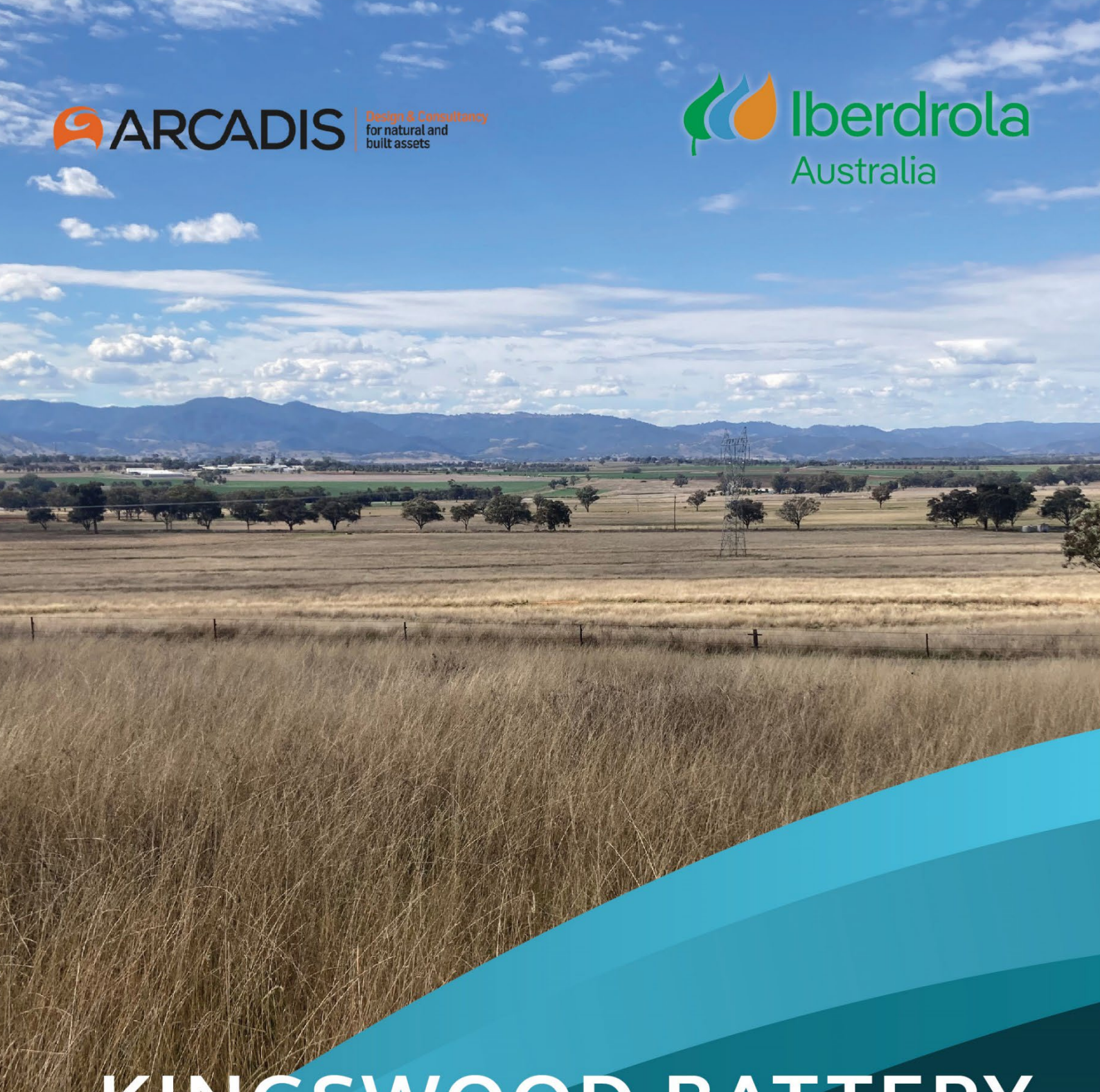

KINGSWOOD BATTERY ENERGY STORAGE SYSTEM

Scoping Report

October 2023

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IBERDROLA AUSTRALIA LIMITED
KINGSWOOD BATTERY ENERGY STORAGE SYSTEM

Scoping Report

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REVISIONS

Revision	Date	Description	Prepared by	Approved by
A	15/06/2023	Draft for IBA review	JG	SM / HT
B	16/08/2023	Draft for IBA review	SM	HT
C	12/09/2023	DPE submission (adequacy)	SM	SM
D	5/10/2023	Lodgement	SM	SM

ACRONYMS AND DEFINITIONS

Term	Definition
AC	Alternating Current
AEMO	Australian Energy Market Operator
Area of interest	A nominal 1 kilometre buffer around the Project Site
ARPNSA	Australian Radiation Protection and Nuclear Safety Agency
ASS	Acid Sulfate Soils
BC Act	*Biodiversity Conservation Act 2016*
BDAR	Biodiversity Development Assessment Report
BESS	Battery Energy Storage System
DC	Direct Current
DPE	Department of Planning and Environment
DPIE	Department of Planning, Industry and Environment (now DPE)
EIS	Environmental Impact Statement
EMF	Electric and Magnetic Fields
EP&A Act	*Environmental Planning and Assessment* Act 1979
EP&A Regulation	*Environmental Planning and Assessment Regulation 2000*
EPBC Act	*Environment Protection and Biodiversity Conservation* Act 1999
FCAS	Frequency Control Ancillary Services
GDEs	Groundwater Dependent Ecosystems
HHIA	Historic Heritage Impact Assessment
HVAC	Heating Ventilation Air Conditioning
Iberdrola	Iberdrola Australia Limited
ICNG	Interim Construction Noise Guideline
ISP	Integrated System Plan
LEP	Local Environmental Plan
LETS	Low Emissions Technology Statements
LGA	Local Government Area
LSBS	Large Scale Battery Storage
MNES	Matter of National Environmental Significance
MW	Megawatt
MWh	Megawatt Hours
NEM	National Electricity Market
NPfI	Noise Policy for Industry
OEH	Office of Environment and Heritage

Term	Definition
OSOM vehicle	Oversized and / or overmass vehicle
PCT	Plant Community Type
PHA	Preliminary Hazard Assessment
Planning Systems SEPP	*State Environmental Planning Policy (Planning Systems) 2021*
POEO Act	*Protection of the Environment Operations Act 1997*
R&H SEPP	*State Environmental Planning Policy (Resilience and Hazards) 2021*
SEARs	Secretary's Environmental Assessment Requirement
SSD	State Significant Development
SSD guidelines	*State significant development guidelines – preparing a scoping report* (DPE, 2022).
Tamworth substation	The existing Tamworth substation owned and operated by TransGrid
T&I SEPP	*State Environmental Planning Policy (Transport and Infrastructure) 2021*
TEC	Threatened Ecological Community
The Project	The project for which approval is being sought, namely the construction, operation and maintenance of a Battery Energy Storage System
Project Site	744 Burgmanns Lane, Kingswood, 2340 (Lot 43 DP1064582). The Project Site does not represent a footprint for construction, but rather indicates the broader area in which the BESS development would be sited (the final siting of infrastructure within the Project Site would be confirmed through design development)
The Proponent	Iberdrola Australia Limited

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EXECUTIVE SUMMARY

Background

Iberdrola Australia Development Pty Limited (ABN 32 137 258 470) (Iberdrola) (the Proponent) is a 100% subsidiary of Iberdrola Australia Limited (ABN 39 105 051 616) (formerly trading as Infigen Energy Limited) and a wholly owned entity of the Iberdrola Group.

Iberdrola is a leader in renewable energy and a long-term developer, operator and owner, and manages all aspects of the project lifecycle. Iberdrola is seeking to support Australia's renewable energy transition by providing "firmed" green energy to a large range of commercial and industrial customers in Australia.

Iberdrola currently has a 1.4 Gigawatt (GW) portfolio of renewable assets under operation or construction in Australia, which is supported by 320 Megawatt (MW) of firming capacity. Iberdrola has strong growth ambitions in supporting Australia in meeting its various clean energy targets and continue to provide reliable and affordable clean energy to its customers. It will be investing $2 billion in Australia by 2025.

Iberdrola is seeking development consent for the construction, operation and maintenance of a Battery Energy Storage System (BESS) of up to 500 MW and up to 1000 Megawatt hours (MWh) of battery storage capacity (the Project) at Kingswood (NSW), within the Tamworth Regional Local Government Area.

The BESS is proposed to be developed in two stages:

- Stage 1 – 250 MW and up to 500 MWh of storage capacity; and
- Stage 2 – An increase up to 500 MW and up to 1000 MWh of storage capacity.

Project justification

The Project is needed to support the NSW Electricity Strategy (2019) for a reliable, affordable and sustainable electricity future that supports a growing economy. There is an increasing need for battery storage to "firm" (make reliable and consistent) weather-dependent renewable sources so that energy supply can respond to consumer demand. The NSW Electrical Strategy (2019) notes that all coal fired power plants in NSW are scheduled for closure within the next 20 years and that firmed renewables are the lowest cost option to replace aging coal power stations

The Australian Energy Market Operator (AEMO's) 2022 Integrated System Plan emphasises that BESS facilities, such as the Project, are required to provide firming capacity to aid in the variability in supply of renewable energy and to support the supply of electricity during peak energy demands.

The Project is located near the new England Renewable Energy Zone (REZ), an area established by the NSW Government as a hub for wind and solar power generation. Although outside of the boundaries of the REZ, the Project is near major transmission lines that will connect the REZ to the NSW electricity grid.

BESS facilities, such as the Project, will provide enabling infrastructure for expanding the renewable energy industry in NSW. As such, the Proponent considers that the Project will play a role in the transformation of the NSW energy sector.

The Project

This Project involves the construction and operation of a BESS and would include:

- A BESS including battery enclosures, inverters, transformers and a control building
- A high voltage transmission line connection (above ground and/or below ground) between the BESS and the nearby Tamworth substation
- Realignment of the existing 330 kV transmission line to avoid conflict with proposed transmission line connecting the BESS to the Tamworth substation
- Tamworth substation upgrade works to facilitate connection with the BESS, including switchgear and bus bar
- Site access to the BESS from Burgmans Lane or Ascot-Calala Road
- Internal site access road and parking
- A permanent office and staff amenities
- Utilities including telecommunications, water and wastewater for amenity buildings
- Stormwater management infrastructure, lighting, fencing and security devices
- Landscaping and screening vegetation.

Key construction activities are expected to include:

- Site enabling works, including earthworks and levelling, establishment of temporary environmental controls, and other civil and ground preparation activities
- Establishment of hardstand areas
- Delivery, installation and electrical fit-out for the Project, including battery enclosures, invertors, transformers and associated cabling and infrastructure
- Establishment of a transmission line between the BESS and the Tamworth substation
- Realignment of the existing transmission 330KV line to avoid conflict with proposed BESS transmission line (subject to ongoing TransGrid consultation)
- Tamworth substation upgrade works to facilitate connection with the BESS
- Establishment of fire asset protection zone and firefighting systems
- Construction of a permanent office and staff amenities
- Finishing works
- Testing and commissioning
- Removal of construction equipment and rehabilitation of construction areas.

The extent and configuration of the final built form will be refined through the Environmental Impact Statement (EIS) and design process.

Planning and assessment process

The Project is considered to meet the definition of State Significant Development under Clause 2.6 of the *State Environmental Planning Policy (Planning Systems) 2021*, as the Project would be for electricity generating works on land that is permitted with development consent under Clause 2.35 of the *State Environmental Planning Policy (Transport and Infrastructure) 2021* and would have a capital investment value greater than $30 million.

Development consent for the Project is therefore being sought in accordance with Part 4, Division 4.7 of the *Environmental Planning and Assessment Act 1979* (EP&A Act).

Purpose of this document

The purpose of this Scoping Report is to support Iberdrola's application to the Minister for Planning approval under Part 4, Division 4.7 of the EP&A Act, with the first step to obtain Secretary's Environmental Assessment Requirements (SEARs) for the EIS.

Key environmental issues

The identification of issues to be addressed in the EIS has been undertaken through a risk-based approach in accordance with the *State significant development guidelines – preparing a scoping report* (DPE, 2022).

The following key environmental issues identified during the risk assessment will require assessment in the EIS:

- Traffic, transport and access
- Noise and vibration
- Biodiversity
- Heritage
- Hazards and risk (including bushfire)
- Landscape and visual
- Land
- Socio-economic impacts
- Cumulative impacts.

Assessment of these issues and the other environmental issues identified will be carried out as part of the EIS. While not identified at this stage as key issues, other issues that will be included in the assessment of the BESS are:

- Water quality, hydrology and flooding
- Air quality
- Waste management.

Consultation

Community and stakeholder engagement for the Project commenced in 2023 and is being undertaken in accordance with *Undertaking Engagement Guidelines for State Significant Projects (*DPE, 2022) and Iberdrola's Community Engagement Policy. This targeted engagement has focused primarily on notifying neighbouring landowners, stakeholders and government agencies of Iberdrola's intention to lodge the Scoping Report for the Project and enable stakeholders to prove initial feedback.

The proponent will continue to consult with the community and stakeholders during the preparation of the EIS. Feedback and participation from consultation and engagement activities would be used to further inform investigations being carried out for the environmental assessment of the Project.

Iberdrola is also a signatory of the Clean Energy Council's Best Practice Charter for Renewable Energy Projects and commits to honouring the Charter in renewable energy projects and associated transmission infrastructure.

Next steps

Following the receipt of the SEARs for the Project, the Proponent will prepare an EIS for the Project, that will be publicly exhibited by the NSW Department of Planning and Environment, in accordance with the requirements of Part 4, Division 4.7 or the EP&A Act.

During public exhibition of the EIS, the community and stakeholders will be encouraged to have their say and make a formal submission.

1 INTRODUCTION

This chapter provides an overview of the Project, including the Project's location, local context and key features. The purpose and structure of this report are also provided.

1.1 Overview

Iberdrola Australia Development Pty Limited (Iberdrola) (the Proponent) is seeking to support Australia's renewable energy transition by providing "firmed" green energy to a large range of commercial and industrial customers in Australia.

The Proponent is seeking development consent for the construction, operation and maintenance of a large-scale Battery Energy Storage System (BESS) of around 500 Megawatt (MW) that would provide 1000 Megawatt hours (MWh) of battery storage capacity.

The Project is considered to support the NSW Government's electricity strategy for a reliable, affordable and sustainable electricity future that supports a growing economy. BESS facilities, such as the Project, would assist with intermittency risks associated with renewable energy generation in NSW, and is considered a key element of the transformation of the NSW energy sector.

The Proponent is seeking State Significant Development (SSD) approval for the Project under Part 4, Division 4.7 of the *Environmental Planning and Assessment Act 1979* (EP&A Act) (refer to Chapter 4 for more information about the statutory context of the Project).

1.2 Project location

The Project is located at 744 Burgmanns Lane, Kingswood 2340 (Lot 43 DP1064582) (the Project Site), within the Tamworth Regional Local Government Area (LGA) and in the suburb of Kingswood.

The Project Site is located around six kilometres southeast of Tamworth and two kilometres west-south-west of Calala town centre and borders the suburb of Calala. The Project Site is also around 400 metres southeast of the existing Tamworth TransGrid substation (Tamworth substation). The Project Site is roughly rectangular in shape, covering around 40 hectares. The location of the Project Site is shown in Figure 1-1.

The proposed transmission line would transect land between the Project Site and the Tamworth substation. Lots anticipated to be impacted by the Project are listed in Table 1-1. There is a potential that other properties may also be impacted for connection to relevant utilities, these would be identified within the Environmental Impact Statement (EIS), subject to further investigation.

Table 1-1 Lots impacted by the Project

Lot / DP	Address	Project component	Land owner
Lot 43 DP1064582	744 Burgmanns Lane, Kingswood 2340	• BESS facility • Ancillary elements and parking • Transmission infrastructure connecting the BESS and Tamworth substation • Site offices and amenities	Iberdrola and the landholder have entered into an option to buy agreement
Lot 3 DP244399	111 Burgess Lane, Kingswood 2340	• Transmission infrastructure connecting the BESS and Tamworth substation	Land owned by TransGrid
Lot 4 DP244399	111 Burgess Lane, Kingswood 2340	• Transmission infrastructure connecting the BESS and Tamworth substation	Land owned by TransGrid
Lot 6 DP21993	Burgmanns Lane, Kingswood 2340	• Substation upgrade • Transmission realignment • Transmission infrastructure connecting the BESS and Tamworth substation	Land owned by TransGrid

1.3 Site context

Tamworth is a rural region dominated by agricultural land uses, particularly cattle and sheep grazing for slaughter, and hay and cereal cropping (ABS, 2021). Consistent with regional setting and its immediate surrounds, the Project Site has been extensively cleared and is used for cattle grazing.

Within the Project Site, a homestead occupied by the existing landowner is located in the southwest corner. Wire fencing extends around the Project Site, dividing the Lot internally into three paddocks, the homestead, and the stables. Two transmission lines transect the Project Site.

The surrounding properties include:

- Lot 44 DP 1064582 to the west
- Lot 23 DP95990P to the south
- Lot 1 DP1234207 to the east
- Lot 1 DP244399 and Lot 2 DP244399 to the north.

The Project Site is bounded by Ascot-Calala Road to the east and Burgmanns Lane to the north, 3.2 kilometres from the New England Highway / Goonoo Goonoo Road. Tamworth substation is 400 metres northwest on Burgmanns Lane. The Project Site has a low gradient sloping northeast towards Calala Creek 800 metres to the east, which feeds into the Peel River.

The nearest residential zoned land is located in Calala around 470 metres north. Isolated receptors are present in adjacent properties on Burgmanns Lane and Ascot-Calala Road. Receptors located within one kilometre of the Project Site are shown in Figure 1-2 and listed in Appendix D.

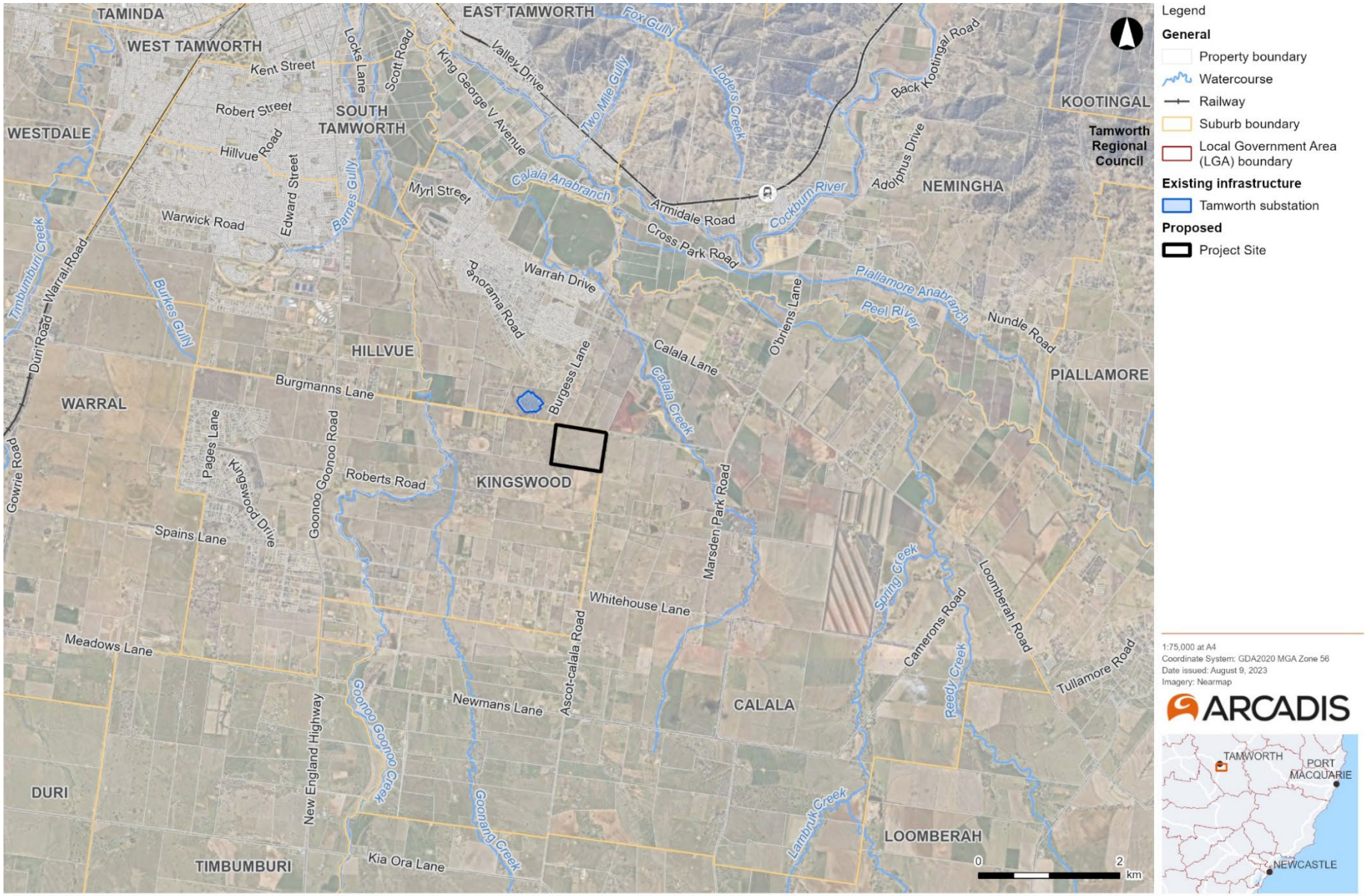


Figure 1-1 Site context

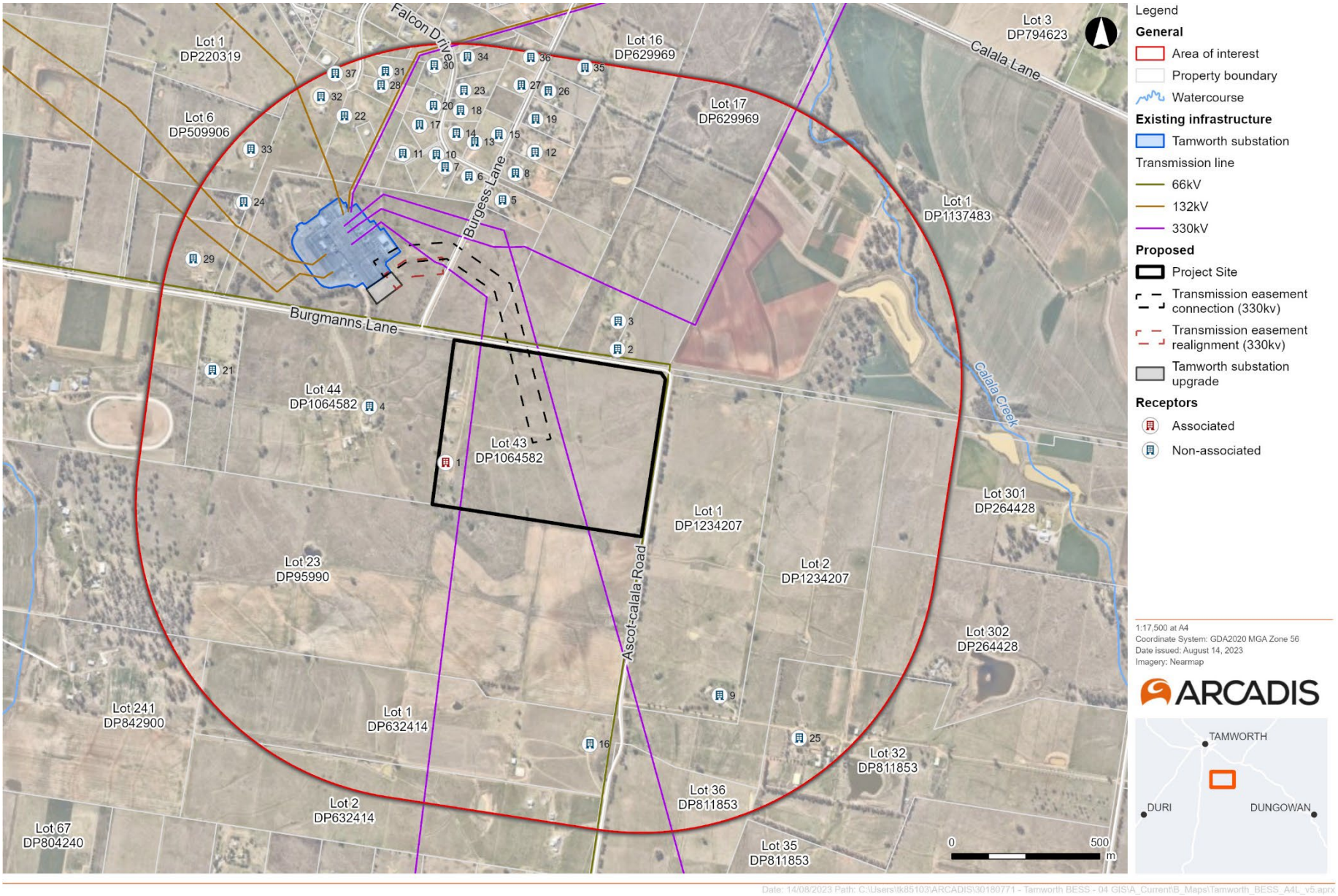


Figure 1-2 Nearby receptors

1.4 The Project

Iberdrola is seeking development consent for the construction, operation and maintenance of a large-scale BESS, of around 500 MW that would provide up to 1000 MWh of battery storage capacity.

This Project would include:

- A BESS including battery enclosures, inverters, transformers and a control building
- A high voltage transmission line connection (above ground and/or below ground) between the BESS and the nearby Tamworth substation
- Realignment of the existing 330 kV transmission line to avoid conflict with the proposed transmission line connecting the BESS to the Tamworth substation.
- Tamworth substation upgrade works to facilitate connection with the BESS including switchgear and bus bar
- Site access to the BESS from Burgmans Lane or Ascot-Calala Road
- Internal site access road and parking
- A permanent office and staff amenities
- Utilities including telecommunications, water and wastewater for amenity buildings
- Stormwater management infrastructure, lighting, fencing and security
- Landscaping and screening vegetation.

1.5 Purpose and structure of this Report

The purpose of this report is to support Iberdrola's application to the Minister for Planning for planning approval under Part 4, Division 4.7 of the EP&A Act, with the first step to obtain Secretary's Environmental Assessment Requirements (SEARs) for the Environmental Impact Statements (EIS).

This scoping report has been prepared to:

- Describe the Project
- Identify feasible alternatives that will be investigated further during the preparation of the EIS with regard to the objective of the development
- Provide an early indication of community views and outline what engagement will be carried out during the preparation of the EIS
- Identify the key environmental matters that requiring assessment in the EIS and the proposed approach to assessing each of these matters with regard to relevant government legislation, plans, policies and guidelines (refer Appendix A).

The structure and content of this report is outlined in Table 1-2.

Table 1-2 Structure and content of this report

Chapter		Description
Chapter 1	Introduction	Outlines the key elements of the Project and the purpose of this report.
Chapter 2	Strategic context	Provides an outline of the need and justification of the Project, as well as a description of the strategic alternatives and locations considered.
Chapter 3	The Project	Describes the Project, including general construction activities.
Chapter 4	Statutory context	Provides an outline of the statutory approvals framework, including applicable legislation and planning policies.
Chapter 5	Engagement	Outlines the stakeholder and community engagement carried out to date.
Chapter 6	Preliminary environmental assessment	Provides a preliminary consideration of the potential direct and indirect impacts associated with construction and operation of the Project.
Chapter 7	Summary of proposed environmental impact statement scope	Summarises the proposed scope of further investigations for the Project during the preparation of the EIS, based on the initial potential direct and indirect impacts identified in this Scoping Report.
Chapter 8	Conclusion	Provides a conclusion to the report and identifies the next steps following the receipt of the SEARs.

1.6 The Proponent

Iberdrola Australia Development Pty Limited (ABN 32 137 258 470) is a 100% subsidiary of Iberdrola Australia Limited (ABN 39 105 051 616) (formerly trading as Infigen Energy Limited) and a wholly owned entity of the Iberdrola Group. Iberdrola S.A. is the ultimate parent company of the entire Iberdrola Group and owns 100% of Iberdrola Australia Limited.

The Iberdrola Group is the number one producer of wind power by volume globally, and one of the world's largest electricity utilities by market capitalisation. Iberdrola Group's global expertise spans renewable energy, electricity networks, smart grids, large-scale energy storage, energy innovation and digitisation, and advanced customer products. The Iberdrola Group owns and operates 53GW of installed generating capacity with a further 7GW contracted, including over 40GW of installed renewables capacity owned.

Iberdrola Australia is a leader in renewable energy and has been operating renewable energy assets locally for over 15 years. Iberdrola Australia is a long-term developer, operator and owner, and manages all aspects of the project lifecycle. It currently has 1.4 GW portfolio of renewable assets under operation or construction in Australia, which is supported by 320 MW of firming capacity. Iberdrola has strong growth ambitions in supporting Australia in meeting its various clean energy targets and continue to provide reliable and affordable clean energy to its customers. It will be investing $2 billion in Australia by 2025.

The details of the Proponent are provided in Table 1-3 below.

Table 1-3 Proponent details

Proponent details	
Name	Iberdrola Australia Development Pty Limited
Postal address	Level 22, Governor Phillip Tower, 1 Farrer Place, Sydney NSW 2000
ABN	39 105 051 616
Nominated contact	Jose Opazo, Iberdrola Australia Development Pty Limited
Contact details	joze.opazo@iberdrola.com.au
Scoping Report	Prepared by Arcadis Australia Pty Ltd

2 STRATEGIC CONTEXT

This chapter provides an outline of the need and justification of the Project. A description of the strategic alternatives and locations has also been considered.

2.1 Strategic planning and policy context

2.1.1 Australia's Long Term Emissions Reduction Plan (National)

Australia's whole-of-economy Long-Term Emissions Reduction Plan is focussed on technology and sets out how Australia will achieve net zero emissions by 2050. One of the key principles of the plan is keeping energy prices down, while providing affordable and reliable power. The plan identifies low emissions technology solutions, including energy storage for firming, as a priority technology to achieving clean, cheap electricity.

The Technology Investment Roadmap is the cornerstone of the Long-Term Emissions Reduction Plan and sets a process to develop and deploy low emissions technologies. The Technology Investment Roadmap includes a requirement to prepare Low Emissions Technology Statements (LETS) which review, refine and evaluate the government's investments in low emission technologies. The current LETS (2021) includes energy storage as an existing priority technology for government investment.

LETS 2021 indicates that broad deployment of electrical energy storage will facilitate further integration of low-cost solar and wind electricity in the grid. Energy storage will provide system security services and be a source of reliable, dispatchable electricity, and reduce pressure on electricity prices by meeting peaks in consumer demand.

The Project would be consistent with the high priority technologies outlined in the Long Term Emissions Reduction Plan as it which would provide increased transmission capacity and a reliable source of power at affordable prices for customers.

2.1.2 2022 Integrated System Plan

The *2022 Integrated System Plan* (2022 ISP) (Australian Energy Market Operator (AEMO), 2022) provides a comprehensive roadmap for the National Electricity Market (NEM) by supporting a once-in-a-century transformation in the way electricity is generated and consumed in eastern and south-eastern Australia.

The 2022 ISP and its optimal development path support Australia's complex and rapid energy transformation towards net zero emissions, enabling low-cost firmed renewable energy and essential transmission to provide consumers in the NEM with reliable, secure and affordable power.

Development opportunities for an optimal energy system identified in 2022 ISP acknowledges that to firm up the inherently variable nature of distributed and large-scale renewable energy generation, new flexible, dispatchable resources, including BESS (as proposed by the Proponent), will be needed.

New utility-scale battery and pumped hydro storage, located at appropriate parts of the network, will enable more effective dispatch of clean electricity on demand, increase resilience by shifting energy through time to manage weather variations, and provide critical system security services.

As the Project would primarily involve the development of a BESS system that connects to existing power supply transmission networks, it is considered to align with, and support the intent of, the 2022 ISP.

2.1.3 NSW Transmission Infrastructure Strategy

The *NSW Transmission Infrastructure Strategy* (DPE, 2018) (the Transmission Infrastructure Strategy) acknowledges that NSW is undergoing an energy sector transformation which will change how energy is generated and used throughout the State.

The Transmission Infrastructure Strategy forms part of the NSW Government's broader plan to make energy more affordable, secure investment in new power stations and network infrastructure and ensure new technologies deliver benefits for customers.

By increasing transmission capacity and low-cost generation, the strategy aims to support an orderly transition of the energy sector over the next two decades.

As the Project would primarily involve the development of a large-scale BESS system that connects to existing power supply transmission networks, it is considered to complement the Transmission Infrastructure Strategy.

2.1.4 NSW Electricity Strategy

The Electricity Strategy (NSW Department of Planning, Industry and Environment, 2019) is the NSW Government's Plan for a reliable, affordable and sustainable electricity future. The Electricity Strategy acknowledges the challenges that exist in achieving the Government's objectives for the electricity system. This includes reliability risks from the retirement of some traditional coal-fired power stations combined with congestion within the existing transmission system. Both these risks reduce the attractiveness of investment in the new generation required to reduce electricity prices, improve reliability and protect the environment.

The Electricity Strategy sets out actions to address the specific needs of NSW while long term national reforms are developed and implemented. Wind and solar generation are variable in their output and need to be complemented with firm and flexible technologies such as hydro, batteries, bioenergy, concentrated solar power, demand management and gas-fired generators. When variable generators are unable to satisfy demand, other technologies which can provide electricity on demand, i.e. firm generation (such as gas and battery storage) dispatch electricity into the grid. This energy generation and supply system is able to satisfy electrical demand so long as there is sufficient firm generation capacity to meet the system's electricity demand.

As noted in the Electricity Strategy, as at October 2019, there are 17,700 MW of large-scale renewable energy projects that have received planning approval or are progressing through the NSW planning system, representing about $24 billion in investment. In addition to these renewable projects, there are 1,410 MW of large-scale non-renewable energy projects with planning approval, worth around $1.5 billion. This includes 1,250 MW of gas projects, worth $1.25 billion, and 160 MW of coal efficiency upgrades, worth $209 million.

Batteries, as a form of electrical storage, also provide multiple grid services such as frequency regulation. The cost of batteries has fallen in recent years and is expected to continue to trend downwards making batteries a more feasible, commercial firming option for wind and solar farms. The principles guiding the development of the Electricity Strategy comprise four propositions. Principle 1: New generation, delivered by competitive markets should reduce electricity prices and protect the environment, notes that renewables, firmed by dispatchable technologies such as gas and storage, are the lowest cost form of new reliable electricity generation. Accordingly, a good investment environment will deliver new generation, reduce electricity prices and ensure reliability while protecting the environment.

The Project is consistent with the goals of the Electricity Strategy, given the Project's ability to provide firm generation infrastructure able to support and complement future development of renewable energy projects.

2.1.5 NSW Electricity Infrastructure Roadmap

The Electricity Infrastructure Roadmap recognises that NSW has some of the best renewable energy resources in the world and as the global economy moves to reduce carbon emissions, NSW can attract investment in new, low carbon industries and can benefit from some of the lowest electricity prices in the Organisation for Economic Co-operation and Development. The Electricity Infrastructure Roadmap also acknowledges that to take advantage of these opportunities, substantial investment into modernising the existing electricity system, including by building transmission, generation and long duration storage and firming infrastructure is required.

The purpose of the NSW Electricity Infrastructure Roadmap is to deliver this infrastructure and secure NSW's future as an energy superpower. The Roadmap is expected to attract $32 billion of timely and coordinated private sector investment in large-scale generation, storage and transmission by 2030 to maintain a reliable, secure and affordable supply.

The Electricity Roadmap notes that investment in large-scale storage and firming capacity, including battery storage (long and short duration) will be required to balance the supply of variable renewable energy.

2.1.6 NSW Climate Change Policy Framework

The aim of the NSW Climate Change Policy Framework (NSW Office of Environment and Heritage, 2016) is to maximise the economic, social and environmental wellbeing of NSW in the context of a changing climate and current and emerging international and national policy settings and actions to address climate change.

The long-term objective of the Climate Change Policy Framework is:

- To achieve net-zero emissions by 2050
- That NSW is more resilient to a changing climate.

As the Project would include the provision of a BESS facility that would assist in the development of a renewable energy power supply network for NSW that would increase capacity and resilience, the Project is considered to be complementary to the Climate Change Policy Framework.

2.1.7 New England North West Regional Plan 2041

The *New England North West Regional Plan 2041* (DPE, 2022) provides an overarching framework to guide development proposals, land use plans and infrastructure funding decisions for the New England North West. Of the 22 objectives laid out by the Regional Plan, the following are relevant to the Project:

- Objective 8: Adapt to climate change and natural hazards and increase climate resilience
- Objective 9: Lead renewable energy technology and investment.

The Project would involve the development of a BESS providing electricity storage and firming capacity for the Tamworth region, supporting the development of intermittent renewable energy generation.

The Regional Plan references the Electricity Infrastructure Roadmap which sets out a plan for five Renewable Energy Zones (REZs), including one in the New England region, which will prioritise funding and support for the development of renewable energy projects. The New England REZ is expected to provide a network capacity of eight gigawatts. The Project's strategic positioning around 35 kilometres west of the New England REZ would provide firm generation infrastructure to support the New England REZ by balancing the supply of variable renewable energy.

2.2 Project justification

As detailed in Section 2.1, NSW is undergoing an energy sector transformation which will change how energy is generated and used throughout the State. The need to increase the generation of renewable energy as many of the State's largest coal-fired power stations begin to close has been identified.

Wind and solar generation are variable in their output and need to be complemented with firm and flexible technologies such as hydro, batteries, bioenergy, concentrated solar power, demand management and gas-fired generators. When variable generators are unable to satisfy demand, other technologies which can provide electricity on demand i.e. firm generation (such as gas and battery storage) dispatch electricity into the grid. This energy generation and supply system is able to satisfy electrical demand so long as there is sufficient firm generation capacity to meet the system's electricity demand.

Without the development and operation of short and long-term dispatch infrastructure to support increasing investment, there is the potential for future deficit in capacity and reliability of the NSW power supply system. In a worse case scenario, this can lead to load shedding or blackout events.

The Project would be for the development of a BESS. BESS facilities, such as that proposed by the Project would provide storage, frequency control ancillary services (FCAS) (to provide a fast injection of energy, to manage supply and demand) and help firm variable renewable energy generation.

2.2.1 How does a BESS work?

Batteries are an energy storage technology designed to absorb and release electrical energy on demand. Unlike many other forms of energy storage and generation, batteries are particularly valuable because they provide flexibility. They can respond faster than other energy storage or generation technologies and help maintain grid stability by providing the necessary response in fractions of a second. The battery technology type and layout for the Project would be refined during the detailed design process. An illustrative concept of a BESS is provided in Figure 2-1.

Figure 2-1 Lake Bonney Li-ion Battery Energy Storage System (Iberdrola)

2.3 Project objectives

The key objectives of the Project include the following:

- Increase the potential for additional renewable energy assets to be built in NSW
- Improve the security, resilience and sustainability of NSW's electricity grid
- Help reduce the direct carbon emission of the NSW's electricity grid (by not relying on traditional fossil fuel firming assets)
- Minimise adverse impacts on the environment and community during construction and operation.

2.4 Strategic alternatives

This section describes the development options considered as part of this Scoping Report. These will be considered in greater detail in the EIS.

2.4.1 Do nothing

The do-nothing approach would not support the NSW Government's broader plans and strategies to make energy more affordable, secure investment in new power sources and network infrastructure and ensure new technologies deliver benefits for customers.

For these reasons, the 'do nothing' scenario is not the preferred, or considered a suitable, option.

2.4.2 Alternative site

Following an assessment of electricity needs across NSW, relevant planning and policy considerations, and forecasted demands, Iberdrola has identified the Tamworth region, and more specifically land close to the Tamworth substation, as a suitable location for the development of a BESS.

No alternative sites at this stage have been identified near the Tamworth substation. The key limiting factors to an alternative site are the potential increased costs and environmental impacts associated with the:

- Acquisition of a suitable property; and
- Increased extent of connection infrastructure between the BESS and the Tamworth substation.

The Project Site contains existing TransGrid transmission infrastructure and is located around 400 metres from the Tamworth substation. As such, the Project would be consistent with existing electricity infrastructure setting and limits impacts on the rural land character.

2.4.3 Alternative technology

The battery technology type and layout for the Project will be refined during the EIS. Battery chemistry and associated technology options are rapidly evolving and combined with decreasing costs, are increasingly being investigated and pursued.

Lithium-ion is the most common battery chemistry used to store electricity and when a large number of batteries are installed together (i.e. grid-scale or large-scale battery storage (LSBS)) they can act as large-scale power generators when connected into the electricity transmission system. A lithium-ion battery storage system would comprise modular units on pad mounted foundations, which are containerised. Each unit contains a number of battery pods strung together and connected to an inverter, which would convert the direct current (DC) from the batteries into alternating current (AC) and connect into the electricity grid. Lithium-ion BESS technology is established in the marketplace.

Flow batteries offer a low-cost and environmentally sustainable alternative to lithium-ion battery systems and are capable of long-duration discharge. Flow batteries produce energy by circulating two differently charged electrolyte solutions (for example from iron, salt, and water) through containers separated by a membrane with low permeability. As the liquids pass over the membrane, electrical current passes through conductive graphite plates in either container, leaving the electrolyte solution. During discharge, ions used to generate energy then dissolve back into the electrolyte solution. Flow batteries are capable of accommodating increased energy storage capacity and discharge duration by adding additional electrolytes to the system. The layout of a flow battery system would comprise flow energy centres in a housed enclosure and associated electrolyte storage tanks on pad mounted foundations. Each flow centre comprises a number of connected power trains connected to an in inverter, which would convert the DC from the batteries into AC and connect into the electricity grid.

Battery chemistries subject to further investigation during preparation of the EIS are provided in Table 2-1. Potentially Stage 1 of the Project would utilise the Lithium-ion battery technology, while Stage 2 would utilise flow batteries, should these be sufficiently progressed / developed at the time that Stage 2 is likely to commence construction.

Table 2-1 Battery chemistry overview

Battery chemistry	Overview
Lithium-ion	Lithium-ion chemistries are diverse. Nickel-Manganese-Cobalt and Iron Phosphate formulations are commonly used within BESS facilities
Lithium-ion polymer battery	Alternative being investigated as certain formulations are quoted to achieve greater safety (e.g., reduction or elimination of thermal runaway), increased energy density, material stability within a greater operating envelope, and an enhancement in overall performance.
Vanadium redox flow battery (flow battery)	Alternative capable of long-duration discharge. Quoted to achieve greater safety (e.g., reduction or elimination of thermal runaway), greater temperature operating envelope and longer operational design life.
Sodium-ion battery	Alternative option given its environmental abundance, non-flammable nature, and reduced susceptibility to temperature changes relative to Lithium-ion batteries

2.4.4 Build the Project at the Project Site

The Project would leverage its strategic proximity to the Tamworth substation to provide for future capacity and resilience of the NSW energy network through the delivery of a large-scale dispatchable energy storage system. It is considered that the Project's location is advantageous for the construction and operation of a new BESS.

2.5 Project Site selection criteria

The Proponent completed a site selection exercise for the Project which included reviewing potential BESS development opportunities within NSW. A number of site selection criteria were applied, including (but not limited to):

- Land use zoning and development permissibility
- Existing grid infrastructure
- Availability of access to the site via a major road
- Provision of an area that would avoid and/or minimise the need to remove high quality native vegetation
- A flat site that would require minimal excavation and/or levelling
- An area that would not result in or be subject to flooding impacts
- An area that is not located within bushfire prone land
- Minimising impact on surrounding privately or publicly owned land
- Minimal environmental impacts.

2.5.1 Preferred option

The Project Site at 744 Burgmanns Lane, Kingswood 2340 was considered as the preferred location for the BESS facility. Underpinning factors for this decision included the:

- Project Site's high rating against each of the criteria listed in Section 2.5, particularly its proximity to the Tamworth substation
- Compatibility of the Project with existing land use zoning and permissibility
- Cleared nature of the Project Site and the immediate surrounding area
- Existing electricity infrastructure setting (i.e. the existing transmission easement on the Project Site).

3 THE PROJECT

This chapter provides an overview of the Project, including its key elements and construction activities that would be undertaken.

3.1 Key features of the Project

The Project would involve construction and operation of a BESS at 744 Burgmanns Lane, Kingswood 2340 (Lot 43 DP1064582). The Project Site is around 400 metres southeast of the Tamworth substation (refer to Chapter 1 (Introduction) of this report for additional information relating to site location and context).

The Project Site is around 40 hectares. The BESS would require an area of around 20% of the Project Site (around 8 hectares) and would connect into the Tamworth substation.

The BESS would have a capacity of around 500 MW and up to 1000 MWh of storage capacity and would be developed in two stages:

- Stage 1 - 250 MW and up to 500 MWh of storage capacity
- Stage 2 - An increase up to 500 MW and up to 1000 MWh of storage capacity.

The transmission route from the BESS to the Tamworth substation and associated land negotiations are underway. A preferred alignment traversing a distance of around 800 metres between the Project Site and Tamworth substation via Lot 3 DP244399, Lot 4 DP244399 and Lot 6 DP21993 has been identified.

To facilitate connection of the transmission line, the existing Tamworth substation would have to be upgraded and realignment of the exisiting 330 kV transmission line may be required to avoid transmission line crossover. The Tamworth substation and transmission realignment works are subject to ongoing consultation with TransGrid.

The Project would include the following key built form features:

- A BESS including battery enclosures, inverters, transformers and a control building
- A high voltage transmission line connection (above ground and/or below ground) between the BESS and the nearby Tamworth substation
- Realignment of the existing 330 kV transmission line to avoid conflict with the proposed transmission line connecting the BESS to the Tamworth substation
- Tamworth substation upgrade works to facilitate connection with the BESS including switchgear and bus bar
- Site access to the BESS from Burgmans Lane or Ascot-Calala Road
- Internal site access road and parking
- A permanent office and staff amenities
- Utilities including telecommunications, water and wastewater for amenity buildings
- Stormwater management infrastructure, lighting, fencing and security
- Landscaping and screening vegetation.

The extent and configuration of the final built form would be refined through the EIS and design process. There is a potential that other properties may also be impacted for connection to relevant utilities. These properties would be identified within the EIS and are subject to further investigation. An indicative overview of the Project is shown in Figure 3-1.

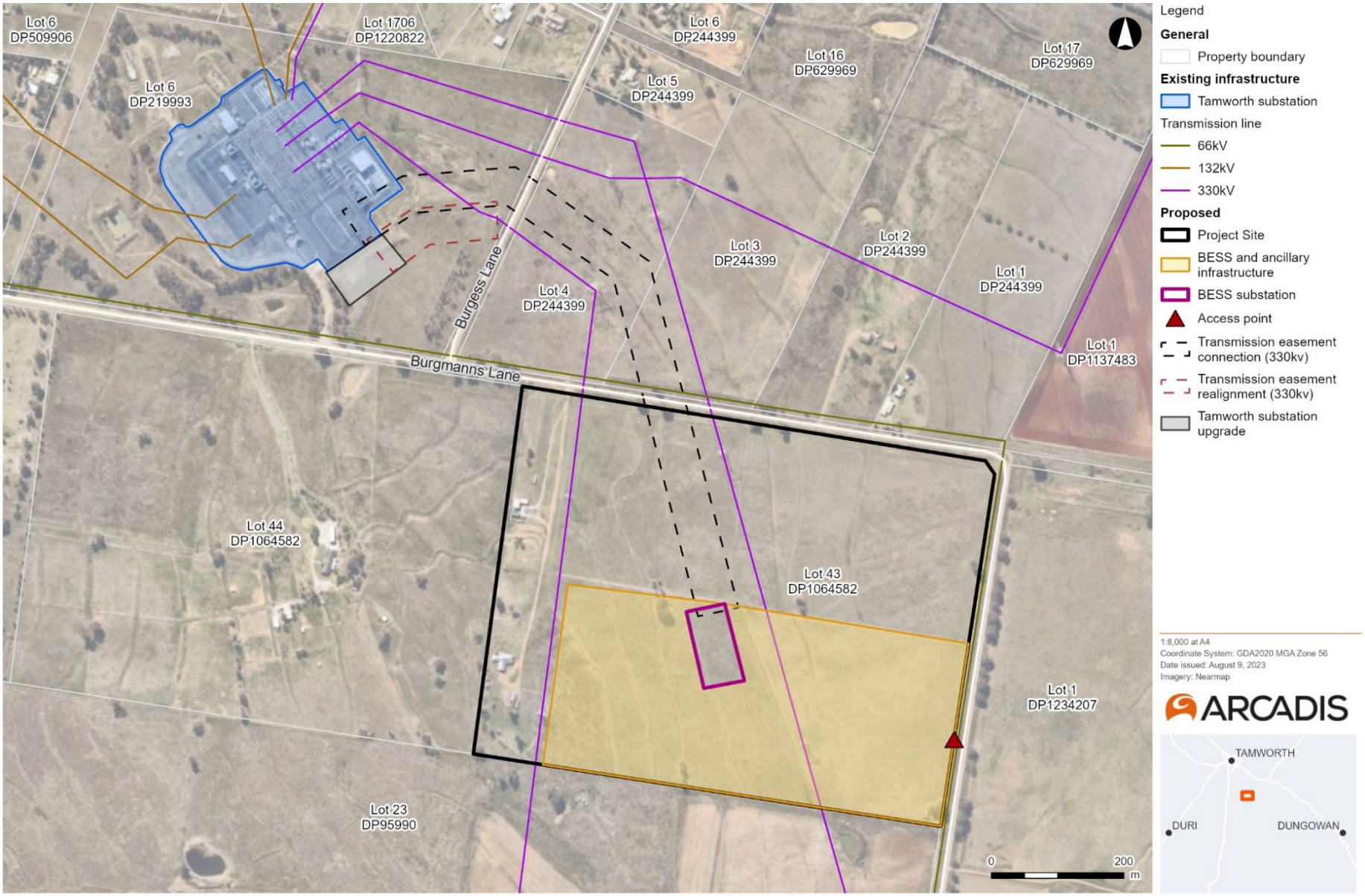


Figure 3-1 Indicative overview of the Project

3.2 Construction

3.2.1 Overview

Key construction activities are expected to include:

- Site enabling works including:
  - Establishment of temporary environmental controls
  - Establishment of site access points and construction of an internal access road and car park. The internal access road would become the permanent operational access road at the completion of construction
  - Vegetation clearance
  - Boundary fencing
  - Utility works
  - Establishment of temporary construction site office and laydown area
  - Environmental investigations or protection works (for example heritage, geotechnical and contamination investigations, where required).
- Earthworks, levelling, and other civil and ground preparation activities, including the removal of spoil from the Project Site, as required
- Establishment of hardstand areas
- Delivery, installation and electrical fit-out for the Project, including the control building, battery enclosures, inverters, transformers and associated cabling and infrastructure
- Establishment of a transmission line between the BESS and the Tamworth substation
- Realignment of the existing transmission 330KV line to avoid conflict with proposed BESS transmission line (subject to ongoing TransGrid consultation)
- Tamworth substation upgrade works to facilitate connection with the BESS
- Establishment of fire asset protection zone and firefighting systems
- Permanent environmental management and pollution control measures
- Construction of a permanent office and staff amenities
- Finishing works
- Testing and commissioning
- Removal of construction equipment and rehabilitation of construction areas.

It is likely that some elements would be prefabricated offsite and transported to the Project Site via heavy vehicles, where they would then be installed. The batteries would likely be containerised on areas of hardstand. Relevant hazardous substance management procedures and controls would be identified through further design development and implemented in accordance with the relevant guidelines and legislation.

3.2.2 Construction program

Construction of the Project would begin after all relevant approvals are obtained. Site enabling works are expected to commence in Q4 of 2024. Stage 1 would take up to 18 months to complete. Construction of Stage 2 would take up to 12 months to complete, when executed.

3.2.3 Workforce

It is anticipated that up to 100 personnel a day would be required during the peak construction periods of the Project. The construction workforce would include (but not be limited to) the following:

- Tradespeople and construction personnel
- Sub-contractor construction personnel
- Engineers
- Functional and administrative staff.

3.2.4 Construction hours

Construction of the Project would be undertaken during standard daytime construction hours, which would be:

- 7am to 6pm Monday to Friday
- 8am to 1pm Saturdays
- No work on Sundays or public holidays.

Activities that would be carried out outside of the standard daytime construction hours would include:

- Work determined to comply with the relevant noise management levels at the nearest sensitive receptor
- The delivery of materials outside approved hours as required by the NSW Police or other authorities for safety reasons
- Emergency situations where it is required to avoid the loss of lives and properties and/or to prevent environmental harm.

3.3 Operation

The BESS would operate (charge and/or discharge) based on network and market conditions. In this respect, the BESS would provide storage for energy arbitrage and frequency control ancillary services providing a fast injection or absorption of energy to manage supply and demand and help firm variable renewable energy generation for Iberdrola's customers in NSW.

The Project would be operational 24 hours a day, seven days a week. It is anticipated that the Project operation would be largely undertaken remotely and would require minimal staff presence at the Project Site. Staff would attend the Project Site on an as-needs basis and would include maintenance workers and site technicians. The Project is anticipated to be operational in 2026 with a design life of around 20 years.

3.4 Decommissioning

At the end of its design life or agreed timetable, the batteries would either be disposed of and / or recycled at approved disposal and / or recycling facilities, or returned to the original equipment manufacturer for refurbishment and recycling (subject to confirmation). Opportunities to extend the design life would be reviewed subject to the replacement of components and market conditions.

Following decommissioning, the Project Site would be rehabilitated to pre-development conditions as far as is reasonably practicable. If Iberdrola is unable to secure the Project Site, the land would be rehabilitated to a standard agreed with the landowner, which may include pre-development conditions or other arrangements.

4 STATUTORY CONTEXT

4.1 Commonwealth planning approvals

4.1.1 Environmental Protection and Biodiversity Conservation Act 1999

The Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) establishes the Commonwealth's role in environmental assessment, biodiversity conservation and the management of protected areas.

Under the EPBC Act, a referral to the Commonwealth Department of Climate Change, Energy, Environment and Water (DCCEEW) is required for proposed 'actions' that have the potential to significantly impact on any Matter of National Environmental Significance (MNES) or the environment of Commonwealth land (including leased land).

Current matters of MNES are:

- World heritage properties
- National heritage places
- Wetlands of international importance (often called 'Ramsar' wetlands after the international treaty under which such wetlands are listed)
- Nationally listed threatened species and ecological communities
- Listed migratory species
- Commonwealth marine areas
- The Great Barrier Reef Marine Park
- Nuclear actions (including uranium mining)
- A water resource, in relation to coal seam gas development and large coal mining development.

The EPBC Act also requires Commonwealth approval for any activity that will, or is likely to have, a significant impact on Commonwealth land. The land on which the Project will be constructed is not Commonwealth land, and there is no Commonwealth land within close proximity to the Project that could be impacted by the construction or operation of the Project.

A search of the EPBC Act Protected Matters Search Tool was undertaken on 24 May 2023 for a 10 kilometre buffer around the Project Site. The search identified four threatened ecological communities (TEC), 42 threatened species and 10 migratory species with the potential to occur within five kilometres of the Project Site. The results of the Protected Matters search for MNES within ten kilometres of the site are provided in Table 4-1.

The potential presence of listed threatened species and communities will be investigated further during the preparation of the EIS. Given the nature of the Project, it is relatively unlikely that it will have a significant impact on any matter protected by the EPBC Act.

Table 4-1 Matters of National Environmental Significance within 10 km of the Project

MNES	MNES within 10 km of the Project Site
World Heritage Properties	None
National Heritage Place	None
Wetlands of International Importance	3
Great Barrier Reef Marine Park	None
Commonwealth Marine Area	None
Listed Threatened Ecological Communities	4
Listed Threatened Species	42
Listed Migratory Species	10

4.1.2 Native Title Act 1993

An objective of the *Commonwealth Native Title Act 1993* is to recognise and protect native title. Section 8 states that the *Native Title Act 1993* is not intended to affect the operation of any law of a State or a Territory that is capable of operating concurrently with the Act.

Searches of the registers maintained by the National Native Title Tribunal indicate there are no applicable native title claims or any indigenous land use agreements registered with respect to land within the Project Site. The Project Site is within area subject to the Gomeroi People's Native Title Determination Application (NSD37/2019) which excludes freehold land and is therefore not applicable.

4.2 NSW environmental planning approvals

The EP&A Act and the *Environmental Planning and Assessment Regulation 2000* (EP&A Regulation) are the primary pieces of legislation that regulate land use planning and development assessment in NSW. This legislation is supported by a range of environmental planning instruments, including State Environmental Planning Policies (SEPP) and Local Environmental Plans (LEP).

4.2.1 Permissibility

Division 4 of the *State Environmental Planning Policy (Transport and Infrastructure) 2021* (T&I SEPP) applies to development for the purposes of electricity generating works or solar energy systems.

Electricity generating works are defined in Clause 2.35 as

'a building or place used for the following purposes, but does not include a solar energy system –

(a) making or generating electricity,

(b) electricity storage'

Development permitted with consent is defined in Clause 2.36(1) as

'development for the purpose of electricity generating works may be carried out by any person with consent on the following land –

> *(a) in the case of electricity generating works comprising a building or place used for the purpose of making or generating electricity using waves, tides or aquatic thermal as the relevant fuel source—on any land*
>
> *(b) in any other case—any land in a prescribed rural, industrial or special use zone.'*

The Project Site (Lot 43 DP1064582) is located within the Tamworth Regional LGA on land zoned as RU4 Primary Production Small Lots (Figure 4-1). In accordance with Clause 2.36(1)(b), the Project is therefore permissible with development consent under the provisions of the T&I SEPP.

4.2.2 State significant development

Section 4.36 of the EP&A Act provides for the declaration of a project as SSD. The declaration of a project as SSD under Section 4.36 of the Act can be by meeting the requirements of a SEPP or by the Minister for Planning.

Clause 2.6 of the State Environmental Planning Policy (Planning Systems) 2021 (Planning Systems SEPP) states that development is declared to be SSD for the purposes of the EP&A Act if:

(a) *The development on the land concerned is, by the operation of an environmental planning instrument, not permissible without development consent under Part 4 of the Act, and*
(b) *The development is specified in Schedule 1 or 2.*

As described in Section 4.2.1, the Project is not permissible without development consent.

Clause 20 of Schedule 1 of the Planning Systems SEPP declares development for the purpose of electricity generating works or heat or their co-generation (using any energy source, including gas, coal, biofuel, distillate, waste, hydro, wave, solar or wind power) to be SSD if it either –

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

The Project has a capital investment value of more than $30 million.

The Project is considered to meet the definition of SSD under Clause 2.6 of the Planning Systems SEPP, as the Project would be for electricity generating works on land that is permitted with development consent under Clause 2.36(1)(b) of the T&I SEPP and would have a capital investment value greater than $30 million.

Development consent for the Project is therefore being sought in accordance with Part 4, Division 4.7 of the EP&A Act.

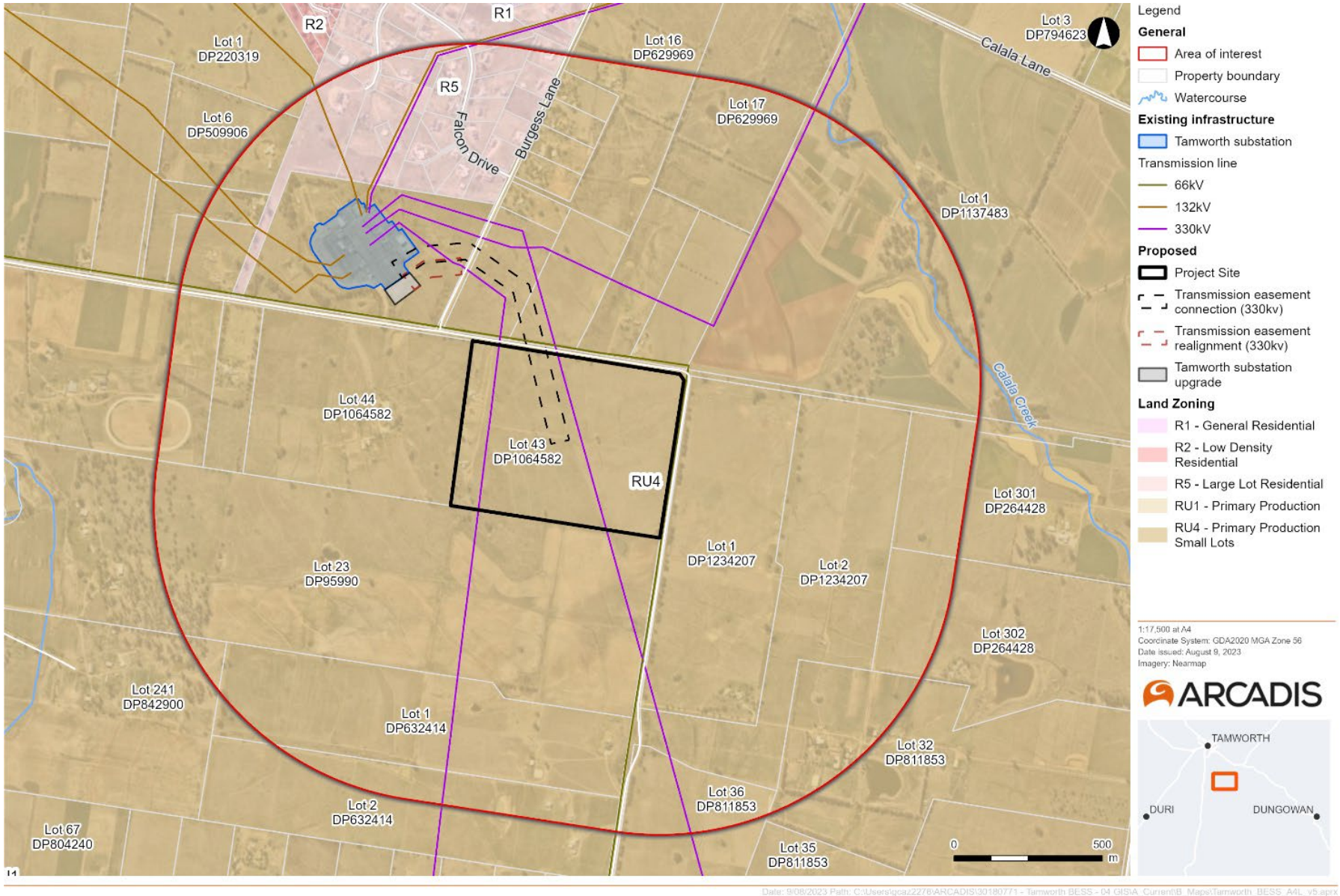


Figure 4-1 Land Use

4.2.3 Planning approval process under Division 4.7 of the EP&A Act

The assessment and approval process for an SSD project is established under Part 4, Division 4.7 of the EP&A Act. The Project requires an SSD application is to be accompanied by an EIS prepared by or on behalf of the applicant in the form prescribed by the regulations, in accordance with Section 4.12(8) of the EP&A Act.

The EIS for the Project will be informed by the SEARs. This Scoping Report supports an application made by Iberdrola (the Proponent) and submitted to the Department of Planning and Environment (DPE) to seek the SEARs project, as required by Section 4.12(8) of the EP&A Act. The EIS will be prepared in accordance with the SEARs and the requirements of Schedule 2 of the EP&A Regulation.

The DPE will place the EIS on public exhibition for a minimum of 28 days (as per Schedule 1, Division 2, clause 9 of the EP&A Act). During the exhibition period, the community, stakeholders and government agencies will have an opportunity to review the EIS and provide a written submission to DPE for consideration in its assessment of the Project.

At the completion of the public exhibition period, DPE will provide the Proponent with a copy of all submissions received during the exhibition period. After reviewing the submissions, the Proponent will prepare a Submissions Report that responds to the relevant issues raised. If changes are required to the Project as a result of the issues raised or to minimise environmental impacts, the proponent would prepare a report to address these changes and submit this for review to DPE, after which it would be made available to the public.

The Minister for Planning is the consent authority for SSD projects. The Minister for Planning has issued a general delegation of the consent authority function for SSD projects to the Independent Planning Commission in instances where more than 50 public objections are received on the application, the applicant has made a reportable political donations disclosure and/or Tamworth Regional Council object to the Project.

4.2.4 NSW Environmental Planning Instruments

The EIS will consider the provisions of SEPPs to the extent they are relevant to the Project. The environmental planning instruments that have been considered are summarised in Table 4-2.

Table 4-2 Environmental planning instruments

Environmental Planning Instrument	Discussion
State Environmental Planning Policy (Planning Systems) 2021	The Planning SEPP identifies development that is SSD. As outlined in Section 4.2.2, the Project is considered to be SSD under Clause 2.6 of the Planning SEPP.
State Environmental Planning Policy (Resilience and Hazards) 2021 (R&H SEPP)	R&H SEPP applies to any projects that fall under the policy's definition of 'potentially hazardous industry' or 'potentially offensive industry'. Certain activities may involve handling, storing or processing a range of substances which in the absence of locational, technical or operational controls may create a risk or offence to people, property or the environment. Such activities would be defined as potentially hazardous or potentially offensive. The Project is not considered to be a 'potentially hazardous industry' or 'potential offensive industry' under the R&H SEPP. Nonetheless, the EIS for the Project would include an assessment of potential hazards and risks associated with the construction and operation of the Project. Refer to Section 6.7 for more information.
State Environmental Planning Policy (Resilience and Hazards) 2021	R&H SEPP provides a state-wide approach to the remediation of contaminated land for the purpose of minimising the risk of harm to the health of humans and the environment. In accordance with Chapter 4 (Remediation of land) of the R&H SEPP, a consent authority must not consent to the carrying out of development on any land unless:

Environmental Planning Instrument	Discussion
Chapter 4 (Remediation of land)	• It has considered whether the land is contaminated. • If the land is contaminated, it is satisfied that the land is suitable in its contaminated state (or would be suitable, after remediation) for the purpose for which the development is proposed to be carried out. • If the land requires remediation to be made suitable for the purpose for which the development is proposed to be carried out, it is satisfied the land would be remediated before the land is used for that purpose. A review of potential contamination issues for the Project will be carried out in accordance with the contaminated land planning guidelines to inform the design and EIS. Refer to Section 6.9 for more information.
State Environmental Planning Policy (Resilience and Hazards) 2021 Chapter 2 (Coastal Management)	The R&H SEPP provides an integrated and co-ordinated approach to land use planning in the coastal zone in a manner consistent with the objects of the *Coastal Management Act 2016*. In accordance with Chapter 2 (Coastal Management) of the R&H SEPP, a consent authority must not consent to the carrying out of development on any land unless the consent authority is satisfied that development on coastal zones has been considered. The Project is not located on or near land mapped as coastal wetland and littoral rainforest area, proximity area for coastal wetland and littoral rainforest area, coastal vulnerability area, coastal environment area or coastal use area.
State Environmental Planning Policy (Transport and Infrastructure) 2021 (T&I SEPP)	T&I SEPP aims to facilitate the effective delivery of infrastructure across NSW. Division 4 of the T&I SEPP applies to the Project, as it is considered to be development for the purposes of electricity generating works or solar energy systems.
State Environmental Planning Policy (Biodiversity and Conservation) 2021 (B&C SEPP)	The B&C SEPP provides a framework for the regulation of the clearing of native vegetation in NSW. Further information is provided in Section 6.4.

4.2.5 Other NSW Approvals

In accordance with Section 4.41 and 4.42 of the EP&A Act, some environmental planning legislation does not apply to SSD projects, or must be applied consistently with an approval for SSD.

Approvals or authorisations that are not required or cannot be refused

Environmental approvals that are not required for SSD, but which have been considered in the preparation of this Scoping Report are listed in Table 4-3.

Table 4-3 Relevant approvals considered but not required under Section 4.41 of the EP&A Act

Approval	Comment
A permit under section 201 of the *Fisheries Management Act 1994*	The Project would not involve dredging or reclamation works.
A permit under section 205 of the *Fisheries Management Act 1994*	No works are proposed in waterways. The Project would not impact on any marine vegetation that is protected under this section.
A permit under section 219 of the *Fisheries Management Act 1994*	No works are proposed in waterways. The Project would not result in the blockage of fish passage

Approval	Comment
An approval under Part 4, or an excavation permit under section 139, of the *Heritage Act 1977*	No non-Indigenous items have been identified at or surrounding the Project Site based on a review of the Tamworth LEP 2010 and NSW heritage register.
An Aboriginal heritage impact permit under section 90 of the *National Parks and Wildlife Act 1974*	A basic search of the Aboriginal Heritage Information Management System (AHIMS) register on 18 May 2023 identified no Aboriginal heritage sites within 200m buffer of the Project Site.
A bushfire safety authority under section 100B of the *Rural Fires Act 1997*	The Project Site is located on land designated as Vegetation Category 3 and is therefore considered bushfire prone. The Project would be designed in accordance Planning For Bushfire Protection (NSW Rural Fire Service 2019).
A water use approval (section 89), a water management work approval (section 90) or an activity approval (other than an aquifer interference approval) (section 91)) of the *Water Management Act 2000*	Water use during project construction and operation is anticipated to be minimal. No impacts are anticipated on the availability of current surface or groundwater resources used by local landholders.

Section 4.42 of the EP&A Act identifies approvals or authorisations that cannot be refused if they are necessary for carrying out approved SSD and must be substantially consistent with the Part 4, Division 4.7 approval. The statutory approvals or authorisations of potential relevance to the Project include:

- A consent under Section 138 of the *Roads Act 1993*.

NSW legislation and regulations that may still be applicable to the Project

Environmental planning related legislation and regulations that may still be applicable to approved SSD projects, are identified in Table 4-4. The applicability of each of the below mentioned pieces of NSW legislation will be confirmed through the EIS development process.

Table 4-4 NSW legislation and regulations of potential relevance

Legislation	Requirement
Biosecurity Act 2015	This Act aims to protect natural resources from the adverse impact of pests, disease, weeds and contaminants on agricultural land and parks and reserves (such as those near to the Project Site). All plants are regulated with a general biosecurity duty to prevent, eliminate or minimise any biosecurity risk they may pose. During construction of the Project, any person who deals with any plant, who knows (or ought to know) of any biosecurity risk, has a duty to ensure the risk is prevented, eliminated or minimised, so far as is reasonably practicable.
Biodiversity Conservation Act 2016 (BC Act)	The BC Act seeks to: • Conserve biological diversity at the bioregional and State scale • Maintain the diversity and quality of ecosystems and enhance their capacity to adapt to change and provide for the needs of future generations • Assess the extinction risk of species and ecological communities and identify key threatening processes through an independent and rigorous scientific process • Establish a framework to avoid, minimise and offset the impacts of proposed development and land use change on biodiversity. Based on the database review, it is unlikely that the Project would have a significant impact on biodiversity values.

Legislation	Requirement
Contaminated Land Management Act 1997 (CLM Act)	This CLM Act outlines the circumstances in which notification to the Environment Protection Authority is required in relation to the contamination of land. This may become relevant during construction of the Project if contamination is encountered. A public register of notifications under this Act is maintained.
Heritage Act 1977 (Section 146)	If a relic is discovered or located, the Heritage Council must be notified '*of the location of the relic, unless he or she believes on reasonable grounds that the Heritage Council is aware of the location of the relic*'.
Protection of the Environment Operations Act 1997 (POEO Act)	The POEO Act is the key piece of environment protection legislation administered by the Environment Protection Authority. • Section 120 of the Act prohibits the pollution of waters • Air pollution-related Sections 124 to 126 (Chapter 5, Part 5.4, Division 1) of the Act require activities to be conducted in a proper and efficient manner, while Section 128 (Chapter 5, Part 5.4, Division 1) of the Act requires that all necessary practicable means are used to prevent or minimise air pollution • Pollution of land and waste is covered by Part 5.6 of the Act. It defines offences relating to waste and sets penalties and establishes the ability to set various waste management requirements via the *Protection of the Environment Operations (Waste) Regulation 2014* • The activities listed in Schedule 1 to the Act (broadly, activities with potentially significant environmental impacts) require an EPL. The operation of the BESS does not constitute any of the scheduled activities and therefore does not require an EPL.
Rural Fires Act 1997 (RF Act)	Sections 63(1) and 63(2) of the RF Act require public authorities and owners/occupiers of land to take all practicable steps to prevent the occurrence of bushfires on, and to minimise the danger of the spread of bushfires on or from, that land. The Project Site is not located within a designated bush fire prone area.

4.3 Local environmental planning instruments

4.3.1 Tamworth Regional Local Environmental Plan 2010

The Project Site is located within the Tamworth Regional LGA and is subject to the provisions of the Tamworth Regional LEP 2010. The Project Site is on land zoned as RU4 Primary Production Small Lots and electricity generating works (which includes facilities for electricity storage) are permitted with consent in the RU4 zone.

Local provisions contained in Tamworth Regional LEP 2010 will be considered where relevant, as part of the EIS, including earthworks, flood planning, stormwater management and biodiversity.

Tamworth Regional Development Control Plan 2010

The Tamworth Regional Development Control Plan 2010 (DCP) contains the key criteria for specific types of development that commonly occur in the Tamworth Regional Local Government Area and for specific locations within the region.

The primary aim of the DCP is to define "deemed to satisfy" standards which will streamline the approval process when these standards are met. Provisions within the DCP will be considered where relevant as part of the EIS.

5 ENGAGEMENT

Iberdrola has undertaken an initial stakeholder scoping exercise and identified a number of key interest groups. The key interest groups identified include:

- Tamworth Regional Council
- NSW Government authorities:
  - DPE
  - NSW Environmental Protection Agency (EPA)
  - Transport for NSW
  - Heritage NSW
  - Biodiversity, Conservation and Science
  - DPE Water
  - DPE Hazard
  - Fire and Rescue
  - NSW Rural Fire Service
  - Department of Primary Industries (DPI) Agriculture
- Tamworth Local Aboriginal Land Council
- Energy industry bodies and infrastructure service providers
- Adjacent landowners
- Community groups.

5.1 Consultation objectives

Iberdrola is committed to undertaking community and stakeholder consultation for the Project. The communication and engagement objectives for the Project are to:

- Inform interested and potential impacted businesses, communities and stakeholders about the design, development and potential impacts of the Project
- Build and develop community and key stakeholder relationships
- Encourage stakeholder participation
- Obtain government, community and stakeholder input for consideration in development of the Project
- Provide information about the planning approval process
- Understand community and stakeholder priorities and concerns so they can be considered in the ongoing development and delivery of the Project.

5.2 Community and stakeholder engagement

Community and stakeholder engagement for the Project has commenced and is being undertaken in accordance with *Undertaking Engagement Guidelines for State Significant Projects* (DPE, 2022) and Iberdrola's Community Engagement Policy. Iberdrola is also a signatory of the Clean Energy Council's Best Practice Charter for Renewable Energy Projects and commits to honouring the Charter in renewable energy projects and associated transmission infrastructure.

Community and stakeholder engagement activities regarding the Project commenced in Q3 of 2023. This targeted engagement has focused primarily on notifying neighbouring business owners and government agencies of Iberdrola intention to lodge the Scoping Report for the Project and enable stakeholders to:

- Take up any early engagement opportunities to understand the Project
- Provide feedback about aspects of the Project which they support, do not support, or wish to be adjusted
- Provide clear reasons for any concerns and possible alternative approaches
- Identify any matters they feel have not been considered.

An overview of the consultation undertaken to date is provided in Table 5-1. The community information sheet (newsletter) provided to nearby receptors is included in Appendix C.

Table 5-1 Summary of engagement activities undertaken to date

Stakeholder	Method of consultation	Feedback	Action taken
Community / Businesses			
Nearby landowners within 1 kilometre of the Project Site	• Newsletter and phone calls to provide high level overview of the Project, Iberdrola's intention to lodge the Scoping Report and to enable initial feedback • Face to face meetings with select adjoining landowners	• No written feedback has been received to date • One landowner raised concerns regarding visual amenity and proximity of the Project to their property • One landowner raised concerns regarding potential traffic impacts along Burgmanns Lane, requesting construction vehicles come from Ascot-Calala instead • Requests for more information about how they would be directly impacted by the Project • Appreciative of early consultation	• Preliminary siting of the BESS in the south of the Project Site aims to maximise distances from receptors • It was communicated that more information would be provided as the Project develops • It was communicated that traffic assessment is being undertaken which considers all stakeholder feedback regarding preferred access routes • Highlighted contact information for further feedback opportunities

Stakeholder	Method of consultation	Feedback	Action taken
General	• Attendance at *Breakfast Briefing – Maximising Regional Benefits from Renewables*, organised by Tamworth Business Chamber on 11 August	• The briefing highlighted opportunities and challenges from the renewable transformation and how Tamworth and the broader New England region can participate in the delivery of local supply chains and the capacity building required to capture these opportunities.	• Opportunities for local businesses to be involved would be identified during development of the Project
Agencies			
DPE	• Virtual meeting held on 29/06/2023	• Feedback was provided in relation to consultation, project details, owners consent, cumulative impacts and relevant guidelines	• Responses were provided to DPE as part of the Scoping Report lodgement process
Tamworth Regional Council	• In person meeting held on 11/08/2023	• Raised concern of cumulative impacts with other proposed projects, in particular in relation to traffic and workforce management • Requested that the Project review construction hours/periods during key Tamworth events including the Tamworth Country Music Festival and Australian Equine and Livestock Events Centre events • Highlighted that the Project Site is mapped as bushfire prone land • Preliminary discussions regarding VPAs and community benefit opportunities. Council noted that any community benefit scheme should be administered by a third party • General sentiment is that council is pro renewable projects/developments	• The EIS would be undertaken in accordance with the *Cumulative Impact Assessment Guidelines for State Significant Projects 2022* (DPE, 2022) • Targeted consultation with council to occur during development of the EIS

Stakeholder	Method of consultation	Feedback	Action taken
DPE Hazard	• Virtual meeting held on 20/06/2023	• If multiple technology/ chemistry options are being investigated, this must be assessed in the EIS or risk a future modification • Noted that Fire Safety Study is the key mechanism for DPE to verify that changes as a result of detailed design are still within the bounds of approval	• Feedback has been incorporated into the scope of the proposed PHA to support the EIS. The PHA would include the feedback
Biodiversity, Conservation and Science	• Virtual meeting held on 26/07/2023	• No specific survey requirements • Suggested review of *Determining native vegetation land categorisation for application in the Biodiversity Offsets Scheme (DPE, 2023)* guideline • BDAR waiver unlikely but a streamlined BDAR is likely feasible, subject to ground truthing	• An assessment of the biodiversity values and the likely biodiversity impacts of the project in accordance with Section 7.9 of the *Biodiversity Conservation Act 2016* (NSW) and the Biodiversity Assessment Method (BAM) would be undertaken as part of the EIS
Transport for NSW	• Email correspondence	• Feedback identified several aspects to be addressed within the Traffic Impact Assessment (TIA) as part of the EIS application, particularly in relation to oversize and/or overmass vehicles	• Feedback has been incorporated into the scope of the proposed TIA to support the EIS. The TIA would consider the feedback and outline where each comment has been addressed

5.3 Consultation proposed during preparation of the EIS

Iberdrola will continue to consult with the community and stakeholders during the preparation of the EIS. Feedback and participation from consultation and engagement activities would be used to further inform investigations being carried out for the environmental assessment of the Project.

Future planned consultation activities with the community and local community groups could include, but not be limited to, distribution of community newsletters at key project milestones, continued consultation with nearby residents and businesses either via letterbox drop, phone calls and face-to-face consultation and community information session(s). Consultation will be undertaken with regards to the key issues identified in Section 6.

Key elements of this consultation would include community contact and information channels in place throughout the planning approval process.

5.4 Public exhibition of the EIS

Public exhibition of the EIS will be for a minimum of 28 days as stated in the EP&A Act. Advertisements will be placed in newspapers to advise of the public exhibition and where the EIS can be viewed, and details of proposed community consultation activities and information sessions.

Consultation activities during public exhibition of the EIS may include:

- Community information sessions
- Newsletter letterbox drop and email newsletters
- Information on project webpage
- Newspaper advertising
- Information available at local council offices
- Stakeholder meetings
- Local business engagement
- Government stakeholder engagement.

The extent and form of this consultation would be determined prior to the exhibition of the EIS.

5.5 Consultation during construction / operation

Should the Project be approved, consultation and operation would continue with the community and key stakeholders during construction. In general, this consultation would involve:

- Pre-commencement “job-fairs” to source local labour, suppliers and subcontractors and maximise local content
- Consultation in accordance with statutory requirements
- Ongoing consultation with key stakeholders, local council and other government agencies
- Provision of regular updates to nearby businesses and the community.

6 PROPOSED ASSESSMENT OF IMPACTS

6.1 Introduction

The identification of issues to be addressed in the EIS has been undertaken through a risk-based approach in accordance with the *State significant development guidelines – preparing a scoping report* (DPE, 2022) (SSD guidelines). Scoping of potential impacts has been undertaken for the Project as described in Section 3.

This process involved reviewing previous reports, undertaking desktop searches of proprietary environmental databases to identify key issues and sensitive areas. The SSD guidelines provide guidance on key factors to consider during scoping, including:

- Scale of the impact (severity, geographical extent and duration)
- Nature of the impact (direct, indirect, cumulative and perceived)
- Sensitivity of the receiving environment (existing regulations and guidelines, value to society and vulnerability to change).

A summary of the key environmental matters identified during the risk assessment is provided in Section 6.2 to 6.11. Other matters for consideration are identified in Section 6.12. In accordance with the SSD guidelines, the scoping summary table has been completed for the Project and is included in Appendix C.

6.2 Traffic, Transport and Access

6.2.1 Existing Environment

An overview of the surrounding road network is shown in Figure 1-1. The Project Site is bounded by Burgmanns Lane to the north and Ascot-Calala Road to the east. Burgmanns Lane and Ascot-Calala Road are both classified as local roads with one unsealed traffic lane in each direction and a speed limit of 60 km/hr.

Goonoo Goonoo Road / New England Highway is classified as a state road and aligned in a north-south direction west of the Project Site. It is a two-way road configured with one traffic lane in each direction. Informal unrestricted kerbside parking is mostly permitted on both sides of the road.

Transport for NSW is planning to start major work on the New England Highway Goonoo Goonoo Road duplication in December 2024, weather permitting. The upgrade would involve installing a set of traffic signals at the intersection of Goonoo Goonoo Road and Calala Lane, installing a roundabout at the intersection of Goonoo Goonoo Road and Craigends Lanes and intersection improvements for The Ringers Road and Greg Norman Drive.

The existing property on the western boundary of the Project Site is currently accessed from Burgmanns Lane at the northwest corner of the property via an unsealed driveway.

There are no bus stops, formal walking or cycling facilities within one kilometre of the Project Site.

6.2.2 Summary of Potential Environmental Impacts

Construction

Heavy vehicles would be required for the delivery of equipment and battery components, and for the removal of waste material resulting from construction activities. Oversized and/or overmass (OSOM) vehicles may be required for the delivery of BESS components during construction. OSOM vehicles would use designated routes approved by TfNSW for both inbound and outbound journeys. Together, the heavy vehicles and light vehicles used by construction staff would temporarily increase the traffic on the local network. This would be limited to the construction period only. A new access road, parking area and laydown area would be constructed within the Project Site. The exact location of these components would be finalised during the development of the EIS.

Operation

During operation, vehicle movements would be less frequent and would generally be associated with maintenance of the BESS. The BESS is anticipated to be operated remotely, therefore vehicle movements from staff are expected to be minor.

6.2.3 Proposed investigation and assessment

A Traffic Impact Assessment would be undertaken as part of the EIS which outlines the proposed size of the construction workforce and forecast construction traffic volumes. The EIS will include an assessment of the potential traffic impacts associated with the Project's construction and operation that would include consideration of the following aspects:

- Access to the Project Site
- The current and future capability of local and regional road infrastructure
- Details surrounding construction vehicle routes and movements
- Potential construction traffic impacts of the Project

  Details of the internal road layout network, access and egress, pedestrian movements, and parking in accordance with Australian Standards.

6.3 Noise and Vibration

6.3.1 Existing Environment

Given the Project's rural setting, the ambient noise environment is likely to be low and characterised by surrounding agricultural activities, Tamworth substation and road traffic along Burgmanns Lane and Ascot-Calala Road. There are around 37 receptors within one kilometre of the Project Site, with the majority of these located to the north (refer Figure 1-2).

6.3.2 Summary of Potential Environmental Impacts

Construction

Noise impacts are likely to relate to construction traffic and the operation of plant and equipment, including construction vehicles, cranes, and hand tools. The extent of impact would vary according to the relationship of the construction works to the receptor location, and the nature of construction work at various stages of the construction process.

Construction work would mostly occur within the recommended standard hours for construction works being:

- Monday to Friday from 7am to 6pm
- Saturday from 8am to 1pm
- No work will occur on Sundays or public holidays.

Operation

The Project would be capable of operating 24 hours per day, seven days per week, although in practice the Project would operate on an intermittent basis. Operational noise would be associated with the inverters, transformers and the operation of the heating, ventilation and air conditioning (HVAC) installed on the BESS. Operational noise impacts would be assessed as part of the EIS to determine any potential impacts and noise mitigation.

6.3.3 Proposed investigation and assessment

A Noise and Vibration Impact Assessment would be undertaken as part of the EIS to assess the potential noise and vibration impacts during construction and operation. The assessment would:

- Establish existing background noise levels at the closest receptor locations
- Identify sound power levels for each piece of equipment or process during construction
- Assess construction noise impacts in accordance with the NSW Government *Interim Construction Noise Guideline* (ICNG)
- Assess operational noise impacts in accordance with the EPA's *Noise Policy for Industry 2017* (NPfI)
- Assess traffic noise consistent with the EPA's *Road Noise Policy* (RNP)
- Identify feasible and reasonable noise mitigation measures to address noise exceedances at receptors.

6.4 Biodiversity

6.4.1 Existing environment

Preliminary desktop searches were undertaken for the Project to identify biodiversity values of the area. The following databases and documents were reviewed:

- BioNet Atlas of NSW Wildlife, managed by the Department of Planning and Environment: Environment and Heritage Group
- Protected Matters Search Tool managed by the Commonwealth Department of Climate Change, Energy, the Environment and Water
- NSW State Vegetation Type Map – Version C1.1.M1 managed by the Department of Planning and Environment
- Tamworth BESS Scoping report (SSD 23830229).

The database searches and document review identified:

- Two threatened flora species and 21 threatened fauna species listed under the BC Act within 10 kilometres of the Project Site
- Records for a total of 12 threatened flora species, 30 threatened fauna species and 12 fauna species listed as migratory or marine species under the EPBC Act within 10 kilometres of the Project Site

- State Vegetation Type Mapping (DPE, 2022) did not identify mapped vegetation within the Project Site, however the following vegetation communities were identified within one kilometre:
  - PCT 599 - Blakelys Red Gum - Yellow Box grassy tall woodland on flats and hills in the Brigalow Belt South Bioregion and Nandewar Bioregion (listed under the BC and EPBC act)
  - PCT 589 - White Box - White Cypress Pine - Silver-leaved Ironbark grassy woodland on mainly clay loam soils on hills mainly in the Nandewar Bioregion (listed under the BC and EPBC act)
- Neighbouring Lot 44 DP1064582 contains a mixture of native and exotic species, including a large White Box (*Eucalyptus albens*).

Overall, current aerial imagery indicates that the majority of the Project Site has been extensively cleared, for agricultural and pastoral purposes. Scattered pockets of unverified trees are present, with these pockets mostly localised to the borders of the Project Site. Site inspections would be undertaken during the EIS to ground truth vegetation extents and species composition.

An overview of preliminary mapped ecological constraints is shown in Figure 6-1.

6.4.2 Potential impacts

Construction

Construction of the Project would occur on land that is mostly cleared and generally consisting of derived grassland and native pasture. Vegetation removal may be required to accommodate the Project. Potential construction impacts to biodiversity may include:

- Clearance of mature vegetation, grassland and nature pasture (native and exotic)
- Introduction and spread of noxious weeds and other invasive species
- Injury/mortality of fauna species during clearance.

Operation

Once the site is operational, there is unlikely to be any further impacts to biodiversity. There is a low possibility of fauna mortalities or injuries resulting from collisions with Project infrastructure.

6.4.3 Proposed investigation and assessment

Under Part 4.7 of the EP&A Act SSD would require a Biodiversity Development Assessment Report (BDAR) for removal of any vegetation identified as a TEC. The following government guidelines would be considered as relevant should the preparation of the BDAR be required:

- Commonwealth EPBC 1.1 Significant Impact Guidelines – Matters of National Environmental Significance (Commonwealth of Australia)
- Commonwealth Department of the Environment and Energy – Nationally Threatened Ecological Communities and Threatened Species Guidelines (various) 37
- Commonwealth Department of the Environment and Energy – Survey Guidelines for Nationally Threatened Species (various)
- Biodiversity Assessment Method (DPIE Environment, Energy and Science, 2020)
- NSW Biodiversity Offsets Scheme (Office of Environment and Heritage, 2017b)

- Threatened species survey and assessment guidelines at https://www.environment.nsw.gov.au/topics/animalsand-plants/threatened-species/about-threatened-species/surveys-and-assessments (various)
- Framework for Biodiversity Assessment (NSW Office of Environment and Heritage, 2014a) (although now superseded, relevant aspects may still be considered for the Environmental Impact Statement).

Should a BDAR be required, it would be based on a desktop review of database searches, regional biodiversity mapping and any relevant existing site-specific reports, as well as site inspections and detailed targeted field surveys, as required. The assessment would be carried out for any threatened species, populations and ecological communities considered likely to be present on the Project Site.

The biodiversity assessment would include the following:

- Investigations for design to avoid impacts on TECs and any other threatened species (or their habitat), as far as practicable
- Identification and description of the flora and fauna species, habitat, populations and ecological communities that occur, or are likely to occur
- An assessment of any direct and indirect impacts of the project on flora and fauna species, populations, ecological communities and their habitats, and Groundwater Dependent Ecosystems (GDEs)
- Assessment of the significance of the impacts of the project on species, ecological communities and populations, and GDEs listed under the Commonwealth EPBC Act, the BC Act and the *Fisheries Management Act 1994* (FM Act) that occur or are considered likely to occur
- Identification of mitigation and offset measures, determined in accordance with the BAM and the EPBC Act Environmental Offsets Policy, if necessary.

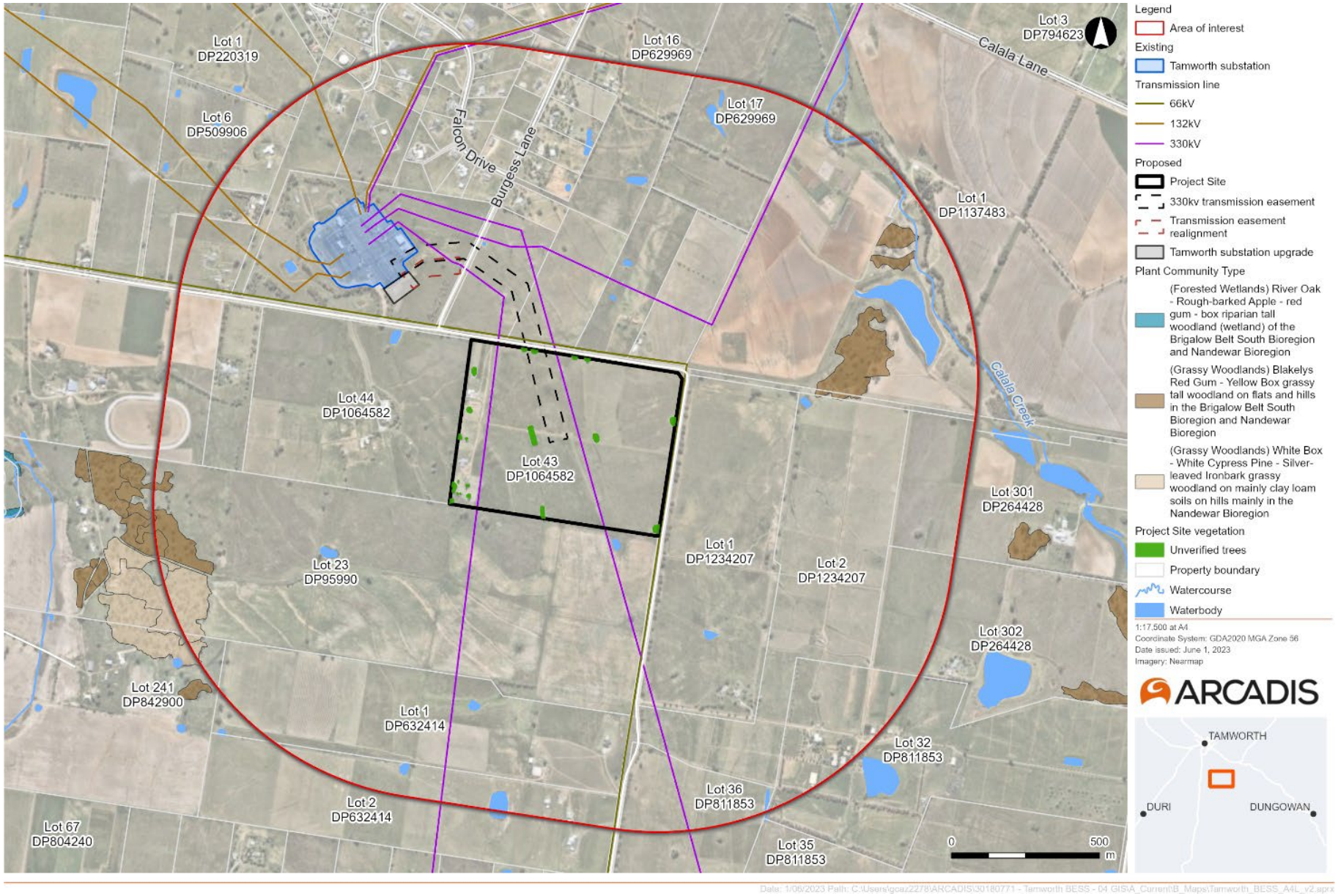


Figure 6-1 Preliminary mapping of vegetation in the Project Site and PCTs listed under the BC Act

6.5 Aboriginal Heritage

6.5.1 Existing Environment

A search of the DPE Aboriginal Heritage Information System (AHIMS) database was undertaken on 18 May 2023 to identify known areas of Aboriginal significance in proximity to the Project Site. The search identified 22 Aboriginal archaeological sites within a six kilometre (east-west) and four kilometre (north-south) extent around the Project Site. No Aboriginal archaeological sites were identified within the Project Site and the nearest known Aboriginal archaeological site is located around 1.8 kilometre south of the Project Site. A review of these archaeological sites indicates that the dominant site type are artefacts. Modified trees (carved or scarred), stone quarry, open camp site and water hole are the other site types commonly in the vicinity of the area of interest.

A search of the NSW Native Title Vision indicates the Project Site is within an area subject to the Gomeroi People's Native Title Determination Application (NSD37/2019). This application does not apply to land covered by freehold title and so does not apply to the Project Site.

Two proposals for BESS facilities within one kilometre of the Project identified no listed Aboriginal archaeological sites within their preliminary constrains reviews. Findings for both proposals indicated that due to the highly disturbed nature of soils associated with agricultural land use of the broader region, Aboriginal sites were unlikely to be present.

Overall, current aerial imagery indicates that the majority of the Project Site has been extensively cleared, for agricultural and pastoral purposes which has likely caused disturbance to the soil profile.

6.5.2 Summary of Potential Environmental Impacts

Construction

The potential for encountering Aboriginal archaeological sites within the Project Site is considered low, however this would be verified during the EIS through site walkovers and consultation with Registered Aboriginal Parties.

Operation

Following construction, ongoing impacts to Aboriginal heritage are unlikely as ground disturbance would be restricted to the construction phases of the Project.

6.5.3 Proposed investigation and assessment

An Aboriginal Cultural Heritage Assessment Report (ACHAR) will be prepared for the EIS in accordance with the following guidelines.

- *Code of Practice for the Archaeological Investigation of Aboriginal Objects in New South Wales* (DECCW, 2010)
- *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW* (DECCW, 2011)
- *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010* (DECCW, 2010)

6.6 Non-Aboriginal Heritage

6.6.1 Existing Environment

A review of the Department of Climate Change, Energy, Environment and Water (DCCEEW) Australian Heritage Database, the NSW State Heritage Inventory and Tamworth Regional LEP 2010 returned nine heritage sites within a five kilometre radius of the Project Site, including:

- King George V Memorial Avenue of Oaks, Tamworth (Listing no. 01922), located at King George V Memorial Avenue of oaks
- Original AA Building Site, (Item #1321), located at Calala Lane
- Nemingha Hall (Item #1255), located at Back Kootingal Road
- Former Nemingha School (Item #1256), located at 138 Nundle Road
- Nemingha Anglican Church (Item #1257), located at Nundle Road
- House (Item #1408), located at 14 King George V Avenue
- Tobacco Kiln (Item #1410), located at 73–95 King George V Avenue
- Tobacco Kiln (Item #1411), located at 119–139 King George V Avenue
- House – Glenbrook (Item #1440), located at 28 Nundle Road

These items are more than three kilometres away. No listed items were identified within the Project Site.

Desktop review of the State Heritage Register, Transport and Sydney Waters' Section 170 Heritage and Conservation Registers identified no additional heritage items within or in proximity to the Project Site.

6.6.2 Summary of Potential Environmental Impacts

Construction

Impacts to listed Non-Aboriginal heritage sites are not anticipated. There is a low likelihood that items of archaeological potential would be impacted during the construction phases of the Project, however this would be verified during the EIS through further investigation and consultation.

Operation

Following construction, ongoing impacts to non-Aboriginal heritage are unlikely as ground disturbance would be restricted to the construction phases of the Project.

6.6.3 Proposed investigation and assessment

An Historic Heritage Impact Assessment (HHIA) of the Project would be completed as part of the EIS if required. The assessment would consider the entire Project Site, and would include:

- Identification of listed items and areas of heritage significance near the Project
- Assessment of potential direct and indirect impacts to listed heritage items
- Field surveys and preliminary heritage assessments of items with potential heritage significance
- Identification of appropriate measures to avoid, minimise and/or mitigate potential impacts to non-Aboriginal heritage

6.7 Hazards and Risk

6.7.1 Existing environment

The Project Site is located in within agricultural area and near to existing electrical infrastructures. The Project Site is mapped as bushfire prone land on Tamworth Regional LEP 2010.

6.7.2 Potential impacts

Construction

The following hazards and risks have the potential to occur during construction of the Project:

- Accidental release of chemicals, fuels and materials associated with their onsite storage, use and transport, and the resultant impacts on construction workers and the environment. To manage this risk, all hazardous substances that may be required would be stored and managed in accordance with the *Work Health and Safety Act 2011* and the Storage and Handling of Dangerous Goods Code of Practice (WorkCover NSW, 2005)
- Disturbance of contaminated soil.

Neighbouring properties may be impacted by hazards and risks of the Project, should the hazard spread from the Project Site.

Operation

While rare, the installation, commissioning and operation of a Lithium-ion BESS can present increased hazards and risks associated with overheating, fire, hazardous chemicals and gas emissions.

The design and installation of the battery system would be undertaken in accordance with relevant Australian standards and guidelines and would be operated in accordance with the manufacturers requirements. Appropriate fire suppression apparatus and installations would be incorporated into the design.

The BESS infrastructure involves electricity powerlines, substations, transformers and other electrical sources such as common electrical appliances and wiring, all emit electric and magnetic fields (EMF). The Australian Radiation Protection and Nuclear Safety Agency (ARPNSA) considers that for substations and transformers, the magnetic fields at distances of five to ten metres away are generally indistinguishable from typical background levels in the home.

Overhead or underground transmission line connections from the Project to the Tamworth substation would generate EMF which would be verified during the EIS.

It is unlikely the Project is impacted by bushfire due to extensive clearing locally.

There is a low risk of fire propagating from the Project. Risk of fire propagation would be mitigated through design of the BESS and management of an Asset Protection Zone (APZ).

6.7.3 Proposed investigation and assessment

The Department of Planning (2011) guideline *"Applying SEPP 33"* provides a risk screening procedure to facilitate determination of whether a proposed development is applicable under the SEPP. In accordance with the guideline, if SEPP 33 is triggered under this screening test, Clause 12 of SEPP 33 requires that any Project to carry out a potentially hazardous development must be supported by a Preliminary Hazard Analysis (PHA).

Lithium-ion batteries (a Class 9 dangerous good) if selected as the preferred battery type for the Project would be stored on-site. There is no threshold quantity for the storage of Class 9 Dangerous Goods in the *Applying SEPP 33 Guideline* and as such, a PHA would not be required for the Project under the guidelines. However, DPE has been requiring that assessments of large-scale BESS projects are supported by a PHA, consistent with the *Multilevel Risk Assessment Guideline* (DPIE, 2011) and the *Hazardous Industry Planning Advisory Paper No.6 – Hazard Analysis* (DPIE, 2011) and an assessment of the risks associated with EMF against the *International Commission on Non-Ionizing Radiation Protection (ICNIRP) Guidelines for limiting exposure to Time-varying Electric, Magnetic and Electromagnetic Fields.*

If flow batteries are selected, electrolyte storage tanks containing Class 8 corrosive liquids would be stored on site. The threshold inventory for Class 8 Packing Group II DGs is 25 tonnes in the Applying SEPP 33 Guidelines. The EIS for the Project would include the preparation of a PHA which qualitatively discusses the potential operational risks of the Project with particular regard to the potential risk to people, property and the biophysical environment that may occur as a result of the accidental release of potential hazardous material and energy.

The Project would be designed in accordance with the relevant building standards and codes including Planning For Bushfire Protection (NSW Rural Fire Service 2019).

6.8 Landscape and Visual

6.8.1 Existing Environment

The existing landscape character of the Project Site is predominantly rural in nature. A large lot residential area and the Tamworth substation are located around 400 metres northwest. The surrounding rural landscape is predominantly cleared farmland and patches of vegetation with undulating hills, terraces, and creek lines. Linear ridges used for sediment retention are used in the Project Site and the broader Tamworth region. The landscape has been heavily modified through historical vegetation clearing, pasture improvement, livestock grazing and cropping.

The topography of the area and patches of vegetation provide visual screening of the Project Site from most receptors and road users. The proposed BESS would be consistent with the existing Tamworth substation and TransGrid transmission line electrical infrastructure located in close proximity of the Project Site.

6.8.2 Summary of Potential Environmental Impacts

Construction

Visual amenity impacts are expected to be most significant during construction of the Project. Impacts may relate to site establishment works, construction vehicle movements and related traffic impacts, and the presence and use of construction equipment.

Impacts would be greatest for those residing adjacent to the Project with unobstructed views, in particular, those receptors immediately north of the Project. Road users of Burgmanns Lane and Ascot-Calala Road would also experience visual impacts, but these would be expected to be temporary and minor as they would be mainly impacted as they drive past the Project Site.

Operation

The Project would represent a minor change in the agricultural landscape character and visual amenity of the area. However, given the existing electricity infrastructure both in the Project Site and neighbouring properties, operational impacts are considered to be manageable. Landscaping and screening vegetation would be identified to soften potential impacts and considered during the development of the EIS.

6.8.3 Proposed investigation and assessment

A landscape character and visual assessment would be produced as part of the EIS in accordance with the *Technical Supplement for Landscape and Visual Impact Assessment* (DPE, 2022) and *Guideline for Landscape Character and Visual Impact Assessment, Environmental impact assessment practice note EIA-N04* (TfNSW 2020), as appropriate.

6.9 Land

6.9.1 Existing Environment

The Project Site is located at an elevation of between around 463 metres Australian Height Datum (AHD) and 420 metres AHD, with a gradient sloping towards the northeast of the Project Site. There are no significant water bodies within the Project Site. The soil on site is expected to be highly disturbed in nature due to the areas' history of use for livestock grazing, however, appears to be generally stable due to the existing grass ground cover. Land and soil capability mapping from DPE's eSPADE database indicates the site is predominantly Class 5 (Severe limitations for high impact land management uses such as cropping, and is generally more suitable for grazing), and some Class 4 (Moderate to severe limitations for some land uses that need to be consciously managed to prevent soil and land degradation) in the northeast (Figure 6-2). There are no mapped saline soils or acid sulfate soils in the Project area.

Contamination

A search of the NSW EPA contaminated land records on 19 May 2023 identified no sites within the vicinity of the Project. Contaminated sites within the Tamworth Regional LGA and their distance from the Project Site are listed below:

- Coles Express Tamworth at 251-253 Goonoo Goonoo Road, South Tamworth (5.7 km to northwest)
- Elgas Depot at 115 Marius Street, Tamworth (8.1 km to northwest)
- Gunnedah Road site at 49 Bunnedah Road, Tamworth (8.3 km to northwest)
- Duri Store at 13 Railway Avenue, Duri (15.1 km to southwest)
- Woolomin Gold Rush Store at 65 Nundle Road, Woolomin (24.7 km to southeast).

Given the distance between the above locations and the Project Site, impacts from these contaminated sites are considered highly unlikely. Although no contaminated sites are mapped in or adjacent the Project Site, agricultural practices such as the use of pesticides in pest plant spraying and cattle dips, and chemical and fuel storage may have affected soils.

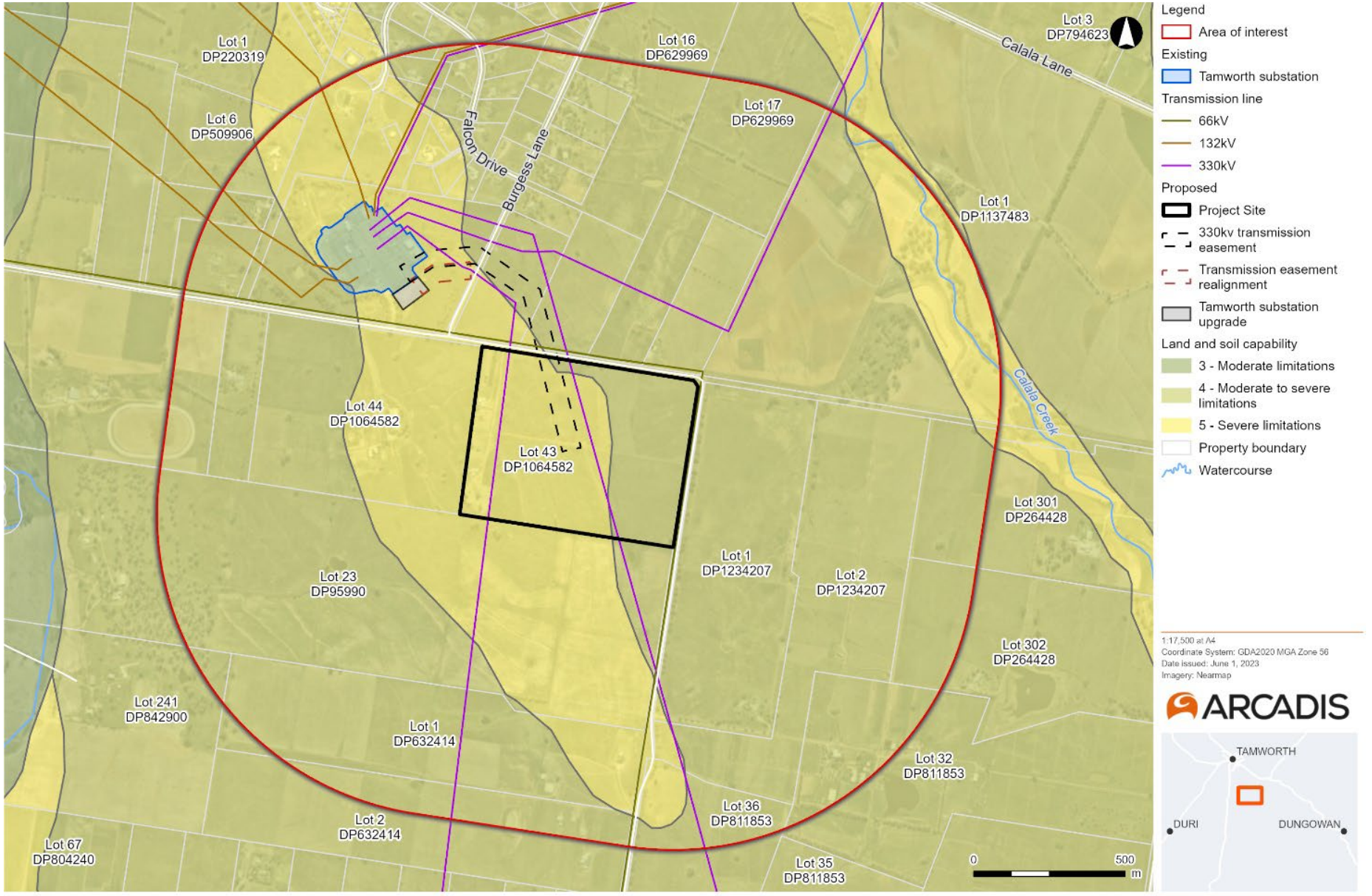


Figure 6-2 Land and soil capability mapping of the Project Site

6.9.2 Potential Environmental Impacts

Construction

Construction would result in exposure of the natural ground surface and subsurface through the removal of vegetation and earthworks which may increase the likelihood for soil erosion to occur. During the excavations for the BESS there is a possibility of unearthing contaminated material if the site has been previously backfilled. It is considered unlikely that ASS would be encountered during construction. Impacts related to contamination would be verified during the EIS are considered unlikely to be significant.

Operation

There is limited potential for impacts to soils during operation of the Project, as there would be no ongoing ground disturbance. Operation of the Project has the potential for spills and leaks from operating machinery resulting in contamination of soil and groundwater if not contained; however, the potential for this to occur is limited and can be managed with the implementation of standard mitigation measures and appropriate design measures.

6.9.3 Proposed investigation and assessment

The EIS will consider the impact of the Project on the agricultural resources and production of the land and its surrounds. The EIS will also consider the compatibility of the Project with the surrounding land uses and will include a Land Use Conflict Risk Assessment in accordance with the Department of Primary Industries *Land Use Conflict Risk Assessment Guide*.

6.10 Social and Economic

6.10.1 Existing environment

The Project is located in the centre of the Tamworth East Statistical Area Level 2 (SA2) geographic area (Tamworth East) as defined by the Australian Bureau of Statistics (ABS). Tamworth East includes the townships of Calala, Kingswood, the southeast of Tamworth City and rural areas (Figure 1-1).

According to 2021 Census data (ABS, 2021), Tamworth East had a population of 21,607 people, with a median age of 37 years (Tamworth Regional Council had a population of 63,070). The major industries of employment in Tamworth East are health care and social assistance, education and training, retail, manufacturing, and construction. A Social Impact Assessment Scoping Worksheet has been prepared in accordance with the Social Impact Assessment Guideline and is included in Appendix C.

6.10.2 Potential impacts

Construction

Potential socio-economic impacts would be most significant during construction of the Project. This may have positive benefits including local employment opportunities, and economic benefits for businesses stemming from increased population from incoming temporary workforce. Negative impacts would include temporary traffic impacts to users of the local road network, dust and noise for local receptors, visual impacts relating to changes in the rural landscape, and potential cumulative impacts with the construction of neighbouring BESS facilities.

Receptors within a one-kilometre radius of the Project have been identified and are shown in Figure 1-2.

Other notable receptors in Tamworth East include:

- Tamworth substation 400 metres to the northwest

- Tamworth Agricultural Institute and NSW Department of Primary Industries around two kilometres east
- Farrer Memorial Agricultural High School 2.1 kilometres to the northeast.

Operation

Once operational the Project is not expected to generate significant socio-economic impacts, as the BESS would be operated remotely with only minimal staff required for intermittent maintenance work.

6.10.3 Proposed investigation and assessment

An assessment of the potential socio-economic impacts as a result of the Project will be carried out as part of the EIS. The socio-economic impact assessment will include:

- Description of the existing socio-economic profile for the communities and businesses surrounding the Project, including:
  - Social characteristics (i.e., population and demography; families and housing; travel behaviour; socio-economic indicators)
  - Economic characteristics, including labour force, income and employment; and business and industry.
- Assessment of the potential impacts of the Project on the socio-economic values of the study area
- Identification of appropriate management and mitigation measures including measures to enhance the Project's benefits and to avoid, manage or mitigate its potential impacts.

Consideration of a voluntary planning agreement, community benefit sharing scheme or negotiated agreement with landowners and / or the Tamworth Regional Council would be undertaken through preparation of the EIS.

6.11 Cumulative

6.11.1 Potential impacts

Cumulative impacts result from successive, incremental, or combined effects of an activity or project when added to other past, current, planned, or reasonably anticipated future impacts (NSW DPE, 2017). The extent to which another development or activity could interact with the construction and/or operation of the Project would be dependent on its scale, location and/or timing of construction.

An initial search of the DPE Major Projects Register for the Tamworth Regional LGA for projects seeking approval or approved in the last 18 months was conducted to identify potential sources of cumulative impacts with the Project. A search was also conducted of the development applications register of the Tamworth Regional Council.

Projects within one kilometre of the Project are shown in Figure 6-3 and described below:

- Calala Battery Energy Storage System (SSD-52786213) consisting of a 300 MW/1200 MWh BESS facility and associated transmission lines. Construction is expected to commence Q2 to Q4 2024 and would take around 12 months to complete
- Tamworth Battery Energy Storage System (SSD-23830229) consisting of a 200 MW/400 MWh BESS facility and associated transmission infrastructure. The expected commence date for construction has not been specified, but is expected to take 12 months to complete.

As noted in Section 6.2, Transport for NSW is planning to start major work on the New England Highway Goonoo Goonoo Road duplication in December 2024. This upgrade is around 3.8 kilometres north west of the Project Site.

Construction

Construction of the Project is expected to commence in Q4 2024. Construction would occur in stages. Stage 1 would take up to 18 months to complete. Construction of Stage 2 would take up to 12 months to complete, when executed. The construction program of the Project would potentially overlap with the construction of nearby developments. Assessment of potential cumulative impacts with nearby proposals including those listed above (and any other proposal that are submitted during the preparation of the EIS) would be undertaken within the EIS in relation to scale, location and/or timing of construction.

Operation

Operation of the Project may generate cumulative impacts with the two proposed BESS facilities associated with noise, visual impact and social impacts.

6.11.2 Proposed investigation and assessment

A cumulative impact assessment would be undertaken as part of the EIS for the Project in accordance with the *Cumulative Impact Assessment (CIA) Guidelines for State Significant Projects 2022* (DPE, 2022). The assessment would include:

- Identification of surrounding developments and major projects with the potential to interact with the construction of the Project through a review of relevant local environmental plans, the DPE's Major Projects database and local council development application
- Identification of potential cumulative impacts arising from the interaction of these projects with the Project and where this is the case, assessment of the cumulative impacts
- Measures to minimise or mitigate identified construction and operational cumulative impacts would also be developed as part of the assessment, where appropriate.

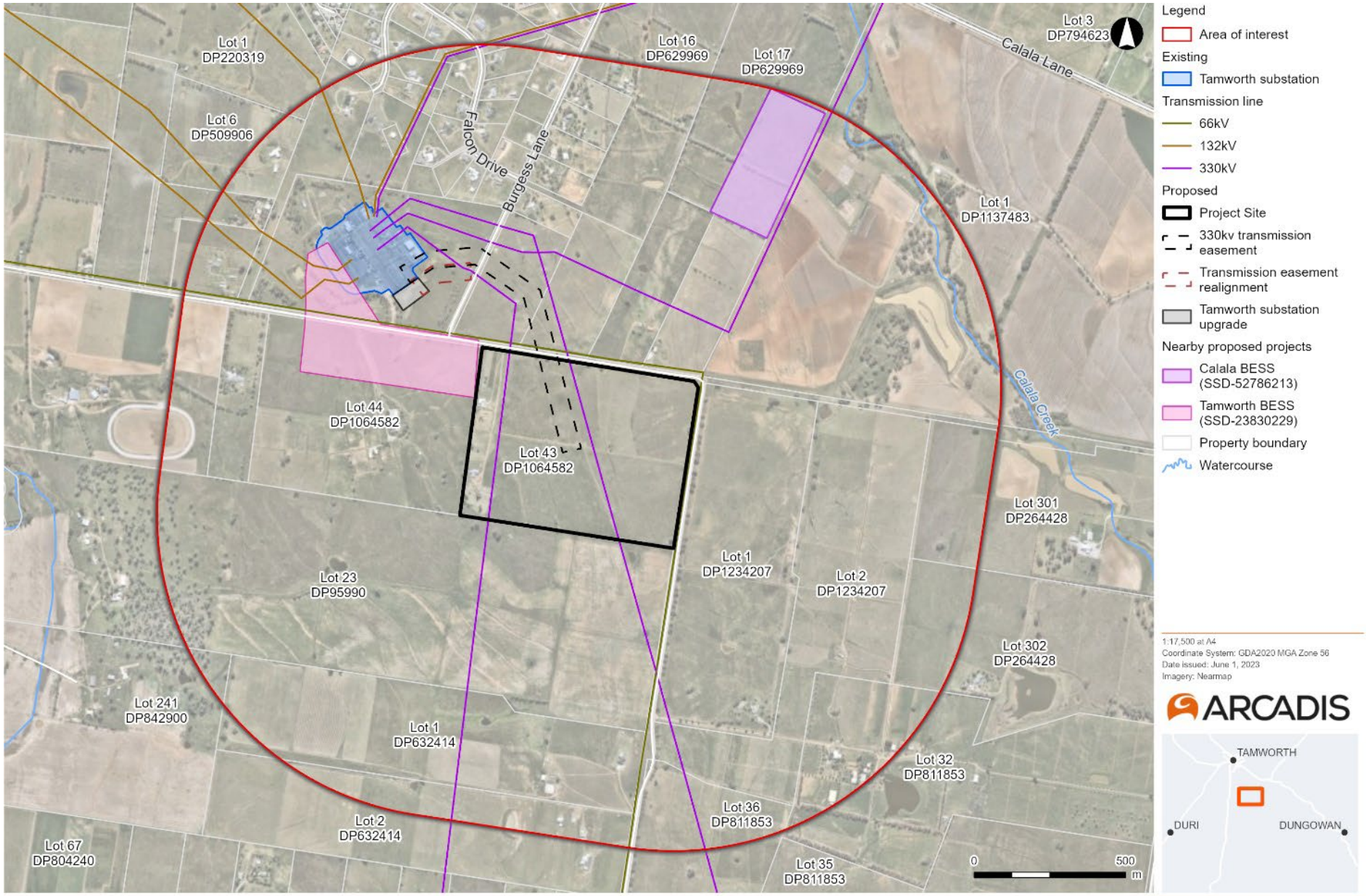


Figure 6-3 Proposed SSD projects within 1 km of the Project Site boundary

6.12 Other Impacts

This section provides an overview of other environmental matters for those environmental aspects that, based on existing information and description of the Project, would require limited or no further assessment in the EIS.

Environmental matter	Existing environment	Potential impacts	Proposed investigation and assessment
Water Quality, Hydrology and Flooding	The nearest waterway to the Project is Calala Creek, around 800 metres east and is a tributary of the Peel River within the Namoi river catchment (Figure 1-1). The Project Site is not designated as flood affected land, but is mapped under the Tamworth Regional LEP 2010 as areas corresponding with a 1% annual exceedance probability (AEP). The Project Site is not known to be in an area with notable groundwater vulnerability.	Given the elevation of the Project Site and proximity from flood prone areas, impacts from flooding are not anticipated. Excavation and site levelling works for the construction of the BESS are expected to be minimal given the low relief of the Project Site. As such, potential impacts to groundwater and hydrology are not anticipated.	The EIS would include an assessment of the potential impacts of the Project on water quality, hydrology and flooding during construction and operation to determine the most appropriate controls required during construction of the Project. The guidelines detailed in Appendix A would be considered, where required, as part of the EIS assessment. The EIS would also consider water use during construction and operation
Air Quality	The nearest automatic weather station is Tamworth Airport AWS (Station number 055325). The surrounding agricultural practices and road network emissions are likely to be the dominant source of air pollution in the Tamworth East region.	Construction activities may act as a source of dust locally from movement of construction vehicles and equipment on unsealed surfaces, vegetation clearing, and ground disturbance through excavations and earthworks. However, dust impacts are considered minor and temporary in nature and therefore unlikely to be significant given the current local ambient air quality. Operation of the Project is not expected to impact air quality.	A qualitative desktop assessment of air quality impacts would be undertaken as part of the EIS. The identification of feasible and reasonable measures to mitigate impacts would be included.

Environmental matter	Existing environment	Potential impacts	Proposed investigation and assessment
Waste Management	N/A	The following waste streams could potentially be generated by construction of the Project: • Spoil material from general earthworks and excavation activities • Sediment laden and/or potentially contaminated wastewater, sewage and greywater from dust suppression, washdown activities and staff amenities • General construction waste (including concrete, scrap metal, plasterboard, cable and packaging materials) from general construction activities • Adhesives, lubricants, waste fuel and oil, engine coolant, batteries, hoses and tyres from the maintenance of construction plant, vehicles and equipment • Putrescibles, paper, carboard, plastics, glass and printer cartridges from activities at construction compounds and site office(s) • Green waste from vegetation clearance and grubbing. Quantities of waste generated by construction of the BESS would be investigated as part of the design development of the Project. Waste impacts would be adequately managed with the introduction of standard management measures and preparation of Waste Management Plan. Waste production during operation of the Project is expected to be minimal and associated with ongoing maintenance of the BESS.	A waste management and resource use assessment would be carried out as part of the EIS, that would consider the relevant government guidelines. The assessment would include: • Identification of the waste streams likely to be generated during construction and operation of the Project • Identification of the expected resources required for construction and operation • Strategies for minimising the export of excavated materials of-site, maximising reuse opportunities and minimising the volume of excavated material disposal to landfill • Strategies for reducing waste such as the use of recycled materials, bulk delivery of goods to minimise packaging and arrangements with suppliers to return any unused construction materials.

7 CONCLUSION

Iberdrola is seeking development consent for the construction, operation and maintenance of a BESS of up to 500 MW that would provide up to 1000 MWh of battery storage capacity at 744 Burgmanns Lane, Kingswood 2340 (Lot 43 DP1064582). The Project is considered to support the NSW Government's electricity strategy for a reliable, affordable and sustainable electricity future that supports a growing economy.

The key environmental issues identified for the Project include:

- Traffic, transport and access
- Noise and vibration
- Biodiversity
- Heritage
- Hazards and risk (including bushfire)
- Landscape and visual
- Land
- Socio-economic impacts
- Cumulative impacts

The EIS would include the following in accordance with Schedule 1 of the EP&A Regulations:

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

The Proponent is seeking SSD approval for the Project under Part 4, Division 4.7 of the EP&A Act. The SEARs are required to enable this assessment.

8 REFERENCES

- Australian Bureau of Statistics (ABS), Census Data (2022). Accessed online 1 June 2023
- Australian Energy Market Operator (2022): *2022 Integrated System Plan for the National Electricity Market*. Accessed online 25 April 2023
- Department of Climate Change, Energy, the Environment and Water (2021): *Australia's whole-of-economy Long-Term Emissions Reduction Plan. A*ccessed online 25 May 2023
- EPA contaminated land records (2022): Accessed online May 23 2023
- NSW DPE (2022): Major Projects Planning Portal. Accessed online May 2022
- NSW DPE (2022): *New England North West Regional Plan 2041*
- NSW DPE (2018): *NSW Transmission Infrastructure Strategy*
- NSW DPE (2022): *State significant development guidelines – preparing a scoping report*
- NSW Department of Energy, Environment and Science (2021): *The NSW BioNet Vegetation Information System (VIS) Classification Database*. Accessed online May 2022
- NSW Department of Planning, Industry and Environment (2019): *NSW Electricity Strategy*
- NSW Department of Planning, Industry and Environment (2020): *The Electricity Infrastructure Roadmap*
- NSW Office of Environment and Heritage (2016): *NSW Climate Change Policy Framework*
- NSW Office of Environment and Heritage (2019): *Aboriginal Heritage Information Management System (AHIMS)*
- NSW DPE (2022): *State Vegetation Type Map*

APPENDIX A SCOPING WORKSHEET

As required by the DPE *State significant development guidelines – preparing a scoping report* (DPE, 2022), a scoping summary table for the Project is include as Table A-1. The table groups the matters requiring further assessment in the EIS by the level of assessment required.

Definitions for levels of assessment are summarised below:

- **Detailed**: The project may result in significant impacts on the matter, including cumulative impacts. The assessment of the impacts of the project on the matter will require detailed studies and investigations to be carried out by technical specialists.
- **Standard**: The project is unlikely to result in significant impacts on the matter, including cumulative impacts. While the assessment of the impacts of the project on the matter will involve technical specialists, these impacts are likely to be well understood, relatively easy to predict using standard methods and capable of being mitigated to comply with relevant standards or performance measures.
- **Matters requiring no further assessment in the EIS**: The project will have no impact on the matter, or the impacts of the project on the matter will be so small that they are not worth considering.

Table A-1 Scoping summary table

Level of assessment	Matter	Cumulative impact assessment (Y/N)	Engagement	Relevant government plans, policies and guidelines	Scoping report reference
Detailed	Traffic, transport and access	Yes	Specific – Tamworth Regional Council and TfNSW	• Guide to Traffic Management (Austroads, 2020)	Section 6.2
Detailed	Noise and vibration	Yes	General	• Noise Policy for Industry (Environmental Protection AuthorityEPA, 2017) • Interim Construction Noise Guideline (Department of Environment, Climate Change and Water, 2009) • NSW Road Noise Policy Guideline (Department of Environment, Climate Change and Water, 2011) • Assessing vibration: A technical guideline (Department of Environment, Climate Change and Water, 2006)	Section 6.3
Detailed	Biodiversity	No	General	• Commonwealth EPBC 1.1 Significant Impact Guidelines – Matters of National Environmental Significance (Commonwealth of Australia, 2013) • Commonwealth Department of the Environment and Energy – Nationally Threatened Ecological Communities and Threatened Species Guidelines (various) • Commonwealth Department of the Environment and Energy – Survey Guidelines for Nationally Threatened Species (various) • Biodiversity Assessment Method (DPIE Environment, Energy and Science, 2020) • NSW Biodiversity Offsets Scheme (Office of Environment and Heritage, 2017b) • Determining native vegetation land categorisation for application in the Biodiversity Offsets Scheme (DPE, 2023)	Section 6.4

Level of assessment	Matter	Cumulative impact assessment (Y/N)	Engagement	Relevant government plans, policies and guidelines	Scoping report reference
Detailed	Aboriginal heritage	No	Specific – Tamworth LALC and RAPs	• Code of Practice for the Archaeological Investigation of Aboriginal Objects in New South Wales (Department of Environment, Climate Change and Water, 2010) • Guide to investigating, assessing, and reporting on Aboriginal Cultural Heritage in New South Wales (Office of Environment and Heritage 2011) • Aboriginal Cultural Heritage Consultation Requirements for Proponents (Department of Environment, Climate Change and Water 2010)	Section 6.5
Detailed	Non-Aboriginal heritage	No	Specific – Heritage NSW	• Commonwealth EPBC 1.1 Significant Impact Guidelines – Matters of National Environmental Significance (Commonwealth of Australia, 2013) • Guidelines for preparing a Statement of Heritage Impact (DPE, 2023) • NSW Heritage Manual (NSW Heritage Office and Department of Urban Affairs and Planning, 1996) • Assessing Significance for Historical Archaeological Sites and Relics (NSW Heritage Branch, Department of Planning, 2009) • Guidelines for the Management of Human Skeletal Remains under the *Heritage Act 1977* (NSW Heritage Office, 1998)	Section 6.6
Detailed	Hazard and risk	No	General	• Assessment Guideline: Multi-Level Risk Assessment (Department of Planning and Infrastructure, 2011) • Hazardous and Offensive Development Application Guidelines: Applying SEPP 33 (DoP, 2011) • Hazardous Industry Planning Advisory Paper No.6 – Hazard Analysis (DPIE, 2011) and an assessment of the associated risks • Commission on Non-Ionizing Radiation Protection (ICNIRP) Guidelines for limiting exposure to Time-varying Electric, Magnetic and Electromagnetic Fields (1998)	Section 6.7

Level of assessment	Matter	Cumulative impact assessment (Y/N)	Engagement	Relevant government plans, policies and guidelines	Scoping report reference
Detailed	Landscape and visual	Yes	General	• Large-Scale Solar Energy Guidelines (DPE, 2022) • Technical Supplement - Landscape and Visual Impact Assessment, Large-Scale Solar Energy Guideline (DPE, 2022) • Guideline for Landscape Character and Visual Impact Assessment, Environmental impact assessment practice note EIA-N04 (TfNSW 2020)	Section 6.8
Detailed	Land	No	General	• Acid Sulfate Soils Assessment Guidelines (Acid Sulfate Soils Management Advisory Committee, 1998) • National Environment Protection (Assessment of Site contamination) Measure (National Environment Protection Council, 2011) • Guidelines on the Duty to Report Contamination under the Contaminated Land Management Act 1997 (Environment Protection Authority, 2015) • Land Use Conflict Risk Assessment Guide (DPI 2011)	Section 6.9
Detailed	Social-economic	Yes	Specific – surrounding community	• Social Impact Assessment Guideline (NSW Department of Planning, Industry and Environment, 2021) • International principles for Social Impact Assessment (International Association for Impact Assessment, 2003)	Section 6.10
Detailed	Cumulative impacts	N/A	General	• Cumulative Impact Assessment Guidelines for State Significant Projects 2022 (DPE, 2022)	Section 6.11
Standard	Water quality, hydrology and flooding	No	General	• Managing Urban Stormwater: Soils and Construction – Volume 1 (Landcom, 2004) • Australian and New Zealand guidelines for fresh and marine water quality (ANZECC & ARMCANZ, 2000) • Guidelines for Groundwater Protection in Australia (Commonwealth of Australia, 2013)	Section 6.12
Standard	Air Quality	No	General	• Approved Methods for the Modelling and Assessment of Air Pollutants in NSW (EPA, 2016)	Section 6.12

Level of assessment	Matter	Cumulative impact assessment (Y/N)	Engagement	Relevant government plans, policies and guidelines	Scoping report reference
Standard	Waste	No	General	• Waste Classification Guidelines (NSW EPA, 2014) • NSW Waste Avoidance and Resource Recovery Strategy 2014-21 (NSW EPA, 2014)	Section 6.12
Standard	Bushfire	No	N/A	• Planning For Bushfire Protection (NSW Rural Fire Service, 2019)	Section 6.12

APPENDIX B SOCIAL IMPACT ASSESSMENT SCOPING WORKSHEET

Social Impact Assessment (SIA) Worksheet

Project name: Kingswood BESS

Date: 24/07/23

CATEGORIES OF SOCIAL IMPACTS	POTENTIAL IMPACTS ON PEOPLE		CUMULATIVE IMPACTS		ELEMENTS OF IMPACTS - Based on preliminary investigation					ASSESSMENT LEVEL FOR EACH IMPACT			PROJECT REFINEMENT	MITIGATION / ENHANCEMENT MEASURES
what **social impact categories** could be affected by the project activities	What impacts are likely, and what concerns/aspirations have people expressed about the impact? Summarise how each relevant stakeholder group might experience the impact. NB. Where there are multiple stakeholder groups affected differently by an impact, or more than one impact from the activity, please add an additional row.	Is the impact expected to be **positive or negative**	Will this impact combine with others from this project (think about when and where), and/or with impacts from other projects (cumulative)?	If yes, identify which other impacts and/or projects	Will the project activity (without mitigation or enhancement) cause a material social impact in terms of its: You can also consider the various magnitudes of these characteristics					Level of assessment for each social impact	What methods and data sources will be used to investigate this impact?		Has the project been refined in response to preliminary impact evaluation or stakeholder feedback?	What **mitigation / enhancement measures** are being considered?
					extent i.e. number of people potentially affected?	**duration** of expected impacts? (i.e. construction vs operational phase)	**intensity** of expected impacts i.e. scale or degree of change?	**sensitivity** or vulnerability of people potentially affected?	**level of concern/interest** of people potentially affected?		Secondary data	Primary Data - Consultation		
way of life	Impact to people's daily routines (in particular neighbouring landowners) caused by construction activities such as construction noise, increased traffic movements, visual changes and potential cumulative impacts from concurrent developments.	Negative	Yes	Calala Battery Energy Storage System (SSD-52786213) and Tamworth Battery Energy Storage System (SSD-23830229)	No	No	Yes	No	No	Minor assessment of the impact	Required	Targeted stakeholder meetings, surveys, engagement and direct observations.	No	Changes to local amenity during construction are expected to be relatively localised and would be assessed in the EIS through noise and vibration, traffic, and landscape and visual assessments. These studies are all expected to recommend appropriate mitigation impacts to local communities' way of life. The Construction Environment Management Plan (CEMP) would include a communication management plan to manage impacts to local communities.
way of life	Locals/council are concerned about a shortage of housing exacerbated by the requirement to house workers working on construction projects. Non-local workers coming into the region may also provide a welcome economic boost to local accommodation providers who have been struggling with the impacts of Covid and inflation	Negative	Yes	Calala Battery Energy Storage System (SSD-52786213) and Tamworth Battery Energy Storage System (SSD-23830229)	Unknown	Yes	No	No	Yes	Minor assessment of the impact	Required	Targeted stakeholder meetings, surveys, engagement and direct observations.	No	Local employment will be encouraged to improve local productivity outcomes and may assist to reduce housing stress.
way of life	Potential for local and regional businesses procurement opportunities during construction. Local businesses may benefit from construction workers spending money at local businesses, such as food outlets located in nearby suburbs.	Positive	Yes	Calala Battery Energy Storage System (SSD-52786213) and Tamworth Battery Energy Storage System (SSD-23830229)	Unknown	Yes	No	No	No	Minor assessment of the impact	Required	Limited - if required	No	Impact will be assessed at a high level in an SIA if required. Local communities may be interested in local business opportunities.
way of life	Increased demand for skilled and unskilled workforce during construction and operation of the project, which may lead to increased temporary employment opportunities for local and regional workforce during construction	Positive	Yes	Calala Battery Energy Storage System (SSD-52786213) and Tamworth Battery Energy Storage System (SSD-23830229)	Unknown	Yes	No	No	No	Minor assessment of the impact	Required	Limited - if required	No	Impact will be assessed at a high level in an SIA if required. Local communities may be interested in local employment opportunities.
access	During construction, construction vehicles would be generated and increase the volume of traffic in the area/on the road. Increased construction traffic and temporary changes to local access may lead to minor delays. Operational traffic movements are anticpated to be limited and thus operational traffic impacts are considered neutral.	Negative	Yes	Calala Battery Energy Storage System (SSD-52786213) and Tamworth Battery Energy Storage System (SSD-23830229)	Unknown	No	No	No	No	Standard assessment of the impact	Required	Targeted stakeholder meetings, surveys, engagement and direct observations.	No	Changes to access and connectivity will be the subject of the Traffic Impact Assessment. This study would recommend appropriate mitigation measures to manage impacts to traffic concerns.

CATEGORIES OF SOCIAL IMPACTS	POTENTIAL IMPACTS ON PEOPLE		CUMULATIVE IMPACTS		ELEMENTS OF IMPACTS - Based on preliminary investigation					ASSESSMENT LEVEL FOR EACH IMPACT			PROJECT REFINEMENT	MITIGATION / ENHANCEMENT MEASURES
what **social impact categories** could be affected by the project activities	What impacts are likely, and what concerns/aspirations have people expressed about the impact? Summarise how each relevant stakeholder group might experience the impact. NB. Where there are multiple stakeholder groups affected differently by an impact, or more than one impact from the activity, please add an additional row.	Is the impact expected to be **positive or negative**	Will this impact combine with others from this project (think about when and where), and/or with impacts from other projects (cumulative)?	If yes, identify which other impacts and/or projects	Will the project activity (without mitigation or enhancement) cause a material social impact in terms of its: You can also consider the various magnitudes of these characteristics					Level of assessment for each social impact	What methods and data sources will be used to investigate this impact?		Has the project been refined in response to preliminary impact evaluation or stakeholder feedback?	What **mitigation / enhancement measures** are being considered?
					extent i.e. number of people potentially affected?	**duration** of expected impacts? (i.e. construction vs operational phase)	**intensity** of expected impacts i.e. scale or degree of change?	**sensitivity** or vulnerability of people potentially affected?	**level of concern/interest** of people potentially affected?		Secondary data	Primary Data - Consultation		
health and wellbeing	Changes in acoustic environment and visual amenity during construction may impact on the health and wellbeing of neighbouring landowners.	Negative	Yes	Calala Battery Energy Storage System (SSD-52786213) and Tamworth Battery Energy Storage System (SSD-23830229)	Unknown	No	No	No	No	Minor assessment of the impact	Required	Limited - if required	No	The Construction Environment Management Plan (CEMP) would include a communication management plan to manage impacts to local communities. Design considerations and mitigation such as screening vegetation to be considered during the development of the EIS.
surroundings	There will be visual changes for some adjoining and close neighbours who are likely to be concerned that the project will create impact visual amenity.	Negative	Yes	Calala Battery Energy Storage System (SSD-52786213) and Tamworth Battery Energy Storage System (SSD-23830229)	Unknown	No	Unknown	No	Yes	Minor assessment of the impact	Required	Targeted stakeholder meetings, surveys, engagement and direct observations.	Yes	Preliminary siting of the BESS in the south of the Project Site has occured to maximise distances from receptors. Changes to local amenity during operation are expected to be relatively localised and would be assessed in the EIS by landscape and visual assessment.
surroundings	Possible that some neighbours may be able to hear some construction and operational noise. An assessment of construction and operational noise will be undertaken as part the EIS.	Negative	Yes	Calala Battery Energy Storage System (SSD-52786213) and Tamworth Battery Energy Storage System (SSD-23830229)	Unknown	Yes	Unknown	Unknown	Yes	Standard assessment of the impact	Required	Targeted stakeholder meetings, surveys, engagement and direct observations.	No	The project will be subject to noise and vibration assessment to identify impacts to neighbouring properties. Measures to reduce noise impacts will be identified in the EIS
surroundings	Given the historic agricultural land use of the site, and poor state of the paddocks, biodiversity impacts are unlikely.	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Consideration of co-use models where our BESS projects co-exist synergistically with agriculture and education. Screening vegetation (native) to be considered during the development of the EIS.
decision-making systems	Agency and community consultation has commenced as part of the Scoping Report and will continue through the EIS and subsequent planning stages.	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

APPENDIX C COMMUNITY INFORMATION SHEET

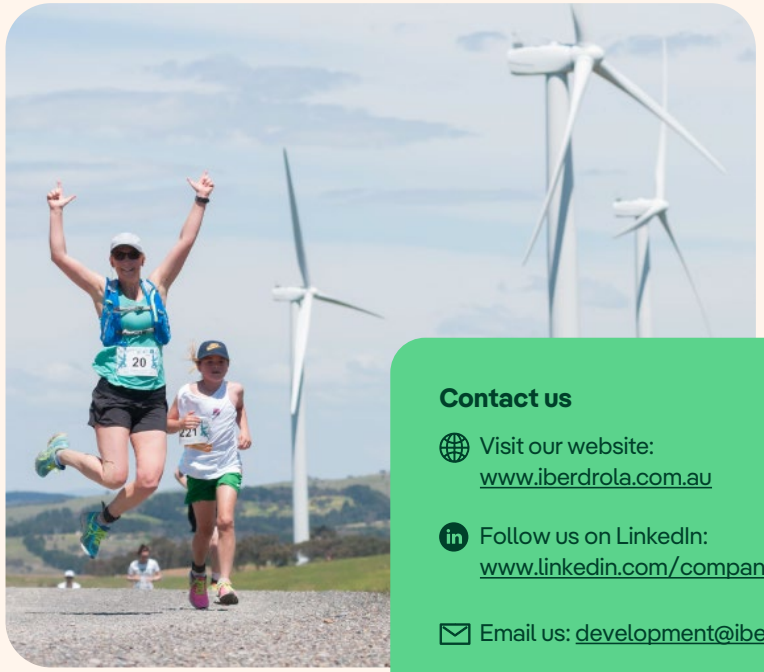
Find out more

I am a landowner and would like to know more

If you think your land might be suitable to host a renewable energy project and would like to find out more, please contact us.

I am a community member and would like to know more

Iberdrola Australia communicates regularly through the life cycle of a project via newsletters, factsheets, emails, information sessions, face-to-face meetings and letterbox drops. Iberdrola Australia also invites community members to reach out if they have any questions or concerns.



Contact us

Visit our website:
www.iberdrola.com.au

Follow us on LinkedIn:
www.linkedin.com/company/iberdrola-au/

Email us: development@iberdrola.com.au

Call us on: 1800 917 372
(24 hours, free within Australia)

About Iberdrola Australia

Iberdrola Australia has 20 years of experience in the renewable energy industry, operating 1.5 gigawatts (GW) of renewable energy assets across Australia. Our vision is to accelerate the take-up of clean energy in Australia by increasing investment to support Australia's energy transition.

We develop, construct, own and operate our projects responsibly with a focus on community and sustainability outcomes and we are committed to being the lead green energy provider for Australian businesses.

Iberdrola Australia is part of the Iberdrola Group, operating globally and recognised as sustainability leaders.

1.5 GW
renewables operating

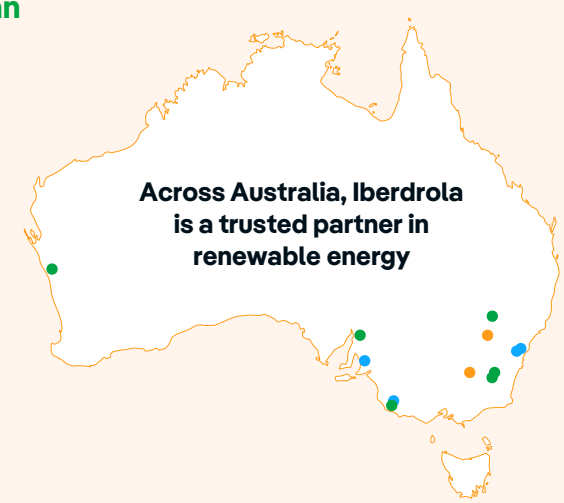
20+ years
in the Australian renewables market

$2 billion
investment in Australia by 2025

Leading Australia to a clean energy future, today

Iberdrola Australia's purpose is to lead Australia's transition to a clean energy future.

We aim to create long-term shared value with our local landholders and strive to create lasting relationships with our local communities, funding local initiatives that make a positive difference. We seek to ensure our operations make valuable social and economic contributions to our communities and believe in preserving, protecting and enhancing biodiversity.



- Operating Renewable Energy Assets
- Under Construction Renewable Energy Assets
- Operating Firming Assets

Our commitment to communities

Iberdrola Australia is committed to working with local communities and stakeholders to ensure our projects have positive long-lasting impacts. We seek to act as a good neighbour, establish a long-term relationship, and become an integral member of the local communities within which we operate.

Community Benefits

We look for opportunities to share the benefits of our projects with the local communities within which we operate. These can vary depending on the project and the community and benefits generally include:

- ✓ Significant economic investment across the local area.
- ✓ Use of local products and services such as retail, transport, restaurants and accommodation.
- ✓ Employment opportunities during development, construction and at our operating renewable energy assets.
- ✓ Local First Nations community projects.
- ✓ Sponsorship of local community projects and initiatives.
- ✓ Establishment of a community benefit fund administered annually for the operational life of the renewable energy asset.
- ✓ Providing a diversified income for host landowners and neighbours.
- ✓ Local biodiversity enhancement projects.
- ✓ Sourcing materials and services from locally based suppliers where possible.

Engagement principles

Iberdrola Australia commits to five core principles in all interactions with our community and stakeholders:

- **Responsible and fair**
- **Open and honest**
- **Active listening**
- **Inclusive engagement**
- **Embrace the uniqueness of our communities**

August 2023

Dear Community Member,

Re: Proposed Kingswood Battery Project

We are writing to you as you live in the area nearby our proposed Kingswood Battery Project. This letter provides you with some information about Iberdrola Australia as well as the preliminary details of the large-scale battery we are proposing.

Iberdrola Australia

Iberdrola Australia has 20 years of experience in the renewable energy industry in Australia, operating 1.5 gigawatts (GW) of renewable projects. Our vision is to accelerate the take-up of clean energy in Australia by increasing investment to support Australia's energy transition.

We develop, construct, own and operate our projects responsibly with a focus on community and sustainability outcomes and we are committed to being the lead green energy provider for Australian businesses.

Iberdrola Australia is part of the Iberdrola Group, operating globally and recognised as sustainability leaders.

Our head office is located in Sydney and we have offices in Brisbane and Melbourne.

Proposed Kingswood Battery

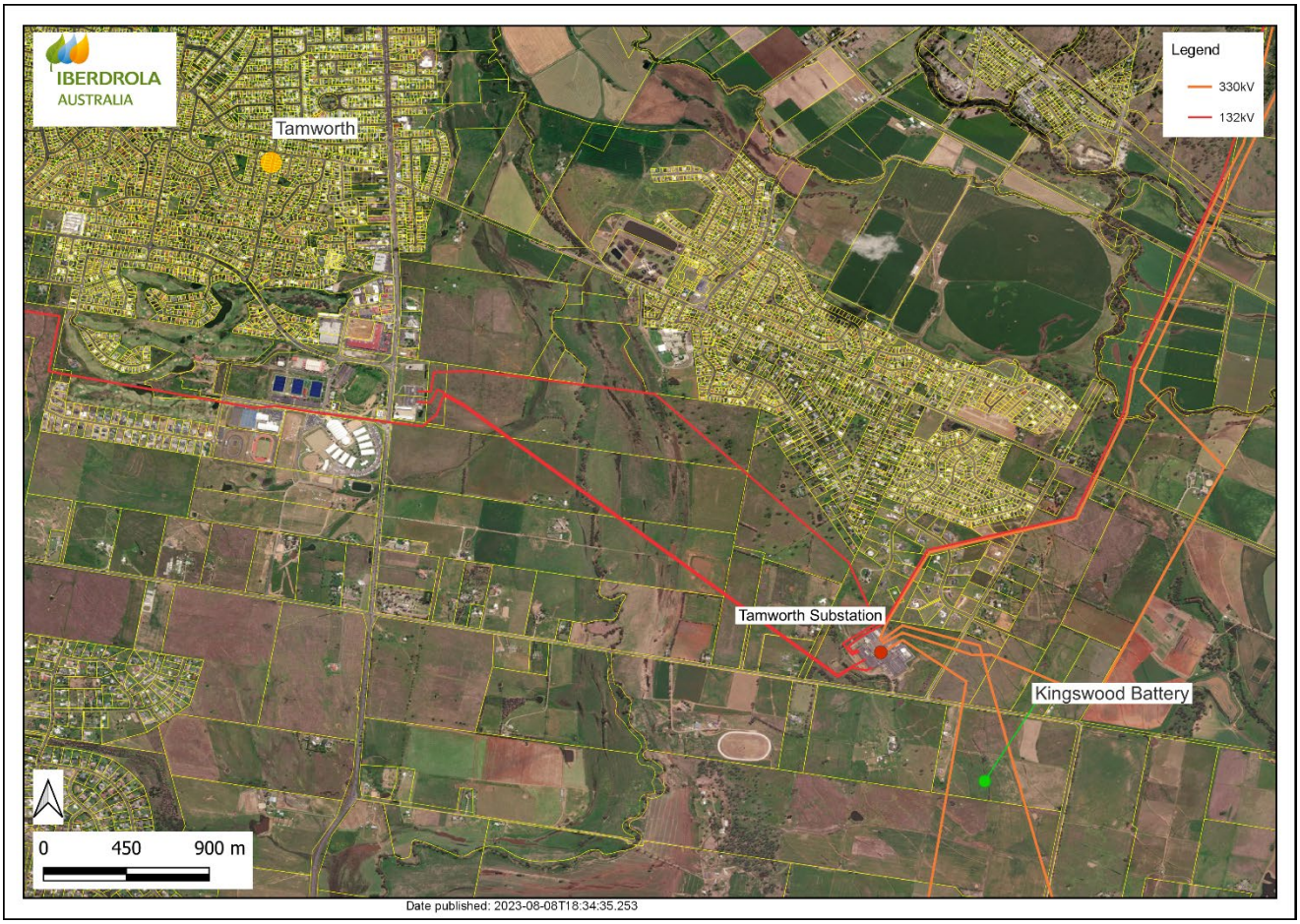
We are currently exploring the feasibility of developing, constructing and operating a large-scale battery project called the Kingswood Battery. The proposed project location is to the south of the existing Tamworth substation, directly across the road from land owned by TransGrid as shown in Figure 1.

The proposed Kingswood Battery Project will have a capacity of up to 500 megawatts (MW) and 2 hours of storage and will connect directly into the existing Tamworth substation operated by TransGrid.

The battery, including ancillary infrastructure, requires a total land area of approximately six hectares (ha) and is currently proposed to be built in two stages:

- Stage 1 – 250MW / 2 hours of storage; and
- Stage 2 – An additional 250MW / 2 hours of storage.

Figure 1 – Kingswood Battery Project Location



What does a big battery look like?

A big battery, sometimes called a grid-scale battery or a battery energy storage system (BESS), uses similar battery technology to a laptop or mobile phone but at a much larger scale. Big batteries typically use hundreds of lithium-ion battery packs arranged in outdoor cabinets between the size of a large domestic refrigerator up to a standard shipping container.

Lake Bonney Battery, one of Iberdrola Australia's operational battery projects located in South Australia, is shown in Figure 2. The capacity of Lake Bonney Battery is 25MW with 2 hours of storage. The battery itself takes up an area of around 0.3 ha.

Community Benefits

Iberdrola Australia is committed to working with local communities and stakeholders to ensure our projects have positive long-lasting impacts.

We seek to act as a good neighbour, establish long-term relationships, and become an integral member of the local communities within which we operate. We look for opportunities to share the benefits of our projects with the local community and are informed of these through our community engagement process.

The Kingswood Battery Project is expected to bring community benefits including job opportunities and investment to the local and regional economy.

Figure 2 - Lake Bonney Battery in South Australia

Share Your Feedback

As a State Significant Development (SSD), the proposed Kingswood Battery Project will undergo a rigorous approval process led by the NSW Department of Planning and Environment (DPE). We are in the initial stages of this process, with one of our first activities to engage with neighbours and local communities.

This early engagement allows us to incorporate local knowledge and feedback into our conceptual designs and also inform us on the best ways to approach our engagement with the community moving forward.

Your insights and feedback matter to us, and we invite you to actively participate throughout the project's development. To share your feedback and to stay informed about the proposed Kingswood Battery Project please do so via the following methods:

- Email: kingswoodbattery@iberdrola.com.au
- Phone:
    - Weekdays, 9am to 5pm: Jose Opazo, +61 484 292 427
    - 24 hours, free within Australia: 1800 917 372
- Post: Level 22, Governor Philip Tower, 1 Farrer Place, Sydney, NSW 2000.

If you would like a face-to-face meeting with a member of the project team, please let us know.

Join our Mailing List

If you would like to join our mailing list and receive updates on the project please scan the QR below with your mobile phone and fill in your details.

Or use the following link to fill in your details: https://forms.office.com/e/CXqjWjDN2F

Opportunities for Involvement

If you, or anyone you know, is interested in future supplier and/or contractor opportunities throughout the construction and/or operations phase of the battery, they may register their interest by sending an email to kingswoodbattery@iberdrola.com.au.

We look forward to hearing from you and keeping you informed of any developments regarding this project.

Sincerely,

Jose Opazo
Project Manager for Kingswood Battery

APPENDIX D SURROUNDING RECEPTORS

ID	Lot / DP	Address	Receptor	Distance to Project Site (m)
1	43//DP1064582	744 Burgmanns Lane Kingswood 2340	Associated	0
2	1//DP244399	795 Burgmanns Lane Calala 2340	Non-associated	56
3	2//DP244399	781 Burgmanns Lane Calala 2340	Non-associated	150
4	44//DP1064582	696 Burgmanns Lane Kingswood 2340	Non-associated	253
5	5//DP244399	111 Burgess Lane Calala 2340	Non-associated	491
6	1703//DP1220822	59 Falcon Drive Calala 2340	Non-associated	554
7	1704//DP1220822	57 Falcon Drive Calala 2340	Non-associated	584
8	6//DP244399	99 Burgess Lane Calala 2340	Non-associated	588
9	1//DP1234207	910 Ascot-calala Road Calala 2340	Non-associated	598
10	1705//DP1220822	55 Falcon Drive Calala 2340	Non-associated	628
11	1707//DP1220822	51 Falcon Drive Calala 2340	Non-associated	652
12	7//DP244399	93 Burgess Lane Calala 2340	Non-associated	668
13	1702//DP1220822	68 Falcon Drive Calala 2340	Non-associated	672
14	1709//DP1220822	66 Falcon Drive Calala 2340	Non-associated	697
15	1701//DP1220822	94 Burgess Lane Calala 2340	Non-associated	708
16	1//DP632414	877 Ascot-calala Road Kingswood 2340	Non-associated	719
17	1708//DP1220822	49 Falcon Drive Calala 2340	Non-associated	735
18	1605//1205441	64 Falcon Drive Calala 2340	Non-associated	775
19	8//DP244399	87 Burgess Lane Calala 2340	Non-associated	779
20	1606//DP1205441	47 Falcon Drive Calala 2340	Non-associated	793
21	45//DP1064582	652 Burgmanns Lane Kingswood 2340	Non-associated	795
22	136//DP1146241	9 Whipbird Street Calala 2340	Non-associated	841
23	1604//DP1205441	62 Falcon Drive Calala 2340	Non-associated	842
24	4//DP509370	633 Burgmanns Lane Calala 2340	Non-associated	849
25	32//DP811853	198 Marsden Park Road Calala 2340	Non-associated	865
26	9//DP244399	69 Burgess Lane Calala 2340	Non-associated	879
27	1505//DP1235314	68 Burgess Lane Calala 2340	Non-associated	885
28	135//DP1146241	7 Whipbird Street Calala 2340	Non-associated	895
29	2//DP162223	651 Burgmanns Lane Calala 2340	Non-associated	922
30	1607//DP1205441	45 Falcon Drive Calala 2340	Non-associated	929
31	134//DP1146241	5 Whipbird Street Calala 2340	Non-associated	935
32	137//DP1146241	10 Whipbird Street Calala 2340	Non-associated	936
33	6//DP509906	625 Burgmanns Lane Calala 2340	Non-associated	940
34	1603//DP1205441	60 Falcon Drive Calala 2340	Non-associated	956
35	16//DP629969	57 Burgess Lane Calala 2340	Non-associated	977
36	1504//DP1235314	62 Burgess Lane Calala 2340	Non-associated	982
37	138//DP1146241	8 Whipbird Street Calala 2340	Non-associated	985