

# KINGSWOOD BATTERY ENERGY STORAGE SYSTEM

**Amendment Report**

April 2025

SSD-63207219

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## Acronyms and Abbreviations

| Acronym                            | Definition                                                                      |
|------------------------------------|---------------------------------------------------------------------------------|
| ACHAR                              | Aboriginal Cultural Heritage Assessment Report                                  |
| AEMO                               | Australian Energy Market Operator                                               |
| AHIMS                              | Aboriginal Heritage Information Management System                               |
| Arcadis                            | Arcadis Australia Pacific Pty Limited                                           |
| BC Act                             | <i>Biodiversity Conservation Act 2016</i>                                       |
| B&C SEPP                           | <i>State Environmental Planning Policy (Biodiversity and Conservation) 2021</i> |
| BESS                               | Battery Energy Storage System                                                   |
| CIV                                | Capital Investment Value                                                        |
| CLM Act                            | <i>Contaminated Land Management Act 1997</i>                                    |
| DCCEEW                             | Commonwealth Department of Climate Change, Energy, the Environment and Water    |
| DPHI                               | Department of Planning, Housing and Infrastructure                              |
| DPIE                               | Department of Planning, Industry and Environment                                |
| EIS                                | Environmental Impact Statement                                                  |
| Electricity Infrastructure Roadmap | <i>NSW Electricity Infrastructure Roadmap</i>                                   |
| Electricity Strategy, the          | <i>NSW Government's Electricity Strategy</i>                                    |
| EP&A Act                           | <i>Environmental Planning and Assessment Act 1979</i>                           |
| EP&A Regulations                   | <i>Environmental Planning and Assessment Regulations 2021</i>                   |
| EPBC Act                           | <i>Environmental Protection and Biodiversity Conservation Act 1999</i>          |
| FTE                                | Full-time equivalent                                                            |
| ha                                 | Hectare                                                                         |
| HV                                 | High voltage                                                                    |
| HVAC                               | Heating, ventilation and air conditioning                                       |
| Iberdrola                          | Iberdrola Australia Development Pty Ltd                                         |
| LV                                 | Low voltage                                                                     |
| MW                                 | Megawatt                                                                        |
| MWh                                | Megawatt-hour                                                                   |
| NEM                                | National Energy Market                                                          |
| NPfi                               | Noise Policy for Industry                                                       |
| NSW                                | New South Wales                                                                 |
| NVIA                               | Noise and Vibration Impact Assessment                                           |
| OEH                                | NSW Office of Environment and Heritage                                          |
| O&M                                | Operations and maintenance                                                      |

| Acronym                                   | Definition                                                                     |
|-------------------------------------------|--------------------------------------------------------------------------------|
| OSOM                                      | Oversize overmass                                                              |
| PCS                                       | Power conversion system                                                        |
| PCT                                       | Plant Community Type                                                           |
| Planning Systems SEPP                     | <i>State Environmental Planning Policy (Planning Systems) 2021</i>             |
| Proponent, the                            | Iberdrola Australia Development Pty Ltd                                        |
| RAP                                       | Registered Aboriginal Party                                                    |
| RF Act                                    | <i>Rural Fires Act 1997</i>                                                    |
| R&H SEPP                                  | <i>State Environmental Planning Policy (Resilience and Hazards) 2021</i>       |
| SEARs                                     | Secretary's Environmental Assessment Requirements                              |
| TEC                                       | Threatened Ecological Community                                                |
| T&I SEPP                                  | <i>State Environmental Planning Policy (Transport and Infrastructure) 2021</i> |
| Transmission Infrastructure Strategy, the | <i>NSW Transmission Infrastructure Strategy</i>                                |
| ZVI                                       | Zone of Visual Influence                                                       |
| 2024 ISP                                  | <i>2024 Integrated System Plan for the National Electricity Market</i>         |

# Executive Summary

## Background

Iberdrola Australia Development Pty Ltd (Iberdrola) (the Proponent) is seeking development consent for the construction, operation and maintenance of a large-scale Battery Energy Storage System (BESS) at 744 Burgmanns Lane, Kingswood, New South Wales (NSW) 2340 (Lot 43 DP1064582) (the Project Site). The BESS would have a capacity of up to 270 Megawatts (MW) and provide up to 1,080 Megawatt-hours (MWh) of battery storage capacity (the Project).

An environmental impact statement (EIS) was prepared to assess the potential impacts of the Project and recommended mitigation measures to appropriately manage impacts. The EIS was prepared by Arcadis Australia Pacific Pty Limited (Arcadis) on behalf of the Proponent. The EIS was prepared in accordance with the Secretary's Environmental Assessment Requirements (SEARs) issued on 30 October 2023 by the Department of Planning, Housing and Infrastructure (DPHI), the *Environmental Planning and Assessment Act 1979* (EP&A Act) and the Environmental Planning and Assessment Regulations 2021 (EP&A Regulations).

The EIS was publicly exhibited from 19 July to 15 August 2024. During the exhibition period, submissions were invited from all stakeholders including members of the community and government agencies.

This Amendment Report outlines amendments which have been made to the design of the Project following exhibition of the EIS (the Amended Project). This Amendment Report outlines the Project design and construction changes, clarifies some matters in the EIS and assesses the environmental impacts of the Amended Project.

A Submissions Report has been prepared separately and has been issued concurrently with this Amendment report.

## Summary of proposed amendments

A transmission line connection to Tamworth substation is subject to a connection agreement with Transgrid. Due to the staging of other BESS projects connecting into the substation, the Proponent, in consultation with Transgrid, has identified the need to consider and assess other transmission line connection solutions. Only one connection solution will be pursued as the preferred.

The following solutions have therefore been proposed:

- **Solution 1 - Existing above ground and/or below ground high voltage transmission connection:** Described and assessed in the existing EIS
- **Solution 2 – Underground cable northern bay alignment** – Described in detail in Section 3.1.2, this connection solution would involve an underground cable alignment into the existing Tamworth substation from its northern boundary
- **Solution 3 – Direct connection to overhead transmission line within the Project Site** – Described in detail in Section 3.1.2, this connection solution would be located within the Project Site and involve the construction of a 330 kV switching station to connect into the existing 330 kV transmission line traversing the property, and require up to two 330 kV poles/towers of 30 to 40 metres in height to re-direct and stabilise the conductors in and out of the switching station.

The additional connection solutions have also resulted in an amendment to the development envelope and footprint as shown in Figure 1-2.

Following exhibition of the EIS, the indicative BESS equipment supplier changed resulting in the need to amend the operational noise assessment and to propose amended operational noise criteria. Further details are provided in Section 3.3.2 and Table 3-1.

## **Assessment of impacts of the proposed amendments**

This Amendment Report assesses the environmental and social impacts of the Amended Project. Some environmental aspects would be unchanged from those assessed in the EIS and, therefore, are not assessed. further in this Amendment Report. Environmental aspects requiring additional assessment as a result of the proposed amendments are detailed in Chapter 6 and include:

- Traffic and transport
- Noise and vibration
- Biodiversity
- Heritage
- Visual amenity.

## **Updated mitigation and management**

Following public exhibition and after consideration of the issues raised in submission, necessary updates to the mitigation measures included in the EIS have been identified. The mitigations measures have been updated to include specific recommendations from the relevant government agencies, and to address concerns raised by the community. The full list of updated mitigation measures is provided in Appendix C of this Amendment Report.

## **Consultation**

Consultation activities detailed in this Amendment Report focused on the proposed amendments. Consultation activities included the following:

- Ongoing meetings with Transgrid to discuss the Project's connection to the Tamworth substation. Two additional transmission line solutions have been identified and assessed within this Amendment Report
- A letter detailing the amended Project was sent to all Registered Aboriginal Parties on 23 October 2024. Refer to Appendix 1 of the Aboriginal Cultural Heritage Assessment Report (Appendix G of this Amendment Report).

## **Conclusion and justification of the amended project**

Iberdrola proposes to amend the Project as a result of ongoing discussions with Transgrid to consider additional potential transmission line connection solutions to Tamworth substation. The Amended Project would maintain consistency with the project strategic context. As such, the justification of the project is consistent with that provided as part of the EIS.

The key potential benefits related to the Amended Project include reduced visual impacts associated with Solution 3.

The Amended Project meets the strategic need and supports the Commonwealth and State governments goal of achieving their respective renewable energy and GHG emissions reduction targets, taking into account biophysical, economic and social considerations, including ecologically sustainable development and cumulative impacts.



# 1 Introduction and background

## 1.1 The Project

Iberdrola Australia Development Pty Ltd (Iberdrola) (the Proponent) is seeking development consent for the construction, operation and maintenance of a large-scale Battery Energy Storage System (BESS) at 744 Burgmanns Lane, Kingswood, New South Wales (NSW) 2340 (Lot 43 DP1064582) (the Project Site). The BESS would have a capacity of up to 270 Megawatts (MW) and provide up to 1,080 Megawatt-hours (MWh) of battery storage capacity (the Project).

The EIS was prepared by Arcadis Australia Pacific Pty Limited (Arcadis) on behalf of the Proponent, to assess the potential impacts of the Project and recommend mitigation measures to appropriately address those impacts. The EIS was prepared in accordance with the Secretary's Environmental Assessment Requirements (SEARs) issued on 30 October 2023 by the Department of Planning, Housing and Infrastructure (DPHI), the *Environmental Planning and Assessment Act 1979* (EP&A Act) and the Environmental Planning and Assessment Regulations 2021 (EP&A Regulations).

The EIS was publicly exhibited from 19 July to 15 August 2024. During the exhibition period, submissions were invited from all stakeholders including members of the community and government agencies.

### 1.1.1 Original project

The Project as described in the EIS, would involve construction and operation of the following:

- BESS including battery enclosures, inverters, transformers, switch gear and control building
- Onsite 33/330 kV substation to convert electricity from the medium voltage BESS to the high voltage transmission network
- High voltage transmission connection (above ground and/or below ground) between the BESS and the Tamworth substation
- Ancillary infrastructure and mitigative features including:
  - Site access to the BESS from Ascot-Calala Road
  - Internal site access road and parking
  - Permanent office and staff amenities
  - Operations and maintenance (O&M) building
  - Stormwater management infrastructure
  - Services and utilities
  - Lighting, fencing and security devices
  - Noise acoustic barriers
  - Asset protection zone
  - Landscaping and screening vegetation.

The BESS would operate 24 hours a day, seven days a week and be monitored remotely, with infrastructure maintenance undertaken on-site. The Project as described in the EIS is shown on Figure 1-1.

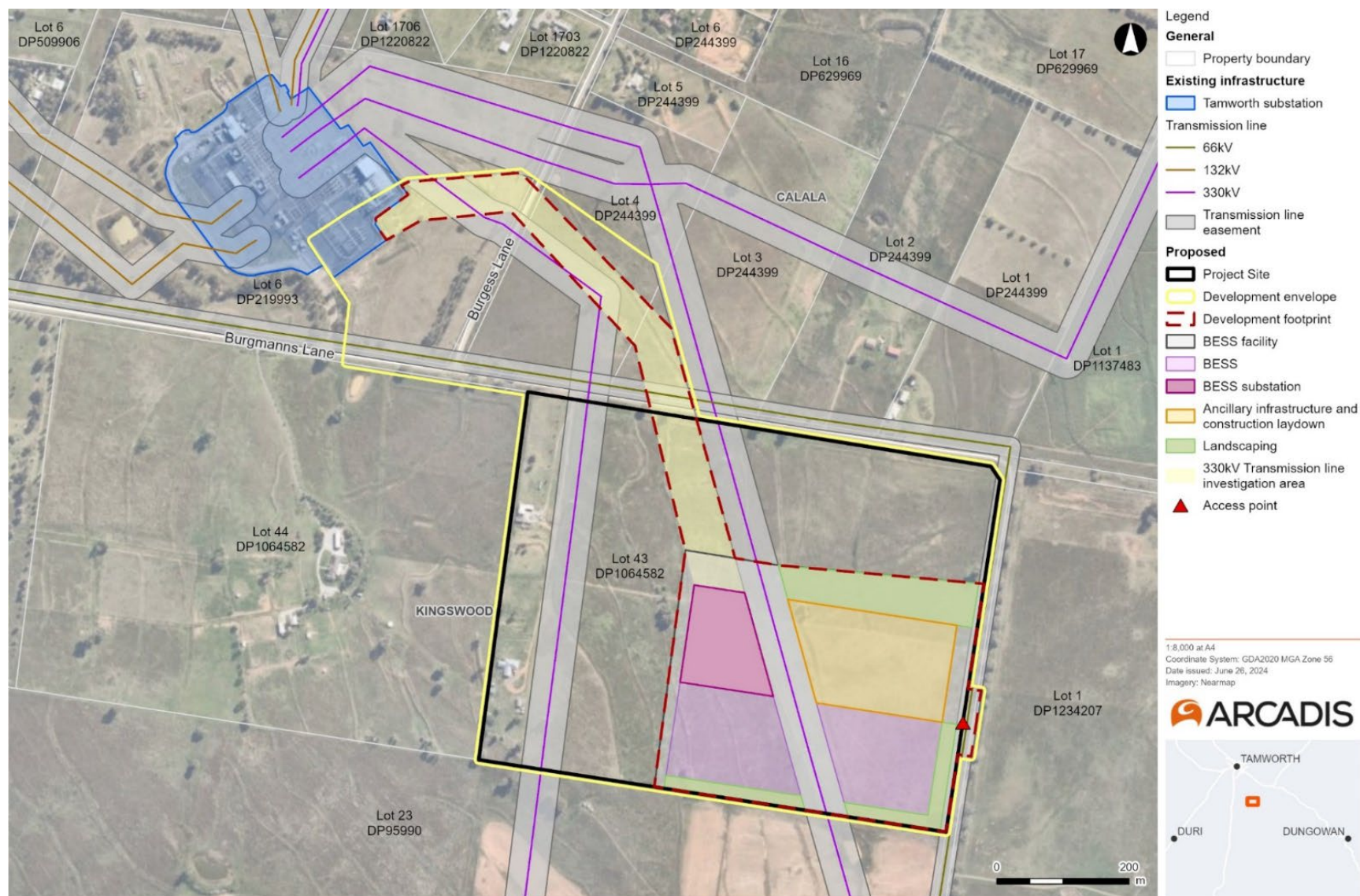


Figure 1-1 Overview of the Project (as per the EIS)

### 1.1.2 Amended project

Following exhibition of the EIS, discussions with Transgrid continued to identify additional potential connection solutions to Tamworth substation. This has resulted in the proposed amendments which are described and assessed in Section 3 and Section 6 of this Amendment Report.

## 1.2 Approval process to date

The following steps have been carried out as part of the approval process for the Project:

- Preparation of a Scoping Report (Arcadis, 2023) for submission to the Department of Planning, Housing and Infrastructure (DPHI)
- DPHI issued Secretary's Environmental Assessment Requirements (SEARs) on 30 October 2023
- Participation in ongoing community and stakeholder engagement
- An EIS was prepared by Arcadis Australia Pacific Pty Limited (Arcadis) on behalf of the Proponent to support an application for the approval of the Project. The EIS was prepared in accordance with the Secretary's Environmental Assessment Requirements (SEARs) issued on 30 October 2023 by the Department of Planning, Housing and Infrastructure (DPHI), the Environmental Planning and Assessment Act 1979 (EP&A Act) and the Environmental Planning and Assessment Regulations 2021 (EP&A Regulations).
- The EIS was placed on public exhibition between 19 July to 15 August 2024
- Following exhibition of the EIS, a Submissions Report has been prepared to provide a summary and analysis of public submissions and a response to stakeholder recommendations. This Amendment Report forms part of the Submissions Report.

Following consultation with Transgrid, this Amendment Report has been prepared to assess the potential impacts of potential connection solutions from the Kingswood BESS substation to Tamworth substation.

An overview of the amended Project is provided in Section 1.3, a full description of the proposed amendments is provided in Section 3 and a full updated Project description is provided in Appendix A. This supersedes the Project description described in the EIS. The findings of the impact assessments associated with the Project, as presented in the EIS and Submissions Report, remain applicable unless otherwise stated in this Report.

## 1.3 Overview of the amended project

### 1.3.1 Key features of the amended project

The key features of the amended Project are listed below. Where the description of the proposed amended Project differ from that described in the EIS, those changes are shown in **bold text**:

- BESS including battery enclosures, inverters, transformers, switch gear and control building
- Onsite 33/330 kV substation to convert electricity from the medium voltage BESS to the high voltage transmission network
- Transmission connection between the BESS and the Tamworth substation **via one of the following solutions**:
  - High voltage transmission connection (above ground and/or below ground)
  - **Underground cable northern bay alignment or**
  - **Connection to existing overhead transmission line**
- Ancillary infrastructure and mitigative design features including:

- Site access to the BESS from Ascot-Calala Road
- Internal site access road and parking
- Permanent office and staff amenities
- Operations and maintenance (O&M) building
- Stormwater management infrastructure
- Services and utilities
- Lighting, fencing and security devices
- Noise acoustic barriers
- Asset protection zone
- Landscaping and screening vegetation.

The BESS would operate 24 hours a day, seven days a week and be monitored remotely, with infrastructure maintenance undertaken on-site. An overview of the amended Project is shown in Figure 1-2.

### **1.3.2 Project objectives**

The Amended Project would continue achieving the project objectives including:

- Increase firming infrastructure and 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 the Project lifecycle
- Support the locality through social and economic enhancement.



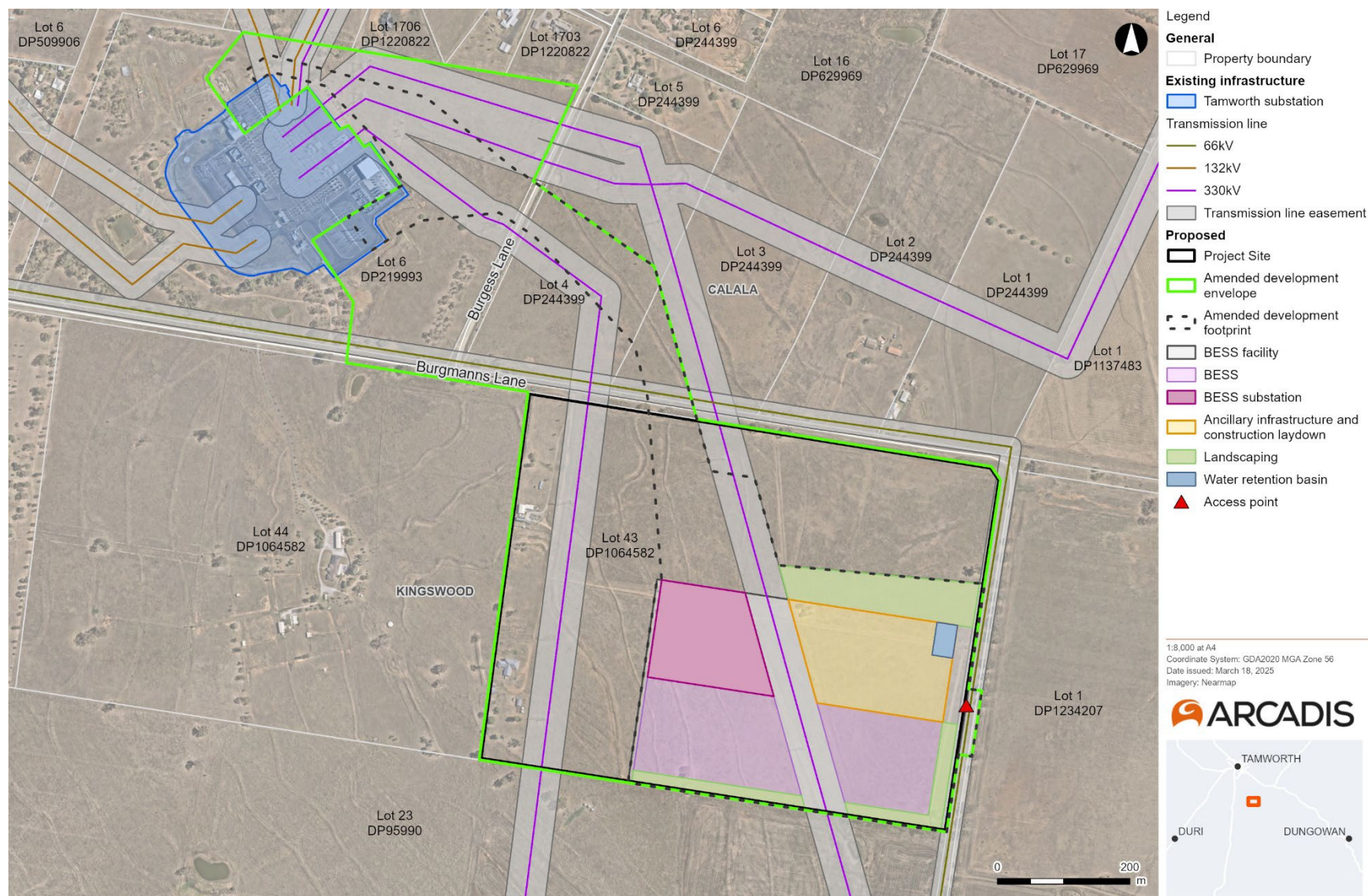


Figure 1-2: Overview of the amended Project envelope and footprint

### 1.3.3 Project need

Over the last 10-15 years, there has been a steady increase in the number of renewable projects which have come online and are generating electricity for use in the National Energy Market, while more of the older traditional coal fired power stations have been retired and decommissioned. This transition from thermal generation to renewable generation is expected to continue into the future. To support this transition, energy storage will be required to support the intermittent nature of generating electricity from renewable energy sources and to provide a reliable and secure source of electricity to consumers and the local population.

The Federal, State and Local Governments have put in place a number of plans, strategies and roadmaps, to progress and optimise consumer benefits through a transition of the energy market. These include:

- *2024 Integrated System Plan for the National Electricity Market (2024 ISP)* (Australian Energy Market Operator (AEMO), 2024)
- *The Transmission Infrastructure Strategy* (Department of Planning, Industry and Environment (DPIE), 2018)
- *The Electricity Strategy* (DPIE, 2019)
- *Electricity Infrastructure Roadmap* (DPIE, 2020)
- *NSW Climate Change Policy Framework* (NSW Office of Environment and Heritage (OEH), 2016).

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 can 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 worst-case scenario, this can lead to load shedding or blackout events.

The Project involves the development of a large-scale Battery Energy Storage System. Such facilities, as that by the Project, would provide short duration storage, frequency control ancillary services (to provide a fast injection of energy, to manage supply and demand) and help firm variable renewable energy generation.

## 1.4 Purpose of this document

In accordance with Clause 192 of the Environmental Planning and Assessment Regulation 2000 (EP&A Regulation), an Amendment Report has been prepared for the project.

As outlined in Chapter 3 of the EIS, one of the design elements subject to change during detailed design included the transmission line alignment and arrangement. The purpose of this Amendment Report is to outline the proposed changes to the project since the exhibition of the EIS and the associated environmental assessment. Chapter 3 describes the key features of the Amended Project. Chapter 6 describes the assessment of potential impacts associated with the proposed changes to the project as described in the EIS. Where required, additional or revised environmental mitigation measures have been identified to address potential impacts associated with the proposed changes and these are outlined in Chapter 6.



## 2 Strategic context

This chapter summarises the strategic context for the Project as presented in Chapter 2 of the EIS. The proposed amendments do not change how the Project aligns to this strategic context.

### 2.1 Summary of strategic context in the EIS

The Project is needed to support the NSW Government's strategy for a reliable, affordable and sustainable electricity future that supports a growing economy. The National Energy Market (NEM) is rapidly moving away from reliance on thermal generation facilities towards renewable energy generators. Grid-scale battery energy storage is essential in providing infrastructure enabling the expansion of renewable energy in NSW and in ensuring firm capacity is met. As such, the Proponent considers that the Project will play a role in the transformation of the NSW energy sector.

The following strategies were outlined in the EIS:

- *2020 Australia's Long Term Emissions Reduction Plan* (DCCEE, 2021): 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
- *2020 Integrated System Plan for the National Electricity Market* (2020 ISP) (AEMO, 2020)
- *NSW Transmission Infrastructure Strategy* (DPIE, 2018) (the Transmission Infrastructure Strategy)
- *NSW Government's Electricity Strategy* (DPIE, 2019) (the Electricity Strategy)
- *NSW Electricity Infrastructure Roadmap* (DPIE, 2020) (Electricity Infrastructure Roadmap)
- *NSW Climate Change Policy Framework* (OEH, 2016)
- *New England North West Regional Plan 2041* (DPE, 2022).

The proposed amendments are considered to be minor in nature and would not change the Project's contribution to the strategic planning documents listed above.

#### 2.1.1 The 2024 Integrated System Plan

Since exhibition of the Project, Arcadis was made aware that EMO has released an updated *Integrated System Plan for the National Electricity Market* (2024 ISP). The ISP 2024 (AEMO, 2024) provides a comprehensive roadmap for the National Energy Market (NEM), with a clear plan for essential infrastructure that will meet future energy needs. The primary focus of the 2024 ISP is to call for urgent investment in generation, storage and transmission to deliver secure, reliable and affordable electricity through the energy transition.

With coal retiring, renewable energy connected with transmission and distribution, firmed with storage and backed up by gas powered generation is the lowest-cost way to supply electricity to homes and businesses as Australia transitions to a net zero economy. The proposed modification will aid in this transition, supplying 600 MW of storage capacity that will assist in smoothing out the peaks and filling in the gaps from variable renewable energy.

As the Amended Project primarily involves the development of a BESS that connects to existing power supply transmission networks, it is considered to align with, and support the intent of, the 2024 ISP.

### 3 Description of the amendments

This chapter describes the proposed design changes associated with the Amended Project. These design changes are a result of on-going consultation with Transgrid relating to potential transmission line connection solutions for the Project.

A transmission line connection cannot be reserved until execution of a connection agreement with Transgrid and is subject to staging of other BESS projects connecting into the Tamworth substation. Given the uncertainty of securing a connection bay at Tamworth substation until later stages of the application process, and the presence of other projects planning to connect to the same substation, Iberdrola, in consultation with Transgrid, has identified the need to consider other transmission line connection solutions. This resulted in the need to amend the project envelope.

The following potential connection solutions have been developed in consultation with Transgrid, however only one connection solution will ultimately be pursued as the preferred solution is confirmed through continued discussions with Transgrid:

- **Solution 1 - Existing above ground and/or below ground high voltage transmission connection:** Described and assessed in the existing EIS
- **Solution 2 – Underground cable northern bay alignment:** Described in detail in Section 3.1.2. This connection solution would involve an underground cable alignment into the existing Tamworth substation from its northern boundary
- **Solution 3 – Direct connection to overhead transmission line within the Project Site:** Described in detail in Section 3.1.2. This connection solution would be located within the Project Site and would involve the construction of a 330 kV switching station to connect into the existing 330 kV transmission line traversing the property. This requires up to two 330 kV poles/towers of 30 to 40 metres in height to re-direct and stabilise the conductors in and out of the switching station.

The additional connection solutions have also resulted in an amendment to the development envelope and footprint as shown in Figure 1-2.

Table 3-2 provides a direct comparison of the Project as assessed in the EIS and this Amendment Report.

## 3.1 Amendment to the high voltage transmission connection

### 3.1.1 Project as described in the EIS

The EIS project included a 330 kV high voltage transmission connection (either above ground and/or below ground) of approximately 800 metres, which would extend from the BESS substation to the Tamworth substation. The final alignment of the transmission connection is subject to the connection process with Transgrid but would be located within the development envelope (refer to Figure 1-1).

The disturbance area for the connection would be in accordance with Transgrid requirements for 330 kV lines. If overhead, this would be a 60-metre easement, and narrower if underground. This easement has been used for the disturbance area for the Project and an indicative alignment is indicated in Figure 1-1.

If above ground, the transmission line would be strung on 330 kV steel lattice tension structures with 330 kV steel pole terminal structures, as shown in Figure 3-1.



Figure 3-1 Example of steel lattice structure (currently present on the Project Site).

### 3.1.2 Proposed amendment

Two additional solutions are being investigated in consultation with Transgrid are described below.

#### **Solution 2 - Underground cable northern bay alignment**

The underground cable northern bay alignment would be located within the amended development envelope (refer to Figure 3-2). The key elements of this connection include:

- A 330 kV underground transmission line of approximately 1,150 metres in length that would extend from the Kingswood BESS substation to the Tamworth substation
- The disturbance area for the connection would be in accordance with Transgrid requirements for 330 kV lines
- A section of the underground cable would be within the amended development envelope and would tie into the Tamworth substation from the north (refer to Figure 1-2)
- The trench would be about one to two metres wide and about 1.5 metres deep (with cables buried approximately one meter underground to the top of the cable)
- Once the trenching is complete, the surface above the cable would be returned to its pre-construction state
- The final alignment of the transmission connection is subject to consultation and agreement with Transgrid but would be located within the development envelope.



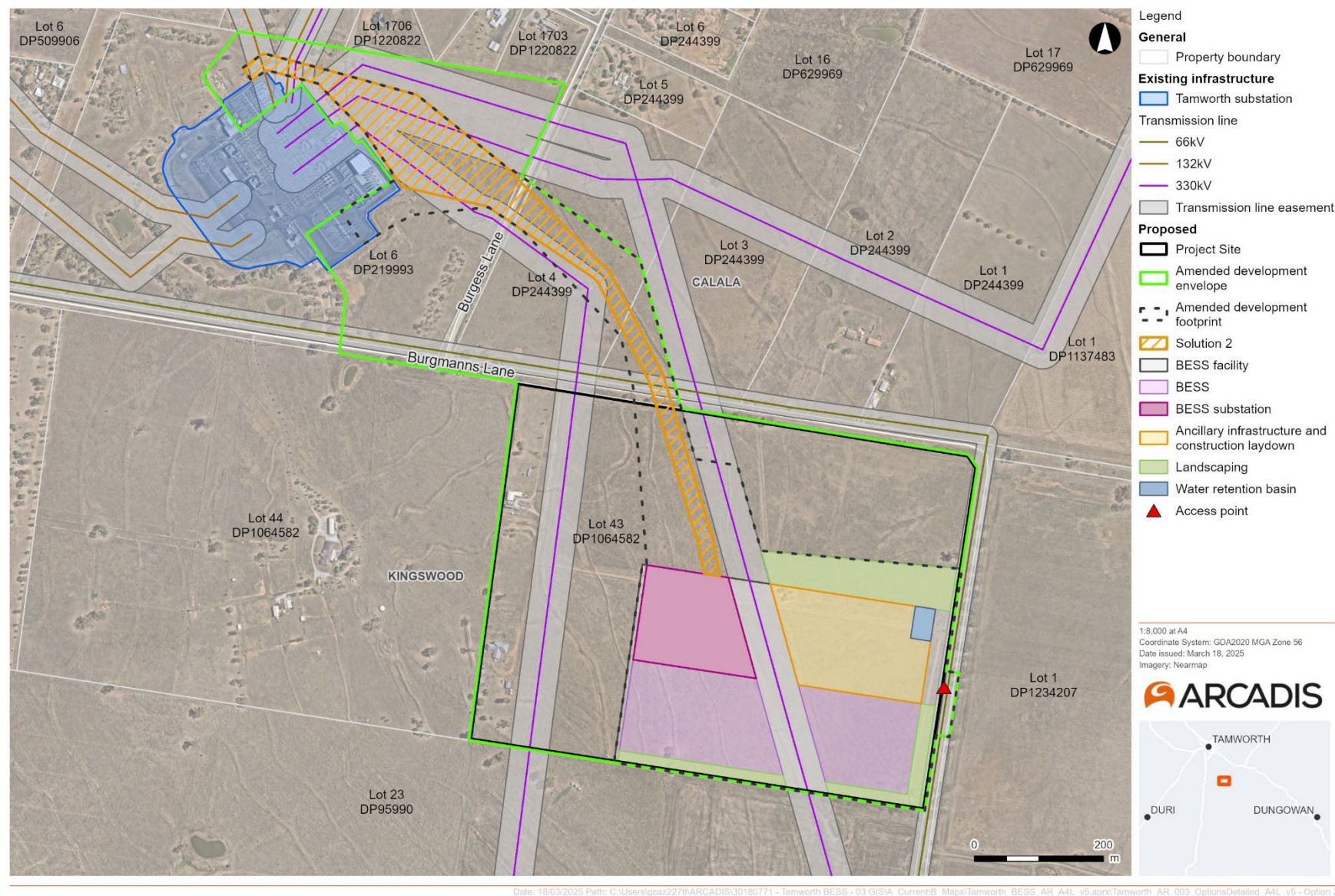


Figure 3-2 Solution 2- Underground cable northern bay alignment



### **Solution 3 - Connection to existing overhead transmission line**

The proposed overhead connection to the existing transmission line would be located within the current development envelope (refer to Figure 3-3). The key elements of this connection include:

- Connection to the existing 330 kV transmission line that runs through the existing development envelope
- The connection into the existing transmission line would require the construction of a 330 kV switching station to facilitate the integration of the proposed BESS. This infrastructure would include essential components such as circuit breakers, disconnectors, and other necessary equipment to ensure safe and reliable operation.
- The solution would also require the installation of two 330 kV poles/towers, each approximately 30 to 40 metres in height, to stabilise and re-direct the existing transmission line into and out of the switching station.

## **3.2 Amendment to the project development envelope and development footprint**

### **3.2.1 Project as described in the EIS**

The EIS envelope and development footprint are presented in Figure 1-1. The footprint of Solution 1, which was originally assessed in the EIS, was 5.60 hectares.

### **3.2.2 Proposed amendment**

The additional connection solutions have resulted in an amendment to the development envelope and footprint as shown in Figure 3-4. The amended development envelope and footprint equate to 61.55 hectares and 27.95 hectares respectively. The amended development envelope and footprint also includes an increase to the BESS and BESS substation to allow sufficient space to co-locate the switching station with the BESS substation. The extension of the BESS and BESS substation footprint allows for a worst-case scenario for all Solutions and has been assessed by the technical specialists included in this Amendment Report.

Solution 2 would extend the development envelope and footprint to the northwest and would be about 5.19 hectares (refer to Figure 3-2).

Solution 3 is within the existing development envelope but would slightly extend the development footprint to the west and would be about 2.12 hectares (refer to Figure 3-3).

## **3.3 Amendment to the operational noise criteria**

### **3.3.1 Project as described in the EIS**

The EIS project modelled operational noise source levels based on a review of available manufacturer data noting that the preferred battery technology supplier had not been confirmed.

Noise levels were calculated under the assumption of 100 percent duty during both neutral weather conditions and noise enhancing meteorological conditions. The noise modelling indicated that compliance was predicted at all sensitive receiver locations for all periods of the day (day, evening and night) (including sleep disturbance) with the implementation of design noise mitigation measures.

The design noise mitigation measures identified to achieve compliance include:

- Silencers on the inverters (reducing sound power level)

- Optimisation of the BESS layout based on exact footprint
- Noise barriers (or other path controls) with a minimum surface mass of 15 kilogram per metre.

### 3.3.2 Proposed amendment

Following exhibition of the EIS, there has been a change of indicative BESS equipment supplier resulting in an update to the sound power levels assumed in the EIS noise assessment. The location of potential battery and transformer within the development footprint remain unchanged from the EIS.

The updated indicative equipment supplier allows for the baseline Noise Policy for Industry (2017) (NPfI) criteria to be achieved under typical environmental conditions (temperature). However, it was determined that at higher temperatures, fan cooling system duty factors would need to be increased to allow for safe and efficient operation of the batteries.

Two scenarios were assessed in the amended operational noise assessment provided in Appendix E and detailed in Section 6.2.3.2. This included the typical scenario (occurring for 90 percent of the time during any season) (Table 3-4 of Appendix E) and the worst-case scenario (occurring up to 10 percent of the time during any season) (Table 3-5 of Appendix E). The worst-case scenario is expected to occur when temperatures are very high, and the battery cooling systems are required to run at a high duty factor to allow for sufficient battery cooling.

Under the worst-case scenario (10 percent of the time during any season), criteria exceedances of up to 5 dB(A) during the daytime and up to 3 dB(A) during the evening are expected to occur at three receivers and two receivers respectively.

It is for this reason, and noting that all other reasonable and feasible measures have been considered, an approach to amend the operational noise criteria during the daytime and evening periods for the worst case scenario is proposed, as described in Section 3.4 of Appendix E.

The proposed amended operational noise criteria are detailed in Appendix E and Table 3-1 below.

Table 3-1: Operational noise limit requirements

| Receiver                                       | Noise criteria (dB(A))      |                                 |                               |                          |
|------------------------------------------------|-----------------------------|---------------------------------|-------------------------------|--------------------------|
|                                                | Day<br>( $L_{Aeq}$ (15min)) | Evening<br>( $L_{Aeq}$ (15min)) | Night<br>( $L_{Aeq}$ (15min)) | Night<br>( $L_{AFmax}$ ) |
| Residential receivers during 90% of any season | 40 <sup>1</sup>             | 35 <sup>1</sup>                 | 35 <sup>1</sup>               | 52 <sup>1</sup>          |
| Residential receivers during 10% of any season | 45 <sup>2</sup>             | 38 <sup>2</sup>                 | 35 <sup>2</sup>               | 52 <sup>2</sup>          |

Note 1: to be measured under up to, and including, noise enhancing meteorological conditions (as described in Table D1 of the NPfI) and typical operating temperatures that are not expected to be exceeded for more than 10 percent of any season.

Note 2: to be measured under up to, and including, noise enhancing meteorological conditions (as described in Table D1 of the NPfI) and all operating temperatures.

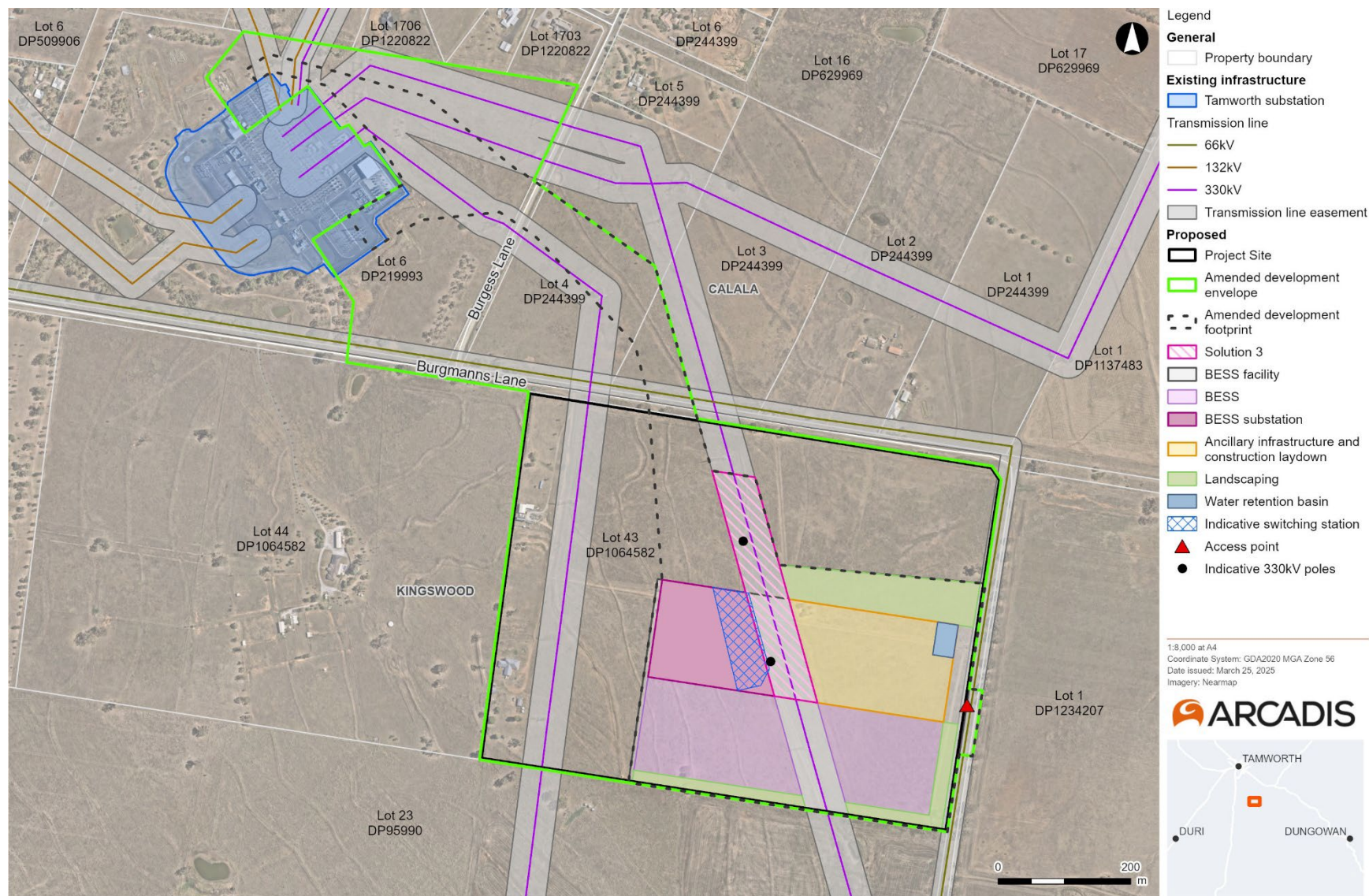


Figure 3-3 Solution 3 - Connection to existing overhead transmission line



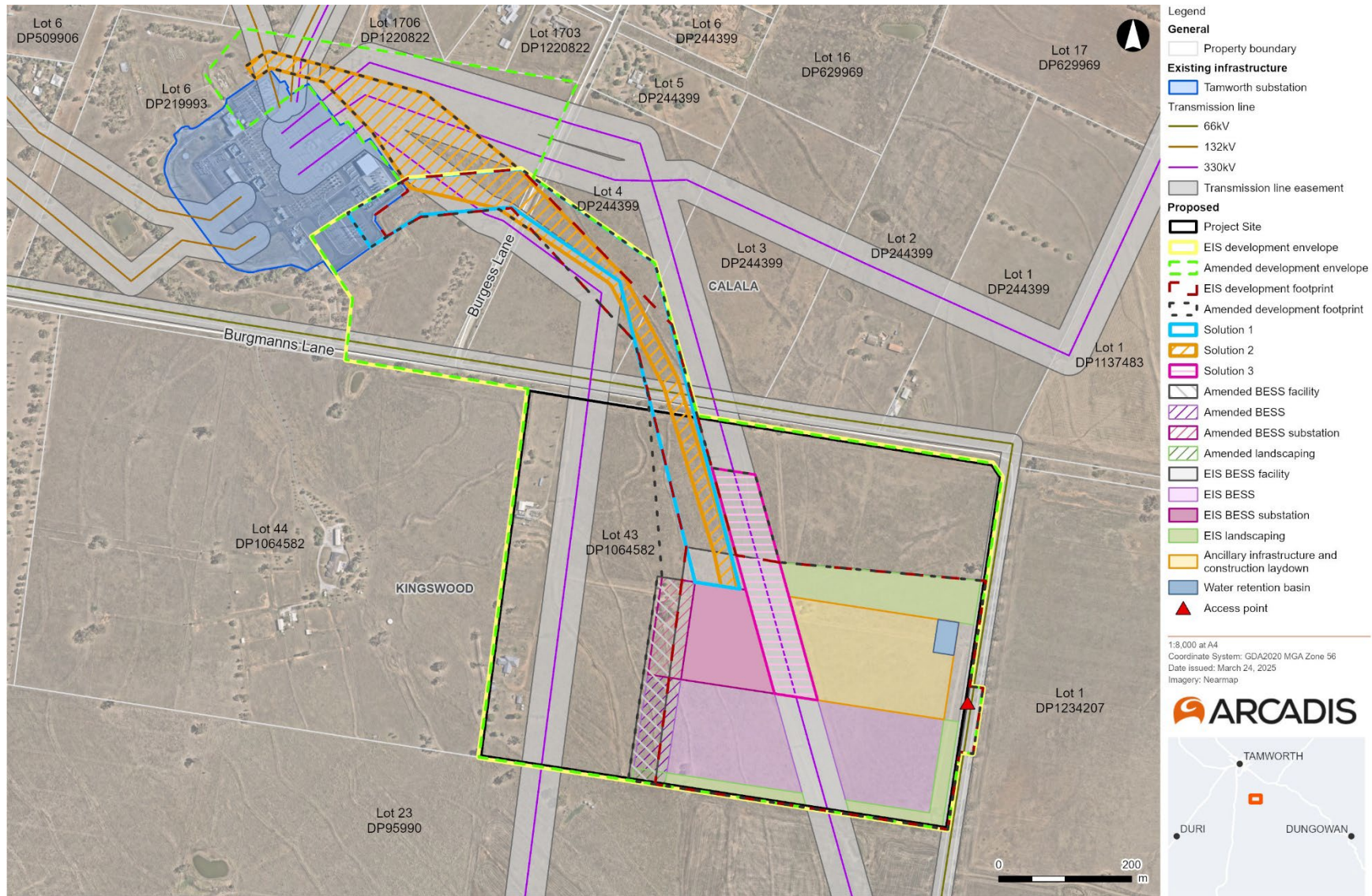


Figure 3-4: Amendment to Project development envelope and development footprint and connection solutions



Table 3-2: Key features of the Project as assessed in the EIS and this Amendment Report

| Project component                    | Original Project                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Amended Project                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|--------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Site details</b>                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Application lots                     | <ul style="list-style-type: none"> <li>Lot 43, DP1064582</li> <li>Lot 3, DP 244399</li> <li>Lot 4, DP 244399</li> <li>Lot 6, DP 219993</li> </ul>                                                                                                                                                                                                                                                                                                                    | No change.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Zoning                               | <ul style="list-style-type: none"> <li>RU4 – Primary Productions Small Lots</li> </ul>                                                                                                                                                                                                                                                                                                                                                                               | No change.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Development footprint                | <ul style="list-style-type: none"> <li>21.68 ha</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                           | <ul style="list-style-type: none"> <li>27.95 ha</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Subdivision                          | <ul style="list-style-type: none"> <li>The Project does not propose to subdivide the lot which it is situated on</li> </ul>                                                                                                                                                                                                                                                                                                                                          | No change.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Access                               | <ul style="list-style-type: none"> <li>New access driveway via Ascot-Calala Road</li> <li>The heavy vehicle route to the Project is proposed via Goonoo Goonoo Road/New England Highway, Whitehouse Lane and Ascot-Calala Road</li> </ul>                                                                                                                                                                                                                            | No change.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Project design and built form</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Layout                               | <p>The Project would generally comprise the following key built form features:</p> <ul style="list-style-type: none"> <li>BESS including battery enclosures, inverters, transformers, switch gear and control building</li> <li>On-site 33/330 kV BESS substation</li> <li>High voltage transmission connection (above ground and/or below ground) between the BESS and the Tamworth substation</li> <li>Ancillary infrastructure and mitigative features</li> </ul> | <p>The Project would generally comprise the following key built form features:</p> <ul style="list-style-type: none"> <li>BESS including battery enclosures, inverters, transformers, switch gear and control building</li> <li>On-site 33/330 kV BESS substation</li> <li>Transmission connection between the BESS and the Tamworth substation via one of the following solutions: <ul style="list-style-type: none"> <li>High voltage transmission connection (above ground and/or below ground) between the BESS and the Tamworth substation</li> <li>Underground cable northern bay alignment</li> <li>Connection to existing overhead transmission line</li> </ul> </li> </ul> |

| Project component       | Original Project                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Amended Project                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | <ul style="list-style-type: none"> <li>Ancillary infrastructure and mitigative features</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| BESS capacity           | <ul style="list-style-type: none"> <li>Up to 270 MW active power</li> <li>Up to 1,080 MWh battery storage capacity</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                   | No change.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| BESS                    | <p>The BESS would comprise the following components:</p> <ul style="list-style-type: none"> <li>Lithium-ion battery technology consisting of pre-assembled battery enclosures housing lithium-ion type battery cells, associated control systems and HVAC (heating, ventilation and air conditioning) units</li> <li>Power conversion system (PCS) incorporating inverters and transformers</li> <li>Ancillary infrastructure (electrical switchroom, control and office building, security fencing)</li> </ul> | No change.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 33/330 kV substation    | <p>The on-site substation would comprise:</p> <ul style="list-style-type: none"> <li>Four high voltage (HV) and two low voltage (LV) switch bays</li> <li>33 kV indoor switchgear housed in portable substation containers</li> </ul>                                                                                                                                                                                                                                                                           | No change.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Transmission connection | <ul style="list-style-type: none"> <li>A 330 kV transmission line (either above and/or below ground) of approximately 800 metres would extend from the BESS substation to the Tamworth substation</li> </ul>                                                                                                                                                                                                                                                                                                    | <p>The following potential connection solutions have been developed in consultation with Transgrid, however only one connection solution will ultimately be pursued as the preferred solution and will be confirmed through continued discussion with Transgrid:</p> <ul style="list-style-type: none"> <li><b>Solution 1</b> (as described in the EIS) – A 330 kV transmission line (either above and/or below ground) of approximately 800 metres would extend from the BESS substation to the Tamworth substation</li> <li><b>Solution 2</b> – Underground cable northern bay alignment</li> <li><b>Solution 3</b> – Connection to existing overhead transmission line</li> </ul> |

| Project component                                        | Original Project                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Amended Project |
|----------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|
| Ancillary infrastructure                                 | <ul style="list-style-type: none"> <li>Site access from to the BESS from Ascot-Calala Road</li> <li>Internal site access road and parking</li> <li>Operational and maintenance (O&amp;M) building</li> <li>Permanent office and staff amenities</li> <li>Stormwater management infrastructure</li> <li>Lighting, fencing and security devices</li> <li>Noise acoustic barriers</li> <li>Water tank</li> <li>Landscaping and screening vegetation</li> </ul>                                                                                                                                                                                                                                           | No change.      |
| Design mitigation                                        | <p>The Project has been sited to avoid and / or minimise environmental impacts whilst minimising distances to the Tamworth substation. Key mitigation measures considered in the Project design include:</p> <ul style="list-style-type: none"> <li>Siting of the BESS to maximise distance from non-associated receivers</li> <li>Suitable asset protection zones and separation distances incorporated into the design of proposed infrastructure and disturbance footprint</li> <li>Planted landscaping around project infrastructure to minimise visual impacts</li> <li>Noise acoustic barriers and silencers</li> <li>Siting of Project infrastructure outside of existing easements</li> </ul> | No change.      |
| Design elements subject to change during detailed design | <ul style="list-style-type: none"> <li>Detailed design for the Project has yet to be completed. The following design elements may be amended through the detailed design process: <ul style="list-style-type: none"> <li>Layout of the battery enclosures and infrastructure within the development envelope</li> <li>Transmission line alignment and arrangement</li> <li>Location and height of attenuation features (noise acoustic barriers) and fencing</li> </ul> </li> </ul>                                                                                                                                                                                                                   | No change.      |



| Project component              | Original Project                                                                                                                                                                                                                                                                                                                                                                                                                           | Amended Project |
|--------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|
| <b>Construction</b>            |                                                                                                                                                                                                                                                                                                                                                                                                                                            |                 |
| Capital investment value (CIV) | <ul style="list-style-type: none"> <li>Greater than \$30 million</li> </ul>                                                                                                                                                                                                                                                                                                                                                                | No change.      |
| Activities                     | <p>Construction of the Project is expected to comprise:</p> <ul style="list-style-type: none"> <li>Civil and enabling works</li> <li>Structural, mechanical and electrical works</li> <li>Commissioning</li> <li>Demobilisation</li> </ul>                                                                                                                                                                                                 | No change.      |
| Program and staging            | <ul style="list-style-type: none"> <li>Construction is expected to commence in Quarter 2 of 2025</li> <li>The Project is anticipated to take approximately 12–15 months to construct.</li> <li>Construction of the Project would be undertaken as a single stage (no staging is proposed)</li> </ul>                                                                                                                                       | No change.      |
| Hours                          | <ul style="list-style-type: none"> <li>Standard working hours: <ul style="list-style-type: none"> <li>7am to 6pm Monday to Friday</li> <li>8am to 1pm Saturdays</li> <li>No works on Sundays or public holidays.</li> </ul> </li> <li>Some work outside of these hours (e.g., oversize deliveries, emergencies) as required.</li> </ul>                                                                                                    | No change.      |
| Workforce                      | <ul style="list-style-type: none"> <li>Up to approximately 100 full-time equivalents (FTE) would be required for construction during the Project peak</li> </ul>                                                                                                                                                                                                                                                                           | No change.      |
| Vehicle movements              | <ul style="list-style-type: none"> <li>The following maximum vehicle movements are predicted (subject to detailed design): <ul style="list-style-type: none"> <li>Up to 80 light vehicles per day (80 in and 80 out) during the construction works phase</li> </ul> </li> <li>Up to 60 heavy vehicles per day (60 in and 60 out) during the construction works phase (inclusive of oversize overmass (OSOM) vehicles movements)</li> </ul> | No change.      |

| Project component | Original Project                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Amended Project |
|-------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|
|                   | <ul style="list-style-type: none"> <li>Average daily heavy vehicle movements during the construction phase would be significantly lower than outlined above</li> </ul>                                                                                                                                                                                                                                                                                                                                         |                 |
| Transport         | <ul style="list-style-type: none"> <li>It is anticipated that the majority of the BESS infrastructure (eg batteries, enclosures, PCS components and substation components) would be transported from Sydney/Newcastle via approved B-double routes</li> <li>Construction materials would be sourced from surrounding concrete batching plants and hard rock quarries</li> <li>Construction labour, equipment and plant would likely be sourced from Tamworth and other surrounding regional centres</li> </ul> | No change.      |
| Water             | <ul style="list-style-type: none"> <li>Water for the Project would primarily be used for dust suppression and construction activities</li> <li>Water sources would be confirmed during detailed design but are likely to include a combination of bore water to be sourced and located on the participating landholder's land, captured stormwater, municipal water supply (in agreement with the relevant authority) and/or imported water in portable tanks</li> </ul>                                       | No change.      |
| <b>Operation</b>  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                 |
| Life of BESS      | <ul style="list-style-type: none"> <li>The estimated life of the initial BESS equipment is 20 years</li> <li>At the end of operational life, this may be extended subject to the replacement and/or refurbishment of components and market conditions</li> </ul>                                                                                                                                                                                                                                               | No change.      |
| Workforce         | <ul style="list-style-type: none"> <li>The Project would contribute to the employment of up to two FTE employees during operation</li> </ul>                                                                                                                                                                                                                                                                                                                                                                   | No change.      |

| Project component | Original Project                                                                                                                                                                                | Amended Project |
|-------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|
|                   | <ul style="list-style-type: none"> <li>The Project would be managed remotely, with two to four employees required to attend the Project Site periodically for maintenance activities</li> </ul> |                 |
| Operational hours | <ul style="list-style-type: none"> <li>24 hours, 7 days a week</li> </ul>                                                                                                                       | No change.      |
| Vehicle movements | <ul style="list-style-type: none"> <li>Vehicle movements to and from the Project Site would occur infrequently during operations, primarily for scheduled maintenance.</li> </ul>               | No change.      |

## 4 Statutory context

The statutory context of the Project remains consistent with that described in Chapter 4 of the EIS (Arcadis, 2024). There have been no changes to the following Acts and legislative instruments that affect this application:

- *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act)
- *Native Title Act 1993*
- *State Environmental Planning Policy (Transport and Infrastructure) 2021* (T&I SEPP)
- *State Environmental Planning Policy (Planning Systems) 2021* (Planning Systems SEPP)
- *Environmental Planning and Assessment Act 1979* (EP&A Act)
- *State Environmental Planning Policy (Biodiversity and Conservation) 2021* (B&C SEPP)
- *State Environmental Planning Policy (Resilience and Hazards) 2021* (R&H SEPP)
- *Biosecurity Act 2015*
- *Biodiversity Conservation Act 2016* (BC Act)
- *Contaminated Land Management Act 1997* (CLM Act)
- *Rural Fires Act 1997* (RF Act)
- *Roads Act 1993*

Under Section 138 of the *Roads Act 1993*, approval from Tamworth Regional Council would be required for an underground cable travelling across the public road reserve on Burgmanns Lane and Burgess Lane for Solution 2.

The proposed amendments do not change the permissibility of the Project or approvals required. An updated statutory compliance table for the amended Project is provided in Appendix B of this Report.



## 5 Consultation

Chapter 5 of the EIS described the consultation that was undertaken prior to the exhibition of the EIS.

This chapter provides a summary of the consultation that has been undertaken following the exhibition of the EIS with a focus on the proposed changes described in Chapter 3. Key consultation activities with Transgrid focussed on these proposed changes. The consultation carried out is in accordance with the SEARS and consistent with the consultation guidelines outlined in Section 5.1 of the EIS.

### 5.1 Key interface stakeholders

Consultation with key interface stakeholders is ongoing. Table 5-1 provides a summary of the consultation activities carried out following exhibition of the EIS.

Table 5-1: Consultation with key interface stakeholders

| Key interface stakeholder | Purpose of consultation                                                                                                                                                                                     | Frequency        | Issues raised and where addressed                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|---------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Transgrid                 | To discuss: <ul style="list-style-type: none"> <li>Project's connection to the Tamworth substation's 330 kV bus bar</li> <li>Potential connection solutions proposed in Chapter 3 and in the EIS</li> </ul> | Ongoing meetings | <p><b>Issues</b></p> <p>Transgrid flagged that the transmission line connection solution identified in the EIS has been allocated to another project however has not yet been reserved. Depending on staging of the project, Iberdrola may need to use another connection solution.</p> <p><b>Response</b></p> <p>Iberdrola and Transgrid identified and reviewed the proposed line route and assessed two additional technically viable connection configurations, each with distinct requirements and implications.</p> <p>The additional transmission line solutions have been identified (refer to Section 3) and assessed (refer to Section 6) within this Amendment Report.</p> |

### 5.2 Aboriginal stakeholders

All Registered Aboriginal Parties (RAPs) were issued a letter on 23 October 2024, providing an update on the Project. The letter is provided in Appendix 1 of the updated Aboriginal Cultural Heritage Assessment Report (ACHAR) (Appendix G of this Amendment Report).

The letter outlined that the public exhibition of the EIS had been completed, and design changes were being assessed through the preparation of an Amendment Report and related to the two additional potential connection solutions (refer to Chapter 3). The letter advised that no additional survey would be required and the ACHAR would be revised to reflect the changes.

## 6 Assessment of impacts

Chapter 6 of the EIS provided an assessment of the key environmental issues for the Project as identified in the SEARs. The assessments carried out on the Project are described in Chapter 3 of the EIS.

A request to amend the Project was submitted to DPHI on 25 October 2024. DPHI confirmed on 25 October 2024 that an Amendment Report is appropriate to address the environmental impacts associated with the amended Project. No additional or updated SEARs were issued by DPHI.

The amended Project, as described in Chapter 3 of this Amendment Report, was then assessed against each of the key issues set out in the SEARs issued by the Secretary of DPHI on 30 October 2023

Table 6-1 provides a summary of environmental aspects considered as part of the amended Project. Where Table 6-1 indicates no additional impact are anticipated, impacts to the environmental aspect would remain consistent with what was assessed in the EIS.

Table 6-1: Overview of impacts

| Environmental aspect  | Solution 2 – Underground cable northern bay alignment | Solution 3 – Connection to existing overhead transmission line |
|-----------------------|-------------------------------------------------------|----------------------------------------------------------------|
| Traffic and transport | Refer to Section 6.1                                  | No additional impact to that assessed in the EIS               |
| Noise and vibration   | Refer to Section 6.2                                  | Refer to Section 6.2                                           |
| Biodiversity          | Refer to Section 6.3                                  | Refer to Section 6.3                                           |
| Hazards and risk      | No additional impact to that assessed in the EIS      | No additional impact to that assessed in the EIS               |
| Bushfire              | No additional impact to that assessed in the EIS      | No additional impact to that assessed in the EIS               |
| Heritage              | Refer to Section 6.4                                  | No additional impact to that assessed in the EIS               |
| Visual amenity        | Refer to 6.5                                          | Refer to Section 6.5                                           |
| Land                  | No additional impact to that assessed in the EIS      | No additional impact to that assessed in the EIS               |
| Social and economic   | No additional impact to that assessed in the EIS      | No additional impact to that assessed in the EIS               |
| Water                 | No additional impact to that assessed in the EIS      | No additional impact to that assessed in the EIS               |
| Waste                 | No additional impact to that assessed in the EIS      | No additional impact to that assessed in the EIS               |
| Air quality           | No additional impact to that assessed in the EIS      | No additional impact to that assessed in the EIS               |
| Cumulative            | No additional impact to that assessed in the EIS      | No additional impact to that assessed in the EIS               |

Section 6.1 to Section 6.5 provides a summary of the additional assessments undertaken. The additional assessments have been undertaken to identify and assess the potential construction, operational and cumulative impacts associated with the amended Project. The assessments focused on potential changes to the expected impacts due to the proposed Project changes discussed in Chapter 3. Where required, additional or revised environmental mitigation measures have been proposed.

The assessments are supported by detailed investigations and have been documented in the updated/supplementary technical assessment memorandums and reports in Appendix D to Appendix G.

## **6.1 Traffic and transport**

This section provides a summary of the potential traffic and transport impacts resulting from the amended Project. This section should be read in conjunction with Section 6.1 of the EIS and the Traffic Impact Assessment provided in Appendix D of the EIS.

### **6.1.1 Assessment methodology**

The qualitative assessment methodology involved an assessment of potential construction traffic and transport impacts has been undertaken for both Solution 2 and Solution 3 of the amended Project.

Solution 2 is not anticipated to have any changes to the operational impacts, but will experience changes during construction (refer to Section 6.1.3)

Solution 3 is not anticipated to have any additional traffic and transport impacts compared to the EIS and has not been assessed further.

### **6.1.2 Existing environment**

The existing environment has not changed since the preparation of the EIS, with the environment described in Section 6.1.2 of the EIS still applicable to the amended Project.

### **6.1.3 Assessment of potential impacts**

Construction activities associated with Solution 2 of the amended Project would require works to occur within the road reserve and would include the following:

- Trenching and laying of underground cables across Burgmanns Lane and Burgess Lane (see Figure 3-2)
- Resurfacing and reinstatement works.

Impacts associated with the above works would be localised and temporary and would be limited to construction. To minimise impacts to local traffic as a result of the Solution 2 of the amended Project, trenching and resurfacing works would be staged.

Trenching, laying of underground cables and resurfacing works would first be undertaken across Burgmanns Lane. Following the reinstatement of Burgmanns Lane, works would then commence across Burgess Lane.

### 6.1.4 Environmental mitigation measures

Traffic and transport impacts associated with the Solution 2 of the amended Project are generally consistent with impacts described in the EIS and would therefore be managed through the implementation of the proposed mitigation measures described in Section 6.1.5 and Appendix D of the EIS.

It is noted that prior to the commencement of construction works for Solution 2, approval under Section 138 of the *Roads Act 1993* would be obtained from Tamworth Regional Council. Full/partial road closures at Burgmanns Lane and Burgess Lane, required for works occurring within the road reserve, would be determined in consultation with Tamworth Regional Council.

## 6.2 Noise and vibration

The Noise and Vibration Amendment Letter assessing the noise impact of both Scenario 2 and 3 is provided in Appendix D. A detailed operational noise assessment is provided in Appendix E. A summary of both Appendices is provided below. This section should be read in conjunction with Section 6.2 of the EIS and the Noise and Vibration Impact Assessment (NVIA) provided in Appendix E of the EIS.

### 6.2.1 Assessment methodology

The assessment methodology involved the following:

- Assessment of potential construction noise impacts for Solution 2 of the amended Project. This solution is not anticipated to have any changes to the operational impacts
- Assessment of both construction and operational noise and vibration impacts of Solution 3 for the amended Project
- Assessment of operational noise impacts as a result of a change in indicative BESS equipment supplier
- A comparison of impacts between the Project as described in the EIS and the amended Project.

Monitoring locations and ambient noise survey results are detailed in Section 6.2.1.3 and 6.2.2 of the EIS.

The assessment methodology used in the letter report (Appendix D) and the detailed noise assessment report (Appendix E) utilises the same methodology that was applied in the EIS NVIA (summarised in Section 6.2.1 in the EIS).

### 6.2.2 Existing environment

The existing noise environment, including noise and vibration sensitive receivers, has not changed since the preparation of the EIS. The noise environment described in Section 6.2.2 of the EIS is still applicable to the amended Project.

Receivers potentially sensitive to construction and operational noise and vibration for the amended Project are consistent with those described in Section 6.2.2 and Figure 6-5 of the EIS.

### 6.2.3 Assessment of potential impacts

#### 6.2.3.1 Construction noise impacts

##### Solution 2 – Underground cable northern bay alignment

Due to amendments to the development envelope associated with installation of underground cabling for Solution 2, some receivers were identified as having reduced distance attenuation in comparison to what was assessed in the EIS. Noise predictions based on Solution 2 are detailed in Table 1 in Appendix D. Table 6-2 (below) identifies residential



receivers predicted to experience an increase in noise levels above what was assessed in the EIS. Construction noise levels have the potential to temporarily increase between 1 dB(A) to 7 dB(A) at 27 of the residential receivers identified in Table 6-2.

Consistent with noise predictions for installation of cabling to the Transgrid substation assessed in Appendix E of the EIS, no receivers are predicted to be highly noise affected as a result of the construction activities associated with Solution 2.

*Table 6-2: Predicted construction noise levels for installation of underground cabling (Scenario 2)*

| Receiver ID | Predicted $L_{eq}$ range |            | Standard hours |                  |                    | Change in noise level in Amendment Letter compared with EIS dB(A) |
|-------------|--------------------------|------------|----------------|------------------|--------------------|-------------------------------------------------------------------|
|             | Low dB(A)                | High dB(A) | NML dB(A)      | Exceedance dB(A) | Compliance: Yes/No |                                                                   |
| R05         | 34                       | 54         | 45             | 9                | No                 | 1                                                                 |
| R06         | 35                       | 55         | 45             | 10               | No                 | 2                                                                 |
| R07         | 37                       | 57         | 45             | 12               | No                 | 3                                                                 |
| R08         | 31                       | 51         | 45             | 6                | No                 | 1                                                                 |
| R10         | 35                       | 55         | 45             | 10               | No                 | 4                                                                 |
| R11         | 36                       | 56         | 45             | 11               | No                 | 6                                                                 |
| R12         | 28                       | 48         | 45             | 3                | No                 | 1                                                                 |
| R13         | 31                       | 51         | 45             | 6                | No                 | 1                                                                 |
| R14         | 31                       | 51         | 45             | 6                | No                 | 2                                                                 |
| R15         | 29                       | 49         | 45             | 4                | No                 | 1                                                                 |
| R17         | 32                       | 52         | 45             | 7                | No                 | 4                                                                 |
| R18         | 29                       | 49         | 45             | 4                | No                 | 2                                                                 |
| R19         | 26                       | 46         | 45             | 1                | No                 | 1                                                                 |
| R20         | 30                       | 50         | 45             | 5                | No                 | 3                                                                 |
| R22         | 33                       | 53         | 45             | 8                | No                 | 7                                                                 |
| R23         | 28                       | 48         | 45             | 3                | No                 | 2                                                                 |
| R24         | 32                       | 52         | 45             | 7                | No                 | 6                                                                 |
| R27         | 25                       | 45         | 45             | 0                | Yes                | 1                                                                 |
| R28         | 29                       | 49         | 45             | 4                | No                 | 4                                                                 |
| R29         | 26                       | 46         | 45             | 1                | No                 | 2                                                                 |
| R30         | 27                       | 47         | 45             | 2                | No                 | 2                                                                 |
| R31         | 28                       | 48         | 45             | 3                | No                 | 3                                                                 |
| R32         | 31                       | 51         | 45             | 6                | No                 | 7                                                                 |
| R33         | 32                       | 52         | 45             | 7                | No                 | 7                                                                 |
| R34         | 25                       | 45         | 45             | 0                | Yes                | 1                                                                 |
| R36         | 24                       | 44         | 45             | 0                | Yes                | 1                                                                 |

| Receiver ID | Predicted $L_{eq}$ range |            | Standard hours |                  |                    | Change in noise level in Amendment Letter compared with EIS dB(A) |
|-------------|--------------------------|------------|----------------|------------------|--------------------|-------------------------------------------------------------------|
|             | Low dB(A)                | High dB(A) | NML dB(A)      | Exceedance dB(A) | Compliance: Yes/No |                                                                   |
| R37         | 28                       | 48         | 45             | 3                | No                 | 5                                                                 |

### Solution 3 – Connection to existing overhead transmission line

Due to amendments to the development envelope and site layout for Solution 3, some receivers were identified as having reduced distance attenuation in comparison to what was assessed in the EIS during clearing and bulk earthworks. Noise predictions based on Solution 3 are detailed in Table 2 in Appendix D. Table 6-3 (below) identifies residential receivers predicted to experience an increase in noise levels above what was assessed in the EIS. Construction noise levels have the potential to temporarily increase between 1 dB(A) and 4dB(A) at 34 of the residential receivers identified in Table 6-3.

Consistent with noise predictions for clearing and bulk earthworks assessed in Appendix E of the EIS, no receivers are predicted to be highly noise affected as a result of the construction activities associated with Solution 3.

Table 6-3: Predicted construction noise levels for clearing and bulk earthworks (Solution 3)

| Receiver ID | Predicted $L_{eq}$ range |            | Standard hours |                  |                    | Change in noise level in Amendment Letter compared with EIS dB(A) |
|-------------|--------------------------|------------|----------------|------------------|--------------------|-------------------------------------------------------------------|
|             | Low dB(A)                | High dB(A) | NML dB(A)      | Exceedance dB(A) | Compliance: Yes/No |                                                                   |
| R02         | 44                       | 65         | 45             | 20               | No                 | 2                                                                 |
| R03         | 42                       | 63         | 45             | 18               | No                 | 3                                                                 |
| R04         | 34                       | 55         | 45             | 10               | No                 | 4                                                                 |
| R05         | 36                       | 57         | 45             | 12               | No                 | 4                                                                 |
| R06         | 34                       | 55         | 45             | 10               | No                 | 4                                                                 |
| R07         | 33                       | 55         | 45             | 9                | No                 | 4                                                                 |
| R08         | 34                       | 55         | 45             | 10               | No                 | 4                                                                 |
| R09         | 25                       | 56         | 45             | 11               | No                 | 1                                                                 |
| R10         | 32                       | 53         | 45             | 8                | No                 | 3                                                                 |
| R11         | 32                       | 53         | 45             | 8                | No                 | 3                                                                 |
| R12         | 33                       | 54         | 45             | 9                | No                 | 3                                                                 |
| R13         | 32                       | 53         | 45             | 8                | No                 | 3                                                                 |
| R14         | 32                       | 53         | 45             | 8                | No                 | 3                                                                 |
| R15         | 32                       | 53         | 45             | 8                | No                 | 3                                                                 |
| R17         | 31                       | 52         | 45             | 7                | No                 | 3                                                                 |
| R18         | 31                       | 52         | 45             | 7                | No                 | 3                                                                 |
| R19         | 31                       | 52         | 45             | 7                | No                 | 3                                                                 |
| R20         | 30                       | 51         | 45             | 6                | No                 | 3                                                                 |

| Receiver ID | Predicted $L_{eq}$ range |            | Standard hours |                  |                    | Change in noise level in Amendment Letter compared with EIS dB(A) |
|-------------|--------------------------|------------|----------------|------------------|--------------------|-------------------------------------------------------------------|
|             | Low dB(A)                | High dB(A) | NML dB(A)      | Exceedance dB(A) | Compliance: Yes/No |                                                                   |
| R21         | 28                       | 49         | 45             | 4                | No                 | 1                                                                 |
| R22         | 29                       | 50         | 45             | 5                | No                 | 3                                                                 |
| R23         | 30                       | 51         | 45             | 6                | No                 | 3                                                                 |
| R24         | 28                       | 49         | 45             | 4                | No                 | 2                                                                 |
| R26         | 30                       | 51         | 45             | 6                | No                 | 3                                                                 |
| R27         | 30                       | 51         | 45             | 6                | No                 | 3                                                                 |
| R28         | 29                       | 50         | 45             | 5                | No                 | 3                                                                 |
| R29         | 27                       | 48         | 45             | 3                | No                 | 2                                                                 |
| R30         | 29                       | 50         | 45             | 5                | No                 | 3                                                                 |
| R31         | 28                       | 49         | 45             | 4                | No                 | 3                                                                 |
| R32         | 28                       | 49         | 45             | 4                | No                 | 2                                                                 |
| R33         | 27                       | 48         | 45             | 3                | No                 | 3                                                                 |
| R34         | 29                       | 50         | 45             | 5                | No                 | 3                                                                 |
| R35         | 29                       | 50         | 45             | 5                | No                 | 3                                                                 |
| R36         | 29                       | 50         | 45             | 5                | No                 | 3                                                                 |
| R37         | 27                       | 48         | 45             | 3                | No                 | 3                                                                 |

### 6.2.3.2 Operational noise impacts

#### Solution 2 – Underground cable northern bay alignment

Noise impacts associated with Solution 2 would be limited to construction only, with no change to operational noise impacts to occur.

#### Solution 3 – Connection to existing overhead transmission line

The components required for the proposed overhead connection for Solution 3 includes a 330 kV switching station includes circuit breakers, disconnectors, and other necessary equipment to ensure safe and reliable operation. In addition, there will be two 330kv poles/towers. The proposed equipment has been reviewed, and it was concluded that no noise intensive equipment is proposed for the switching station located on the amended development envelope. Therefore, no adverse noise impacts to any surrounding receivers are expected due to the additional equipment.

#### Change of BESS equipment supplier

As a result of a change to the indicative BESS equipment supplier, outlined in Section 3.3.2, an amended operational noise assessment was undertaken to assess typical conditions (temperature) (90 percent of the time in any season) and worst case conditions (10 percent of the time any season) (Appendix E).

Under typical conditions (occurring for 90 percent of the time during any season) (Table 3-4 of Appendix E), operational noise levels to surrounding residential receivers are predicted to comply with baseline NPfI criteria.

Under worst-case conditions (occurring up to 10 percent of the time during any season) (Table 3-5 of Appendix E), baseline NPfI criteria exceedances of up to 5 dB(A) during the daytime and up to 3 dB(A) during the evening are predicted to occur at three receivers and two receivers respectively.

The proposed amendments detailed in Section 3.3.2, allowing a 5 dB(A) increase during the daytime and 3 dB(A) increase during the evening for up to 10 percent of any season, would allow for operational noise level compliance during peak temperature days.

### **6.2.3.3 Vibration impacts**

No vibration intensive activities are proposed to occur near any receiver. Given the significant intervening distance to the nearest receiver building, about 230 metres from the site boundary, no vibration impacts are expected to occur.

## **6.2.4 Environmental mitigation measures**

Noise and vibration impacts associated with the amended Project are generally consistent with impacts described in the EIS and would therefore be managed through the implementation of the proposed mitigation measures described in Section 6.2.4 and Appendix E of the EIS.

In response to predicted operational noise impacts during peak temperature days, amendments to the noise criteria during the daytime and evening periods are proposed (refer to Table 3-1).

The Proponent will consult with owners of properties predicted or demonstrated to exceed the default noise objectives outlined in Note 1 of Table 3-1 for more than 10 percent of any given season and, if appropriate, will seek to enter into negotiated agreements with the owner of the residence or the land.

If there is no agreement, then upon request, the Proponent shall provide architectural treatments in accordance with the Noise Policy for Industry (EPA, 2017), as outlined in Table 4.2 of the policy.

## **6.3 Biodiversity**

An updated Biodiversity Development Assessment Report (BDAR) has been prepared to provide the results of the additional field surveys, assess biodiversity impacts and update calculations for biodiversity offsets for the amended Project, in comparison to those of the Project as described in the EIS. This includes amendments associated with high voltage transmission connection solutions and amendment to the development envelope and footprint. The updated BDAR is provided in Appendix F, and a summary is provided below. This section should be read in conjunction with Section 6.3 of the EIS.

### **6.3.1 Assessment methodology**

The biodiversity study area and subject land (development envelope) for the assessment have been amended to accommodate the proposed changes for the amended Project. The amended subject land and wider study area is shown in Figure 6-1.

Additional field surveys for the updated BDAR were carried out between 23 September and 25 September 2024. The additional surveys focussed on additional areas within the amended development envelope (i.e. the areas that are outside of the development envelope as described in the EIS) Lot 6 DP 219993 and Lots 3 and 4 DP 244399.

The field surveys included an additional six vegetation integrity plots to sample vegetation within the study area (Bam plots 4-9). The location of the field surveys are shown in Figure 6-1.



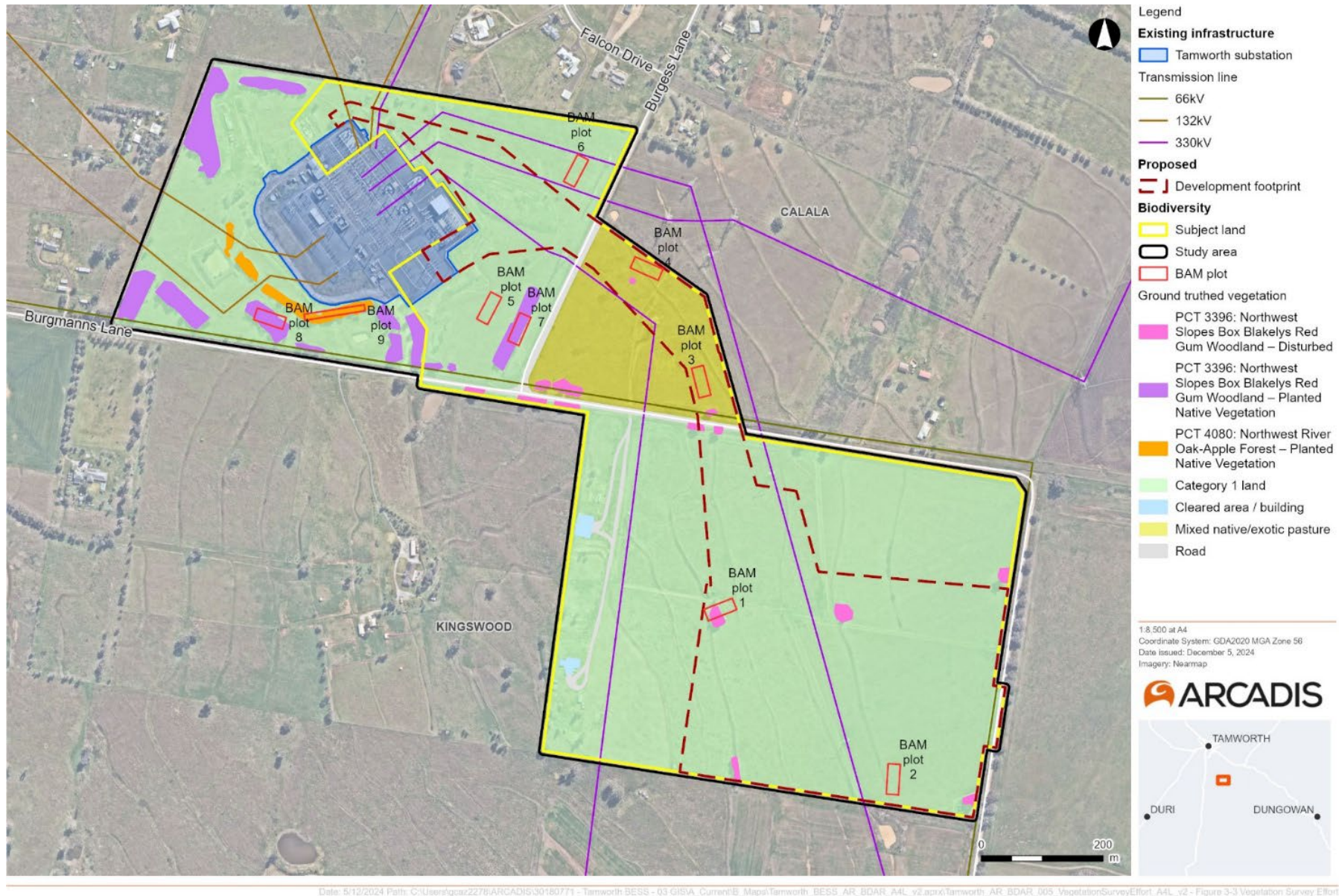


Figure 6-1: PCT and vegetation zones for the amended Project



## 6.3.2 Existing environment

Section 6.3.2 of the EIS describes the existing environment of the EIS subject land in relation to biodiversity. This section focuses on the existing environment of the additional areas that form part of the amended development envelope. The aspects of the existing environment that have changed from the EIS are described in this section and are listed below:

- Landscape features
- Vegetation
  - Vegetation communities
  - TECs listed under the BC Act.

Some aspects of the existing environment were determined through desktop review and additional field surveys to be consistent with those discussed in Section 6.3.2 of the EIS. These are described in Appendix F and not discussed further in this section.

### 6.3.2.1 Landscape features

One landscape feature, additional to what was identified in Section 6.3.2.1 of the EIS, is described in Table 6-4. The description of the remaining landscape features are unchanged from the EIS and are not repeated in this report.

Table 6-4: Updated landscape features for the amended Project

| Landscape feature | EIS study area                                                                                                                                                                             | Amended biodiversity study area                                                                                                                                                                                                                                                               |
|-------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Aquatic habitat   | The EIS noted that the subject land does not support any aquatic habitat, including human-made dams. The nearest aquatic habitats are Calala Creek, Goonang Creek and Goonoo Goonoo Creek. | The updated BDAR amended this section, specifying that the subject land does not support any <b>natural</b> aquatic habitat.<br><br>There is a dam within the study area on Lot 6 DP 219993, but this will not be impacted by the Project (located outside the amended development envelope). |

### 6.3.2.2 Vegetation

#### Vegetation communities

The amended development envelope shown in Figure 6-1 was found to have:

- A slightly smaller area of Plant Community Type (PCT) 3396 Northwest Slopes Box-Blakelys Red Gum Forest than shown in the EIS development envelope
- A slightly larger area of Category 1 land than shown in the EIS development envelope
- 6.64 hectares of mixed native/exotic pasture vegetation located within Lots 3 and 4 DP 244399 which were not present in the EIS development envelope.

These changes are summarised in Table 6-5.

Table 6-5: Vegetation communities within the development envelope

| PCT No. | PCT Name                                     | Area within EIS development envelope (ha) | Area within amended development envelope (ha) | Difference (ha) |
|---------|----------------------------------------------|-------------------------------------------|-----------------------------------------------|-----------------|
| 3396    | Northwest Slopes Box-Blakelys Red Gum Forest | 0.93                                      | 0.83                                          | -0.1 (decrease) |
| n/a     | Mixed native/exotic pasture                  | 0                                         | 6.64                                          | 6.64            |
| n/a     | Category 1 land                              | 51.58                                     | 51.72                                         | 0.14            |

As shown in Table 6-5, these changes, including the additional vegetation zone identified, resulted in a total of 6.68 additional hectares of vegetation zones in the amended development envelope when compared to the EIS.

However, most of the additional 6.68 hectares consists of mixed native/exotic pasture and Category 1 land, which were dominated by exotic vegetation. Further detail about the changes to vegetation zones and a description of the additional vegetation zone is provided in Appendix F.

#### Threatened ecological community (TECs) listed under the Biodiversity Conservation Act (BC Act)

PCT 3396 which was identified in the development envelope and described in the EIS was found to meet the criteria for one TEC listed under the BC Act. No additional TECs were identified in the amended development envelope; however there were minor differences in TEC area between the amended development envelope and the Project as described in the EIS.

Anticipated changes in the area covered by TEC as a result of the proposed changes to the development envelope are presented in Table 6-6. As show, this would result in a total of 0.83 hectares of TEC within the amended development envelope.

Table 6-6: TECs listed under the BC Act identified within the amended development envelope

| TEC Name                                                                                                                                                                                                                                                                                                       | PCT  | BC Act Status         | Area (ha) within the EIS development envelope | Area (ha) within the amended development envelope | Difference (ha) |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-----------------------|-----------------------------------------------|---------------------------------------------------|-----------------|
| White Box- Yellow Box- Blakely's Red Gum Grassy Woodland and Derived Native Grassland in the NSW North Coast, New England Tableland, Nandewar, Brigalow Belt South, Sydney Basin, South Eastern Highlands, NSW South Western Slopes, South East Corner and Riverina Bioregions. Critically Endangered (BC Act) | 3396 | Critically endangered | 0.93                                          | 0.83                                              | -0.1 (decrease) |

### 6.3.3 Assessment of potential impacts

#### 6.3.3.1 Construction impacts

Section 6.3.3 of the EIS identified a number of potential biodiversity impacts that may occur during construction of the Project. This section focusses on the additional impacts that are likely to occur as a result of the amended Project when compared to the Project described in the EIS.

Potential impacts that have changed from the EIS are focussed on the removal of native vegetation and are described in this section.

#### Removal of native vegetation

Although two PCTs were identified within the study area, as well as two condition classes for PCT 3396, the only native vegetation to be cleared for the amended Project is PCT 3396: Disturbed. Other native vegetation types within the study area, which will not be impacted by the Project, are omitted from the impact assessment. In addition to native vegetation impacts, clearing of non-native vegetation will be required.

Impacts of each of the solutions for the transmission corridor were assessed separately and included the amendments to the development envelope and development footprint. In addition, impacts from total clearing of the amended development footprint were assessed, in order to provide a maximum possible clearing total, even though this scenario is unlikely.

The direct impacts of the Project, including Solution 2 and Solution 3 proposed as part of the amended Project, are presented in Table 6-7 for all impacted vegetation communities.

Table 6-7: Direct impacts to native vegetation within the amended development footprint

| Vegetation community        | Solution 1 (as per EIS) | Solution 2 – Underground cable northern bay alignment | Solution 3 – Connection to existing overhead transmission line | Amended development footprint |
|-----------------------------|-------------------------|-------------------------------------------------------|----------------------------------------------------------------|-------------------------------|
| PCT 3396 – Disturbed        | 0.22                    | 0.20                                                  | 0.18                                                           | 0.22                          |
| Mixed native/exotic pasture | 2.18                    | 1.15                                                  | 0.00                                                           | 2.83                          |
| Category 1 land             | 19.72                   | 20.69                                                 | 17.90                                                          | 24.42                         |

No additional indirect impacts from what was described in the EIS would result from vegetation removal for the amended Project.

#### 6.3.3.2 Operational impacts

Section 6.3.4 of the EIS identified potential biodiversity impacts during operation of the Project including:

- Trampling of adjacent native vegetation
- Rubbish dumping
- Soil disturbance
- Weed spread.

The operation of the amended Project would not result in additional impacts to biodiversity compared to the Project described in the EIS. Impacts would be consistent with the operational impacts documented in the EIS. More detail on the above impacts is provided in Section 8.2 of Appendix F.

### 6.3.4 Environmental mitigation measures

The environmental mitigation measures for the Project as described in the EIS (see Section 6.3.5 of the EIS) are considered appropriate to manage the biodiversity impacts associated with the amended Project.

### 6.3.5 Offsetting required

Section 6.3.3 of the EIS detailed the biodiversity offsets that would be required for the Project, in accordance with Section 9.2 of the BAM and as determined using the BAM Calculator (BAMC).

A total of two ecosystem credits for 3396 – Northwest Flats Box-Blakelys Red Gum Forest were identified as being required for the Project as described in the EIS. The amended Project would not result in any additional ecosystem credits to be offset.

Consistent with the EIS, no species credits were identified within the subject land for the amended Project, and no offsets required.

## 6.4 Heritage

The updated ACHAR is provided in Appendix G and a summary is provided below. This section should be read in conjunction with Section 6.6 of the EIS and the ACHAR provided in Appendix G of the EIS.

### 6.4.1 Assessment methodology

The ACHAR was updated to consider potential impacts to Aboriginal cultural heritage associated with the additional proposed connection solutions and the subsequent increase to the development envelope as assessed in the EIS.

Updates to the ACHAR involved the following:

- Desktop assessment – comparative analysis of the additional areas within the amended development envelope (i.e. the areas that are outside of the development envelope as described in the EIS), against known or potential areas of Aboriginal heritage sensitivity.

Solution 3 is within the development envelope assessed in the EIS and would not have any additional impacts to Aboriginal heritage impacts compared to the EIS. Solution 3 has not been assessed further.

### 6.4.2 Existing environment

The existing environment has not changed since the preparation of the EIS, with the existing environment described in Section 6.6.2 of the EIS still applicable to the amended Project. The study area used for the updated ACHAR prepared for this Amendment Report (Appendix G) is consistent with that used in the ACHAR prepared for the EIS.

To ensure results from Aboriginal Heritage Information Management System (AHIMS) were less than 12 months old, an extensive search was conducted on 23 October 2024. The search used a 7.5 kilometre buffer centred around the amended development envelope and was consistent with the previous AHIMS search conducted on 27 October 2023. The EIS AHIMS search, returned 95 sites, with no recorded Aboriginal sites located within one kilometre of the amended development envelope.

Previous studies were undertaken for the Calala BESS (Biosis, 2023) at 57 Burgess Lane, Calala. This includes much of the northern portion of the amended development envelope. No previously unrecorded Aboriginal cultural heritage sites were identified during site surveys for the Calala BESS, with no areas of archaeological sensitivity identified.

### 6.4.3 Assessment of potential impacts

No additional sites of Aboriginal heritage significance have been identified within the amended development envelope since the preparation of the EIS. Construction works associated with Solution 2 would require earthworks and disturbance to the ground surface. This activity would have the potential to impact previously unrecorded items of Aboriginal heritage significance within the amended development envelope.

There would be no additional impacts to Aboriginal cultural heritage values as a result of the amended Project compared to the EIS given the general similarity in footprints and construction activities.

### 6.4.4 Environmental mitigation measures

Aboriginal heritage impacts associated with the amended Project, are generally consistent with impacts described in the EIS and would therefore be managed through the implementation of the proposed mitigation measures described in Section 6.6.4 of the EIS.

## 6.5 Visual amenity

The Visual Impact Assessment supplementary technical memorandum is provided in Appendix G of this Amendment Report, and a summary is provided below. This section should be read in conjunction with Section 6.7 of the EIS and the Landscape Character and Visual Impact Assessment provided in Appendix J of the EIS.

### 6.5.1 Assessment methodology

The assessment methodology involved the following:

- High-level Zone of Visual Influence (ZVI) Mapping of Solution 3 of the amended Project
- Preparation of a photomontage of Solution 3 of the amended Project from VP06 on Burgmanns Lane (as per Appendix J of the EIS). VP06 was selected as a key view and represents general visibility of the Project, with the greatest potential visual magnitude change and impact
- A comparative assessment of impacts between the Project as described in the EIS and Solution 2 and 3 of the amended Project.

While Solution 2 is outside the existing development footprint, the transmission line would be underground. Any additional visual impacts are not expected once the underground cable has been installed. This is consistent with the EIS and has not been assessed further.

### 6.5.2 Existing environment

The existing environment has not changed since the preparation of the EIS. The environment described in Section 6.7.2 of the EIS is still applicable to the amended Project.

### 6.5.3 Assessment of potential impacts

#### 6.5.3.1 Construction impacts

Construction activities associated with Solution 2 and 3 will be visible from nearby road corridor and residents. These activities will be of a temporary nature and unlikely to have significant visual impacts on passing motorists or nearby receptors. It is therefore considered that the construction impacts from Solution 2 and 3 are comparable to the impacts documented in the project EIS.



### 6.5.3.2 Operational impacts

The comparative ZVIs prepared for Solution 1 (as per EIS) and Solution 3 (refer to Appendix G) indicate that there is a similar level of theoretical visibility for each solution. Solution 3 has a slightly reduced level of visibility from Calala to the northwest of the Project and an area of land to the immediate west of the Project.

The photomontages prepared for Solution 1 (as per the EIS) and Solution 3 (refer to Appendix G) indicate a similar level of visual impact resulting from the transmission connection solutions when viewed south from Burgmanns Lane. Solution 3 would reduce the potential visual impact on dwellings to the north of Burgmanns Lane when compared with Solution 1 (as per the EIS). The visual impact from public viewing locations would also be reduced.

Overall, the visual impact resulting from Solution 3 is considered to be low. When compared with the overhead transmission line assessed for Solution 1 in the EIS, the visual impact is lowered through the reduction in transmission line infrastructure.

### 6.5.4 Environmental mitigation measures

The visual impacts associated with the amended Project, specifically Solution 3, are generally consistent with the impacts described in the EIS. The environmental mitigation measures identified in Section 6.7.4 of the EIS are therefore considered appropriate to manage the visual amenity impacts associated with the amended Project. No additional or amended environmental mitigation measures are required for the amended Project.

## 7 Conclusion and justification of the amended project

Iberdrola proposes to amend the Project as a result of ongoing discussions with Transgrid to consider additional potential transmission line connection solutions. The Amended Project would maintain consistency with the projects strategic context. As such, the justification of the project is consistent with that provided as part of the EIS.

As a connection solution cannot be guaranteed at this stage, the proposed changes to the project includes two additional potential solutions for the transmission connection between the BESS and the Tamworth substation (in addition to Solution 1 which was assessed in the EIS). The additional potential solutions are summarised below:

- **Solution 2 – Underground cable northern bay alignment:** This connection solution would involve an underground cable alignment into the existing Tamworth substation from its northern boundary
- **Solution 3 – Direct connection to overhead transmission line within the Project Site:** This connection solution would be located within the Project Site and would involve the construction of a 330 kV switching station to connect into the existing 330 kV transmission line traversing the property. This would require up to two 330 kV poles/towers of 30-40 metres in height to re-direct and stabilise the conductors in and out of the switching station.

An amendment to the operational noise criteria was also proposed resulting from a change to the indicative BESS supplier. The indicative equipment supplier would allow for the baseline Noise Policy for Industry 2017 (NPfI) criteria to be achieved under typical environmental conditions (temperature) (90 percent of the time during any season). Under the worst-case scenario (10 percent of the time during any season), criteria exceedances of up to 5 dB(A) during the daytime and up to 3 dB(A) during the evening have the potential to occur. As a result, noting all other reasonable and feasible measures have been considered, amended operational noise criteria are proposed. Further details are provided in Section 3.3.2 and Table 3-1.

As documented in Section 6, impacts associated with the proposed project changes are generally consistent with the impacts described in the EIS. The project would still result in impacts due to:

- Temporary reduction in the capacity of the surrounding road network in the event concurrent nearby developments were constructed at the same time,
- Temporary noise impacts during construction
- Temporary visual impacts during construction
- Removal of 0.22 hectares of native vegetation
- Low visual impacts at two of the viewpoints assessed
- Social impacts including additional demand for accommodation during construction
- Potential impacts to health and wellbeing
- A change in surroundings
- Employment opportunities.

The Project would still provide a range of long-term economic benefits at the regional and State level contributing to a more resilient, efficient, and sustainable energy system. The Project is expected to require up to 100 construction personnel (or 271 job years based on the estimated development cost for the Project) and is estimated to directly increase Tamworth LGA's economic output by around \$124.9 million.

The key potential benefits that differ from the EIS for the Amended Project include reduced visual impacts associated with Solution 3.

The Amended Project is considered justified in relation to its strategic need supporting the Commonwealth and State governments to achieve their respective renewable energy and greenhouse gas emissions reduction targets, taking

into account biophysical, economic and social considerations, including ecologically sustainable development and cumulative impacts.

## **APPENDIX A** UPDATED PROJECT DESCRIPTION

**APPENDIX B** UPDATED STATUTORY COMPLIANCE TABLE



**APPENDIX C UPDATED MITIGATION MEASURES TABLE**

Mitigation measures have been summarised below. These measures have been reviewed and updated to address issues raised in the submissions. The changes made to the mitigation measures as presented in the EIS are shown in **bold** and ~~striketrough~~.

## **APPENDIX D ENVIRONMENTAL NOISE ASSESSMENT FOR AMENDMENT REPORT**

## **APPENDIX E EIS AMENDMENT OPERATIONAL NOISE ASSESSMENT**

## **APPENDIX F** UPDATED BIODIVERSITY DEVELOPMENT ASSESSMENT REPORT

## **APPENDIX G** UPDATED ABORIGINAL CULTURAL HERITAGE ASSESSMENT REPORT



## **APPENDIX H VISUAL IMPACT ASSESSMENT – SUPPLEMENTARY TECHNICAL MEMORANDUM**