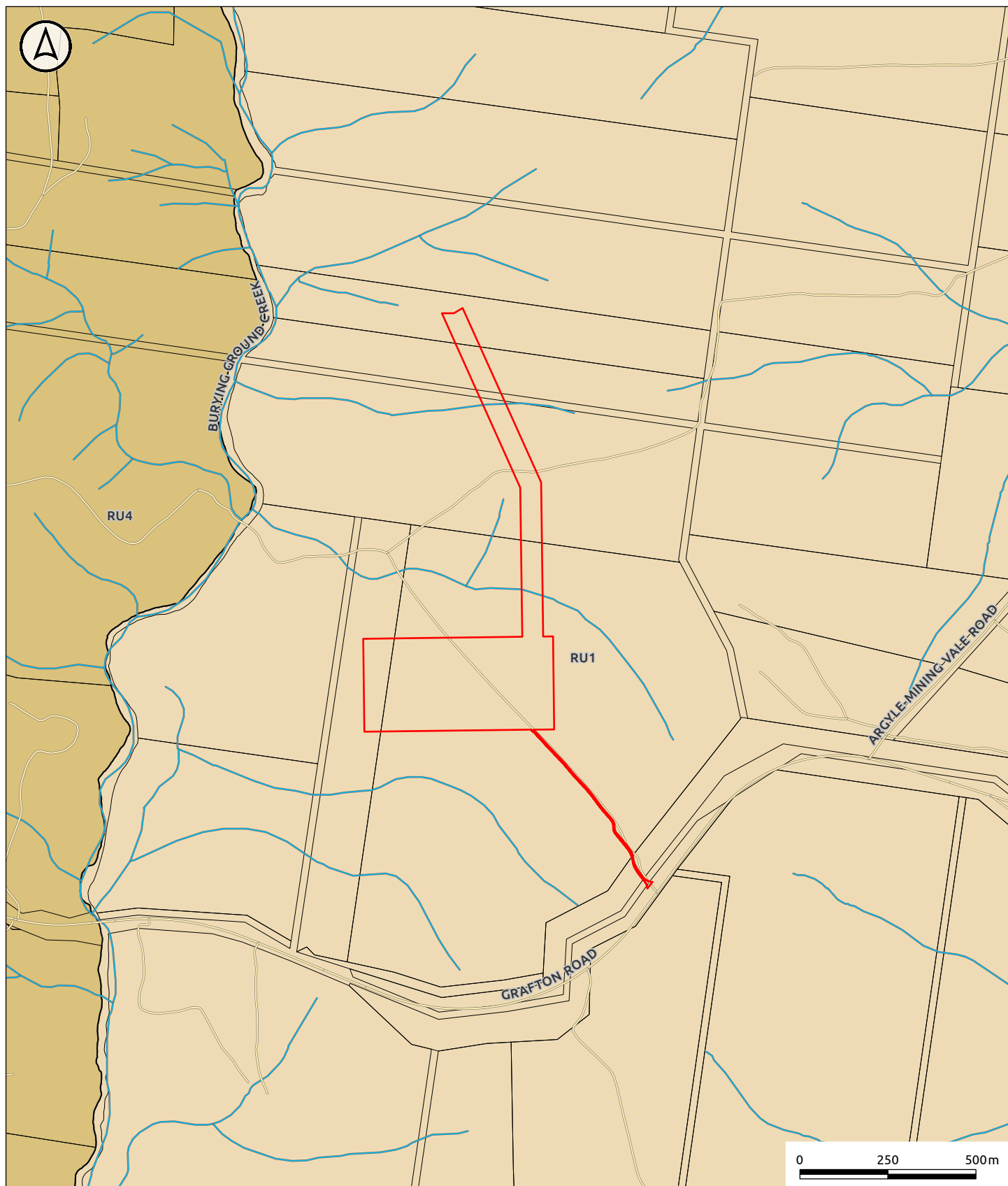
4.2.1 ARMIDALE LOCAL ENVIRONMENTAL PLAN 2012

The development site is located within the RU1 Primary Production zone pursuant to the ARLEP 2012. Within the RU1 zone, electricity generating works are prohibited. However, pursuant to Section 2.36(1)(b) of the Infrastructure SEPP, electricity generating works are permitted with consent in a prescribed rural zone, including the RU1 zone. The Infrastructure SEPP prevails over the LEP to the extent of any inconsistency and thus the development is permissible with consent.

The objectives of RU1 zones under the ARLEP 2012 is to:

- *To encourage sustainable primary industry production by maintaining and enhancing the natural resource base.*
- *To encourage diversity in primary industry enterprises and systems appropriate for the area.*
- *To minimise the fragmentation and alienation of resource lands.*
- *To minimise conflict between land uses within this zone and land uses within adjoining zones.*
- *To allow for non-agricultural land uses that will not restrict the use of other land in the locality for agricultural purposes.*

The project is not inconsistent with these objectives on the basis that it provides for development that would not result in conflict with other land uses within the zone, will be supported by appropriately scoped assessments to consider all impacts, and will ensure that residual impacts that cannot be avoided are appropriately mitigated.



- Legend**
- Development Site
 - Lot
 - Road
 - Watercourse
- Land Zoning (LZN)**
- RU1
 - RU4

Figure 8

5. ENGAGEMENT

The following sections describe the engagement activities that have already been carried out for the project. bd infrastructure supported ACenergy to undertake community and stakeholder engagement during the scoping phase of the project. Early community engagement aimed to provide opportunities for the community to understand the project and to provide feedback about impacts and benefits that could be fed into project development and assessment. Community concerns will be considered by ACenergy as they design the project and will be further assessed in the Environmental Impact Statement (EIS).

5.1 Engagement to date

5.1.1 DEPARTMENT OF PLANNING, HOUSING AND INFRASTRUCTURE

ACenergy carried out preliminary engagement with the Department of Planning, Housing and Infrastructure (DPHI) on 20 February 2024 to introduce the project and obtain preliminary feedback. Key matters that were raised in this meeting included the following:

- > the direct access to Waterfall Way/Grafton Road and the requirements for Transport for NSW;
- > required approvals from Local Lands Services and Crown Lands in relation to the travelling stock routes;
- > the Macleay River estuary catchment and consideration of potential impacts;
- > owners consent for all land associated with the development including crown lands and lands involving the connection to existing infrastructure to the north; and
- > noise and visual impacts on surrounding receivers and public areas.

This input from DPHI has contributed to shaping the initial assessment criteria, as well as the next steps in the investigative phases.

5.1.2 ARMIDALE REGIONAL COUNCIL

ACenergy, Premise and bd infrastructure met with Armidale Regional Council online on 3 April 2024. The briefing introduced the project and gathered early feedback on community values and expectations. Council noted the cumulative impact of simultaneous construction could put a strain on housing, personnel, and traffic in the area. ACenergy have commenced discussions with Council regarding a Voluntary Planning Agreement (VPA) around benefit sharing.

5.1.3 TRANSGRID

ACenergy has had ongoing discussions with Transgrid regarding transmission line connection from the development site. A connection enquiry was lodged in November 2023 and response received in December 2023 advising connection arrangement and network information. ACenergy advised Transgrid of intent to proceed with Connection Application and entered into an agreement to process the connection application in January 2024. Monthly meetings have been held since between Lumea, Transgrid and ACenergy to process the connection application and produce a scope of work and cost for the connection assets in preparation for a connection offer.

5.1.4 COMMUNITY

The 'community' encompasses a wide range of individuals and groups who are either interested in or impacted by a State significant project. This includes local residents, community groups, Aboriginal and Torres Strait Islander communities, culturally diverse groups, peak bodies, and businesses.

ACEnergy considered several factors to determine the targeted community for this project. These factors including the development site's location in an agricultural area with few near neighbours and the minimal construction impact given the batteries are constructed off-site. A desktop analysis was carried out to identify community groups located near the project. No community groups were identified near to the project, but general community groups servicing the entire Armidale township were identified. These included:

- > Armidale Local Aboriginal Land Council
- > Southern New England Land Care
- > Pathfinders Ltd.
- > Business New England
- > Sustainable Living Armidale
- > New England Climate Action Group
- > Country Women's Association – Armidale branch
- > The University of New England

A summary of the consultation activities carried out with identified community is included in **Table 5**.

Table 5 – Summary of community consultation activities

Engagement activity	Target stakeholder	Activity and stakeholders reached
Newsletter Letterbox drop	> Surrounding landowners and occupiers	> A Newsletter was distributed to 20 properties on the week of 5 February 2024. It provided information to local communities and residents and gave forward notice of upcoming consultation.
Website update	> All interested stakeholders	> The webpage acted as a central repository of information relating to the project, including publicly available documents and communications materials prepared by the proponent. The website update went live on 12 February 2024 on the ACEnergy website.
Door-knocking	> Surrounding landowners and occupiers	> Door-knocking with representatives' from bd infrastructure and ACEnergy occurred on 8 and 9 February 2024. > Door-knocking reached 9 properties along Waterfall Way/Grafton Road, Middle-Farm Road, Argyle-Mining Vale Road, Gara Road, Woodlands Road.

Engagement activity	Target stakeholder	Activity and stakeholders reached
		> Door-knocking was used to outline specific project impacts to stakeholders with the potential to be directly affected by the project and have their feedback collected. > Appropriate materials such as the newsletter fact sheet were made available to door-knocked residents. > Directly impacted landowners were taken to the development site and given a personalised tour and explanation of the project.
Phone calls	> Immediate landowners and occupiers	> ACenergy conducted one-on-one phone calls between 18 and 19 January 2024 to introduce the project and establish lines of communication.
Email notification	> Surrounding business owners and occupiers, Aboriginal stakeholders and local community groups	> Email correspondence on 5 February 2024 to Armidale Local Aboriginal Land Council, Southern New England Land Care, Pathfinders Ltd., Business New England, Sustainable Living Armidale, New England Climate Action Group, Country Women's Association – Armidale branch and The University of New England introduced the project and offered an online briefing time for interested parties. > Email correspondence on 16 February 2024 to Crown Lands and Local Land Services sought confirmation on the requirements regarding access to the development site.

5.2 Project name change

The project underwent several name changes during early stakeholder engagement between February and March 2024. The project was initially introduced to the community as the 'Armidale Big BESS'. This name was used in the community newsletter and newspaper advertisement that went to print on the week of 5 February 2024 in *The Armidale Express*.

Upon consideration of the relative smaller size of the project in comparison to several other Battery Energy Storage projects within the area, the project name changed to 'Armidale Energy Storage Park'. The name change was communicated to stakeholders during door knocking on 8 and 9 February 2024. The updated name was used in collateral, including the website update and an updated community newsletter distributed during door knocking.

After consultation with the DPHI, the project underwent a third name change. DPHI noted that the project name of 'Armidale Energy Storage Park' could lead to confusion for the community, as similarly named Battery Energy Storage projects already exist (including Armidale BESS). Following DPHI's directive, ACenergy put forward the project name of 'Gara Battery Energy Storage System (BESS)'. The

'Gara BESS' project name will be used in all further consultation during the Environmental Impact Statement. ACEnergy are in the process of updating the community on the name change.

Contact details such as the project phone number, email and website address remained the same on all the collateral delivered to the community.

5.3 Community views

Key issues identified during engagement were noise and visual impacts, especially to residents directly east and west to the development site along Landsbree Road and Argyle Mining Vale Road. Residents wanted visual impacts to be mitigated with extensive screening and boundary naturalisation. During one-on-one door knocking further issues and queries were raised, including:

- > Loss of visual amenity, including from the proposed noise wall and potential light spill during operation;
- > Noise impacts related to the operation of the BESS;
 - One resident noted the predominant easterly winds would carry noise towards them;
- > Concern regarding the fire risk of the batteries;
- > Construction and operation operating hours, including if there would be any nighttime construction;
- > Site access and safety given the sharp turn required from Waterfall Way/Grafton Road to access the development site;
- > Impact of construction on town water supply;
 - Polypipe water supply pipes along parallel to Waterfall Way/Grafton Road and could be affected by heavy vehicles entering the development site;
- > A need for local employment to be prioritised, for both construction and operation;
- > ACEnergy's business model and intention once the BESS is operating;
 - If a solar farm is being considered on site once the BESS is operational;
- > The lifespan of the BESS;
- > Land devaluation concerns;
- > Concern regarding the safe level of electromagnetic field radiation being emitted from the BESS; and
- > Opportunity for community benefit fund to be directed to the local RFS shed.

Further mitigation and enhancement measures will be investigated as part of the engagement process and the EIS.

5.4 Future community engagement

ACEnergy is committed to building ongoing relationships of trust with the local community and impacted neighbours. This commitment to appropriate and responsive engagement will continue throughout the course of the EIS preparation. By providing ongoing communication with stakeholders, we ensure the opportunity to eliminate, reduce or manage impacts identified and explored in the Project planning stage along with opportunities to enhance benefits of the Project.

ACEnergy intends to engage with:

- > Armidale Regional Council;
- > Transport for NSW;
- > Department of Planning, Housing and Infrastructure;
- > Transgrid;
- > Crown Lands;
- > Local Lands Services;
- > Department of Climate Change, Energy, the Environment and Water;
- > Department of Primary Industries;
- > Fire and Rescue NSW;
- > NSW Rural Fire Service; and
- > Surrounding residents, landowners, businesses and local community groups.

Proposed stakeholder engagement will be informed by a Community and Stakeholder Engagement Plan as part of the EIS. The community and stakeholder engagement activities will aim to meet the following objectives:

- > To ensure all community and stakeholders have access to factual, 'plain English' and up-to-date information in which to make informed decisions regarding the Project.
- > To further explore initial concerns or ideas raised by community and regulatory stakeholders in early engagement activities.
- > To work with community and regulatory stakeholders to mitigate remaining concerns, enhance opportunities for benefits and manage remaining impacts.

6. PROPOSED ASSESSMENT OF IMPACTS

6.1 Introduction

An initial review of information has been completed to provide a summary of matters requiring assessment at EIS preparation stage and the level of assessment required for each issue. By reference to the DPIE Scoping Report Guidelines (DPIE 2021), a number of factors have been considered through this process, including:

- > the scale and nature of the likely impact of the project and the sensitivity of the receiving environment;
- > whether the project is likely to generate cumulative impacts with other relevant future projects in the area; and the ability to avoid, minimise and/or offset the impacts of the project, to the extent known at the scoping phase.

The following sections provide details on specific assessment areas. A summary table is provided at **Appendix A** categorising these areas as per the Scoping Report Guidelines. By reference to Appendix D of the guidelines, the level of assessment is either detailed, standard or 'matters requiring no further assessment in the EIS'. Detailed assessment is for those impacts likely to have a significant impact, including cumulative impacts. A standard assessment is unlikely to result in significant impacts. A standard assessment may still include technical specialists however impacts in this category are likely to be well understood and easy to predict.

The level of assessment is identified as standard and is summarised as follows:

- > Standard
 - Access;
 - Amenity;
 - Biodiversity;
 - Built Environment;
 - Economic;
 - Hazard and Risks;
 - Aboriginal Heritage;
 - Land Use;
 - Social Impact;
 - Water.
- > Matters requiring no further assessment in the EIS are as follows:
 - Air quality;
 - Historic heritage.

6.2 Access

A preliminary review of potential traffic impacts has been completed by ttp and is provided in Appendix F.

6.2.1 VEHICLE ACCESS

Access to the development site is expected be via Waterfall Way/Grafton Road, which is an approved route for 25/26m B-doubles and links to either the New England Highway or the Pacific Motorway to provide access to either Port Botany or Port Kembla. The development site is also within an approved area for GML 25m b-doubles subject to conditions. These conditions are available from Armidale Regional Council and may involve temporary restrictions for impassable routes and considerations on narrow bitumen and gravel roads, particularly during school hours or wet weather.

Additionally, the OSOM network map identifies limited access locations for portions of the routes to the coast. This will be investigated further in the project Traffic Impact Assessment (TIA).

The ttp review also discusses the presence of Category 2 Travelling Stock Routes (TSR) to the east and west of the development site, and as well areas along Waterfall Way/Grafton Road identified as TSR "high" conservation value. The ttp review discusses that easements for property access, powerlines and pipelines are acceptable on Category 2 TSRs. In addition to this, it is noted that early consultation with Local Lands Services indicated that, in principle, authority could be given for access to exist across the TSR subject to further details being provided prior to the issue of a Letter of Authority. Further consideration will be given to this matter in the preparation of the TIA.

6.2.2 TRAFFIC GENERATION

The data publicly available for traffic volumes along Waterfall Way/Grafton Road is limited, with the most recent data available dated 2012. Despite this, the ttp review calculates a total cumulative impact (worst case) for vehicle numbers based on other projects surrounding the development site in the event that construction of all projects occurs concurrently. The summary determined a total cumulative impact (worst case) during construction of the project to be 118 light vehicles and 154 heavy vehicles per day.

6.2.3 SITE ACCESS

Sight distances for the site access to Waterfall Way/Grafton Road have been reviewed based on the posted speed limit of 100km/h, a reaction time of 2.0s, and a minimum safe intersection sight distance (SISD) of 248m. The review identifies that the main constraints on sight distance for vehicles approaching from the southwest (from Armidale) are the roadside vegetation and the raised land, whereas to the northeast (towards Armidale) it is considered that the main constraint is roadside vegetation on the east side of the road which causes a temporary obstruction to the sight line. The TIA in support of the EIS will consider this matter in detail and provide recommendations around any necessary improvements.

The ttp review considers that based on the worst case cumulative traffic turning left into the development site and right out of the development site, that the treatment of the site access would not warrant higher than the minimum treatment requirements (basic left-turn BAL).

6.2.4 CARPARKING

There is limited guidance for car parking rates for BESS facilities provided under the RTA Guide. The TIA will provide a practical assessment on car parking demand for the proposed BESS.

There is sufficient room within the development site to accommodate required car parking.

6.3 Air

Air quality impacts arising from dust generation and vehicle emissions during construction are of a limited nature and relatively easily predicted. Once the project is operational, impacts to air quality are expected to be of a limited nature.

It is not proposed to assess this matter in the EIS.

Implementation of appropriate mitigation measures via a construction environmental management plan (CEMP) would be expected to address any potential air quality impacts.

6.4 Amenity

6.4.1 VISUAL IMPACT

An initial review of the potential for visual impacts has been prepared by Iris Visual Planning + Design and is provided as **Appendix G**.

The installation of the BESS is to be within an undulating, rural landscape which is mostly cleared of vegetation, comprising pasture fields and scattered trees. There are several rural dwellings scattered around the development site and across the rural area, with the closest non-associated receiver to be located approximately 495 metres to the northeast of the development site. Other dwellings near the development site include rural dwellings along Waterfall Way/Grafton Road to the south and south west, along Middle Arm Road and Woodlands Road to the west, and along argyle-Mining Vale Road to the east. It is noted that there are patches of vegetation and native trees on Lot 1 DP246878, predominantly along the road lines, which are expected to provide some visual screening between the development site and receivers.

The preliminary visual catchment prepared for the project (**Figure 9**) identifies that views from the public domain will be somewhat contained by the landform, with potential views of the project limited to several roads within the two kilometre study area, including Waterfall Way/Grafton Road and Woodlands Road. Additionally, while the BESS will not be visible to dwellings on the east outskirts of Armidale, it is noted that there are six dwellings closer to the development site which have potential for a view to the project (refer **Figure 4**). There is also potential for a further seven dwellings to obtain distant views.

With respect to the construction and operational phases of the project, Iris Visual Planning + Design note the potential for a range of visual impacts during construction and operational phases. Construction impacts could include:

- > *The presence of construction activity on the development site*
- > *Earthworks required to prepare and flatten the landform of the development site*
 - *Temporary construction facilities including:*
 - *construction compounds and laydown areas*
 - *site office and vehicle parking*
 - *construction access tracks*
 - *stormwater and sediment controls for the development site.*
- > *Construction vehicle movements along surrounding road*

Impacts during operation would be associated with the potential visibility of the following infrastructure associated with the project:

- > *Electrical infrastructure including battery and medium voltage power station (MVPS) units arranged in rows*
- > *Transformers, switchgear and overhead transmission lines connecting the BESS to the existing electricity transmission network*
- > *Other permanent ancillary infrastructure including small buildings (site office, operation and maintenance facility and control room)*
- > *Car parking, internal access tracks, security fencing and signage*

A detailed Visual Impact Assessment (VIA) would be provided as part of the EIS to further analyse the potential visual impact of the project. The detailed VIA will include an assessment of the likely visual and landscape impacts of the project on surrounding residences, including field verification of the visibility analysis and an assessment of representative viewpoints. Both private and public vantage points would be assessed in the VIA to identify the potential visual impacts of the project.

Where relevant, the VIA will identify appropriate measures to help minimise the potential for the project to visual amenity. As detailed via Iris Visual this will include the preparation of a concept landscape plan to provide detail the proposed screening vegetation.

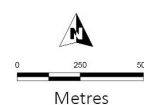
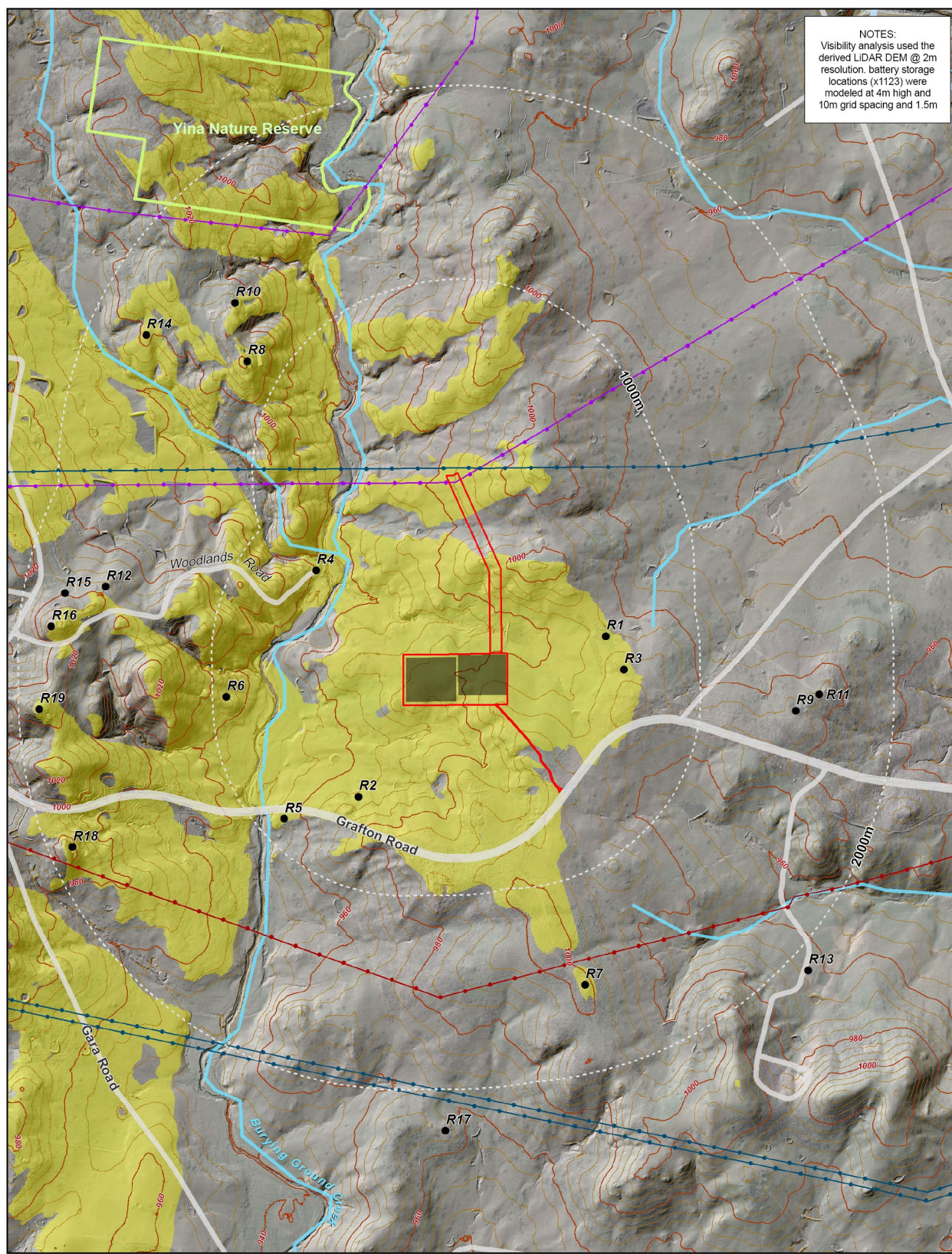


Figure 9 Visual catchment of the project

6.4.2 NOISE AND VIBRATION

Noise and vibration impacts are expected to occur during both construction and operation of the project. In relation to construction activities this would include preparatory earthworks, delivery, and assembly of the BESS infrastructure. During operation this would include operation of the BESS and noise from associated vehicles.

A preliminary review of noise impacts of the project found that receiver R02 would be the primarily affected receiver, with receivers to the north, east and west not requiring mitigation due to the greater distance from the project. Preliminary modelling found that compliance could be achieved through installation of a 3.5m high acoustic barrier along the southern and partially along the western boundary of the development site to sufficiently mitigate noise impacts for receiver R02.

The potential noise and vibration impact of the construction and operation BESS on nearby sensitive receivers would be considered in a Noise and Vibration Impact Assessment to be provided as part of the EIS. The Noise and Vibration Impact Assessment will be prepared in accordance with the:

- > *NSW Interim Construction Noise Guideline;*
- > *NSW Noise Policy for Industry;*
- > *NSW Road Noise Policy;* and
- > *Assessing Vibration: A Technical Guideline.*

6.5 Biodiversity

6.5.1 METHODS

A biodiversity assessment has been completed by Habitat Environmental Services – refer **Appendix B**. Preliminary biodiversity values have been assessed through a combination of desktop searches and site survey.

6.5.1.1 Desktop review

Desktop searches consisted of:

- > The BioNet Atlas of NSW Wildlife for previous records of threatened species, populations and ecological communities (as listed under the *NSW Biodiversity Conservation Act 2016* (BC Act)) within a 5 km radius of the development site
- > Regional vegetation mapping – NSW State Vegetation Type Map
- > The NSW Biodiversity Values and Threshold Tool
- > NSW BioNet Vegetation Classification for Plant Community Type Information
- > NSW Department of Spatial Services
- > The NSW BioNet Threatened Biodiversity Data Collection, Threatened Species Profiles and Final Determinations for information on threatened species, populations, and ecological communities.

6.5.1.2 Field Survey

A site assessment was undertaken on the 9th of April 2024, which included mapping of vegetation boundaries, identification of plant community types, and habitat assessment. This included walking transects of the development site in conjunction with a review of aerial photos, sampling of five

vegetation plots, the identification of any important habitat features through the use of a handheld GPS and photos of the features, and diurnal opportunistic observations of fauna species.

6.5.2 RESULTS

The majority of the development site is identified within the NSW State Vegetation Type Map as “not classified”, with four small areas identified as PCT 3583 which is labelled as Hunter Coast Lowland Scribbly Gum Forest. While this has been found to be somewhat accurate, the field results identify the area as PCT 3359 which is known as “New England Hills Stringybark-Box Woodland”.

6.5.2.1 Habitat features

The northern portion of the development site has been identified to have limited biodiversity value due to the lack of key habitat features such as complex vegetation structure, limited hollow-bearing trees, fallen logs etc., however it is noted that there is a stick nest in the northeastern corner of the development site. Whereas the southern portion of the development site is considered to have a higher biodiversity value due to the patches of woodland vegetation and the presence of two hollow-bearing trees.

6.5.2.2 Threatened species assessment

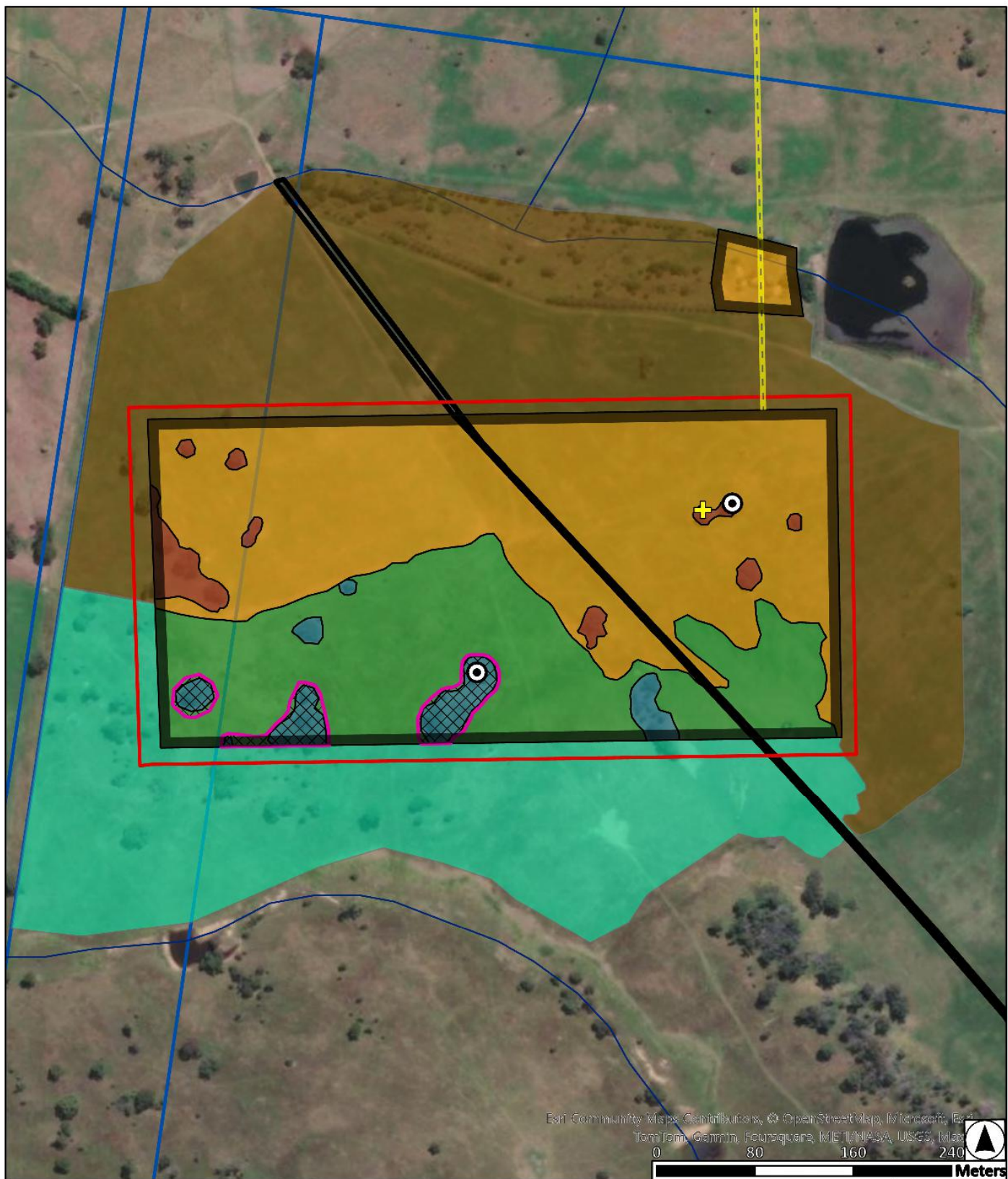
The findings identify a small area of open woodland to the southwest of the development site which may fall within the definition of the NSW BC Act and the Commonwealth EPBC Act CEEC – White Box - Yellow Box – Blakely’s Red Gum Grassy Woodland and Derived Native Grassland.

Additionally, while no threatened flora or fauna species were identified during the site visit, a search of BioNet Atlas identified two threatened plant species and ten threatened fauna species within a 5 km radius. It is considered that there is a moderate likelihood of one threatened plant and four threatened fauna species to occur within the development site.

6.5.3 NEXT STEPS

With considerations of the findings, as well as the legislative requirements, the following fieldwork is identified to inform the BDAR at EIS stage:

- > Further sampling of vegetation adjacent to the development site is required to meet the minimum number of survey plots to fulfil the requirements of the NSW Biodiversity Assessment Method. These would include surveys during autumn to verify the presence of the NSW BC Act and the Commonwealth EPBC Act CEEC – White Box - Yellow Box – Blakely’s Red Gum Grassy Woodland and Derived Native Grassland.
- > Targeted field surveys are required during the prescribed survey window as stipulated in the BAM for each candidate threatened species for which suitable habitat is identified within the development site.
- > Further surveys for hollow-bearing trees with the areas adjacent to and surrounding the development site is recommended to confirm the locations of potential breeding trees for threatened species.



Esri Community Maps Contributors, © OpenStreetMap contributors, Imagery © TomTom, Garmin, Fenix, METI/USGS, USGS, Max

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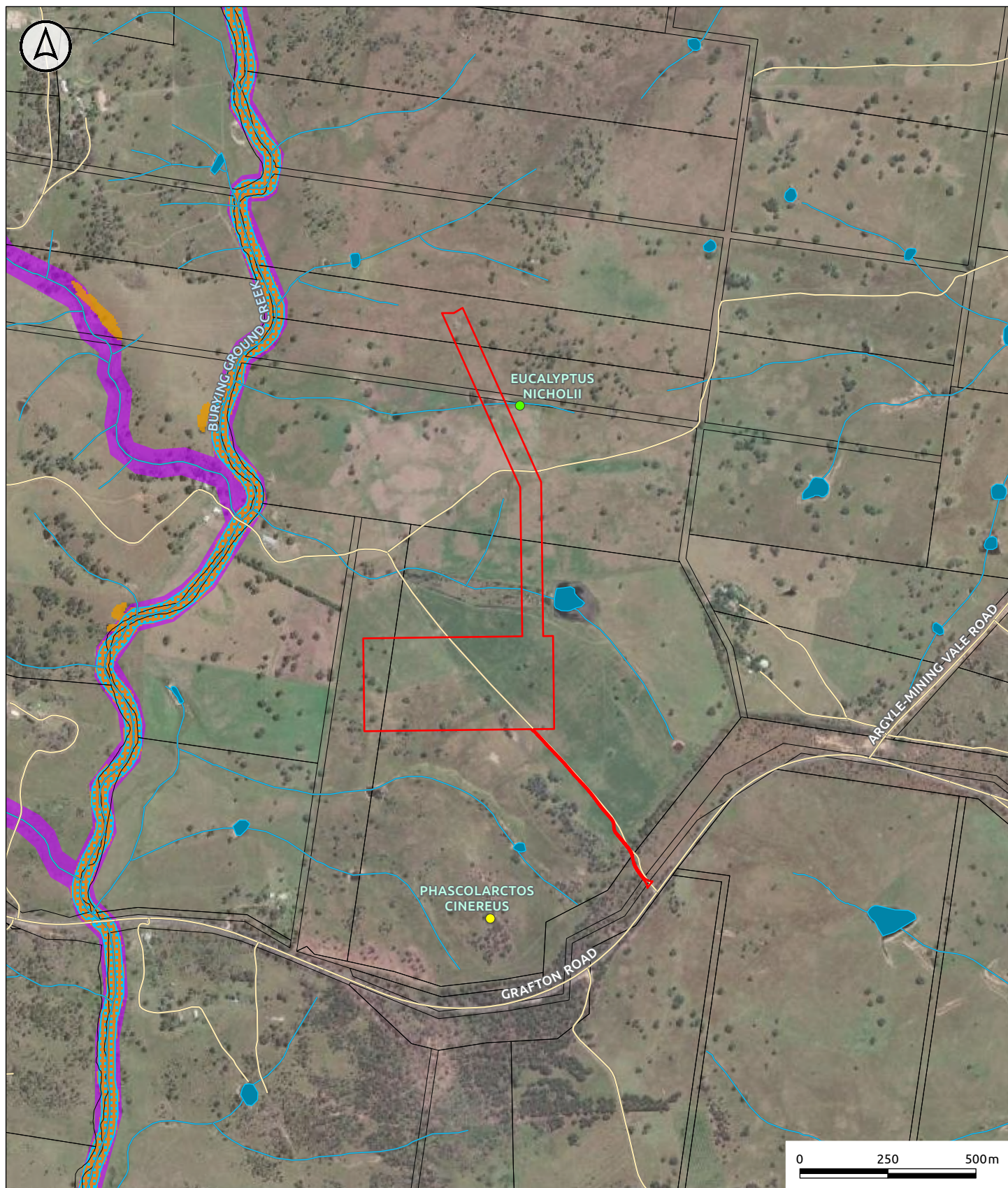
Meters



Legend

- | | |
|---|--|
| Study Area | PCT 3359 Native Trees with Exotic Grassland (VZ03) |
| 86 Woodlands Road - Lot Boundary | PCT 3359 Exotic Grassland and Planted Vegetation (VZ04) |
| Subject Land | Cleared Track |
| + Stick Nest | Predominantly Native Vegetation |
| PCT 3359 Woodland with Native Understorey (VZ01) | Predominantly Non-Native Vegetation |
| PCT 3359 Derived Native Grassland (VZ02) | Proposed Connection Route |
| CEEC - White Box Yellow Box Blakely's Red Gum Grassy Woodland Derived Native Grassland | |

Project ID: HBT0229_GaraBESS



- Legend**
- Development Site
 - Lot
 - Road
 - Water Body
 - Watercourse
 - Key Fish Habitat - Northern Rivers
 - Biodiverse riparian land

- Native Vegetation Regulatory Map**
- Vulnerable Regulated Land
- Threatened Species Records**
- Fauna
 - Flora

0 250 500m

Premise
ACENERGY PTY LTD
 Gara BESS

Figure 11

6.6 Built environment

The development site is situated in a rural setting with four associated residential receivers located within a 1km buffer distance of the proposed development. The land is primarily surrounded by agricultural land used for grazing and cropping purposes. Existing 132 kV and 330 kV overhead powerlines run east west to the north of Lot 1 DP246878, providing a connection to the electrical grid. The new Armidale Regional Landfill (MP06_0220) is located to the south of Lot 1 DP246878, at 1238 Grafton Road, approximately 1.5 km away, however it is noted that it is unlikely that the landfill will be in use while the development construction is underway as Council intends to exhaust the capacity of the existing landfill prior to use.

There is the potential that the BESS and associated noise walls may introduce additional visual features into the local environment, and this will be addressed via the project visual impact assessment.

6.7 Economic

The proposed development is likely to have a net positive economic impact derived from creating local employment opportunities during the construction, operation, and decommissioning phases, as well as by contributing to electricity supply from renewable sources and stability (due to the battery component). Improved electricity supply and stability are expected to contribute towards downward pressure on electricity prices paid by residents of the local area, as well as by users of the broader electricity network.

Whilst impacts to land values are not a material planning consideration, any perceived economic impacts to property prices of local residents as a consequence of air, visual, noise and vibration, hazard, land use, social or water impacts will be mitigated through mitigation measures such as the implementation of a construction management plan, landscaped buffers and adequate buffers to associated and non-associated dwellings.

Opportunities for community benefit sharing will be investigated and discussions with ARC have commenced in this regard.

Opportunities will be investigated through local procurement to engage local people and engage with local businesses throughout the construction phase. This will be detailed in the project economic assessment.

Preliminary, scoping assessment of these impacts is provided throughout **Section 6**. Each of these impacts is to be considered in greater detail in the EIS.

6.8 Hazard and risks

6.8.1 HAZARDOUS AND OFFENSIVE DEVELOPMENT

Impacts from an electromagnetic field (EMF) may be generated by transmission lines and underground cables. EMF risks are expected to be below the International Commission on Non-Ionizing Radiation Protection (ICNIRP) guidelines (adopted by the Australian Radiation Protection and Nuclear Safety Agency, ARPANSA).

Nevertheless, there is a perception that components of the proposed development, primarily the inclusion of a switching station and BESS, may significantly alter the EMF within a locality and thereby cause harm to residents and the environment.

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 4.14 of *State Environmental Planning Policy (Resilience and Hazards) 2021*. Class 9 goods do not exceed the screening thresholds as they “pose little threat to people or property” (Department of Planning 2011, p. 33).

A Preliminary Hazard Analysis (PHA) is to be provided as part of the EIS and will assess EMF levels associated with the proposed infrastructure.

The potential for cumulative impacts associated with the operation of the project would also be considered as discussed in **Section 3.3**.

6.8.2 BUSHFIRE

The development site is partially mapped as bushfire prone land pursuant to the NSW Planning Portal Spatial Viewer, with identified areas within the southern portion of Lot 1 DP246878, adjoining Waterfall Way/Grafton Road – refer **Figure 5**. However, it is noted that the development site will be located clear of the mapped bushfire prone land. Notwithstanding, a bushfire assessment would be provided as part of the EIS to ensure consistency of the development with the NSW Rural Fire Service (RFS) guidelines, *Planning for Bushfire Protection 2019*, including the 2020 addendum.

6.8.3 FLOODING

Lot 1 DP246878 is not mapped as flood prone land as flood mapping is limited to the Armidale CBD areas, however it is noted that there are several watercourses within the development site, including Burying Ground Creek. Potential flood impacts resulting from these watercourses along with pre and post development flood scenarios would be addressed as part of the EIS. This would include a flood impact assessment report.

6.9 Heritage

6.9.1 EUROPEAN HERITAGE

A review of the State Heritage Inventory, Schedule 5 of the ARLEP 2012, and of the DCCEEW Australian Heritage Database was conducted on 22 May 2024 to identify any local or state heritage listed items located at or within proximity to the development site.

There were no listed heritage items within a 1km of the development site, with the closest heritage items identified as:

- > I149 – Eucalyptus tree along Middle Farm Road approximately 1.8 km from the development site.
- > I222 – Culvert on Gara Road (southeast of Waterfall Way/Grafton Road intersection) approximately 2km from the development site.

Due to the proximity of these heritage items from the development site, it is not likely that the proposed development will adversely impact on historic heritage. Further consideration and assessment of the potential for impact is historic heritage is not required and is not proposed to be assessed in the EIS.

6.9.2 ABORIGINAL CULTURAL HERITAGE

A basic search of the Aboriginal Heritage Information Management System (AHIMS) was conducted on 22 May 2024 to identify the presence of any previously recorded Aboriginal cultural heritage sites or places within the study area. The search included the development site with a buffer of approximately 1km (**Appendix D**). The search results have identified two Aboriginal sites or places.

An extensive search of the AHIMS database recorded one site as being an artefact, and one as a modified tree (carved or scarred). Both sites are located south of Waterfall Way/Grafton Road and physically distanced from the development site (**Figure 12**).

A review of the National Native Title Tribunal register has identified that there are no Native Title Determination Areas at or in proximity to the development site.

An Aboriginal Cultural Heritage Assessment (ACHA) will be provided to support the EIS to identify and assess potential impacts to the recorded Aboriginal artefact or tree and address the necessary management and mitigation measures.

6.10 Land use

There are no existing exploration or mining titles or applications applying to the development site.

Lot 1 DP246878 is zoned as RU1- Primary Production under the ARLEP and is predominantly having a Land and Soil Capability of Class 5 (Severe limitations) with the southern extent mapped as class 98 (not assessed) (**Figure 13**). Lot 1 DP246878 is not mapped as biophysical strategic agricultural land (BSAL) or draft state significant agricultural land map.

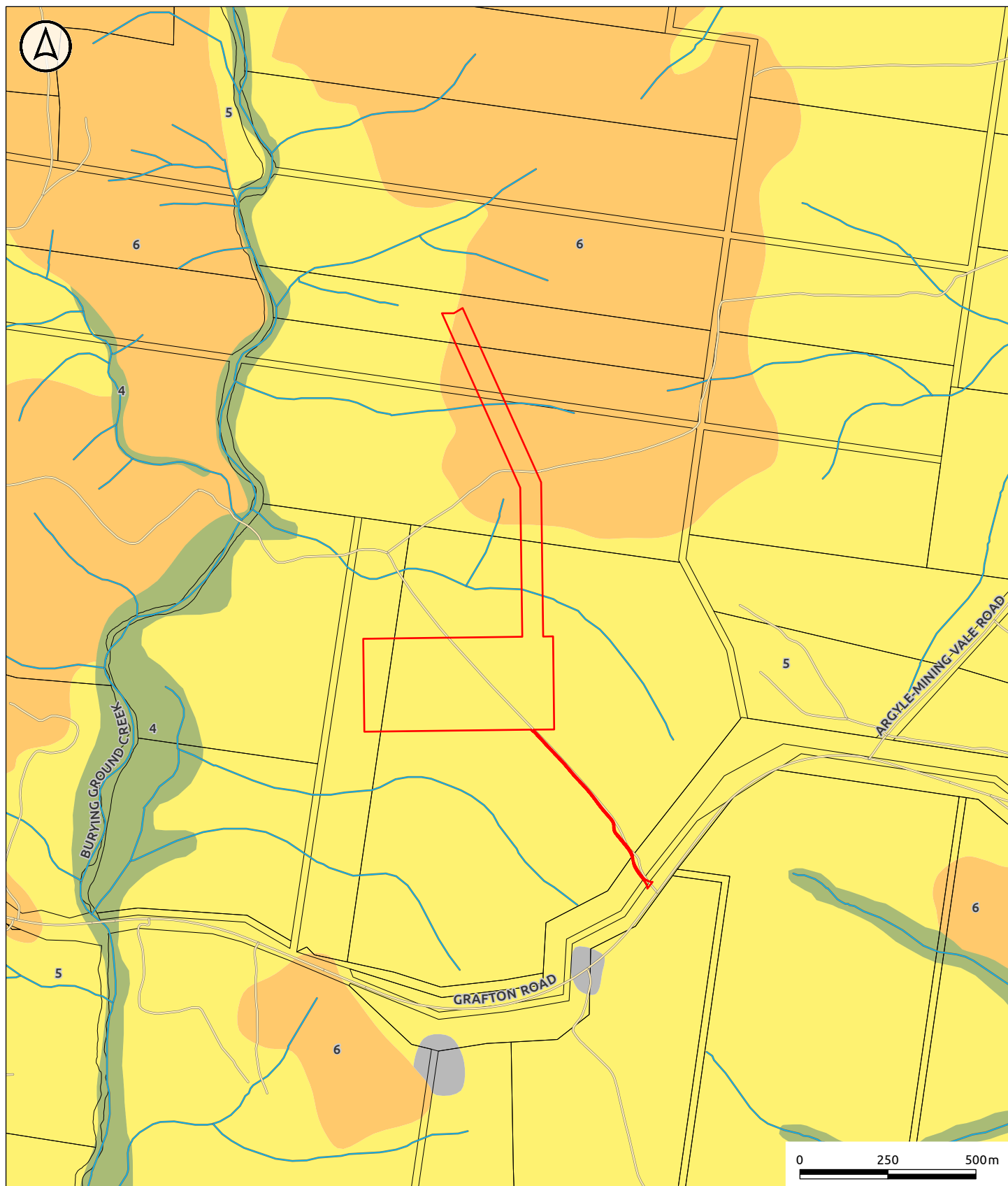
The matters raised above will be addressed in the EIS, including the required soil survey and assessment of the agronomic capability of Lot 1 DP246878.



- Legend**
- Development Site
 - Lot
 - Road
 - Water Body
 - Watercourse
- Aboriginal Heritage Sites**
- Artefact
 - Modified Tree (Carved or Scarred)

Figure 12

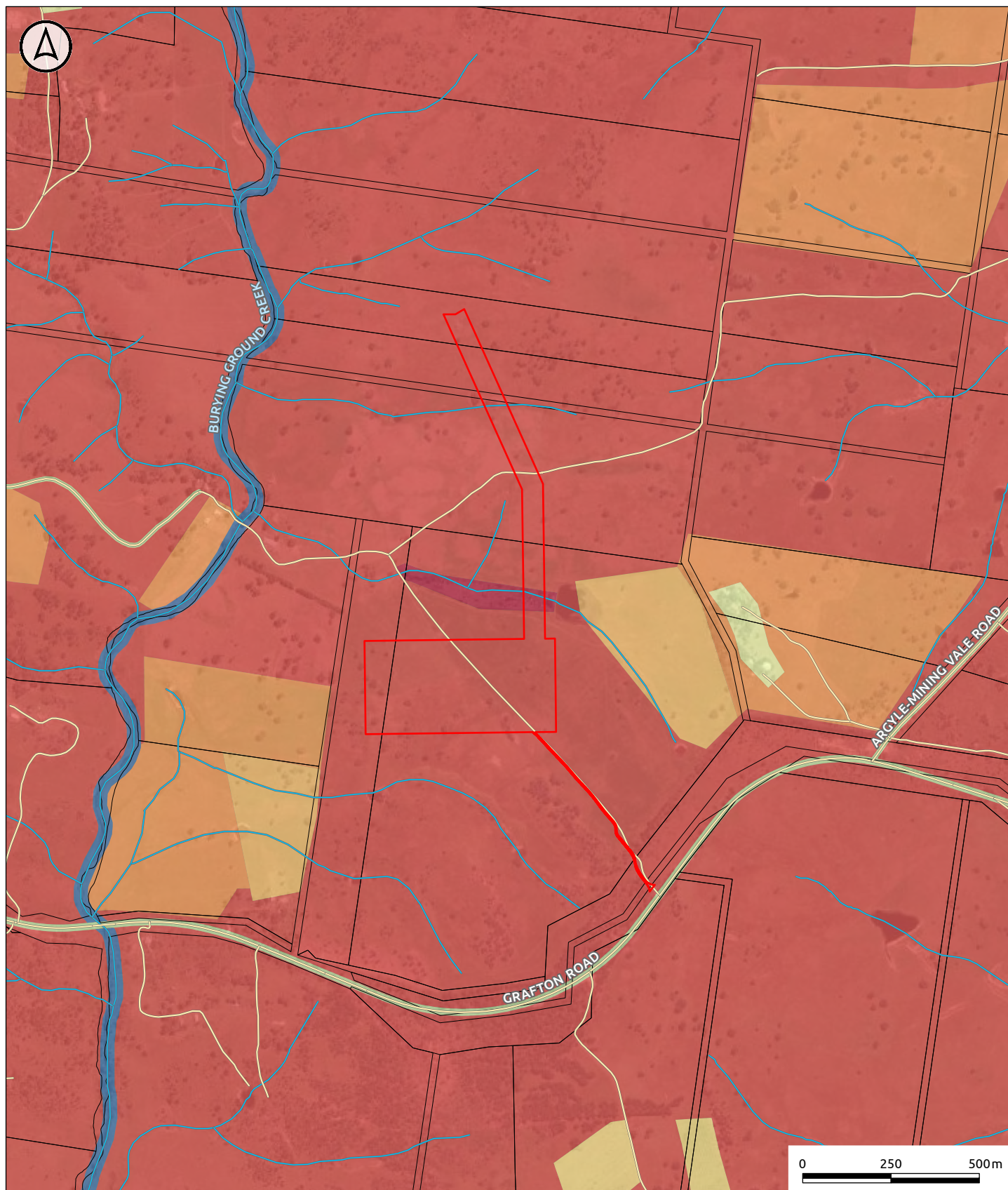
Sources: © State of NSW, Department of Customer Service, Spatial Services 2024; AC Energy 2024
 State of NSW, Department of Climate Change, Energy, the Environment and Water 2024; ESRI 2024
 File: P000374_01_MASTER.aprx Prepared By: adam.davis Date: 22/05/2024



- Legend**
- Development Site
 - Lot
 - Road
 - Watercourse

- Land and Soil Capability (LSC)**
- 4 - Moderate to severe limitations
 - 5 - Severe limitations
 - 6 - Very severe limitations
 - Disturbed Terrain

Figure 13



Legend

- Development Site
- Lot
- Road
- Watercourse

NSW Landuse 2017 v1.5

- 1.2.0 Managed resource protection
- 2.1.0 Grazing native vegetation
- 3.2.0 Grazing modified pastures

- 3.3.0 Cropping
- 3.4.0 Perennial horticulture
- 5.4.0 Residential and farm infrastructure
- 5.7.0 Transport and communication
- 6.3.0 River

0 250 500m



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Gara BESS

Figure 14

6.11 Social impact

6.11.1 APPROACH

A preliminary social impact assessment (SIA) has been conducted for the Project – as attached in **Appendix E**. The aim of the assessment is to identify likely social impacts before considering suitable refinements or other early responses. The findings in the scoping phase will inform the level of community engagement and SIA analysis required for the next phases of the planning approvals process, i.e. preparation of the environmental impact statement (EIS).

The assessment has been informed by a variety of data sources, including a review of existing social or administrative data such as the latest Australian Bureau of Statistics (ABS) Census, targeted stakeholder and community engagement, field observations from a site visit, initial technical assessments for the Project and the use of desktop research in the form of findings and experience from similar projects already in operation. All social impacts are considered from the point of view of the affected people, rather than the Project itself.

The assessment has been conducted in accordance with the relevant guidelines provided by the NSW Department of Planning, Housing and Infrastructure (DPHI).

6.11.2 SOCIAL BASELINE

The development site is located 9 km to the east of Armidale and is located on the boundary of two suburbs/localities (SAL) identified as Armidale SAL and Metz SAL (social locality). At the 2021 census, the social locality had a total residential population of 24, 084, with majority of the population residing with the Armidale SAL, and a slightly older age group than the NSW average, with a median age 40 compared to 39 years. The social locality also had a higher proportion of Aboriginal and/or Torres Strait Islander at 5.7% compared to the proportion of the state (3.4%).

In terms of employment industries, due to the high number of national parks and state forest within the region, the “Agriculture, forestry and fishing” sector employ a large proportion of workforce in the social locality, particularly the Metz SAL. In addition, both education and health care industries also encompass a large portion of the workforce due to the two hospitals, Tafe and university within Armidale. It is noted that the median weekly income for the social locality is only 4.8% lower than the state average, however the unemployment rate for the social locality was slightly higher.

Within the social locality there are differences in the range of socio-economic disadvantage. Based on a quantile between 1 and 5, Metz SAL sits within the 4th quintile of the Socio-Economic Indexes for Areas (SEIFA), and Armidale SAL sitting within the 3rd quintile. This information indicates that Armidale SAL is less advantaged than Metz SAL.

While early engagement in the area communicated housing stress as a concern within the social locality, the 2021 census data indicates that the social locality has a lower proportion of occupied dwellings and higher proportion of unoccupied private dwellings compared to NSW. This is particularly evident within the Metz SAL which indicated a very low percentage of occupied private dwellings (33.9%), likely due to the rural nature of the area. This conflicting information will be further assessed in the EIS SIA.

The 2021 census also indicated a higher housing mobility within the social locality when compared to the NSW average, with Metz SAL comprising the most stable population over both a 12 month and five year comparison.

6.11.3 POTENTIAL SOCIAL IMPACTS AND MATTERS REQUIRING FURTHER ASSESSMENT

The preliminary SIA is detailed in **Appendix E**, including the Social Impact Scoping Worksheet required by the NSW DHPI.

Key potential benefits identified include:

- > Local procurement and economic opportunities during construction of the project including workforce, short-term accommodation, construction materials and amenities.
- > Investments in community facilities through contributions to local Rural Fire Service (RFS)
- > Contributing towards the renewable energy transition
- > A more stabilised and reliable electricity network

Key potential impacts identified include:

- > Noise, vibrations, dust and visual impacts for close neighbours both during construction and operation
- > Pressure on housing during construction, where short-term accommodation is not available
- > Pressure on local employment, where cumulative renewable energy construction in the area may lead to shortage of workers.
- > Key stakeholders raised road safety and traffic concerns as a result of construction related traffic and access changes.
- > Fire risk concerns due to bushfire prone area.

The above predicted benefits and impacts require further research and refinement during the EIS phase of the project in response to design development, detailed environmental assessment, engagement outcomes, and to align with the requirements of the SEARs.

Detail of mitigation or enhancement strategies will be detailed in a complete SIA to be provided as part of the EIS in accordance with the *Social Impact Assessment Guidelines 2023* (DPIE 2023). This assessment will be proportionate with the scale, complexity and likely impacts and benefits of the project.

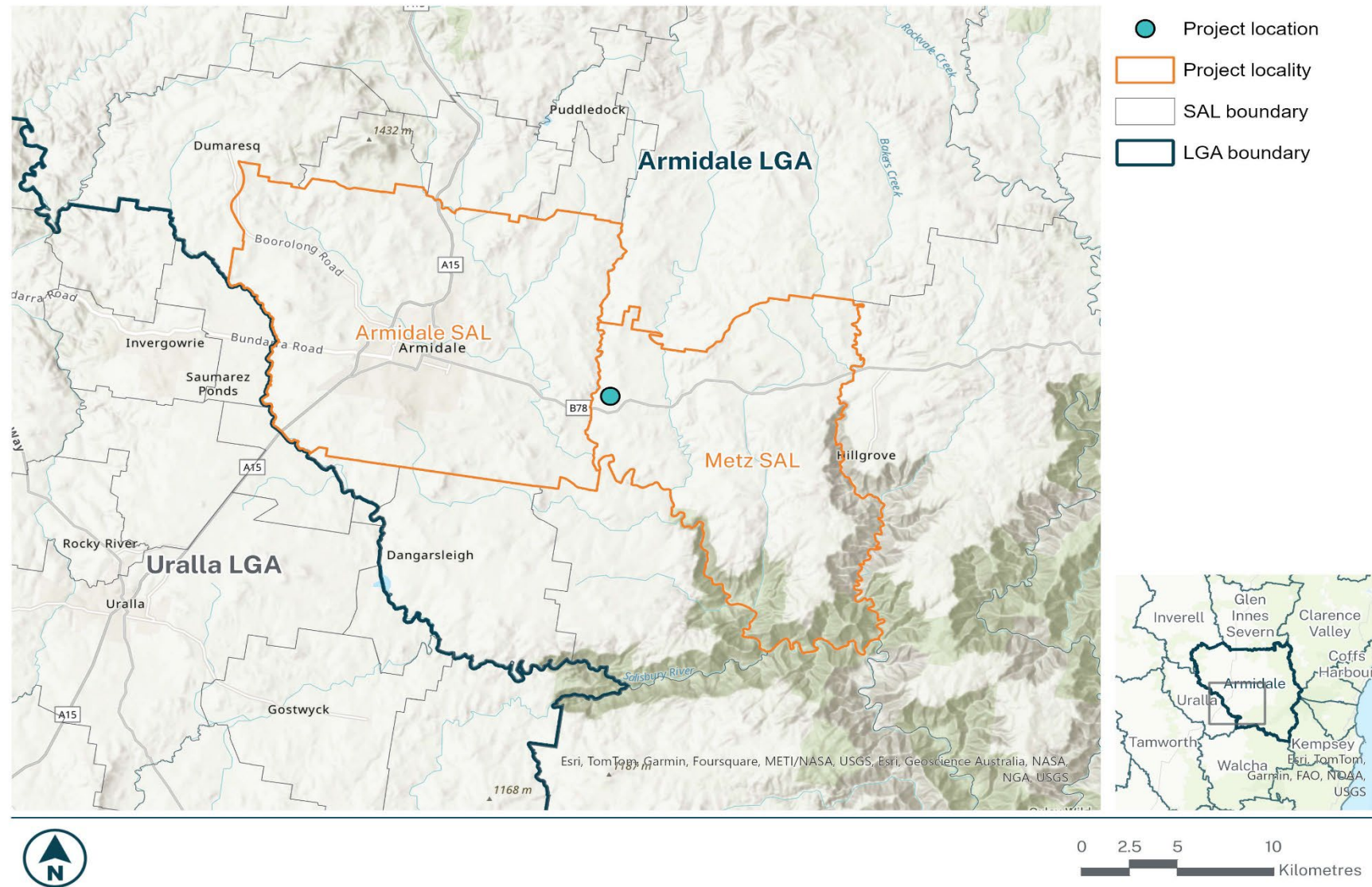
6.12 Water

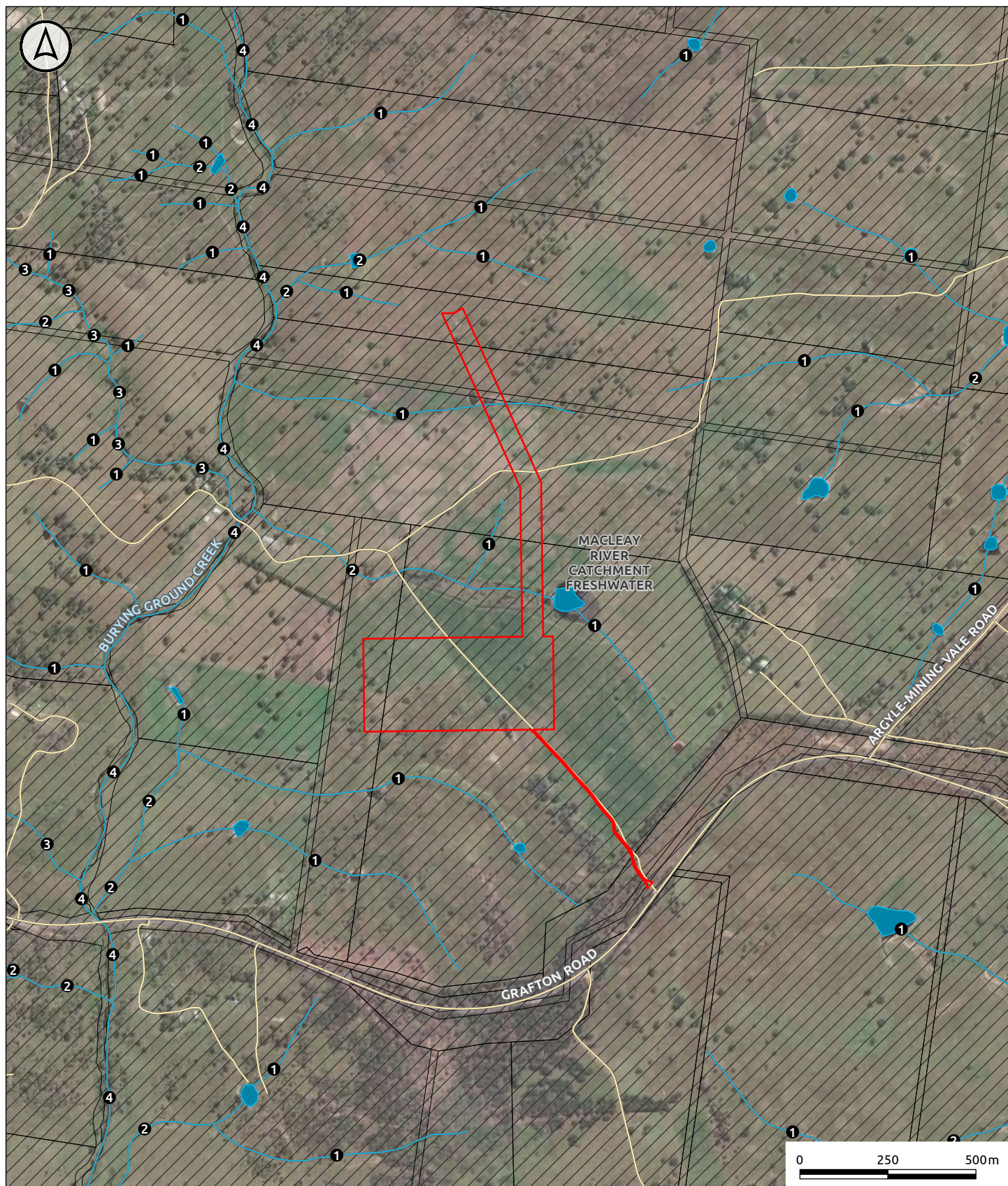
Lot 1 DP246878 is not mapped as groundwater vulnerable under the ARLEP.

Flooding is discussed in **Section 6.12**.

The development site is located within the Macleay River freshwater catchment, and contains several mapped waterways, with two crossing the development site boundary. Further assessment of potential water quality impacts and erosion impacts will be undertaken and provided as part of the EIS.

Figure 15 – Map of social localities





- Legend**
- Development Site
 - Lot
 - Road
 - Water Body
 - Watercourse (Strahler Stream Order)
 - Estuary Catchment

Figure 16

7. REFERENCES

Table 6 – References

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APPENDIX A

SCOPING REPORT SUMMARY TABLE

Level of Assessment	Matter	CIA	Engagement	Relevant Government Plans, Policies and Guidelines	Scoping Report Reference
Standard	Social Impact	Y	Specific	Social Impact Assessment Guidelines for State Significant Projects (Department of Planning Industry and Environment, 2023) Environmental Planning and Impact Assessment Practice Note: Socio-economic Assessment (Roads and Maritime Services, 2013).	6.11
Standard	Land Use	N	Specific	Surface Development Guideline 5 – Active Mining Areas – Moderate Predicted Subsidence Impact (Subsidence Advisory NSW, 2018) Development Application – Merit Assessment Policy (Subsidence Advisory NSW, 2018) Land Use Conflict Risk Assessment Guide (DPI, 2011)	6.10
Standard	Heritage	N	Specific	NSW Skeletal Remains: Guidelines for Management of Human Remains (Heritage Office, 1998) Criteria for the Assessment of Excavation Directors (NSW Heritage Council, 2011).	6.9
Standard	Hydrogeology	N	Specific	Acid Sulphate Soils Assessment Guidelines (Department of Planning, 2008) Managing Land Contamination: Planning Guidelines SEPP 55 – Remediation of Land (Department of Urban Affairs and Planning and Environment Protection Authority, 1998) Managing Urban Stormwater: Soils and Construction Volume 1 (Landcom, 2004) Managing Urban Stormwater: Soils and Construction Volume 2 (Department of Environment and Climate Change, 2008) Approved Methods for the Sampling and Analysis of Water Pollutants in NSW (Department of Environment and Climate Change, 2008)	6.12 6.8.2

				Australian and New Zealand Guidelines for Fresh and Marine Water Quality (ANZECC / ARMCANZ, 2000) Using the ANZECC Guidelines and Water Quality Objectives in NSW (Department of Environment and Conservation, 2006) Managing Urban Stormwater: Soils and Construction Volume 1 (Landcom 2004) and Volume 2 (A. Installation of Services; B. Waste Landfills; C. Unsealed Roads; D. Main Roads; E. Mines and Quarries) (DECC 2008) NSW Government's Flood risk management manual (2023)	
Standard	Biodiversity	Y	Specific	Refer to Section 6.5 of the Scoping Report.	6.5
Standard	Bushfire	N	Specific	Planning for Bushfire Protection 2019	6.8.2
Standard	Access and Traffic	Y	Specific	Guide to Traffic Management – Part 3 Traffic Studies and Analysis (Austroads, 2013) Guide to Traffic Generating Developments Version 2.2 (RTA, 2002)	6.2
Standard	Visual Impact	Y	General	Refer to Section 6.4.1 of the Scoping Report.	6.4.1
Standard	Noise and Vibration	Y	General	Construction Noise Strategy (Transport for NSW, 2012) Interim Construction Noise Guideline (Department of Environment, Climate Change and Water, 2009) NSW Industrial Noise Policy (Environment Protection Authority, 2000) NSW Road Noise Policy (Environment Protection Authority, 2011) Assessing Vibration: A Technical Guideline (Department of Environment and Conservation, 2006) German Standard DIN 4150-3: Structural Vibration – Effects of Vibration on Structures Environmental Noise Management Assessing Vibration: A Technical Guideline (Department of Environment and Conservation, 2006)	6.4.2

				Technical Basis for Guidelines to Minimise Annoyance due to Blasting Overpressure and Ground Vibration (Australian and New Zealand Environment Council, 1990).	
Not assessed	Air Quality	Y	General	Approved Methods for the Modelling and Assessment of Air Pollutants in New South Wales (EPA, 2022) NSW's Sustainable Design Guidelines (Version 3.0) (Transport for NSW, 2013) Greenhouse Gas Inventory Guide for Construction Projects (Transport for NSW, 2012).	6.3
Standard	Hazard	N	General	Hazardous and Offensive Development Application Guidelines: Applying SEPP 33 (DoP, 2011) International Standard (ISO / IEC 31010) Risk Management – Risk Assessment Technique Australian Code for the Transport of Dangerous Goods by Road and Rail (7th edition) (National Transport Commission, 2007) Storage and Handling of Dangerous Goods Code of Practice (WorkCover, 2005).	6.8



APPENDIX B

BIODIVERSITY ASSESSMENT



APPENDIX C

PROTECTED MATTERS SEARCH TOOL (PMST) RESULTS



APPENDIX D

AHIMS SEARCH RESULTS



APPENDIX E

PRELIMINARY SOCIAL IMPACT ASSESSMENT



APPENDIX F

PRELIMINARY TRAFFIC IMPACT ASSESSMENT



APPENDIX G

PRELIMINARY VISUAL IMPACT ASSESSMENT

