Bulabul Battery

Modification Report

Prepared for AMPYR Australia Pty Ltd

February 2026

Bulabul Battery

Modification Report

AMPYR Australia Pty Ltd

E250078 RP1

February 2026

Version	Date	Prepared by	Reviewed by	Comments
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Approved by



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13 February 2026

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Executive Summary

ES1 Overview

The Trustee for AMBESS01 HOLD TRUST (AMPYR) has approval to develop the Bulabul Battery (formerly known as Wellington South Battery Energy Storage System (BESS)), a large-scale BESS, on-site substation and associated infrastructure. The project is located in Wuuluman, approximately 2.2 kilometres (km) north-east of the township of Wellington in the Dubbo Regional Council local government area (LGA) and the Central West Orana Renewable Energy Zone (CWO REZ). The project was approved, subject to conditions, by the Director, Energy Assessments, as delegate of the Minister for Planning and Public Spaces, on 22 December 2023 (SSD-27014706).

AMPYR is seeking to modify SSD-27014706, pursuant to Section 4.55(1A) of the NSW *Environmental Planning and Assessment Act 1979* (EP&A Act), to:

- revise the location of the approved construction laydown area
- provide for an additional new bay at Transgrid's Wellington Substation
- widen the transmission easement to facilitate the project's grid connection.

The modification will increase the size of the approved development boundary by approximately 2.7 hectares (ha). The modified development boundary will be approximately 24.7 ha and has been designed to avoid environmental constraints.

This modification report has been prepared in accordance with the *State significant development guidelines – preparing a modification report* (DPIE 2022) and supports the application to modify SSD-27014706.

ES2 Strategic context

The project's broader strategic context in relation to decarbonisation goals (at both NSW and Commonwealth levels), facilitating the rollout of renewable energy projects, and contributing to a stable and reliable National Electricity Market (NEM) are unchanged from the approved project.

ES3 Statutory context

Under Section 4.55 of the EP&A Act, a consent authority may modify a State significant development (SSD) consent provided the development to which the consent as modified relates is substantially the same as the development for which the consent was originally granted. A modification under Section 4.55(1A) of the EP&A Act is the appropriate pathway given that:

- the nature of the project (being a grid-scale BESS) remains the same
- the delivery capacity remains the same
- the approved associated infrastructure and grid connection remains the same
- the operational lifespan of the project remains the same
- only a minor increase to the development boundary is required
- as demonstrated in this modification report, the modification will result in minimal environmental impacts beyond those previously assessed and approved under SSD-27014706.

As the modified development will remain substantially the same development for which consent was originally granted and the modification will result in minimal environmental impact, the modification can be considered under Section 4.55(1A) of the EP&A Act.

ES4 Engagement

Consultation with community and regulatory stakeholders has continued to occur since the project received development consent in December 2023. Dubbo Regional Council, Heritage NSW, NSW Department of Planning, Housing and Infrastructure (DPHI), Conservation Programs, Heritage and Regulation (CPHR), Transgrid, near neighbours and the project's registered Aboriginal parties (RAPs) have been consulted regarding the modification.

ES5 Assessment of impacts

The potential impacts of the modification have been compared to the impacts assessed in the Environmental Impact Statement (EIS) (EMM 2022a) and Amendment Report (EMM 2023a) for the approved project. Impact assessments have been undertaken for those environmental and social values where the modification could result in changes to those values. The potential impacts are summarised as follows:

- Biodiversity – the modification area has been selected to avoid impacts to features of high biodiversity value and threatened species habitat to the extent possible. The modification will only impact low condition derived native grassland, with no impact required to trees. The modification will require 13 ecosystem credits to compensate for impacts on native plant community types (PCTs) and ecosystem credit species. The modification will require 29 species credits to compensate for impacts to potential habitat for Superb Parrot, Glossy Black Cockatoo and Pink-tailed Legless Lizard.
- Aboriginal heritage – the modified development boundary will not impact any identified Aboriginal cultural heritage sites. No additional impacts on Aboriginal cultural heritage are anticipated as a result of the modification.
- Historical heritage – no changes to historical heritage impacts are anticipated as a result of the modification.
- Land and soils – the increase in area of the modified development boundary is minor and will not encompass differing soil types or high-capability soils. No additional land or rehabilitation constraints have been identified, and no additional impacts are anticipated as a result of the modification.
- Landscape and visual – the modified project is not expected to alter the landscape character or visual amenity, and existing mitigations in the form of landscape screening and the design of project infrastructure (colour, texture, finishes, etc) remain relevant to the modified project.
- Noise and vibration – negligible changes to construction noise impacts are anticipated as a result of the modification. No changes to operational noise are anticipated as a result of the modification.
- Traffic and transport – no changes to traffic and transport impacts are anticipated as a result of the modification.
- Water resources – potential surface water and groundwater impacts during construction and operation remain minor and no additional mitigation measures are necessary.
- Hazards and risk – no changes to hazards and risks are anticipated as a result of the modification.
- Social – no changes to social impacts are anticipated as a result of the modification.

- Bushfire – no changes to bushfire risks are anticipated as a result of the modification.

ES6 Justification of the modified project

Benefits arising as a result of the modified project are also expected to closely resemble those anticipated to be generated by the approved project. The project will contribute to energy security and reliability in NSW, facilitate decarbonisation, and help to prepare for the retirement of large-scale coal-fired power generation. The project will also provide local economic stimulus and local employment opportunities during construction, which will have economic benefits for the local and regional economy.

The project has the potential to provide an important contribution to the objectives of the CWO REZ by contributing to the continued growth of renewable energy generation and storage capacity. It will complement nearby existing and proposed renewable energy generation assets by smoothing out fluctuations in electricity supply from these intermittent power sources while contributing to the overall storage capacity and reliability of the NEM.

The modification will result in minimal environmental impacts beyond the approved project. The assessment of impacts in this modification report demonstrates that the project can be constructed and operated within acceptable limits through the application of existing mitigation measures.

Assessment of impacts undertaken for this modification indicate that the modification will result in minimal changes to the environmental impact of the approved project, and hence it is considered to be substantially the same development for which consent was originally granted.

TABLE OF CONTENTS

Executive Summary **ES.1**

1 Introduction **1**

1.1 Overview 1

1.2 Approved project 1

1.3 Proposed modification 5

1.4 The applicant 5

1.5 Terminology 8

2 Strategic context **9**

2.1 Justification for the project 9

2.2 Site suitability 9

3 Description of the modification **12**

3.1 Overview 12

3.2 Modification elements 17

3.3 Conditions of consent 18

4 Statutory context **19**

4.1 Introduction 19

4.2 Power to grant approval 19

4.3 Permissibility 19

4.4 Commonwealth Environment Protection and Biodiversity Conservation Act 1999 20

4.5 NSW Environmental Planning and Assessment Act 1979 20

4.6 NSW Environmental Panning and Assessment Regulation 2021 21

5 Engagement **23**

5.1 Introduction 23

5.2 Engagement carried out 23

5.3 Engagement to be carried out 24

6 Assessment of impacts **25**

6.1 Biodiversity 25

6.2 Aboriginal heritage 30

6.3 Historical heritage 31

6.4 Land and soils 31

6.5 Landscape and visual impact assessment 33

6.6 Noise and vibration 34

6.7 Traffic and transport 35

6.8 Water resources 36

6.9 Hazards and risk 37

6.10 Social 38
6.11 Other matters 39
7 Justification of the modified project 41
7.1 Evaluation 41
7.2 Benefits 42
7.3 Conclusion 42
Abbreviations 43
References 45

Appendices

Appendix A Updated project description A.1
Appendix B Statutory compliance table B.1
Appendix C Biodiversity development assessment report C.1
Appendix D Aboriginal cultural heritage assessment addendum D.1
Appendix E Noise impact assessment addendum E.1

Tables

Table 1.1 Applicant details 5
Table 1.2 Terminology 8
Table 2.1 Key features of the modified development boundary 10
Table 3.1 Proposed modification 12
Table 4.1 Section 4.55(1A) requirements 20
Table 4.2 EP&A Regulation section 100 requirements 21
Table 6.1 Plant community types within the modification area 25
Table A.1 Key aspects of the project description 2
Table B.1 Statutory compliance table B.2

Figures

Figure 1.1 Regional context 2
Figure 1.2 Local context 3
Figure 1.3 Approved project 4
Figure 1.4 Modified development boundary 7
Figure 2.1 Environmental features and constraints 11
Figure 3.1 Comparison of approved and modified development boundary 15
Figure 3.2 Modified project 16
Figure 6.1 Plant community types 26
Figure 6.2 Threatened species habitat 27

Photographs

Photograph 1.1 Project context, looking south 6

1 Introduction

1.1 Overview

The Trustee for AMBESS01 HOLD TRUST (AMPYR) has approval to develop the Bulabul Battery (formerly known as Wellington South Battery Energy Storage System (BESS)), a large-scale BESS, on-site substation and associated infrastructure. The project is located in Wuuluman, approximately 2.2 kilometres (km)north-east of the township of Wellington in the Dubbo Regional Council local government area (LGA) and the Central West Orana Renewable Energy Zone (CWO REZ). The project was approved, subject to conditions, by the Director, Energy Assessments, as delegate of the Minister for Planning and Public Spaces, on 22 December 2023 (SSD-27014706). The project's regional and local context is shown on Figure 1.1 and Figure 1.2.

The project will have a discharge capacity of 500 megawatts (MW) and a storage capacity of 1,000 megawatt hours (MWh). It will connect to the National Electricity Market (NEM) via an on-site substation. A 500 m 330 kilovolt (kV) transmission line will connect the on-site substation to the adjacent Wellington Substation, operated by Transgrid.

AMPYR is seeking to modify SSD-27014706, pursuant to Section 4.55(1A) of the NSW *Environmental Planning and Assessment Act 1979* (EP&A Act) to accommodate minor changes to the approved development boundary to revise the construction laydown area, provide for a new bay at Transgrid's Wellington Substation and widen the transmission easement to facilitate the project's grid connection. The proposed modification will facilitate the construction of the project and will result in a minor increase to the approved development boundary.

This modification report has been prepared in accordance with the *State significant development guidelines – preparing a modification report* (DPIE 2022) and supports the application to modify SSD-27014706.

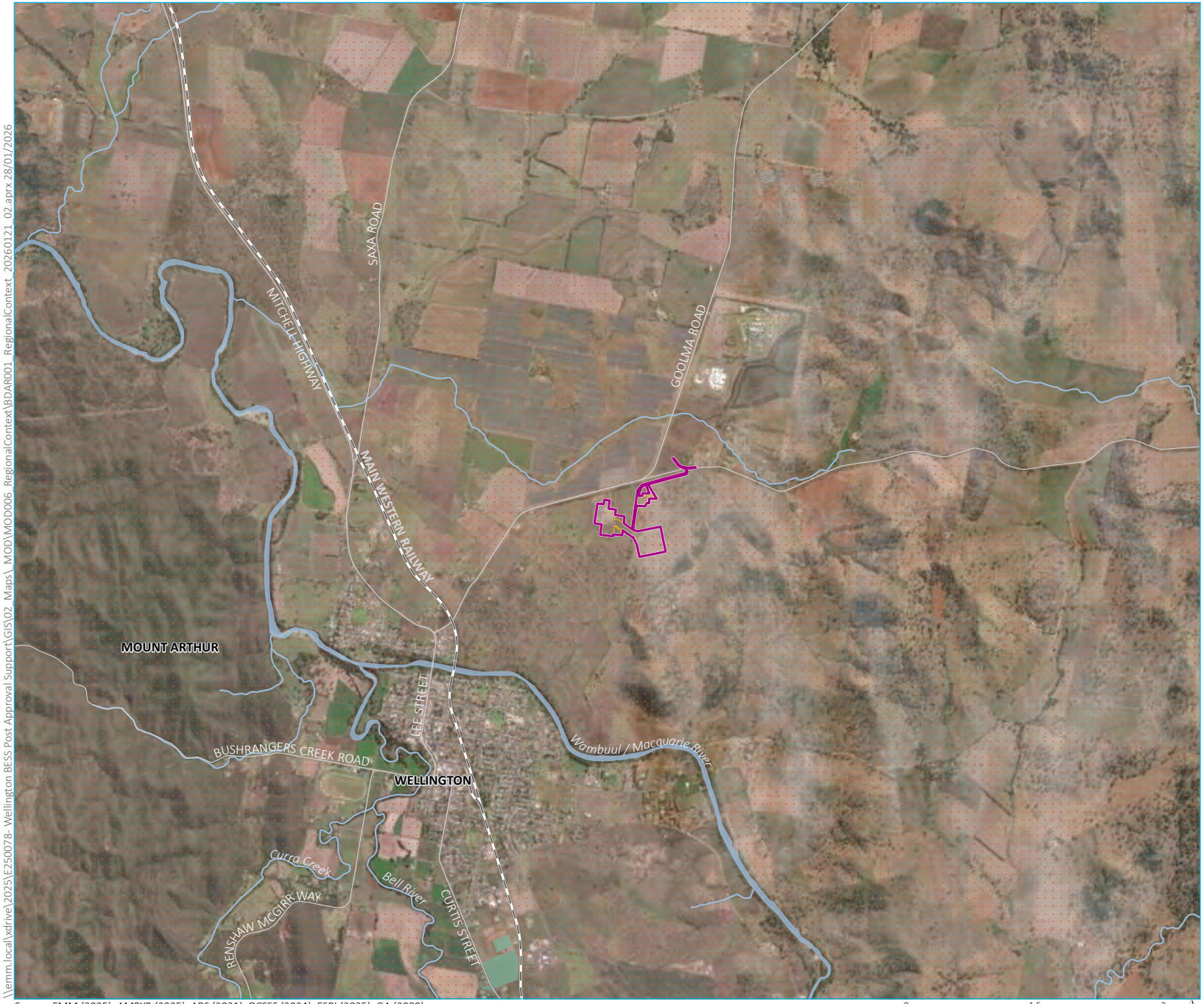
1.2 Approved project

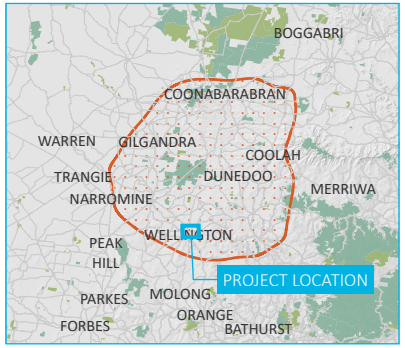
The approved project includes a 500 MW BESS and supporting infrastructure, and primarily consists of:

- a BESS compound, which will house battery containers and supporting infrastructure
- a BESS substation, which will house various electrical infrastructure, including two 330 kV transformer switch bays and 33 kV indoor switchgear
- a 330 kV transmission line extending from the BESS substation to the Wellington Substation
- an upgrade of the Transgrid Wellington Substation to include an additional 330 kV switch bay and relocation of security fencing
- ancillary infrastructure, including internal access tracks, drainage, security fencing, lighting and closed-circuit television, temporary construction facilities and laydown areas, and firefighting water supplies.

The approved development boundary is approximately 22 hectares (ha) and comprises Lot 32 of Deposited Plan (DP) 622471 at 80 Twelve Mile Road, Wuuluman, and Lot 1 of DP 1226751 at 6909 Goolma Road, Wuuluman, NSW. The approved project layout is shown in Figure 1.3.

The project was recently selected as part of the Capacity Investment Scheme (CIS), an initiative of the Commonwealth Department of Climate Change, Energy, the Environment and Water (DCCEEW).





KEY

- Modified development boundary
- Modification area
- Central West Orana Renewable Energy Zone

Existing environment

- Rail line
- Major road
- Named watercourse
- Named waterbody
- NPWS reserve

INSET KEY

- Major road
- NPWS reserve
- State forest
- Central West Orana Renewable Energy Zone

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Source: EMM (2025); AMPYR (2025); ABS (2021); DCSSS (2024); ESRI (2025); GA (2009)

0 1.5 3 km

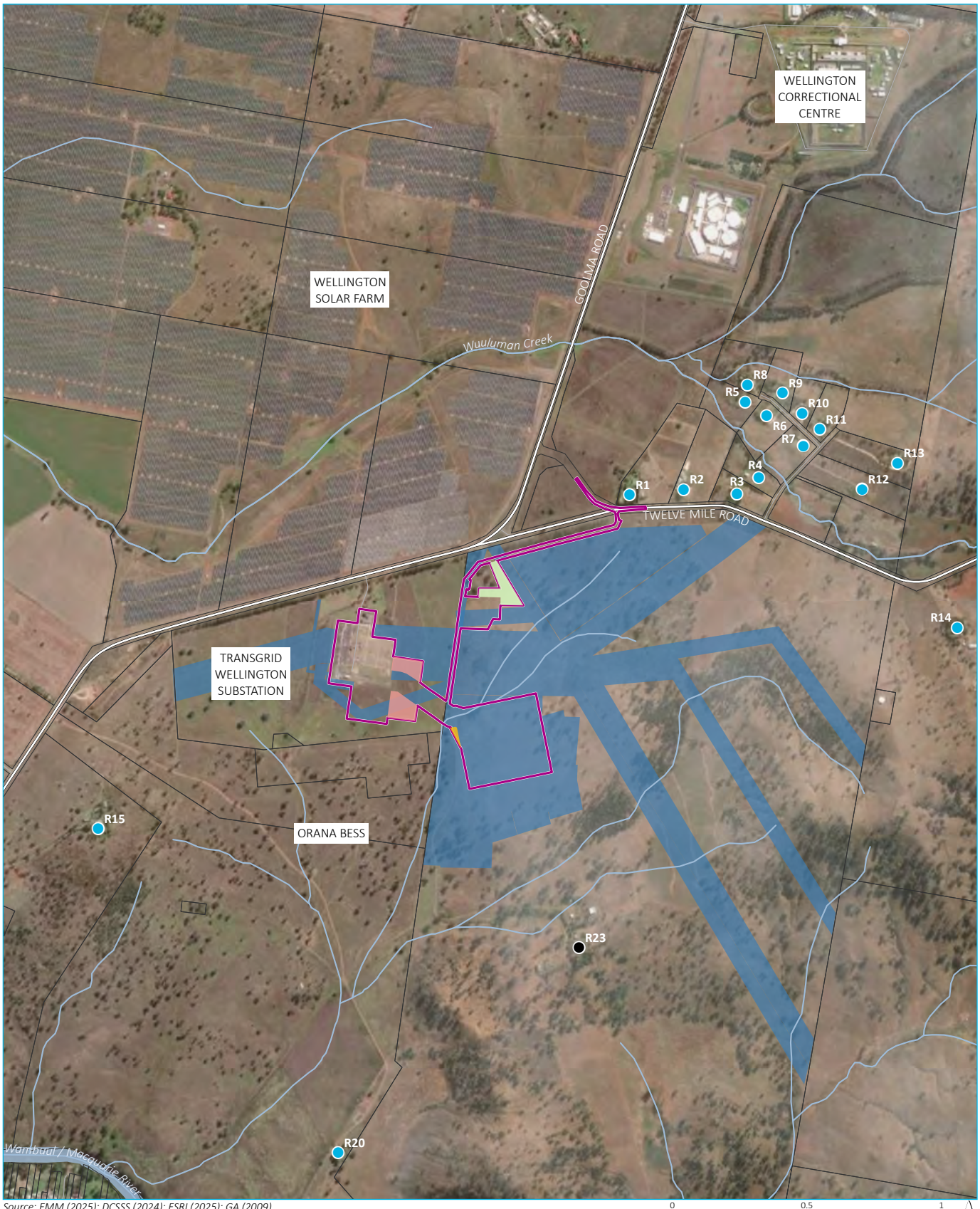
GDA 1994 MGA Zone 55

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Regional context

Bulabul Battery MOD1
Modification Report
Figure 1.1

EMM creating opportunities



Source: EMM (2025); DCSSS (2024); ESRI (2025); GA (2009)

0 0.5 1 km

GDA 1994 MGA Zone 55

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KEY

Modified development boundary

Receiver

- Non-project residential receiver
- Project participating landowner

Modification element

- Additional construction laydown
- Additional easement
- Additional substation bay

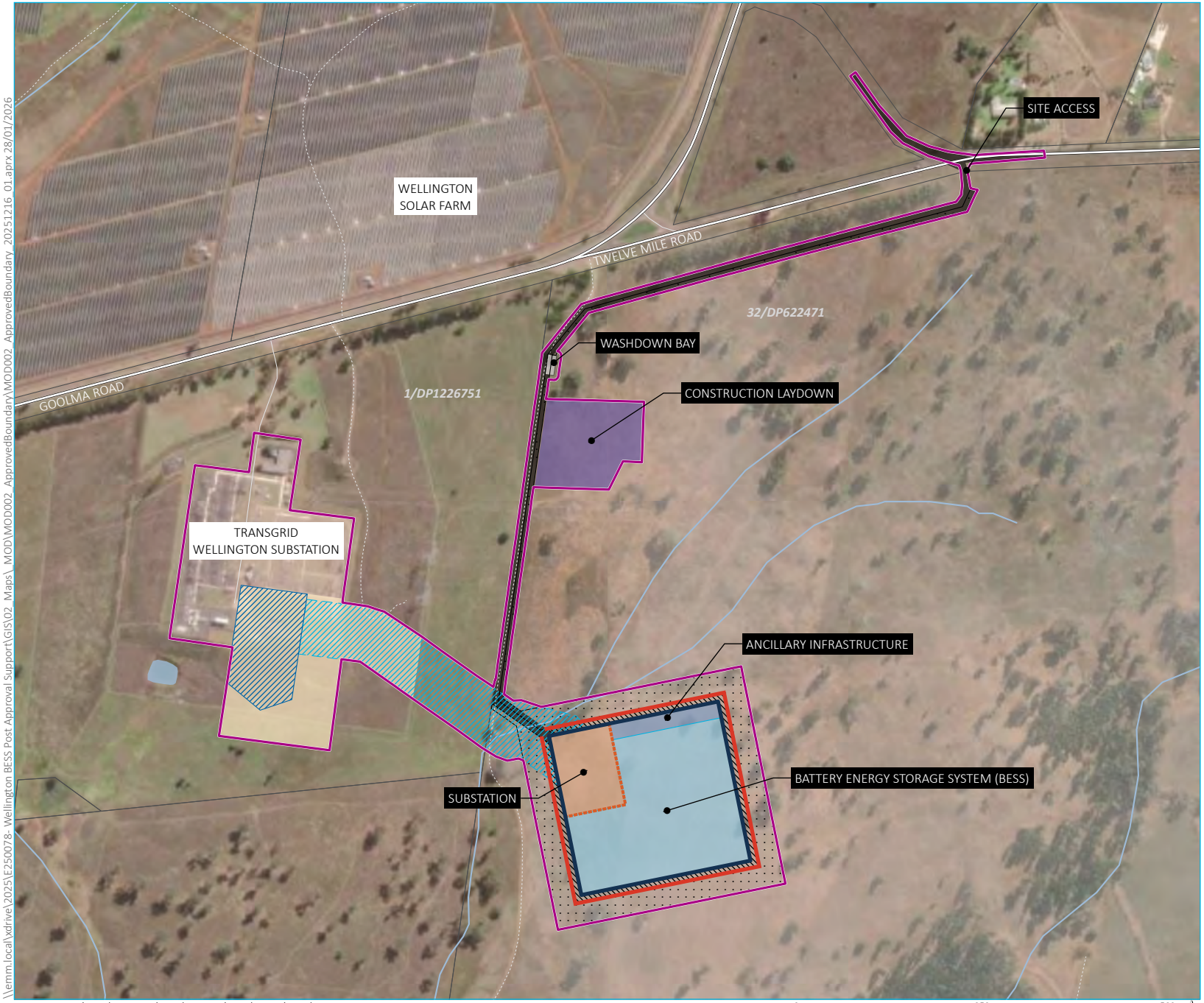
Existing environment

- Major road
- Minor road
- Named watercourse
- Named waterbody
- Freehold easement
- Cadastral boundary

Local context

Bulabul Battery MOD1
Modification Report
Figure 1.2

EMM creating opportunities



KEY

- Approved development boundary
- BESS infrastructure

Project component

- Ancillary infrastructure (carpark, office, control room)
- BESS unit
- Substation
- Indicative asset protection zone (10 m)
- Transmission corridor
- Indicative landscaping (post construction)
- Indicative TransGrid substation upgrade core infrastructure area
- Indicative TransGrid substation upgrade disturbance area
- Washdown bay
- Construction laydown
- Access road
- Indicative location of noise bund

Existing environment

- Major road
- Minor road
- Vehicular track
- Watercourse/drainage line
- Waterbody
- Cadastral boundary

Approved development boundary

Source: EMM (2025); AMPYR (2025); DCSSS (2024); ESRI (2025)

0 250 500 m

GDA 1994 MGA Zone 55

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Bulabul Battery MOD1
Modification Report
Figure 1.3

EMM creating opportunities

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Construction of the project will be undertaken in two stages. Stage 1 of the project commenced construction in September 2025 (Photograph 1.1). Management plans required by the development consent have been approved by NSW Department of Planning, Housing and Infrastructure (DPHI) for construction of Stage 1 and are currently being updated for Stage 2. This modification is required to facilitate Stage 2 of the project, which is anticipated to commence construction in August 2026 subject to commercial and other considerations.

1.3 Proposed modification

AMPYR is seeking to modify the project due to external factors necessitating changes to the project layout. AMPYR intends to modify SSD-27014706 to:

- revise the location of the approved construction laydown area
- provide for an additional new bay at Transgrid's Wellington Substation
- widen the transmission easement to facilitate the project's grid connection.

The modification will increase the size of the approved development boundary by approximately 2.7 ha. The modified development boundary will be approximately 24.7 ha and has been designed to avoid environmental constraints. The modification elements and modified development boundary are shown in Figure 1.4.

The discharge and storage capacity of the project will not change because of the modification.

The proposed modification is described in detail in Chapter 3. This modification report provides an assessment of the impacts and benefits associated with the proposed modification, as well as proposed management and mitigation measures for residual impacts.

1.4 The applicant

The applicant is the Trustee for AMBESS01 HOLD TRUST, who is referred to as AMPYR throughout this document. AMPYR is an asset management group that finances, develops and operates sustainable assets with an aim to drive a net zero greenhouse gas emissions future. Applicant details are provided in Table 1.1.

Table 1.1 Applicant details

Name	The Trustee for AMBESS01 HOLD TRUST
Postal address	Level 17, 167 Macquarie Street, Sydney NSW 2000
Contact	Anthony Yeates
ABN	68 630 312 015



Source: AMPYR (January 2026).

Photograph 1.1 Project context, looking south



KEY

- Modified development boundary
- Approved construction laydown area – unavailable for use
- Approved development boundary

Modification elements

- Additional construction laydown
- Additional easement
- Additional substation bay

Existing environment

- Major road
- Minor road
- Vehicular track
- Watercourse/drainage line
- Waterbody
- Cadastral boundary

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Source: EMM (2025); AMPYR (2025); DCSSS (2024); ESRI (2025)

0 250 500 m

GDA 1994 MGA Zone 55

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Modified development boundary

Bulabul Battery MOD1
Modification Report
Figure 1.4

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1.5 Terminology

The terms defined in Table 1.2 are used throughout this modification report.

Table 1.2 Terminology

Term	Definition
Approved development boundary	The extent of surface disturbance required for construction and operation of the approved project, as assessed by the EIS and Amendment Report. This would be superseded by the modified development boundary, if approved.
BESS compound	The portion of the development boundary containing the battery enclosures/containers, power conversion systems and ancillary infrastructure, operations and maintenance (O&M) buildings and spare parts warehouses.
BESS substation	The portion of the development boundary containing the BESS substation, which will comprise two 330/33 kV transformer bays including oil retention bunds, indoor medium voltage switchgear units, control rooms housed in buildings, and other ancillary infrastructure.
Modification area	Area subject to all proposed direct impacts from the modification and includes land required for the construction laydown area, substation bay and easement.
Modified development boundary	The extent of surface disturbance required for construction and operation of the modified project.
The project	An inclusive term covering the entirety of the approved Bulabul Battery.
The site	The area comprising Lot 32 of DP 622471 and Lot 1 of DP1226751 at 80 Twelve Mile Road and 6909 Goolma Road, Wuuluman, NSW.

2 Strategic context

2.1 Justification for the project

Australia's electricity industry is currently undergoing a transformation, as coal-fired generation is being replaced by renewables, energy storage and other forms of 'firming' capacity as part of the transition towards a net zero emissions future.

The transition from reliance on a small number of large-scale fossil fuel generators to a reliance on an array of smaller scale, widely dispersed wind and solar generators presents reliability and security challenges to the NEM. Notably, the weather-dependent nature of wind and solar technologies makes their output variable and sometimes unpredictable. BESS facilities, such as the project, can provide the firming capacity necessary to meet demand during periods of low generation by storing excess energy generated during times of low demand and dispatching energy back into the grid during periods of peak demand.

BESS facilities such as the project also function to smooth out price differences during peak and off-peak periods and potentially balance out price increases during unanticipated outages thereby putting downward pressure on spot prices. Once operational, the project will provide a valuable contribution to the energy security of NSW and the east coast of Australia. Specifically, it will:

- provide dispatchable capacity to support renewable energy generation in the NEM
- support and enable new renewable energy projects, which are crucial to replace coal fired generation capacity and provide additional capacity to the NEM, and will provide broader security to the grid by providing back-up power during network disruptions
- be developed consistent with the objectives of the *Energy Infrastructure Investment Act 2020*, and likely to facilitate the achievement of those objectives
- be located within the CWO REZ adjacent to existing electrical transmission infrastructure which will allow benefits from the project to be realised immediately without the need for new transmission infrastructure.

The operation of the project, in conjunction with other large-scale renewable energy storage projects in NSW, has potential to fill the need for replacement power as ageing coal-fired generators face closure. It is also consistent with and will support the achievement of the emissions reductions objectives of the Commonwealth Government's Large Scale Renewable Energy Target, Paris Agreement targets, and the NSW Government's Net Zero Plan and Energy Roadmap, amongst other strategies, policies and objectives.

The modification of the project will not substantially change the nature of the project or its anticipated impacts. As such, the justification of the project remains aligned with that presented in the EIS and Amendment Report. That is, anticipated impacts arising as a result of the project are not predicted to be significant and can be adequately managed through appropriate design, mitigation and management during construction and operation.

2.2 Site suitability

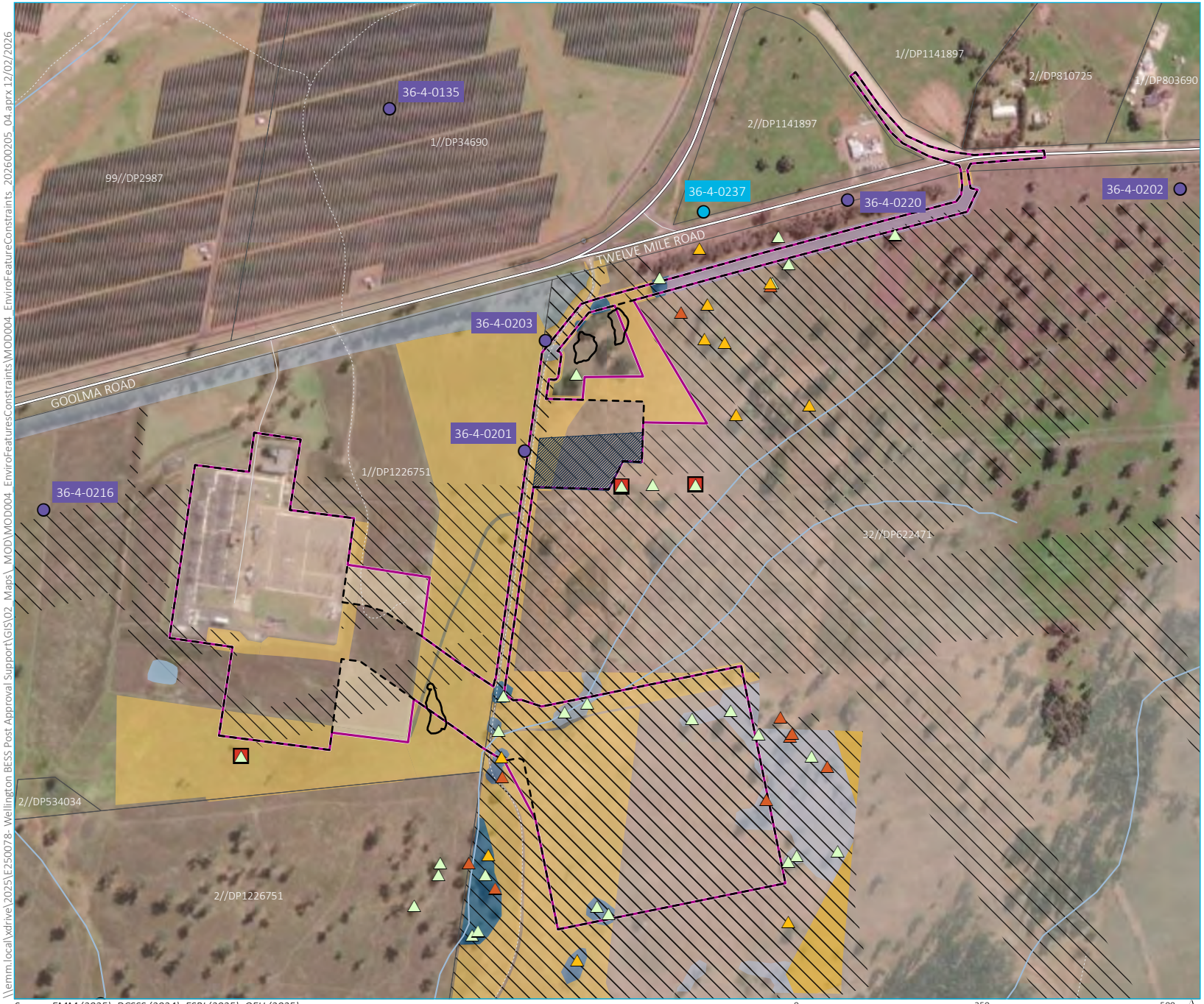
The modified development boundary is approximately 24.7 ha and is adjacent to the existing 330 kV Wellington Substation. No changes to the BESS compound or BESS substation are proposed as part of the modification. The modification area has been selected due to its proximity to the approved development boundary. Environmental features and constraints within the modified development boundary and surrounds are shown in Figure 2.1.

As part of the preparation of this modification report, five separate areas were considered including two options for the construction laydown area and additional land for the substation bay and easement. A biodiversity constraints assessment was undertaken to identify areas with scattered and remnant trees, including hollow-bearing trees, to site the modification area to avoid impacts to these features of higher biodiversity value (i.e. higher condition threatened ecological community (TEC) and potential habitat for hollow-associated threatened fauna). In an effort to avoid these features, the modification area was refined to include only one construction laydown area and to reduce the area required for the easement. These areas lack trees and hence avoid higher condition TEC and potential habitat for hollow-associated threatened fauna.

Key features of the modified development boundary, site and surrounding area are described in Table 2.1 and shown in Figure 1.2.

Table 2.1 Key features of the modified development boundary

Aspect	Description
LGA	The site is within the Dubbo Regional Council LGA.
Land zoning	The site is zoned RU1 Primary production and SP2 Infrastructure under the Dubbo Regional Local Environmental Plan 2022.
Nearby townships	The site is approximately 2.2 km north-east of the township of Wellington, 45 km south-east of Dubbo, and 57 km west of Mudgee.
Topography, landscape and natural features	The site and surrounding area is predominantly rural land. The site is flat to undulating and is mainly cleared for agricultural use and construction of the project, Wellington Substation and overhead transmission lines. Areas of native and remnant vegetation occur within the site in the form of remnant woodland, scattered trees and riparian vegetation along watercourses. The site includes first and second order watercourses. Watercourses within the site are tributaries of the Macquarie River approximately 2.3 km south-west of the site.
Land use	Except for Transgrid's Wellington Substation, overhead transmission lines and the ongoing construction of the project, land use within the site predominantly consists of sheep grazing, cattle grazing and dry land cropping.
Land ownership	The site consists of two land parcels, and two landowners: • Lot 32 DP 622471 is privately-owned • Lot 1 DP 1226751 is owned by Transgrid. Dubbo Regional Council owns and manages the public road reserve within the approved development boundary.
Sensitive receptors	There are 20 sensitive receptors, being rural residential dwellings on surrounding properties not associated with the project, within approximately 2 km of the modified development boundary. Sensitive receptors are primarily located in loose clusters to the west, south-west and north-east of the project, with most lying between 1 km and 2 km from the nearest part of the modified development boundary. Fewer sensitive receptors are located to the south and east. The nearest non-associated residence is R1, approximately 800 metres (m) north of the BESS infrastructure (Figure 1.2). There are neighbour agreements in place between AMPYR and both R1 and R2. Separation distances between the project and non-associated residences have not changed as a result of the modification.
Nearby infrastructure	The site is adjacent to and accessible from Twelve Mile Road and is adjacent to Goolma Road. The 330 kV Wellington Substation is located adjacent to the site. Orana BESS (SSD-45242780) is being constructed adjacent to the modified development boundary. The Main Western railway line is 2.3 km south-west of the site. Wellington Solar Farm and Wellington North Solar Farm are located to the north of the site along Goolma Road. These two solar farms along with two correctional facilities on Goolma Road are visible from the public roadway. Maryvale Solar Farm, Uungula Wind Farm and Bodangora Wind Farm are also within the general vicinity of the site.



KEY

- Modified development boundary
- Approved construction laydown area – unavailable for use
- Approved development boundary
- Superb Parrot survey record
- Rocky habitat

Hollow-bearing tree

- < 5 cm
- 5- 20 cm
- > 20 cm

AHIMS (by site type)

- Isolated find
- Potential Archaeological Deposit (PAD)
- Undefined artefact scatter

Plant Community Type (PCT)

PCT 266 | White Box grassy woodland (Box Gum Woodland CEEC (BC Act))

- Moderate (intact)
- Low (intact)
- Poor (intact)
- DNG (planted)
- DNG (good)
- DNG (moderate)
- DNG (low)

Existing environment

- Major road
- Minor road
- Vehicular track
- Watercourse/drainage line
- Waterbody
- Freehold easement
- Cadastral boundary

Source: EMM (2025); DCSSS (2024); ESRI (2025); OEH (2025)

0 250 500 m

GDA2020 MGA Zone 55

N

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Environmental features and constraints

Bulabul Battery MOD1
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Figure 2.1

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3 Description of the modification

3.1 Overview

AMPYR is seeking to modify the project due to external factors necessitating changes to the project layout. A comparison between the approved project and the modified project is provided in Table 3.1 and an updated project description is provided in Appendix A. The approved and modified development boundary are shown on Figure 3.1. The modified project is shown on Figure 3.2.

Table 3.1 Proposed modification

Key aspect	Approved project	Changes under the modification
Development boundary	The project will require a development boundary of approximately 22 ha during construction.	The modified development boundary is approximately 24.7 ha, a minor increase of 2.7 ha (12%) compared to the approved development boundary.
Delivery capacity	500 MW/1,000 MWh	No change.
BESS compound	Specific component requirements are subject to selection of the potential technology provider. The BESS compound will comprise: • 1,400–6,200 pre-assembled battery enclosures incorporating power conversion systems, thermal management systems, and safety systems • 150–300 inverters/transformers • ancillary infrastructure (e.g. electrical switch room, a control and office building, security fencing). Battery enclosures will be approximately 3 m tall.	No change.
BESS substation	An on-site substation will comprise: • two 330 kV transformer switch bays • 33 kV indoor switchgear housed in portable substation containers. The tallest component of the substation will be the tips of bushings, approximately 11 m tall, however the bulk of the unit will be 9 m tall.	No change.
Connection infrastructure	An approximate 500 m 330 kV transmission line will extend from the BESS substation to Wellington Substation. Transgrid has advised that the Wellington Substation upgrade works may incorporate installation of one new 330 kV switch bay and multiple transformers, which may be installed in stages to coincide with the staged construction of the BESS should a staged approach be adopted.	An additional bay will be installed at Transgrid's Welington Substation on the eastern side of the substation. A minor increase is required to the easement between the BESS substation and Wellington Substation.

Key aspect	Approved project	Changes under the modification
Ancillary infrastructure	The project will include the following ancillary components and upgrades: • an upgrade to the existing site access so that the site access will be via Twelve Mile Road to facilitate safer connection to the roadway network and to facilitate the entry of larger construction vehicles • upgrades to existing access tracks • control and office building and associated parking • drainage and stormwater management • ancillary infrastructure including security fencing, lighting and closed-circuit television • connection to utilities (telecom, sewerage, etc.) • an asset protection zone (APZ) • noise attenuation/acoustic barriers (wall/retaining wall and batter or earth mounds) 4 m tall along all sides of the BESS facility • planted landscaping around the BESS facility.	No change.
Site access intersection	An upgrade to the existing site access to be via Twelve Mile Road to facilitate safer connection to the roadway network and to facilitate the entry of larger construction vehicles.	No change.
Built design, materials and finishes	Project enclosure components and cabinets will be light in colour to assist with heat management and made of steel. The control and office building will be a prefabricated building comprising a lunch room, office and ablutions room. The building will be assembled onsite and built to a height of 5 m tall. The building will be made of steel or similar and grey in Upgrade of the Wellington Substation will comprise an extension to the existing infrastructure elements on that site.	No change.
Construction		
Construction activities	Construction of the project will involve: • civil and enabling works • structural, mechanical and electrical works • commissioning • demobilisation. Construction of the project will require an area of approximately 22 ha to facilitate the movement of plant and equipment (approved development boundary). This area will incorporate a temporary construction compound and laydown area for the storage of materials and infrastructure prior to installation at the site.	The area required to undertake construction has increased to 24.7 ha. An alternative construction laydown area is required. Construction activities will be undertaken generally in accordance with the EIS and Amendment Report. No other material changes are anticipated.

Key aspect	Approved project	Changes under the modification
Construction schedule	DPHI formally approved AMPYR's staging request on 1 July 2025. It is intended the project will be constructed in two stages, consistent with that staging approval: • Stage 1 includes 300 MW installed discharge capacity, civil and enabling works, installation of batteries, one transformer and switchgear and associated structural, mechanical and electrical works, and connection to the Wellington Substation. • Stage 2 will likely consist of 200 MW installed discharge capacity, civil and enabling works, including installation of a second transformer and associated switchgear and batteries. The approved *Accommodation and Employment Strategy* (AES) (AMPYR 2025a) provides for a 23-month construction and commissioning period for Stage 1. The timing for Stage 2 is not yet certain and has not been specified in the AES or staging approval. It is anticipated that Stage 2 will commence construction following commencement of commissioning of Stage 1.	No change.
Construction duration, workforce, hours, vehicle movements and water demand will be undertaken generally in accordance with the EIS and Amendment Report. No material changes are proposed.		
Operation		
Operational life, operational hours, operational employment and vehicle movements will be generally in accordance with the EIS and Amendment Report. No material changes are proposed.		
Decommissioning		
Decommissioning timing and decommissioning works will be generally in accordance with the EIS and Amendment Report. No material changes are proposed.		



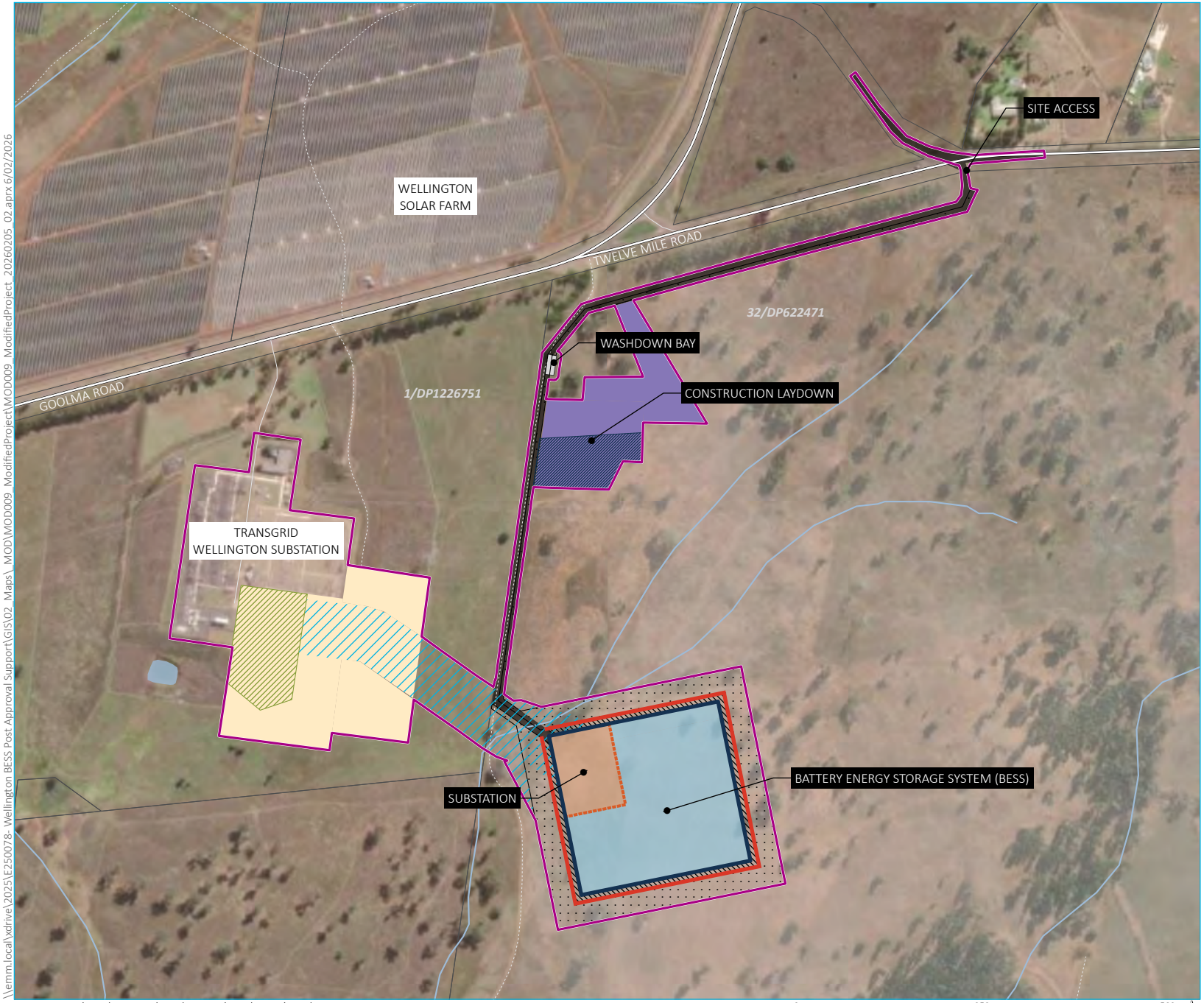
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Source: EMM (2025); AMPYR (2025); DCSSS (2024); ESRI (2025)

Comparison of approved and modified development boundary

Bulabul Battery MOD1
Modification Report
Figure 3.1

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KEY

- Modified development boundary
- Approved construction laydown area – unavailable for use
- BESS infrastructure

Project components

- BESS units and ancillary infrastructure
- Substation
- Indicative asset protection zone (10 m)
- Transmission corridor
- Indicative landscaping (post construction)
- Indicative TransGrid substation upgrade core infrastructure area
- Indicative TransGrid substation upgrade disturbance area
- Washdown bay
- Construction laydown
- Access road
- Indicative location of noise bund

Existing environment

- Major road
- Minor road
- Vehicular track
- Watercourse/drainage line
- Waterbody
- Cadastral boundary

Modified project

Bulabul Battery MOD1
Modification Report
Figure 3.2

Source: EMM (2025); AMPYR (2025); DCSSS (2024); ESRI (2025)

0 250 500 m

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creating opportunities

3.2 Modification elements

3.2.1 Revised construction laydown area

The approved project includes an area of approximately 1.5 ha that was to be used as a construction laydown area, as identified in Appendix 1 of SSD-27014706.

Since the project was approved, additional transmission infrastructure connecting to Transgrid's Wellington Substation has been constructed and additional easements have been established over land within the approved development boundary (Figure 1.2). The additional transmission infrastructure and associated easements overlap the approved construction laydown area, meaning that approximately 0.9 ha (i.e. 60%) of the approved construction laydown area cannot be used. Therefore, a revised construction laydown area is required.

The revised construction laydown area is shown on Figure 3.1 and is approximately 1.1 ha. This area has been selected based on its proximity to the approved development boundary and as a result of discussions with the project landholder and outcomes of a biodiversity constraints assessment.

Approximately 0.9 ha of the approved construction laydown area cannot be used due to additional non-project-related transmission infrastructure and an associated easement (Photograph 1.1 and Figure 3.1). This section of the approved development boundary will not be used for any purpose relating to the approved project or modification.

3.2.2 Additional bay at Transgrid's Wellington Substation

The approved project included upgrades to the existing Wellington Substation and the construction of one new bay to facilitate the project's grid connection.

For commercial reasons, AMPYR will be delivering the project in two stages, requiring a second new bay. The approved development boundary had sufficient space for both bays. Since the project received approval, Transgrid has planned for the addition of several other connections into this substation and have revised the connection layout. Under the revised connection layout, Transgrid have indicated that there is insufficient space available within the approved development boundary at Wellington Substation to facilitate the additional new bay. To facilitate the project's grid connection under Transgrid's revised connection layout, Transgrid will need to undertake augmentation works outside of the approved development boundary. The augmentation works will involve an extension of the switchyard bench followed by the installation of new switch bays within the area shown on Figure 3.1, which is approximately 1.5 ha. The nature of these works and the footprint required are as proposed by Transgrid.

Construction of the new switch bays is expected to involve installation of high-voltage electrical equipment such as circuit breakers, disconnectors, busbars, and associated protection and control systems. Works are also expected to include civil activities such as earthworks, installation of concrete footings, cable trenching and integration with existing substation infrastructure to ensure safe and reliable operation.

3.2.3 Widening the transmission easement

A minor increase (0.1 ha) to the approved development boundary is also required to widen the transmission easement between the BESS and Wellington Substation to facilitate the project's grid connection. This area is shown on Figure 3.1. No physical infrastructure is expected to be required in the widened transmission easement required for the modification. There is no overstorey vegetation within the widened easement area.

3.3 Conditions of consent

The following amendments to the conditions of consent are recommended:

- include reference to this report in the definition of 'EIS'
- update conditions B11 and B12 of Schedule 2 to reflect the outcomes of the biodiversity development assessment report (BDAR) in Appendix C, including additional ecosystem and species credit requirements
- update Appendix 1 to align with Figure 3.2 of this report.

4 Statutory context

4.1 Introduction

This section describes the relevant Commonwealth and State legislation and regulatory framework under which the modification will be assessed and determined.

A detailed statutory compliance table is provided as Appendix B.

4.2 Power to grant approval

Under Section 4.55 of the EP&A Act, a consent authority may modify a SSD consent provided the development to which the consent as modified relates is substantially the same as the development for which the consent was originally granted. A modification under Section 4.55(1A) of the EP&A Act is the appropriate pathway given that:

- the nature of the project (being a grid-scale BESS) remains the same
- the delivery capacity remains the same
- the approved associated infrastructure and grid connection remains the same
- the operational lifespan of the project remains the same
- the development boundary remains substantially the same, with a net increase in area of approximately 2.7 ha
- as demonstrated in this modification report, the modification will result in minimal environmental impact beyond those previously assessed and approved under SSD-27014706.

As the modified project will remain substantially the same development for which consent was originally granted and the modification will result in minimal environmental impact, the modification can be considered under Section 4.55(1A) of the EP&A Act.

The Minister for Planning and Public Spaces is the determining authority for the modification application.

AMPYR has not made any reportable political donations.

4.3 Permissibility

The modified development boundary is zoned RU1 Primary production and SP2 Infrastructure under the Dubbo Regional Local Environmental Plan 2022 (Dubbo Regional LEP). The project is characterised as 'electricity generating works' under the Dubbo Regional LEP.

Electricity generating works and works that are ordinarily incidental or ancillary to purposes shown on the Dubbo Regional LEP Land Zoning Map (i.e. the Transgrid substation which the project will connect to) are permitted with consent on land zoned SP2. Development for the purpose of electricity generating works is a prohibited land-use on land zoned RU1. Notwithstanding this prohibition, the project is a permissible land-use with development consent by virtue of Section 2.36(1) of State Environmental Planning Policy (Transport and Infrastructure) 2021 (Transport and Infrastructure SEPP), which permits electricity generating works on any land in the RU1 and SP2 zones. Therefore, the project (as modified) is permissible with consent.

4.4 Commonwealth Environment Protection and Biodiversity Conservation Act 1999

The Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) is administered by the Commonwealth Department of Climate Change, Energy, the Environment and Water (DCCEEW). It provides a legal framework to protect and manage nationally and internationally important flora, fauna, ecological communities and heritage places defined as 'matters of national environmental significance' (MNES). If significant impacts are considered likely, and the action is deemed to be a 'controlled action', the proponent may be asked to provide further information about the proposal.

An assessment of the impacts of the approved project on MNES was prepared as part of the preparation of the EIS and Amendment Report. The assessment concluded that the approved project will not result in a significant impact to any MNES and a referral under the EPBC Act was not required.

The BDAR (Appendix C) has considered impacts on species and TECs listed under the EPBC Act. No EPBC Act listed TECs occur within the modified development boundary. Assessments of significance were undertaken for EPBC Act listed threatened species identified as having a moderate or greater likelihood of occurring within the modified development boundary. The assessments concluded that the modified project is not expected to result in significant impacts on MNES and, subsequently, referral of the project to the Commonwealth Minister for the Environment for assessment is not required.

4.5 NSW Environmental Planning and Assessment Act 1979

Compliance of the modification with the requirements of Section 4.55(1A) of the EP&A Act is summarised in Table 4.1.

Table 4.1 Section 4.55(1A) requirements

Section 4.55(1A) requirement	Comment
Modifications involving no or minimal environmental impact A consent authority may, on application being made by the applicant or any other person entitled to act on a consent granted by the consent authority and subject to and in accordance with the regulations, modify the consent if—	
a) it is satisfied that the proposed modification is of no or minimal environmental impact, and	The modification is minor and will incur minimal environmental impact. Chapter 6 provides a detailed breakdown of the impacts of the modification in the relevant technical areas, showing the insubstantial nature of the changes to the project's environmental impacts.
b) it is satisfied that the development to which the consent as modified relates is the same or substantially the same development as the development for which the consent was originally granted and before that consent as originally granted was modified (if at all), and	The proposed modification is consistent with the objectives of SSD-27014706, being the construction and operation of a BESS project. A comparison between the approved project and the project as proposed to be modified is provided in Table 3.1 and demonstrates that the modified project is substantially the same as that which was originally approved. AMPYR is seeking to modify the project due to external factors necessitating changes to the project layout. These factors could not have been foreseen during the preparation of the EIS and Amendment Report and require minor layout changes outside of the approved development boundary. Nonetheless, the construction, operational and decommissioning aspects of the project will remain substantially the same.

Section 4.55(1A) requirement	Comment
c) it has notified the application in accordance with— i) the regulations, if the regulations so require, or ii) a development control plan, if the consent authority is a council that has made a development control plan that requires the notification or advertising of applications for modification of a development consent, and	Section 105 of the NSW Environmental Planning and Assessment Regulation 2021 (EP&A Regulation) relates to the notification requirements associated with Section 4.55(1A) of the EP&A Act.
d) it has considered any submissions made concerning the proposed modification within any period prescribed by the regulations or provided by the development control plan, as the case may be.	Any submissions made concerning the modification will be reviewed by DPHI and forwarded to AMPYR to consider and respond to (via a submissions report).

4.6 NSW Environmental Panning and Assessment Regulation 2021

In accordance with Section 99 of the EP&A Regulation, this modification report has been prepared in the approved form, contains all of the information and documents required by the approved form, the EP&A Act and the EP&A Regulation and will be submitted on the NSW Planning Portal. As the project is SSD, this modification report also includes the particulars of the nature of the proposed modification (Chapter 3) and has regard to *State significant development guidelines – preparing a modification report* (DPIE 2022).

Section 100 of the EP&A Regulation states the required information a modification application must include. An outline of where this information has been addressed is provided in Table 4.2.

Table 4.2 EP&A Regulation section 100 requirements

Consideration	Where addressed
Content of modification application 1. A modification application must contain the following information—	
a) the name and address of the applicant,	Section 1.4
b) a description of the development that will be carried out under the development consent,	Chapter 3
c) the address and folio identifier of the land on which the development will be carried out,	Chapter 1
d) a description of the modification to the development consent, including the name, number and date of plans that have changed, to enable the consent authority to compare the development with the development originally approved,	Chapter 3
e) whether the modification is intended to— i) merely correct a minor error, misdescription or miscalculation, or ii) have another effect specified in the modification application,	Chapter 3
f) a description of the expected impacts of the modification,	Chapter 6
g) an undertaking that the modified development will remain substantially the same as the development originally approved,	Table 4.1
h) for a modification application that is accompanied by a biodiversity development assessment report—the biodiversity credits information,	Section 6.1 and Appendix C
i) if the applicant is not the owner of the land—a statement that the owner consents to the making of the modification application,	Landowner's consent will be provided separately to this modification report.

Consideration	Where addressed
j) whether the modification application is being made to— i) the Court under the Act, Section 4.55, or ii) the consent authority under the Act, Section 4.56.	The consent authority for the modification application will be the Minister for Planning and Public Spaces.

5 Engagement

5.1 Introduction

This section describes the engagement that has been undertaken since the approval of the project and during preparation of the modification report, the key matters raised, how these matters have been addressed, and the plans for future stakeholder engagement.

5.2 Engagement carried out

Consultation with community and regulatory stakeholders has continued to occur since the project received development consent in December 2023. Dubbo Regional Council, Heritage NSW, NSW Department of Planning, Housing and Infrastructure (DPHI), Conservation Programs, Heritage and Regulation (CPHR), Transgrid, near neighbours and the project's registered Aboriginal parties (RAPs) have been consulted regarding the modification. A summary of key engagement outcomes as part of the preparation of this modification report is provided below:

- DPHI – AMPYR wrote to DPHI on 3 October 2025 to introduce the modification and seek advice regarding the assessment pathway and scope of this modification report. A meeting was held with DPHI on 23 October 2025 and included discussion of the assessment scope and appropriate approval pathway.

- Transgrid – AMPYR has engaged regularly with Transgrid regarding the project design (specifically the connection to Wellington Substation) and to request landowner's consent for the submission of the modification application. The element of the modification on Lot 1 of DP 1226751 (owned by Transgrid) is the additional new bay at Transgrid's Wellington Substation and the nature of these works and the footprint required are as proposed by Transgrid during engagement with AMPYR.

- Dubbo Regional Council – AMPYR has engaged regularly with Dubbo Regional Council since project approval. An overview of the modification has been provided to Dubbo Regional Council as part of the request for landowner's consent for the submission of the modification application. No comments on the modification have been provided to date.

- Heritage NSW – EMM engaged with Heritage NSW regarding the Aboriginal Cultural Heritage Assessment (ACHA) process for the modification. Feedback from Heritage NSW informed the decision to proceed with an addendum to the ACHA.

- CPHR – EMM engaged CPHR regarding the assessment of biodiversity for the modification and to seek clarification on the use of the 'Streamlined Assessment Module – Small Area' as set out in Appendix C of the Biodiversity Assessment Method (BAM) for sites under 3 ha. CPHR advised that the Biodiversity Development Assessment Report (BDAR) must address the impacts of the original development as proposed to be modified, and not just the impacts associated with the proposed modification. The BDAR (Appendix C) has been prepared in line with advice received from CPHR.

- Registered Aboriginal parties (RAPs) – EMM engaged with RAPs as part of the preparation of the ACHA Addendum (Appendix D). An archaeological survey of the modification area and surrounds was undertaken with representatives from four of the RAPs. A copy of the draft Aboriginal Cultural Heritage Assessment Addendum was provided to RAPs for review.

- Near neighbours – AMPYR engages regularly with neighbouring landholders. This has included discussions about the modification with three of the nearest neighbours (R1, R2 and R15) and the host landowner (R23) (Figure 1.2). Meetings with the nearest neighbours were held in person at their residences in late October 2025 and included discussion about the modification, as well as a construction update. These discussions were positive and no concerns have been raised about the modification to date.

- Wellington community – AMPYR has continued to inform the Wellington community, particularly those within 5 km of the project, about the project and the modification. The project's December community newsletter is available here on the project's web page and included information about the modification. The newsletter was distributed via letter box drop to all residents within approximately 5 km of the development boundary, capturing approximately 30 non-associated residences. In addition, copies of the newsletter were provided to two local cafes, Wellington Library, Wellington Visitor Information Centre and Dubbo Regional Council's Wellington Office. The newsletter was also displayed on community notice boards outside Wellington Coles and Wellington Woolworths. AMPYR will continue to engage with the Wellington community through project newsletters, the project website and AMPYR's Facebook page.

5.3 Engagement to be carried out

Consultation will continue to be undertaken in accordance with the requirements of SSD-27014706. Engagement methods that will be implemented to keep the local community and relevant agencies informed about the construction, operation and environmental performance of the project (including the modification) may include project website updates, newsletters and mailouts, drop-in information sessions, media and social media updates.

In accordance with condition C20 of SSD-27014706, AMPYR has made the following information publicly available on its website:

- the EIS
- the final layout plans for the development
- current statutory approvals for the development
- approved strategies, plans or programs required under the conditions of this consent (other than the Fire Safety Study and Emergency Plan)
- the proposed staging plans
- how complaints about the project can be made
- any independent environmental audit, and AMPYR's response to the recommendations in any audit.

This information will be kept up to date and the website maintained for the life of the project.

6 Assessment of impacts

6.1 Biodiversity

6.1.1 Introduction

A BDAR for the modification has been prepared by EMM and is provided in Appendix C.

The report provides an assessment of the potential residual impacts of the modification on biodiversity in accordance with the *Biodiversity Assessment Method* (BAM) (DPIE 2020) under the BC Act, EPBC Act and NSW *Fisheries Management Act 1994*. It also documents the strategies implemented to avoid and/or minimise the impacts of the modification on biodiversity and the biodiversity offset requirements of the modification.

This section provides a summary of the key findings of the BDAR.

6.1.2 Existing environment

i Native vegetation

Vegetation within the modification area is aligned to one plant community type (PCT), being PCT 266 – White Box grassy woodland in the upper slopes sub-region of the NSW South Western Slopes Bioregion. Two vegetation zones were delineated within the modification area:

- areas of moderate derived native grassland (DNG) that align with PCT 266
- areas of low DNG that align with PCT 266.

These areas are described in Table 6.1 and shown in Figure 6.1. There are no trees within the modification area.

Table 6.1 Plant community types within the modification area

Plant community type	Condition	Vegetation formation	Vegetation class	Direct impacts (ha)	Vegetation integrity score
PCT 266 – White Box grassy woodland in the upper slopes sub-region of the NSW South Western Slopes Bioregion	Moderate DNG	Grassy Woodlands	Western Slopes Grassy Woodlands	1.16	18.4
	Low DNG	Grassy Woodlands	Western Slopes Grassy Woodlands	1.54	7.9

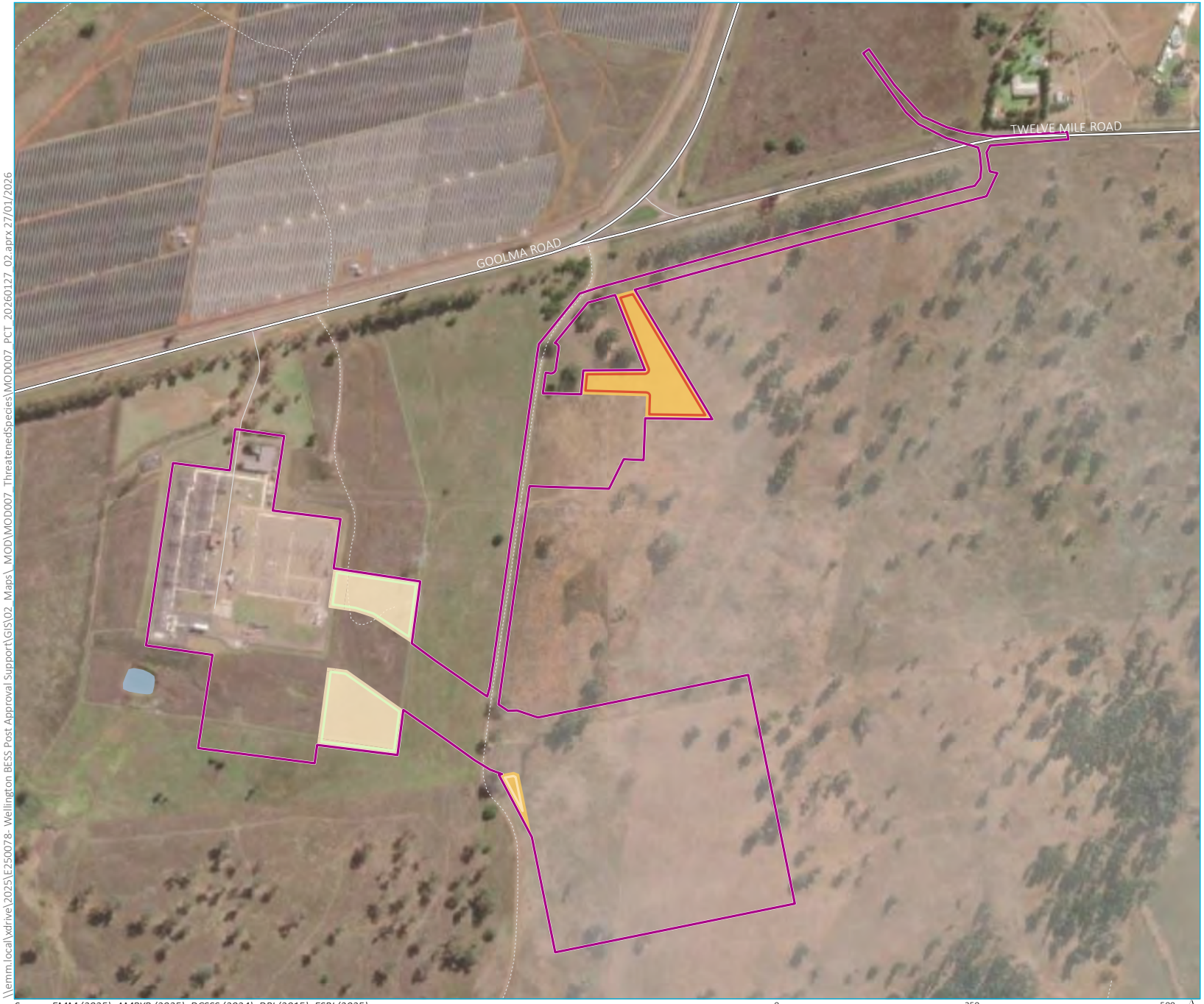
Although the DNG to be impacted is highly degraded, both zones meet the determination for the BC Act listed TEC White Box – Yellow Box – Blakely's Red Gum Grassy Woodland and Derived Native Grassland in the NSW North Coast, New England Tableland, Nandewar, Brigalow Belt South, Sydney Basin, South Eastern Highlands, NSW South Western Slopes, South East Corner and Riverina Bioregions (White Box Yellow Box Blakley's Red Gum TEC).

ii Threatened species

A search of DCCEEW's Protected Matters Search Tool (PMST) for MNES, including threatened species likely to occur within the modification area, was performed as part of the BDAR.

An assessment of habitat constraints for threatened species was undertaken to indicate the likelihood of threatened species being present. Several threatened species were excluded from further assessment due to the absence of suitable habitat components within the modification area.

Threatened species habitat within the modification area and surrounds is shown in Figure 6.2.



KEY

- Modified development boundary

Modification element

- Additional construction laydown
- Additional easement
- Additional substation bay

Plant community type

- PCT 266 DNG Low
- PCT 266 DNG Moderate

Existing environment

- Major road
- Minor road
- Vehicular track
- Waterbody

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Source: EMM (2025); AMPYR (2025); DCSSS (2024); DPI (2015); ESRI (2025)

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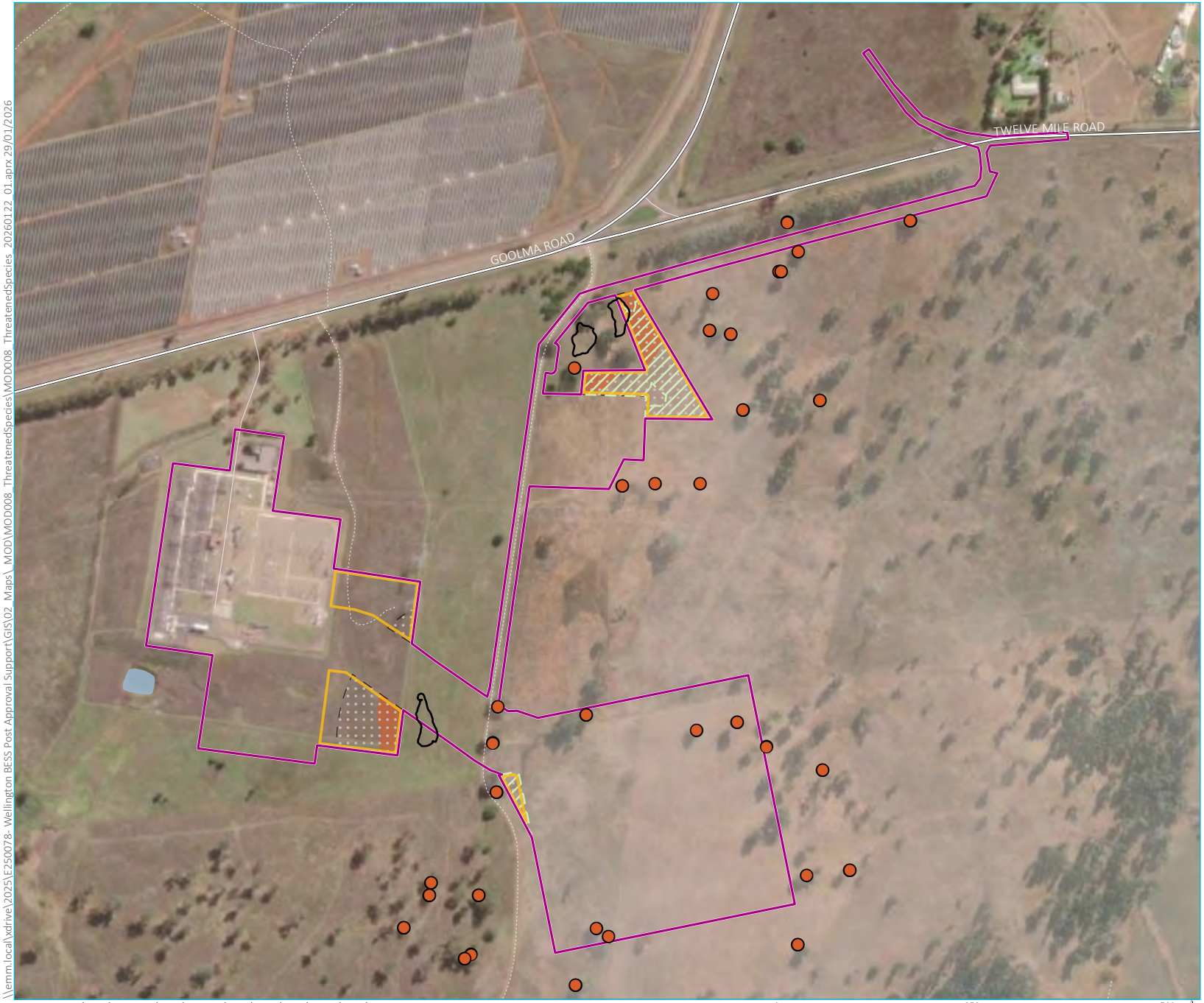
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Plant community types

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Modification Report
Figure 6.1

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KEY

- Modified development boundary
- Modification area
- Hollow-bearing tree suitable for Superb Parrot and/or Glossy Black Cockatoo
- Rocky habitat

Species polygons

- Pink-tailed Legless Lizard
- Superb Parrot
- Glossy Black Cockatoo

Existing environment

- Major road
- Minor road
- Vehicular track
- Waterbody

Source: EMM (2025); AMPYR (2025); DCSSS (2024); DPI (2015); ESRI (2025)

0 250 500 m

GDA 1994 MGA Zone 55

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Threatened species habitat

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Modification Report
Figure 6.2

EMM
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The following threatened fauna species were recorded or identified as having the potential to be present in the modification area:

- Pink-tailed Legless Lizard (*Aprasia parapulchella*) – assumed present due to detection of this species nearby in connected and similar habitat.
- South-eastern Glossy Black Cockatoo (*Calyptorhynchus lathami lathami*) – assumed present as targeted surveys for this species were not undertaken in accordance with the BAM (due to the survey window for this species and the assessment and approval timeframes required for the modification).
- Superb Parrot (*Polytelis sansoni*) – this species was detected during targeted surveys undertaken for the original BDAR (EMM 2023c). Although no breeding activity was observed, more than one individual was observed in an area with potential nesting habitat (i.e. hollows of appropriate size).

Targeted flora surveys were undertaken to identify the presence or absence of threatened flora species in the modification area. No threatened flora species were identified during surveys within the modification area.

6.1.3 Impact assessment

i Avoidance and minimisation of impacts

The modification area has been selected to avoid impacts to features of high biodiversity value, which included higher condition TEC (i.e. scattered trees and remnant woodland) and potential habitat for hollow-associated threatened fauna. The modification will impact low condition DNG, with no impact required to trees.

As discussed in Section 3.2.1, approximately 0.9 ha of land within the approved construction laydown area cannot be used due to a transmission line easement and will no longer be impacted by the project (Figure 3.1). The avoidance of impacts within this area will reduce the project's impacts on biodiversity, including:

- avoidance of impacts to approximately 0.7 ha of non-native grassland
- avoidance of impacts to approximately 0.2 ha of PCT 266 (moderate DNG)
- avoidance of impacts to approximately 0.7 ha of habitat for Superb Parrot (as determined through the species polygon in the original BDAR (EMM 2023c)).

ii Direct impacts

The modification will involve clearing of land and will therefore result in loss of native vegetation within the modification area. As shown in Table 6.1, 2.7 ha of PCT 266 DNG in varying condition will be directly impacted by the modification. Although highly degraded, the vegetation to be impacted is consistent with the BC Act listed White Box Yellow Box Blakley's Red Gum TEC. The impact of the modification is in addition to the 8.79 ha of native vegetation assessed and approved for impacts as part of the original BDAR (EMM 2023c).

iii Indirect impacts

Without any measures to avoid, minimise or mitigate impacts, indirect impacts from the modification will be consistent with the approved project and may include:

- sedimentation and runoff impact to downstream vegetation
- weed introduction and spread
- disturbance from increased noise and dust levels resulting in disturbance of fauna species, and consequent abandonment of habitat, or changes in behaviour (including breeding behaviour).

iv Serious and irreversible impacts

The only serious and irreversible impact (SAII) entity identified as being impacted by the modification is White Box Yellow Box Blakley's Red Gum TEC. The assessment for SAII is provided in Section 6.4 of Appendix C. Importantly, the modification area only includes 2.7 ha of highly disturbed DNG and will not impact any remnant woodland. The modification will not isolate any areas of the TEC and will not have a substantial impact on the patch size of the remaining areas of the TEC.

v Impacts requiring offsets

a Ecosystem credits

Direct impacts to 1.16 ha of PCT 266 (moderate DNG) requires 13 ecosystem credits to offset the residual impacts of the modification. Impacts to 1.54 ha of PCT 266 (low DNG) does not generate an offset liability. Offsets will be provided in accordance with the NSW Biodiversity Offset Scheme.

b Species credits

A total of 29 species credits are required to offset the residual impacts of the modification, including:

- 10 credits to offset impacts to Superb Parrot
- 14 credits to offset impacts to Glossy Black Cockatoo
- 5 credits to offset impacts to Pink-tailed Legless Lizard.

Offsets will be provided in accordance with the NSW Biodiversity Offset Scheme.

vi Matters of national environmental significance

The BDAR has considered impacts on species and communities listed under the EPBC Act. The project as modified is not expected to result in significant impacts on any EPBC Act listed species or communities. An assessment of significance for relevant species is provided in Chapter 7 of Appendix C.

6.1.4 Management and mitigation

The project's impacts on biodiversity are managed through the implementation of the approved *Biodiversity Management Plan* (BMP) (Ecosite Solutions 2025). The BMP will be updated to include reference to the modification area. Mitigation measures specific to the management of biodiversity values relevant to the modification area are summarised in Table 6.4 of Appendix C and are already considered in the BMP. No additional mitigation measures are required.

6.1.5 Conclusion

The modification area has been selected to avoid impacts to features of high biodiversity value. The modification will impact low condition DNG, with no impact required to trees.

Based on the NSW Biodiversity Offset Scheme, the modification will require 13 ecosystem credits to compensate for impacts on native PCTs and ecosystem credit species. It will also require 10 species credits for Superb Parrot, 14 species credits for Glossy Black Cockatoo, and 5 species credits for Pink-tailed Legless Lizard.

Residual impacts on biodiversity will be managed through the implementation of the approved BMP, which will be updated to include reference to the modification area.

6.2 Aboriginal heritage

6.2.1 Introduction

An Aboriginal cultural heritage assessment (ACHA) was prepared by EMM (EMM 2022h) for the EIS. This included consultation with the Aboriginal community, desktop review of the regional archaeological record, and on-site investigations to identify and assess the cultural heritage within the approved development boundary.

An ACHA Addendum has been prepared by EMM (Appendix D) to consider the impact of the modification on Aboriginal cultural heritage. Registered Aboriginal parties (RAPs) identified during the preparation of the ACHA were consulted as part of the prepared of the ACHA Addendum. As part of the preparation of the ACHA Addendum, the modification area was surveyed by an archaeologist and RAP representatives.

6.2.2 Existing environment

The environment within the modified development boundary and surrounds is dominated by flat to undulating rises, dotted with granite outcrops with local relief increasing to the east. Vegetation across the modified development boundary and surrounds has been cleared, with dense native grasses dominating ground cover. Soils within the modification area are eroded due to vegetation clearance, animal tracks and erosional sheetwash.

Land uses immediately surrounding the project include agriculture (i.e. livestock grazing) and energy generation, storage and transmission infrastructure (including Orana BESS, Wellington Substation and Wellington Solar Farm).

6.2.3 Impact assessment

No cultural materials were identified during the survey of the modification area, and the modification area is considered to have low potential to exhibit surface or shallowly buried cultural materials. No intangible values for the modification area have been identified to date.

The modification will not impact any identified Aboriginal objects, and if unknown objects do occur, they are likely to be present as intermittent, low density stone artefact sites of low archaeological significance.

6.2.4 Management and mitigation

An *Aboriginal Cultural Heritage Management Plan* (ACHMP) (OzArk 2025a) and *Aboriginal Cultural Heritage Chance Finds Protocol* (CFP) (OzArk 2025b) has been prepared in consultation with RAPs for the approved project. The ACHMP and CFP will be updated to include the modification area. No additional mitigation measures are required.

6.2.5 Conclusion

No cultural materials were observed or documented within the modification area. Therefore, no additional impacts are anticipated. Risks to Aboriginal cultural heritage values can continue to be mitigated through the implementation of the ACHMP.

6.3 Historical heritage

6.3.1 Introduction

A historic baseline assessment (HBA) was prepared by EMM (EMM 2022b) to accompany the EIS. Investigations included a desktop review of relevant documentation and a field survey. The HBA considered a larger area than the modified development boundary including the local and broader regional area.

6.3.2 Existing environment

There are no items listed on the World Heritage List, National Heritage List, Commonwealth Heritage List or State Heritage Register (SHR) within 1 km of the modification area. The town of Wellington, 2.2 km south-west of the project, has several items listed in the Dubbo Regional LEP and in the SHR.

6.3.3 Impact assessment

The HBA for the EIS covered the full extent of the modified development boundary. No sites were found to occur in the vicinity of the modified development boundary. No impacts to heritage items, be they built, archaeological or landscape values are predicted as a result of the modification.

6.3.4 Management and mitigation

Mitigation measures as outlined in the EIS remain relevant to the mitigation of potential impacts to historical heritage from the modification. No additional mitigation measures are required.

6.3.5 Conclusion

There are no historical heritage items within the modified development boundary or that will potentially be impacted by the modification. Unexpected finds can be suitably managed through implementation of management measures during construction and operation. The modification is not anticipated to impact any historical heritage sites and no additional mitigation measures are required.

6.4 Land and soils

6.4.1 Introduction

A land, soil and erosion assessment (LSEA) was prepared by EMM (EMM 2022c) to accompany the EIS. The LSEA assessed the approved development boundary and considered the wider environmental context of Lot 32 of DP 266471 and Lot 1 of DP 1226751.

6.4.2 Existing environment

The topography of the modified development boundary slopes consistently at around 5% to the south-west from a high of 480 m relative to Australian Height Datum (AHD) and is mainly cleared for agricultural use and construction of the project, Wellington Substation and overhead transmission lines. There is a minor rise of 340 mAHD to the west of the modified development boundary.

The LSEA provided a detailed assessment of the soil and land characteristics, which are summarised below. The modified development boundary and surrounding areas are predominantly located on the Nanima soil landscape with areas of the Bodangora soil landscape associated with the western and northern end of the site.

State-wide mapping identifies that the modified development boundary encompasses one soil order; Ferrosols. Land soil capability (LSC) mapping completed for NSW shows the modified development boundary includes LSC classes 3 and 6, representing land with moderate and very severe limitations, respectively.

6.4.3 Impact assessment

i Land and soil suitability

The modification will result in an overall increase in the development boundary of 2.7 ha. LSC mapping indicates that LSC class 3 and class 6 land is associated with both the approved and modified development boundaries.

The activities to be undertaken in the modified development boundary will be generally consistent with the EIS. The conclusions presented in the LSEA remain applicable with regard to soil and land suitability. That is, that no impacts are anticipated beyond the development boundary, to adjacent lands, to soil quality, or to the LSC.

The LSC status of the modified development boundary can be reinstated following appropriate landform design, soil stripping and management and rehabilitation, as recommended in the management and mitigation measures.

ii Impacts on agricultural production

The modification will result in an increase in the approved development boundary of 2.7 ha. It is estimated that approximately 1.6 ha of the modification area, associated with the easement and construction laydown area, is currently available for grazing. Given the small area of grazing land that will be impacted by the modification, impacts on agricultural productivity will be negligible.

Once the project reaches the end of its investment and operational life, the project infrastructure will be decommissioned and the modified development boundary returned to its pre-existing land use, namely suitable for grazing of sheep and cattle, or another land use as agreed by the project owner and the landholder at that time.

iii Impacts to surrounding areas

With no planned disturbance to areas outside of the modified development boundary and the implementation of existing management measures, impacts to soil quality or LSC of adjacent lands are not anticipated.

6.4.4 Management and mitigation

The management and mitigation measures identified in the LSEA are adequate to manage impacts from the modification. No additional mitigation measures are required.

6.4.5 Conclusion

Land and soil impacts during construction and operation of the modified project are considered minor due to the small additional amount of land that the modified development boundary will utilise (2.7 ha), and the homogeneity of the land that will be added to the development boundary as a result of the modification. Land and soil impacts can be adequately managed through the implementation of existing mitigation measures identified in the LSEA.

6.5 Landscape and visual impact assessment

6.5.1 Introduction

A visual impact assessment (VIA) was prepared for the approved project by EMM (EMM 2022d) to accompany the EIS. This chapter presents an assessment of the changes to landscape and visual impacts of the modification compared to the approved project (as assessed in the VIA).

6.5.2 Existing environment

As described in the VIA, the project is in a rural setting with the wider region characterised by grazing properties, small-scale farm businesses, natural areas, scattered rural dwellings and towns. The major transport infrastructure is the Dubbo–Orange railway and the Mitchell Highway.

Land uses surrounding the project include agriculture (i.e. livestock grazing) and energy generation, storage and transmission infrastructure (including Orana BESS, Wellington Substation and Wellington Solar Farm). Cattle and sheep grazing for wool, breeding stock and meat dominate agricultural activities.

The project is adjacent to Transgrid's Wellington Substation, which has multiple 132 kV and 330 kV above ground transmission lines connecting to it (Photograph 1.1). These transmission lines are carried by 50–60 m high steel towers that traverse the landscape surrounding the project. Orana BESS is being constructed adjacent to the modified development boundary (Photograph 1.1).

Wellington Solar Farm and Wellington North Solar Farm are to the north of the site and are visible from nearby public roads. Maryvale Solar Farm, Uungula Wind Farm and Bodangora Wind Farm are also within the broader area and form part of the existing landscape context and surrounds.

The VIA assessed impacts from 10 viewpoints. Visual impacts from most of the viewpoints are limited to the proposed transformer towers and the transmission towers. Because of the hilly topography and remnant vegetation in the landscape most receptors that are more than 1 km from the project were not predicted to see the BESS compound.

The VIA determined that, of the viewpoints assessed, project infrastructure may be visible to varying degrees from all 10 viewpoints. The VIA predicted a moderate visual impact from viewpoint 4 (R15), which reduces to low impact after mitigation (landscape screening) and low visual impacts from the remaining viewpoints.

6.5.3 Impact assessment

i Construction

The VIA identified that the construction laydown area is considered one of the most visible elements of the construction process. The revised construction laydown area will be closer to Goolma Road and Twelve Mile Road; however, remnant vegetation is expected to obstruct views towards this area.,

Due to their temporary nature, site establishment works and construction activities within the modification area are considered unlikely to have significant visual impacts on passing motorists or nearby receptors. Subsequently, landscaping is not proposed to mitigate visual impacts during construction.

ii Operation

Visual elements of the project as described in the VIA include:

- BESS compound and substation – the modification does not propose any change to the BESS compound and substation.

- Upgrades to Transgrid's Wellington Substation upgrade – construction of the new switch bays is expected to involve installation of high-voltage electrical equipment such as circuit breakers, disconnectors, busbars, and associated protection and control systems.

- Network connection, control and office building, access and internal road network and lighting – the modification does not propose any changes to these elements of the project.

The additional infrastructure proposed at the Wellington Substation as part of the modification is expected to blend in with existing infrastructure. In this context, the visual landscape will not be altered significantly as the proposed infrastructure will be placed adjacent to similar infrastructure that is already part of the visual character of the area.

Reflectivity, glare and night lighting will not materially change as a result of the modification.

6.5.4 Management and mitigation

Landscape screening is proposed around the BESS compound and along the eastern side of the access road to mitigate visual impacts. The management and mitigation measures identified in the VIA are adequate to manage impacts from the modification. No additional mitigation measures are required.

6.5.5 Conclusion

Due to the limited extent of the modification, the impacts of the modified project are not expected to further alter the landscape character or visual amenity. Existing mitigations in the form of landscape screening remain relevant to the modified project.

6.6 Noise and vibration

6.6.1 Introduction

A noise and vibration impact assessment (NVIA) was prepared for the EIS by EMM (2022i). An NVIA addendum has been prepared to assess potential noise and vibration impacts from the modification (Appendix E).

Access for construction, operation and decommissioning via Twelve Mile Road is not proposed to change as part of the modification. No changes are proposed to vehicle generation or road traffic noise. No changes to project operations are proposed as part of the modification, hence operational noise is not expected to change and has not been considered further.

6.6.2 Existing environment

The existing environment remains consistent with that described in the NVIA. Surrounding land uses include rural and agricultural uses, renewable energy generation, storage and transmission projects (including Orana BESS, Wellington Substation, Wellington Solar Farm and Wellington North Solar Farm), and two correctional facilities. With the exception of project-related and adjacent project construction, ambient noise levels are expected to be controlled by natural elements and limited human activity including traffic and agricultural activities.

6.6.3 Impact assessment

Construction noise levels have been predicted for the modified development boundary and assessed against the relevant noise management levels (NMLs). The results of the modelling demonstrate predictions comply with the construction NMLs for most assessment locations during daytime standard construction hours.

The modification is predicted to result in a negligible increase to construction noise compared to that predicted in the NVIA. There is a potential negligible increase (<1 dB) in construction noise at R1, with a total noise exceedance

of the construction NML of up to 4 dB. No other exceedances have been identified. R1 and R2 have executed noise agreements with AMPYR that consider construction and operation noise impacts.

Predicted construction noise levels represent a potential worst-case scenario, and actual construction noise levels will likely be less than predicted levels most of the time.

6.6.4 Management and mitigation

AMPYR will continue to manage construction noise levels in accordance with Section 4.2 of the *Wellington 300 MW BESS Project Environmental Management Plan* (RJE Global 2025). No additional mitigation measures are required for the modification.

6.6.5 Conclusion

Construction noise for the modified project has been modelled and identified that there is a potential negligible increase in construction noise at R1 (<1 dB) when compared with the approved project. R1 is the only location that exceeds the construction NML for standard daytime hours. R1 and R2 both have executed noise agreements with AMPYR that consider construction and operation noise impacts. No additional mitigation measures are required.

6.7 Traffic and transport

6.7.1 Introduction

A traffic impact assessment (TIA) was prepared by EMM (EMM 2022e) to accompany the EIS, and an Addendum TIA was prepared by EMM (EMM 2023b) to accompany the Amendment Report. The approved *Traffic Management Plan Wellington South Battery Energy Storage System* (AMPYR 2025b) was prepared in consultation with Transport for NSW and Dubbo Regional Council. The modification will not alter traffic impacts from the project.

6.7.2 Existing environment

The existing environment remains consistent with that described in the EIS for the project. The Mitchell Highway will be the main transport route used by regionally based traffic during both construction and operation. Site access is via Twelve Mile Road.

6.7.3 Impact assessment

The changes to the project resulting from the modification will not impact traffic requirements, and as such the project will be constructed and operated as per the traffic conditions stipulated in development consent conditions B1 to B10.

6.7.4 Management and mitigation

Mitigation measures as outlined in the Amendment Report and Addendum TIA remain relevant to the mitigation of potential traffic impacts on the road network. No additional mitigation measures are required for the modification and traffic will continue to be managed in accordance with the *Traffic Management Plan Wellington South Battery Energy Storage System* (AMPYR 2025b).

6.7.5 Conclusion

The modified project is not anticipated to generate traffic impacts beyond those which were assessed in the Amendment Report and Addendum TIA. Traffic movements from the modified project will comply with relevant development consent conditions. The traffic management measures identified in the Amendment Report and Addendum TIA are considered appropriate and no additional mitigation measures are required.

6.8 Water resources

6.8.1 Introduction

A water assessment was prepared by EMM (2022f) to accompany the EIS. This section provides an assessment of potential impacts to water resources associated with the modification.

6.8.2 Existing environment

The project is within the catchment of an ephemeral second order watercourse, which is a tributary of the Macquarie River (referred to as Watercourse A). Minor portions of the project lie on the catchment boundaries of a neighbouring, ephemeral second order watercourse to the west, and Wuuluman Creek, an ephemeral third order watercourse to the north of the project. These are shown in Figure 2.1.

Flooding impacts were considered for the approved project, in reference to a floodplain risk management study carried out by Wellington Council (2013). The study found that in the event of extreme flooding, of a magnitude similar to the probable maximum flood (PMF), the Macquarie River is predicted to reach approximately 310 mAHD at the downstream reaches of the Watercourse A, below the modified development boundary of 335 mAHD.

6.8.3 Impact assessment

i Water quality

The modification will result in a minor increase in ground disturbance during earthworks which can lead to exposure of soils and increased risk of erosion and mobilisation of sediment into receiving watercourses. Potential risks to water quality during construction are considered to be minor with the implementation of management measures described in the EIS and water assessment.

Interactions with mapped watercourses as a result of the modification will be minor and limited to vegetation management only, with no direct disturbance to watercourses.

Operation impacts are not expected to differ from those described in the EIS and water assessment. The water management approach described in the water assessment is considered appropriate and no additional mitigation measures are required.

ii Water quantity

There is potential for a minor and temporary increase in site runoff due to clearing and earthworks within the modification area. Construction impacts to water quantity are considered to be minor with the implementation of management measures described in the EIS and water assessment.

Site runoff potential for the catchment contributing to Watercourse A is likely to increase permanently as a portion of the previous grassed areas will be replaced with impervious hardstand areas (associated with the additional substation bay). Runoff will be mitigated through the water management approach described in the EIS and water assessment which has the objective of ensuring that peak flow rates are not increased for events up to and including the 1% Annual Exceedance Probability (AEP) event. No additional mitigation and management measures are required.

iii Flooding

The risk of flooding within the modified development boundary is minor even in extreme events such as the PMF. The modified project is not expected to have any measurable impact on water quality and downstream receptors. No additional mitigation and management measures are required.

iv Water demand

There is no additional demand for water as a result of the modification.

v Groundwater

The modification will not add any additional groundwater interacting activities to the project and hence has not been assessed further.

6.8.4 Management and mitigation

Mitigation measures as outlined in the EIS and water assessment remain relevant to the mitigation of potential impacts to water resources. No additional mitigation measures are required for the modification.

6.8.5 Conclusion

The potential surface water and groundwater impacts during construction and operation remain minor and can be adequately managed through the implementation of the management and mitigation measures provided as part of the approved project.

6.9 Hazards and risk

6.9.1 Introduction

A preliminary hazard analysis (PHA) was prepared by Sherpa Consulting Pty Ltd (Sherpa 2022) to accompany the EIS. Key project components assessed include the BESS compound, BESS substation and maintenance activities.

6.9.2 Existing environment

The existing environment remains consistent with that described in the EIS. The surrounding area is primarily cleared land used for grazing and dryland cropping, with scattered rural residences, agricultural buildings and energy generation, storage and transmission infrastructure. There are multiple renewable energy generation projects (proposed, approved and constructed) in the vicinity of the project, as well as Wellington Substation.

6.9.3 Impact assessment

The PHA included an assessment of potential hazards, including hazards arising from the BESS layout, electric and magnetic fields, BESS equipment, hazardous substances, operations and maintenance activities, and external factors.

Separation distances between BESS units and receivers will remain unchanged as a result of the modification.

The addition of a new substation bay, easement and construction laydown area does not alter the outcomes of the PHA, and the modified project remains consistent with that which was assessed in the PHA.

Infrastructure will be generally consistent with the EIS and designed and constructed in accordance with the manufacturer's specifications and relevant standards where applicable.

6.9.4 Management and mitigation

The modified project does not alter the potential hazards which were assessed in the PHA. As such, the management measures identified in the consent conditions, EIS and PHA are considered appropriate and no additional mitigation measures are required.

6.9.5 Conclusion

The modification will not result in the emergence of risks and hazards beyond those which were assessed in the PHA. As such, the findings of the PHA remain applicable. Significant off-site impacts are not expected due to the rural character of the area and the large separation distance to the nearest sensitive receptor.

6.10 Social

6.10.1 Introduction

A social impact assessment (SIA) was prepared by EMM (EMM 2022g) to accompany the EIS. The findings of the SIA are considered to remain applicable as the modification is unlikely to result in a change to social impacts from the project.

6.10.2 Existing environment

The existing environment remains consistent with that described in the EIS and SIA.

6.10.3 Impact assessment

The impacts identified in the SIA and how these relate to the modification are described below:

- Amenity related to traffic noise – no changes to traffic are anticipated as a result of the modification.
- Community investment, social cohesion and resilience – the modification does not alter community investment associated with the project nor is it expected to impact social cohesion or community resilience.
- Public safety related to increased traffic – the modification does not alter approved traffic impacts.
- Public safety related to increased truck movements along school bus routes – the modification does not alter the approved traffic impacts.
- Public safety related to fire hazards – the modification does not propose any changes to the BESS compound.
- Livelihood related to increased local employment opportunities, training and apprenticeship opportunities – no changes to the construction workforce are proposed as part of the modification.

- Cumulative impacts related to housing, employment and traffic – the modification does not propose any changes to construction or operational workforce or any changes to traffic movements.

The modification will not change the outcomes of the SIA. This is due to the nature of the modification, which will not result in any significant change to the ways that the public will be impacted by the project.

6.10.4 Management and mitigation

The modified project is not anticipated to generate social impacts beyond those which were assessed in the SIA. As such, the management measures identified in the EIS and SIA are considered appropriate and no additional mitigation measures are required.

6.10.5 Conclusion

The modification is unlikely to result in a change in social impacts compared to those which were assessed in the SIA. The findings of the SIA remain applicable and no further management or mitigation measures are necessary.

6.11 Other matters

Impacts relating to waste management, contamination, air quality and rehabilitation were assessed in the EIS and have been considered below in the context of the modification. Bushfire impacts have also been assessed.

6.11.1 Waste

Waste will be managed in accordance with the waste hierarchy of priorities and sent to appropriately licensed resource recovery or waste management facilities, or where possible, reused on-site. Waste streams are not anticipated to change as a result of the modification. Waste will continue to be managed in accordance with the measures identified in the EIS and the *Wellington 300 MW BESS Project Environmental Management Plan* (RJE Global 2025).

6.11.2 Contamination

There is no evidence to suggest potential contamination within the modified development boundary. Prior land use has predominantly consisted of dry land cropping and grazing. Activities commonly associated with contamination, such as industrial or chemical works or storage, are not known to have occurred within the modified development boundary or in the surrounding area. Contamination will continue to be managed in accordance with the measures identified in the EIS and the *Wellington 300 MW BESS Project Environmental Management Plan* (RJE Global 2025).

6.11.3 Air quality

Assessment of the approved project determined that construction has potential for emissions to air from activities such as earthworks, land clearing and the movement of vehicles along unpaved roads. Exhaust emissions will also be generated by plant and equipment required for construction. Sources of operational phase air pollutant emissions will be negligible. Emissions to air are not likely to result in significant impacts to amenity or air quality during construction or operation.

Air quality impacts will not change as a result of the modification, and the findings of the EIS remain applicable. The dust protection measures in the *Wellington 300 MW BESS Project Environmental Management Plan* (RJE Global 2025) will continue to be implemented during construction.

6.11.4 Rehabilitation

At the end of the operational life of the BESS, it will either be replaced and upgraded or built infrastructure will be removed and the site rehabilitated. Areas disturbed during construction and not required for the operation of the project will be rehabilitated following completion of construction. No changes to the rehabilitation management and mitigation measures described in the EIS are required for the modification.

6.11.5 Bushfire

The modified development boundary extends into land with the same bushfire susceptibility as the land within the approved development boundary. Bushfire prone land mapping has been updated since the EIS was prepared and the modified development boundary is mapped as bushfire prone land.

The project is situated in a rural area and there is a large separation distance to the nearest dwellings. Off-site consequences of a bushfire within the modified development boundary will not change as a result of the modification.

The project will incorporate an asset protection zone (APZ), as well as appropriate design and construction standards to manage bushfire risk. The management measures identified in the consent conditions are considered appropriate and no additional mitigation measures are required.

7 Justification of the modified project

This section provides a justification and evaluation of the modified project, having regard to the economic, environmental, and social impacts and benefits of the modified project and the principles of ecologically sustainable development.

7.1 Evaluation

AMPYR has approval to construct and operate Bulabul Battery, a major grid-scale battery and associated infrastructure. Based on the impact assessment findings for the modification, presented in Chapter 6, the proposed modification will result in minimal changes to the environmental impact of the approved project and is considered to be substantially the same development for which consent was originally granted.

The potential impacts are summarised as follows:

- Biodiversity – the modification area has been designed to minimise impacts on biodiversity values and potential threatened fauna habitat. Impacts on native vegetation and threatened species habitat will be offset through the retirement of ecosystem and species credits.
- Aboriginal heritage – the modified development boundary will not impact any identified Aboriginal cultural heritage sites. No additional impacts on Aboriginal cultural heritage are anticipated as a result of the modification.
- Historical heritage – no changes to historical heritage impacts are anticipated as a result of the modification.
- Land and soils – the increase in area of the modified development boundary is minor and will not encompass differing soil types or high-capability soils. No additional land or rehabilitation constraints have been identified, and no additional impacts are anticipated as a result of the modification.
- Landscape and visual – the modified project is not expected to alter the landscape character or visual amenity, and existing mitigations in the form of landscape screening and the design of project infrastructure (colour, texture, finishes, etc) remain relevant to the modified project.
- Noise and vibration – negligible changes to construction noise impacts are anticipated as a result of the modification. No changes to operational noise are anticipated as a result of the modification.
- Traffic and transport – no changes to traffic and transport impacts are anticipated as a result of the modification.
- Water resources – potential surface water and groundwater impacts during construction and operation remain minor and no additional mitigation measures are necessary.
- Hazards and risk – no changes to hazards and risks are anticipated as a result of the modification.
- Social – no changes to social impacts are anticipated as a result of the modification.
- Bushfire – no changes to bushfire risks are anticipated as a result of the modification.

7.2 Benefits

Benefits arising from the project will not change as a result of the modification and include:

- contributing to the continued growth of renewable energy generation and storage capacity in the CWO REZ
- the provision of dispatchable capacity to support renewable energy generation in the NEM
- job creation in the Dubbo LGA and surrounding region
- increased energy security
- the creation of economic benefits, both direct and indirect, that would be attained by local businesses and suppliers.

The project will contribute to energy security and reliability in NSW and help to prepare for the retirement of large-scale coal-fired power generation. The project will also provide local economic stimulus and local employment opportunities during construction, which will have economic benefits for both the local economy within the Dubbo Regional LGA and the regional economy more broadly.

7.3 Conclusion

The project will provide an important contribution to the objectives of the CWO REZ by contributing to the continued growth of renewable energy generation and storage capacity. It will complement nearby existing and proposed renewable energy generation assets by smoothing out fluctuations in electricity supply from these intermittent power sources while contributing to the overall storage capacity and reliability of the NEM. The project will also provide economic benefits for the local economy within the Dubbo Regional LGA.

The modification will result in minimal environmental impacts beyond the approved project. The assessment of impacts in this modification report demonstrates that the project can be developed and operated within acceptable limits through the application of existing mitigation measures. The project (as modified) will not result in significant impacts to the environment or the local community.

The project (as modified) will remain substantially the same development for which consent was originally granted. It is considered that the modification can be approved pursuant to Section 4.55(1A) of the EP&A Act.

Abbreviations

Item	Definition
ACHA	Aboriginal cultural heritage assessment
ACHMP	Aboriginal cultural heritage management plan
AMPYR	The Trustee for AMBESS01 Hold Trust
AEP	annual exceedance probability
AES	Accommodation and Employment Strategy
AHD	Australian Height Datum
APZ	asset protection zone
BC Act	*NSW Biodiversity Conservation Act 2016*
BAM	Biodiversity Assessment Method
BDAR	biodiversity development assessment report
BESS	battery energy storage system
BMP	Biodiversity Management Plan
CFP	Aboriginal Cultural Heritage Chance Finds Protocol
CIS	Capacity Investment Scheme
CPHR	Conservation Programs, Heritage and Regulation
CWO REZ	Central West Orana Renewable Energy Zone
dB	decibels
DCCEEW	Commonwealth Department of Climate Change, Energy, Environment and Water
DNG	derived native grassland
DP	deposited plan
DPHI	Department of Planning, Housing and Infrastructure
EIS	Environmental Impact Statement
EMM	EMM Consulting Pty Limited
EP&A Act	NSW *Environmental Planning and Assessment Act 1979*
EP&A Regulation	NSW Environmental Planning and Assessment Regulation 2021
EPBC Act	*Environment Protection and Biodiversity Conservation Act 1999*
ha	hectares
HBA	historic baseline assessment
km	kilometres
kV	Kilovolt
LEP	local environmental plan
LGA	local government area

Item	Definition
LSEA	land, soil and erosion assessment
LSC	land and soil capability
m	metres
ML	megalitres
MNES	Matters of national environmental significance
MW	megawatt (1 million watts of power)
MWh	megawatt hour (a megawatt hour is equivalent to 1 million watts of electricity being used for an hour. A megawatt hour could be 2 megawatts of power being used for half an hour or it could be 0.5 megawatts of power being used continually for 2 hours).
NEM	National Electricity Market
NMLs	noise management levels
NSW	New South Wales
NT Act	*Commonwealth Native Title Act 1993*
NVIA	Noise and vibration impact assessment
O&M	operations and maintenance
PCT	plant community type
PHA	Preliminary hazard analysis
PMF	probable maximum flood
PMST	Commonwealth Protected Matters Search Tool
RAPs	Registered Aboriginal parties
REZ	Renewable Energy Zone
SAII	serious and irreversible impacts
SIA	Social impact assessment
SEPP	State Environmental Planning Policy
SHR	State Heritage Register
SSD	State significant development
TEC	Threatened ecological communities
The project	Bulabul Battery (formerly Wellington South Battery Energy Storage System); a battery storage system and associated infrastructure
TIA	Traffic impact assessment
VIA	Visual impact assessment

References

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AMPYR 2025b, *Traffic Management Plan Wellington South Battery Energy Storage*

DECC 2009, *Interim Construction Noise Guideline*.

DPIE 2020, *Biodiversity Assessment Method*.

DPIE 2022, *State significant development guidelines – preparing a modification report.*

Ecosite Solutions 2025, *Wellington South Battery Energy Storage System Biodiversity Management Plan*.

EMM 2022a, *Wellington South Battery Energy Storage System Environmental Impact Statement*, prepared by EMM for AMPYR Australia Pty Ltd.

EMM 2022b, *Wellington South Battery Energy Storage System, Historic Heritage Assessment Report*, prepared by EMM for AMPYR Australia Pty Ltd.

EMM 2022c, *Wellington South Battery Energy Storage System*, *Land, Soil and Erosion Assessment*, prepared by EMM for AMPYR Australia Pty Ltd.

EMM 2022d, *Wellington South Battery Energy Storage System, Visual Impact Assessment*, prepared by EMM for AMPYR Australia Pty Ltd.

EMM 2022e, *Wellington South Battery Energy Storage System, Traffic Impact Assessment*, prepared by EMM for AMPYR Australia Pty Ltd.

EMM 2022f, *Wellington South Battery Energy Storage System, Water Assessment*, prepared by EMM for AMPYR Australia Pty Ltd.

EMM 2022g, *Wellington South Battery Energy Storage System, Social Impact Assessment*, prepared by EMM for AMPYR Australia Pty Ltd.

EMM 2022h, *Wellington South Battery Energy Storage System, Aboriginal Cultural Heritage Assessment*, prepared by EMM for AMPYR Australia Pty Ltd.

EMM 2022i, *Wellington South Battery Energy Storage System, Noise Impact Assessment*, prepared by EMM for AMPYR Australia Pty Ltd.

EMM 2023a, *Wellington South Battery Energy Storage System, Amendment Report*, prepared by EMM for AMPYR Australia Pty Ltd.

EMM 2023b, *Wellington South Battery Energy Storage System, Addendum Traffic Impact Assessment,* prepared by EMM for AMPYR Australia Pty Ltd.

EMM 2023c, *Wellington South Battery Energy Storage System, Biodiversity Development Assessment Report,* prepared by EMM for AMPYR Australia Pty Ltd.

OzArk 2025a, *Wellington South Battery Energy Storage System, Aboriginal Cultural Heritage Management Plan*, prepared by OzArk Environmental & Heritage Pty Ltd for AMPYR Australia Pty Ltd.

OzArk 2025b, *Wellington South Battery Energy Storage System, Aboriginal Cultural Heritage Chance Finds Protocol,* prepared by OzArk Environmental & Heritage Pty Ltd for AMPYR Australia Pty Ltd.

RJE Global 2025, *Wellington 300 MW BESS Project Environmental Management Plan*.

Sherpa Consulting 2022, *Wellington South Battery Energy Storage System*, *Preliminary Hazard Analysis*, prepared by Sherpa Consulting for AMPYR Australia Pty Ltd.

Wellington Council 2013, *The Wellington Floodplain Risk Management Study* and *Plan*.

Appendix A
Updated project description

EMM
creating opportunities

This project description reflects the approved project description from the EIS (EMM 2022a) and Amendment Report (EMM 2023a), with changes proposed as a result of the modification.

The project consists of the construction and operation of a major grid-scale battery project adjacent to Transgrid's Wellington Substation. The project is expected to use lithium-ion battery technology and will have a peak maximum generation capacity of 500 MW/1,000 MWh.

A summary of the key aspects of the project is provided in Table A.1 and presented in Figure 3.2. A more detailed description of the project is provided in Chapter 3 of the EIS.

The works described in Table A.1 and Chapter 3 of the EIS are subject to detailed design.

Table A.1 Key aspects of the project description

Key aspects	Description
Project area	
Address and legal description	80 Twelve Mile Road, Wuuluman (battery energy storage system and transmission line) described as Lot 32 DP 622471 and 6909 Goolma Rd, Wuuluman (transmission line and Wellington Substation upgrade) described as Lot 1 DP 1226751.
Development boundary	The project will require a disturbance boundary of approximately 24.7 ha that will be required during project construction.
Environmental constraints near the project area	The following constraints are present within the site: • nearby sensitive receivers, the closest of which being a resident along Twelve Mile Road (R1) approximately 800 m north-east of the BESS infrastructure • the presence of a tributary to Macquarie River and associated riparian vegetation • the presence of native vegetation and its associated ecosystem and species values • the site is within a designated bushfire prone area.
Physical layout and design	
Layout	The proposed BESS will generally comprise the following components: • lithium-ion (Li-ion) batteries inside battery enclosures • power conversion systems (PCS) incorporating inverters and transformers • an aboveground or underground transmission line to the Wellington Substation and associated easement • an on-site substation comprising two 330 kV transformer bays and ancillary infrastructure • cabling and collector units • an asset protection zone (APZ). The project layout showing these components is presented in Figure 3.2.
Mitigation measures	The project has been sited to avoid environmental constraints within or near the site while minimising distances to the Wellington Substation. Key mitigation measures considered in the project design include: • avoidance of higher condition native grassland and woodland in project siting and selection of development boundary • suitable APZs incorporated in design of proposed infrastructure and development boundary • construction of noise attenuation/acoustic barriers (wall/retaining wall and batter or earth mounds) 4 m in height to the north, east, south and west as a means of reducing potential noise impacts on nearby residential receivers • planted landscaping around project infrastructure to minimise visual impacts.

Key aspects	Description
Ancillary infrastructure and upgrades	The project will include the following ancillary components and upgrades: • a new site access intersection off Twelve Mile Road • upgrades to existing access tracks within the development boundary • connection to the switchyard in adjoining Wellington Substation • upgrade of the Wellington Substation, which may include additional 330 kV switch bays with power transformers (which may be installed as an alternative to the transformer bays being located on the BESS site), switchyard bench extension and relocation of security fencing • control and office building and associated parking • drainage and stormwater management • ancillary infrastructure including security fencing, lighting and closed-circuit television • connection to utilities (telecom, sewerage, etc).
Built design, materials and finishes	Project enclosure components and cabinets will be light in colour to assist with heat management and made of steel. The control and office building will be a prefabricated building comprising a lunch room, office and ablutions room. The building will be assembled on-site and built to a height of 5 m tall. The building will be made of Trimclad steel or similar and grey in colour. Upgrade of the Wellington Substation will comprise an extension to the existing infrastructure elements on that site, including installation of additional 330 kV switch bays with power transformers.
Design elements subject to change during detailed design	Detailed design for the project is yet to be completed. The following design elements may be amended throughout the detailed design process: • the layout of the BESS containers, inverter stations and substation infrastructure • the transmission line alignment and arrangement (i.e. either above ground on steel lattice tension structures and poles or underground) • the control and office building (material, finishes) • works at the Wellington Substation and switchyard to accommodate project connection • the location of attenuation features (noise wall/bunds) and fencing.
Plans and figures illustrating the layout and design in plan-view and cross section	An overview of the project layout is provided in Figure 3.2.
Specifications	
Discharge capacity	Approximately 500 MW.
Storage capacity	Up to 1,000 MWh or two hours of maximum discharge capacity.
Typical operating cycle	One to two cycles per day on average assumed for assessment.
BESS compound components	Specific component requirements are subject to selection of the potential technology provider. The BESS compound will comprise: • 1,400–6,200 pre-assembled battery enclosures incorporating power conversion systems, thermal management systems, and safety systems • 150–300 inverters/transformers • ancillary infrastructure (e.g. electrical switchroom, a control and office building, security fencing). Battery enclosures will be approximately 3 m tall.
BESS substation components	An on-site substation comprising: • two 330 kV transformer switch bays • 33 kV indoor switchgear housed in portable substation containers. The tallest component of the substation will be the tips of bushings, approximately 11 m tall; however, the bulk of the unit will be 9 m tall.

Key aspects	Description
Connection infrastructure	An approximate 500 m 330 kV transmission line will extend from the BESS substation. The augmentation works at Wellington Substation will involve extension of the switchyard bench followed by the installation of new switch bays. Construction of the new switch bays is expected to involve installation of high-voltage electrical equipment such as circuit breakers, disconnectors, busbars, and associated protection and control systems. Works are also expected to include civil activities such as earthworks, installation of concrete footings, cable trenching and integration with existing substation infrastructure to ensure safe and reliable operation.
Construction	
Construction activities	Construction of the project will require an area of approximately 24.7 ha to facilitate the movement of plant and equipment (development boundary). This area will incorporate a temporary construction compound and laydown area for the storage of materials and infrastructure prior to installation at the site.
Transgrid connection works	The project will connect to the Wellington Substation switchyard either via overhead or underground cables extending from the on-site substation. Transgrid has advised that the Wellington Substation upgrade works will incorporate installation of new 330 kV switch bays for the project's grid connection.
Construction workforce	The project will create up to approximately 100 construction employment opportunities, many of which are expected to be sourced from the Dubbo region and other surrounding regional areas.
Construction scheduling and staging	DPHI formally approved AMPYR's staging request on 1 July 2025. It is intended the project will be constructed in two stages, consistent with that staging approval: • Stage 1 includes 300 MW installed discharge capacity, civil and enabling works, installation of batteries, one transformer and switchgear and associated structural, mechanical and electrical works, and connection to the Wellington Substation. • Stage 2 will likely consist of 200 MW installed discharge capacity, civil and enabling works, including installation of a second transformer and associated switchgear and batteries. The approved *Accommodation and Employment Strategy* (AES) (AMPYR 2025a) provides for a 23-month construction and commissioning period for Stage 1. The timing for Stage 2 is not yet certain and has not been specified in the AES or staging approval. It is anticipated that Stage 2 will commence construction following commencement of commissioning of Stage 1.
Construction hours	Construction of the project will be undertaken in accordance with the recommended standard/normal hours as defined by the *Interim Construction Noise Guideline* (DECC 2009) being: • Monday to Friday: 7:00 am to 6:00 pm • Saturday: 8:00 am to 1:00 pm • no works of Sunday and public holidays. Some exceptions may be made for low impact works and extraordinary circumstances.
Vehicle movements	The project will generate: • 60 heavy vehicle movements a day during construction, upgrading, or decommissioning • 80 light vehicle movements and 30 heavy vehicle movements during the AM (6:00 am to 7:00 am) or PM (5:00 pm to 6:00 pm) project peak hour during construction, upgrading, or decommissioning • 20 movements of heavy vehicles requiring escort during construction, upgrading, or decommissioning.
Transport	Project components (batteries, enclosures, PCS components, cables and substation components) will be transported to the site from Sydney/Newcastle via the Mitchell Highway, Goolma Road and Twelve Mile Road. Construction materials are likely to be sourced from surrounding concrete batching plants and hard rock quarries.

Key aspects	Description
Water demand	Water used directly on site for construction is estimated at 10 megalitres (ML) used predominantly for dust suppression purposes. Water sources will be confirmed during detailed design but are likely to include a combination to be sourced from bore water located on the participating landholder's land, municipal water supply (in agreement with the relevant authority) and/or imported water in portable tanks.
Operation	
Operational activities	Operation of the project will involve: • maintenance and cleaning of equipment • general office activities • waste removal.
Operational employment	The project will contribute to the employment of up to two employees during operation.
Operational life expectancy	The BESS is expected to operate for 20 years. At the end of operational life, this may be extended subject to the replacement of components.
Operational hours	The BESS will operate 24 hours a day, 7 days a week and be operated remotely.
Vehicle movements	On average, approximately 4 trips per day (4 in-bound and 4 out-bound), comprising: • staff vehicles • heavy vehicles (transporting replacement parts and equipment as required). Vehicle movements to and from the site will occur infrequently during operations, primarily for scheduled maintenance.
Decommissioning	
Decommissioning timing	At the end of the operational life of the BESS the project will either be replaced and upgraded or built infrastructure will be removed and the site rehabilitated.
Decommissioning works	Works undertaken during decommissioning will not exceed intensity associated with construction works and is expected to take up to 8 months.

Appendix B
Statutory compliance table

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Table B.1 Statutory compliance table

Statutory document	Reference	Requirement	Section
Commonwealth legislation			
EPBC Act	-	The EPBC Act provides the legal basis to protect and manage internationally and nationally important flora, fauna, ecological communities, heritage places and water resources which are deemed to be MNES. MNES, as defined under the EPBC Act, are: 1. world heritage properties 1. places listed on the National Heritage Register 2. wetlands of international significance listed under the Ramsar Convention 3. threatened flora and fauna species and ecological communities 4. migratory species 5. Commonwealth marine areas 6. Great Barrier Reef Marine Park 7. nuclear actions (including uranium mining) 8. water resources, in relation to coal seam gas or large coal mining development. Under the EPBC Act, actions that will, or are likely to, have a significant impact on MNES are deemed to be controlled actions and can only proceed with the approval of the Commonwealth Minister for the Environment.	**Modification report** Section 6.1 Appendix C **EIS** Section 6.1 Appendix E
Commonwealth *Native Title Act 1993* (NT Act)		The NT Act recognises and protects native title rights in Australia. It allows a native title determination application (native title claim) to be made for land or waters where native title has not been validly extinguished, for example, extinguished by the grant of freehold title to land. Applications for compensation for extinguishment or impairment of native title rights can also be made. All native title claims are subjected to a registration test and will only be registered if claimants satisfy a number of conditions. A register of native title claims is maintained by the National Native Title Tribunal. Proposed activities or development that may affect native title are called 'future acts'. Claimants whose native title claims have been registered have the right to negotiate about some future acts, including mining and granting of a mining lease over the land covered by their native title claim. Where a native title claim is not registered, a development can proceed through mediation and determination processes, though claimants will not be able to participate in future act negotiations.	There are no active claims encompassing the modified development boundary.

Statutory document	Reference	Requirement	Section
NSW legislation			
EP&A Act	Section 1.3	Relevant objects of the Act.	The objects of the EP&A Act were considered in the Section 7.4 of the EIS. The project (as modified) will be consistent with the relevant objects of the EP&A Act.
	Section 4.15(1)	(1) Matters for consideration—general In determining a development application, a consent authority is to take into consideration such of the following matters as are of relevance to the development the subject of the development application—	-
		a) the provisions of— i) any relevant environmental planning instruments, and … iv) the regulations (to the extent that they prescribe matters for the purposes of this paragraph) that apply to the land to which the development application relates	The provisions of relevant environmental planning instruments have been considered in the preparation of the modification report.
		b) the likely impacts of that development, including environmental impacts on both the natural and built environments, and social and economic impacts in the locality	Chapter 6
		c) the suitability of the site for the development	Section 2.2
		e) the public interest	Chapter 2

Statutory document	Reference	Requirement	Section
BC Act	Section 7.14	(2) The Minister for Planning, when determining in accordance with the *Environmental Planning and Assessment Act 1979* any such application, is to take into consideration under that Act the likely impact of the proposed development on biodiversity values as assessed in the biodiversity development assessment report. The Minister for Planning may (but is not required to) further consider under that Act the likely impact of the proposed development on biodiversity values. (3) If the Minister for Planning decides to grant consent or approval and the biodiversity offsets scheme applies to the proposed development, the conditions of the consent or approval may require the applicant to retire biodiversity credits to offset the residual impact on biodiversity values (whether of the number and class specified in the report or other number and class). The residual impact is the impact after the measures that are required to be carried out by the terms or conditions of the consent or approval to avoid or minimise the impact on biodiversity values of the proposed development. (4) A condition to retire biodiversity credits is required to be complied with before any development is carried out that would impact on biodiversity values. If the retirement of particular biodiversity credits applies to a stage of the development, compliance with the condition for their retirement is postponed until it is proposed to carry out that stage of the development.	**Modification report** Section 6.1 Appendix C Ecosystem and species credits for the modification will be required in accordance with the NSW Biodiversity Offsets Scheme (as detailed in Section 6.1 and Appendix C). **EIS** Section 6.1 Appendix E AMPYR has fulfilled its credit obligation for the approved project through the purchase and retirement of ecosystem and species credits in accordance with condition B12 of the development consent.
	Section 7.17	(1) Subsection (2) applies to an application for the modification of a development consent, or State significant infrastructure approval, that was granted after the commencement of this Division. (2) The provisions of this division relating to applications for development consent or State significant infrastructure approval apply to the application for modification as follows— a) the provisions apply in relation to the original development as proposed to be modified (the proposed modified development), b) if this division applies to the proposed modified development, a biodiversity development assessment report (a further assessment report) must be submitted with the application for modification and taken into consideration, even if— i) a biodiversity development assessment report was submitted in connection with the application for the original development, or ii) this division did not apply to the original development, including because the modification results in the development exceeding the biodiversity offsets scheme threshold, c) however, a further assessment report is not required to be submitted with the application for modification if— i) the authority or person determining the application for modification, or determining the environmental assessment requirements for the application, is satisfied that the modification will not increase the impact on biodiversity values, or	Part 4 Division 7 of the BC Act sets out the approval pathway for modifications of SSD projects. In accordance with clause 7.17(2)(c), a BDAR (referred to as a further assessment report in the BC Act) is not required to be submitted with a modification application if the authority determining the application for modification is satisfied that the modification will not increase the impact on biodiversity values. As the modification will increase the impact on biodiversity values, a BDAR bas been prepared in accordance with the BC Act and the BAM.

Statutory document	Reference	Requirement	Section
		ii) the application would, if it were an application for a development consent for the proposed modified development, be exempt from the requirement to be accompanied by a biodiversity development assessment report under an order made under section 7.7(3), d) if a further assessment report must be submitted with the application for modification—the further assessment report must take into account any measures already taken to avoid, minimise and offset the impact on biodiversity values in connection with the consent or approval before the proposed modification, e) if a further assessment report is not required to be submitted with the application for modification and the relevant authority proposes to change any offset obligations as part of granting the modification application—sections 7.14(3A) and (3B) apply as if— i) a further assessment report was required to be submitted with the application for modification, and ii) the relevant authority is proposing to impose a condition to retire biodiversity credits of a number and class that differs from the number and class required to be retired under the original approval or consent, f) if an application for a development consent, or State significant infrastructure approval, for the proposed modified development would have been required to be refused because of serious and irreversible impacts on biodiversity values—the application for modification must also be refused.	
NSW regulations			
EP&A Regulation	Clause 98	(1) A modification application may be made by— a) the owner of the land to which the modification application relates, or b) another person, with the consent of the owner of the land. (2) The consent of the owner is not required if the original development application was made, or could have been made, without the consent of the owner. (3) The consent of the owner of the land is not required for a modification application made by a public authority, or a modification application for public notification development, if the applicant complies with subsections (4) and (5). (4) The applicant must give notice of the modification application— a) to the owner of the land before the modification application is made, or b) by publishing, no later than 14 days after the modification application is made. a notice in a newspaper circulating in the area in which the development will be carried out. (5) If the applicant gives notice under subsection (4)(b), the applicant must also, no later than 14 days after the application is made— a) if the applicant is a public authority—publish the notice on the public authority's website, or b) for public notification development—arrange for the consent authority to publish the notice on the NSW planning portal.	The modification application has been made with the consent of the owners of the land within the modified development boundary. A copy of the landowner's consent will be provided to DPHI.

Statutory document	Reference	Requirement	Section
	Clause 99	Making a modification application	
		(1) A modification application must— a) be in the approved form, and b) contain all the information and documents required by— i) the approved form, and ii) the Act or this Regulation, and c) be submitted on the NSW planning portal.	This modification report will be submitted via the NSW planning portal and has been prepared in the approved form.
		(2) If the modification application is for State significant development— a) the application must also include particulars of the nature of the modification, and b) the applicant must have regard to the State Significant Development Guidelines in preparing the application.	This modification report has been prepared in accordance with *State significant development guidelines – preparing a modification report* (DPIE 2022).
	Clause 100	Content of modification application (1) A modification application must contain the following information—	
		a) the name and address of the applicant,	Section 1.4
		b) a description of the development that will be carried out under the development consent,	Section 0 Chapter 3 Appendix A
		c) the address and folio identifier of the land on which the development will be carried out,	Section 1.2 Appendix A
		d) a description of the modification to the development consent, including the name, number and date of plans that have changed, to enable the consent authority to compare the development with the development originally approved,	Chapter 3
		e) whether the modification is intended to— i) merely correct a minor error, misdescription or miscalculation, or ii) have another effect specified in the modification application,	Chapter 3
		f) a description of the expected impacts of the modification,	Chapter 6
		g) an undertaking that the modified development will remain substantially the same as the development originally approved,	Table 4.1

Statutory document	Reference	Requirement	Section
		h) for a modification application that is accompanied by a biodiversity development assessment report—the biodiversity credits information,	Section 6.1 Appendix C
		i) if the applicant is not the owner of the land—a statement that the owner consents to the making of the modification application,	A copy of the landowner's consent will be provided to DPHI.
		j) whether the modification application is being made to— i) the Court under the Act, section 4.55, or ii) the consent authority under the Act, section 4.56.	AMPYR proposes to modify the consent under Section 4.55(1A) of the EP&A Act.

Appendix C

Biodiversity development assessment report

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Bulabul Battery

Biodiversity Development Assessment Report

Prepared for AMPYR Australia Pty Ltd

March 2026

Bulabul Battery

Biodiversity Development Assessment Report

AMPYR Australia Pty Ltd

E250078 RP#12

March 2026

Version	Date	Prepared by	Reviewed by	Comments
V1	16 January 2026	Hayden Beck	Ross Davey	Draft for client review
V2	9 February 2026	Hayden Beck	Ross Davey	Revised draft for client review
V3	10 March 2026	Hayden Beck	Ross Davey	Final

Reviewed by



Ross Davey
Senior Ecologist
10 March 2026

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This report has been prepared in accordance with the brief provided by AMPYR Australia Pty Ltd and, in its preparation, EMM has relied upon the information collected at the times and under the conditions specified in this report. All findings, conclusions or recommendations contained in this report are based on those aforementioned circumstances. This report is to only be used for the purpose for which it has been provided. Except as permitted by the Copyright Act 1968 (Cth) and only to the extent incapable of exclusion, any other use (including use or reproduction of this report for resale or other commercial purposes) is prohibited without EMM's prior written consent. Except where expressly agreed to by EMM in writing, and to the extent permitted by law, EMM will have no liability (and assumes no duty of care) to any person in relation to this document, other than to AMPYR Australia Pty Ltd (and subject to the terms of EMM's agreement with AMPYR Australia Pty Ltd).

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ABN: 28 141 736 558

Executive Summary

ES1 Project description

The Trustee for AMBESS01 HOLD TRUST (AMPYR) received approval to develop the Wellington South Battery Energy Storage System (BESS), now called Bulabul Battery, a large-scale BESS, on-site substation and associated infrastructure (the project). AMPYR is seeking to modify the State Significant Development (SSD) SSD-27014706, pursuant to section 4.55(1A) of the NSW *Environmental Planning and Assessment Act 1979* (EP&A Act) to:

- revise the location of the approved construction laydown area
- provide for an additional new bay at Transgrid's Wellington Substation
- widen the transmission easement to facilitate the project's grid connection.

The proposed modification will result in minor changes to the approved development boundary. This Biodiversity Development Assessment Report (BDAR) has been prepared to support the modification report.

ES2 Landscape features

The modification area is in the South West Slopes Interim Biogeographic Regionalisation of Australia (IBRA) bioregion and Lower slopes subregion, and within the Macquarie-Bogan catchment. No watercourses and their associated riparian corridor buffers intersect the modification area, however several unnamed streams to the south flow into the Macquarie River.

The total area of native vegetation within a buffer of 1,500 metres (m) of the modification area (referred to as the buffer area) was assessed as being 609.94 hectares (ha), or 61% native vegetation. Most of this vegetation is derived native grassland (DNG) occurring due to a long history of agriculture in the region, including intensive livestock grazing and cropping. Intact woodland within the buffer area is scattered and sparse. There are no important geological features present in the buffer area, apart from cracks and crevices.

ES3 Native vegetation

All vegetation within the modification area is consistent with plant community type (PCT) 266 – White Box grassy woodland in the upper slopes sub-region of the NSW South Western Slopes Bioregion. This vegetation consists of two zones: low and moderate condition DNG. No trees will be cleared by the modification. Although the DNG to be impacted is highly degraded, both zones meet the determination for the NSW *Biodiversity Conservation Act 2016* (BC Act) listed 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 Ecological Community.

ES4 Threatened species

Superb Parrot was the only threatened species detected during targeted surveys undertaken for the approved project. Although no breeding activity was observed, more than one individual was observed in an area with potential nesting habitat (i.e. hollows of appropriate size). Presence was assumed for the Pink-tailed Legless Lizard due to detection of this species nearby in connected and similar habitat. Presence was also assumed for the Glossy Black Cockatoo as targeted surveys for this species were not undertaken in accordance with the *Biodiversity Assessment Method* (BAM).

ES5 Impact avoidance, minimisation and mitigation

The modification area has been selected to avoid impacts to features of high biodiversity value, which included higher condition threatened ecological community (TEC) (i.e. scattered trees and remnant woodland) and potential habitat for hollow-associated threatened fauna. This modification will impact relatively low condition DNG only, with no impact required to trees.

ES6 Assessment of impacts under other relevant biodiversity legislation

i Environment Protection and Biodiversity Conservation Act 1999

The BDAR has considered impacts on species and ecological communities listed under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). No Commonwealth listed TECs occur. Assessments of Significance for the project as modified were undertaken for Commonwealth listed threatened species identified as having a moderate or greater likelihood of occurring. These assessments concluded that the project as modified is unlikely to have a significant impact on these Commonwealth listed species.

ii Biosecurity Act 2015

One priority weed was detected nearby the modification area, African Boxthorn (*Lycium ferocissimum*). The biosecurity security duties for this species are detailed in Section 7.2.1 and should be a key focus of ongoing weed management activities.

ES7 Biodiversity impacts and offsets

Under the NSW Biodiversity Offset Scheme (BOS), the modification requires 13 ecosystem credits to compensate for impacts on native PCTs and ecosystem credit species. In addition to ecosystem credits, the project also requires 10 species credits for the Superb Parrot, 14 species credits for the Glossy Black Cockatoo and 5 species credits for Pink-tailed Legless Lizard.

TABLE OF CONTENTS

Executive Summary **ES.1**

1 Introduction **1**

1.1 Project overview 1

1.2 Site description 1

1.3 Terms and definitions 4

1.4 Assessment requirements 4

1.5 Purpose of report 5

1.6 Information sources 5

2 Legislative context **7**

2.1 Commonwealth legislation 7

2.2 State legislation 7

3 Landscape features **11**

3.1 Landscape features 11

3.2 Assessment of site context 12

4 Native vegetation **15**

4.1 Background review 15

4.2 Methods 15

4.3 Results 17

5 Threatened species **26**

5.1 Threatened species habitat 26

5.2 Ecosystem credit species 29

5.3 Species credit species 31

6 Impact assessment **56**

6.1 Potential direct and indirect impacts 56

6.2 Prescribed and uncertain impacts 58

6.3 Avoidance, minimisation and mitigation 61

6.4 Serious and Irreversible Impacts 67

6.5 Impact summary 74

7 Assessment of other relevant biodiversity legislation **78**

7.1 Commonwealth 78

7.2 State 105

8 Conclusion **106**

9 References **107**

Appendices

Appendix A	BAM plot data sheets	A.1
Appendix B	Biodiversity Management Plan for approved project	B.1
Appendix C	Biodiversity Credit Report	C.1

Tables

Table 1.1	Terms and definitions used in report	4
Table 3.1	Percentage of native vegetation cover	12
Table 4.1	Definitions used in delineation of vegetation zones	16
Table 4.2	Plant community types mapped within the modification area	18
Table 4.3	White Box grassy woodland in the upper slopes sub-region of the NSW South Western Slopes Bioregion	19
Table 4.4	Vegetation zone and impact summary	23
Table 4.5	BC Act threatened ecological communities within the modification area	24
Table 5.1	Ecosystem credit species assessment	29
Table 5.2	Candidate species credit assessment	32
Table 5.3	Candidate species requiring further assessment	38
Table 5.4	Targeted flora survey method	39
Table 5.5	Targeted fauna survey method for species credit species	40
Table 5.6	Methods and survey effort – reptiles	42
Table 5.7	Methods and survey effort – arboreal mammals	43
Table 5.8	Methods and survey effort – diurnal birds	45
Table 5.9	Methods and survey effort – nocturnal birds	46
Table 5.10	Methods and survey effort- invertebrates	48
Table 5.11	Superb Parrot observation during targeted surveys	52
Table 5.12	Candidate species presence, extent and habitat quality	53
Table 6.1	Vegetation zone impact summary	56
Table 6.2	Prescribed impacts	59
Table 6.3	Avoidance strategy	62
Table 6.4	Impact minimisation, mitigation and amelioration measures	66
Table 6.5	Current status of White Box Yellow Box Blakely's Red Gum Woodland and DNG CEEC	68
Table 6.6	Assessment of White Box Yellow Box Blakely's Red Gum Woodland and DNG CEEC	71
Table 6.7	Summary of impacts requiring offsets - native vegetation	74
Table 6.8	Summary of impacts requiring offsets – threatened species	75
Table 7.1	Threatened ecological communities known or predicted to occur in the locality	78

Table 7.2	Assessment of vegetation against the EPBC listing for White Box – Yellow Box – Blakely's Red Gum Grassy Woodland and Derived Native Grassland	80
Table 7.3	Threatened flora species known or predicted to occur in the locality	81
Table 7.4	Threatened fauna species known or predicted to occur in the locality	83
Table 7.5	Likelihood of occurrence for migratory species	87
Table 7.6	Assessment of significance for the Regent Honeyeater	88
Table 7.7	Assessment of significance for the Southern Whiteface	90
Table 7.8	Assessment of significance for the Glossy Black Cockatoo	91
Table 7.9	Assessment of significance for the Swift Parrot	93
Table 7.10	Assessment of significance for the Superb Parrot	95
Table 7.11	Assessment of significance for the Diamond Firetail	98
Table 7.12	Assessment of significance for the Grey-Headed Flying-Fox	100
Table 7.13	Assessment of significance for the Pink-tailed Legless Lizard	102
Table 7.14	Biodiversity duties for priority weeds	105

Figures

Figure 1.1	Regional context	2
Figure 1.2	Project context	3
Figure 3.1	Location map	13
Figure 3.2	Site map	14
Figure 4.1	Plant community types and vegetation zones	25
Figure 5.1	Targeted flora survey effort	49
Figure 5.2	Targeted fauna survey effort	50
Figure 5.3	Threatened species and habitat recorded	54
Figure 6.1	Avoidance strategy	64
Figure 6.2	Impacts requiring offset – ecosystem credits	76
Figure 6.3	Impacts requiring offset – species credits	77

BDAR declaration

Certification under clause 6.15 Biodiversity Conservation Act 2016 and conflict of interest

I, Ross Davey, certify that this report has been prepared based on the requirements of, and information provided under, the Biodiversity Assessment Method and clause 6.15 of the *Biodiversity Conservation Act 2016* (BC Act).

Signature: 

Date: 10/03/2026

BAM Assessor Accreditation no: BAAS24060

This BDAR has been prepared to meet the requirements of BAM 2020. Actual, perceived or potential conflict of interest

It is noted that EMM is engaged to undertake work for both development and conservation (Stewardship) clients. There is the potential for actual, perceived or potential conflicts of interest. This section discloses relevant information known at the time of preparation of this report to such considerations.

- EMM staff or relatives involved in the preparation of this report do not own, and were not aware of any other EMM staff or relative holding or having interests in Stewardship sites or any of the biodiversity credits identified as being required in this report.
- There were no debts to the client or associates of the client.
- There were no known potential conflicts of interest between the client for this report with another client of EMM.

Staff qualifications and contributions

EMM staff that have contributed to field surveys and authoring this report are listed in the table below.

Name	Position	Project role	Qualifications	Relevant years of experience	Project involvement
Ross Davey	Senior Ecologist	Lead BAM assessor, vegetation mapping, lead BDAR author, targeted flora and fauna surveys	BSc (EnvMgt) BAM accredited assessor (BAAS24060)	5	Modification 1
Hayden Beck	Associate Ecologist	Contributing BAM assessor, BDAR preparation and review	PhD (Ecology) MSc (Res) BEnvSc (Hons) BSc (MarSc) BAM accredited assessor (BAAS 19000)	10	Modification 1
Paul Rossington	Associate Ecologist	BAM plots and vegetation mapping; Targeted threatened flora and fauna surveys	MSc BSc BAM accredited assessor (BAAS 18065)	20+	Modification 1

Name	Position	Project role	Qualifications	Relevant years of experience	Project involvement
Pornima Abhyankar	GIS Analyst	Report figures, GIS support	MBA (EnvMng) MSc (Geology) BSc (Geology)	5	Modification 1
Aislinn Smeallie	Graduate Ecologist	Targeted threatened flora and fauna surveys	BSc	2	Modification 1
Zachary Blake	Graduate Ecologist	Targeted threatened fauna surveys	BEnvSc	2	Modification 1
Cecilia Phu	Associate Ecologist	Contributing BAM assessor, vegetation mapping, BDAR review	BSc (Hons) BAM Accredited Assessor (BAAS17058)	15+	Approved project
Bianca Seal	Senior Ecologist	Lead BAM assessor, vegetation mapping, lead BDAR author, targeted flora and fauna surveys	BSc, GradDipGIS BAM Accredited Assessor (BAAS23008)	5	Approved project
Michael Forbes	GIS Analyst	Report figures, GIS support	BAppSc (Ecology)	15+	Approved project
David James	Fauna Ecologist	Targeted fauna surveys	BSc (Hons) (Zoology and Marine Biology)	30+	Approved project
Erica-Danae Goldsmith	Ecologist	Targeted threatened flora and fauna surveys	BSc (Zoology) Conservation Biology	2	Approved project
Jennifer Lindsay	Ecologist	Targeted threatened fauna surveys	BEnvSc	2	Approved project

1 Introduction

1.1 Project overview

The Trustee for AMBESS01 HOLD TRUST (AMPYR) received approval to develop the Wellington South Battery Energy Storage System (BESS), now called Bulabul Battery, a large scale BESS, on-site substation and associated infrastructure (the project), on 22 December 2023. The project is situated in the locality of Wuuluman, approximately 2.2 kilometres (km) north-east of the township of Wellington, in the Central West of New South Wales (NSW). Figure 1.1 and Figure 1.2 show the project's location, which lies within the Dubbo Regional Council (DRC) local government area (LGA) and the Central-West Orana (CWO) Renewable Energy Zone (REZ).

The project will have a delivery capacity of approximately 500 megawatts (MW). A 500 m transmission line will connect the on-site substation to the adjacent Wellington Substation, operated by Transgrid.

AMPYR is seeking to modify State Significant Development (SSD) SSD-27014706, pursuant to section 4.55(1A) of the NSW *Environmental Planning and Assessment Act 1979* (EP&A Act) to:

- revise the location of the approved construction laydown area (1.1 hectares (ha))
- provide for an additional new bay at Transgrid's Wellington Substation (1.5 ha)
- widen the transmission easement to facilitate the project's grid connection (0.1 ha).

The modification elements are identified on Figure 1.2. As shown on Figure 1.2, approximately 0.9 ha land within the approved development boundary, which is associated with part of the approved construction laydown area, cannot be used due to a transmission line easement. This area will no longer be impacted by the project.

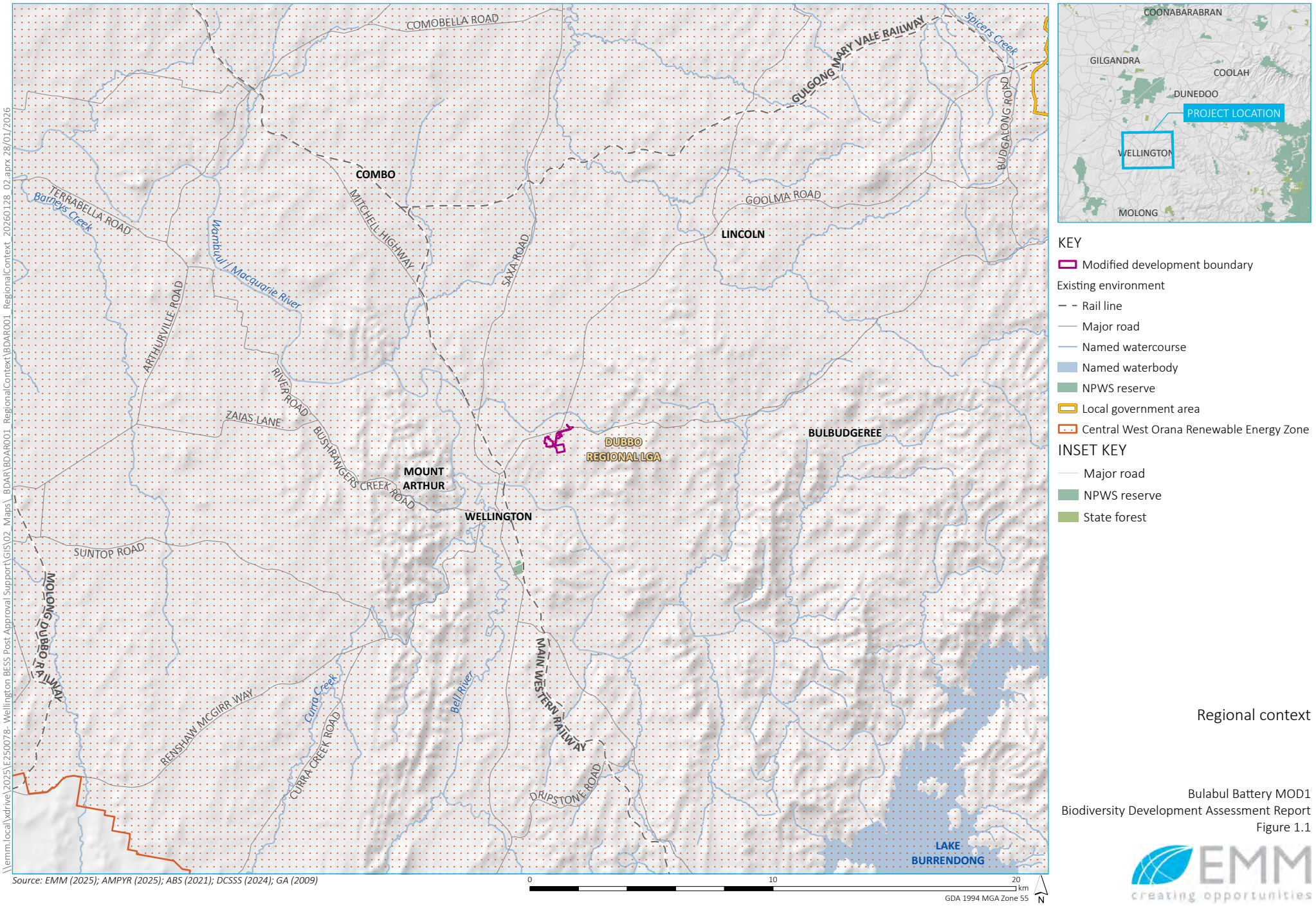
The proposed modification will result in minor changes to the approved development boundary. This Biodiversity Development Assessment Report (BDAR) has been prepared to support the modification report.

1.2 Site description

The study area (the area which was surveyed for ecological values) occurs within Lot 1 DP 1226751 and Lot 32 DP 622471 and is zoned as RU1 - Primary Production and SP2 – Electricity Generating Works under the Dubbo Regional Local Environmental Plan 2022 (Dubbo LEP). Lands adjoining the study area are zoned as SP2 – Correctional Centre and R5 – Large Lot Residential under the Dubbo LEP.

Goolma Road, the existing Transgrid Wellington Substation, and various powerline easements result in a highly fragmented landscape with isolated patches of native woodland. Due to the mixture of land uses in the immediate area, the study area has limited connectivity with native vegetation in adjoining lands.

Within the study area, historical land clearing for agricultural practices have resulted in native vegetation occurring as derived native grassland (DNG), paddock trees and small patches of remnant open woodland. Some areas of grassland are dominated by exotic grasses and herbaceous species. Other areas lack native vegetation cover and diversity due to ongoing grazing.



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Regional context

Bulabul Battery MOD1
Biodiversity Development Assessment Report
Figure 1.1

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KEY

- Modified development boundary
- Approved development boundary
- Approved construction laydown area – unavailable for use

Modification elements

- Additional construction laydown
- Additional easement
- Additional substation bay

Existing environment

- Major road
- Minor road
- Watercourse/drainage line
- Waterbody
- Cadastral boundary

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Source: EMM (2025); AMPYR (2025); DCSSS (2024); ESRI (2025)

0 250 500 m

GDA 1994 MGA Zone 55

N

Project context

Bulabul Battery MOD1
Biodiversity Development Assessment Report
Figure 1.2

EMM creating opportunities

1.3 Terms and definitions

Key terminology adopted throughout the BDAR is listed in Table 1.1.

Table 1.1 Terms and definitions used in report

Term	Definition
Approved development boundary	The extent of surface disturbance required for construction and operation of the approved project. This would be superseded by the modified development boundary, if approved.
Buffer area	The area of land within 1,500 m of the modified development boundary. Buffer areas are selected in accordance with the Biodiversity Assessment Method (BAM) (DPIE 2020a).
Indirect impact area	Area subject to anticipated indirect impacts, which was delineated as 5 m buffer from the modified development boundary.
Modified development boundary	The extent of direct surface disturbance required for construction and operation of the modified project.
Site access	Site access from Twelve Mile Road, which is within the approved development boundary.
Study area	The area of land that was surveyed for ecological values. This is equivalent to Lot 32 of DP 622471 and Lot 1 of DP1226751 at 80 Twelve Mile Road and 6909 Goolma Road, Wuuluman, NSW. This includes the modification area.
Subject land	This refers to the area within the original BDAR (EMM 2023) that was subject to all proposed direct impacts.
Modification area	Area subject to all proposed direct impacts from the modified project.
The project	An inclusive term covering the entirety of the approved Bulabul Battery.
The site	The area comprising Lot 32 of DP 622471 and Lot 1 of DP1226751 at 80 Twelve Mile Road and 6909 Goolma Road, Wuuluman, NSW.

1.4 Assessment requirements

An assessment of the biodiversity values and the likely biodiversity impacts of the project was undertaken for the approved project in accordance with Section 7.9 of the NSW *Biodiversity Conservation Act 2016* (BC Act), the BAM 2020 and documented in a Biodiversity Development Assessment Report (BDAR).

As a BDAR is also required for this modification, section 7.17 of the BC Act requires that a BDAR is prepared to address the impact of the 'original development as proposed to be modified', not just impacts associated with the proposed modification. Further, considering the impacts of the project 'as proposed to be modified', a small area assessment cannot be applied to the modification.

1.5 Purpose of report

This BDAR assesses the project in accordance with the BAM (DPIE 2020a) and addresses matters relating to terrestrial biodiversity. The specific objectives of this assessment are to:

- describe biodiversity values of the modification area
- assess the likelihood that threatened species and communities (threatened biodiversity) listed under the BC Act and Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) could occur in the modification area
- document the strategies implemented to avoid and/or minimise impacts of the project on threatened biodiversity
- provide environmental safeguards to mitigate threatened biodiversity impacts during construction and operation
- assess residual threatened biodiversity impacts, after avoidance and minimisation strategies have been implemented
- identify additional credit requirements associated with impacts within the modification area.

This report meets the minimum information requirements for BDARs as set out in Appendix K of the BAM (DPIE 2020a).

1.6 Information sources

1.6.1 Publications and databases

In order to provide context for the project, information about flora and fauna species, populations, communities and habitats from the locality (generally within 10 km) was obtained from the following publications and databases:

- NSW BioNet (DPE 2025a) for:
    - Atlas of NSW Wildlife for threatened species records
    - threatened species profiles
    - threatened biodiversity data collection (TBDC)
    - Vegetation Classification database for information on plant community types (PCTs)
- Commonwealth Department of Climate Change, Energy, the Environment and Water (DCCEEW) Protected Matters Search Tool (PMST) (DCCEEW 2025a) for Matters of National Environmental Significance (MNES) likely to occur within the study area
- Commonwealth DCCEEW Species Profile and Threats Database (DCCEEW 2025b)
- New South Wales Flora Online (PlantNET) (Royal Botanic Gardens and Domain Trust 2025)
- Register of Areas of Outstanding Biodiversity Value (AOBV) (DPE 2025b).

1.6.2 Other relevant reports

This BDAR has been prepared with reference to other technical reports that were prepared within the locality. The other relevant reports referenced in this BDAR are listed below:

- Wellington South BESS Biodiversity Development Assessment Report (EMM 2023) (original BDAR)
- Wellington Solar Farm Environmental Impact Statement (NGH 2017)
- Wellington North Solar Plant Environmental Impact Statement (NGH 2018)
- Orana BESS Biodiversity Development Assessment Report (NGH 2023).

1.6.3 Spatial data

Base map data was obtained from Department of Finance, Services and Innovation (DFSI) NSW databases, with cadastral data obtained from DFSI digital cadastral database. Mapping for stream orders was obtained from the NSW Department of Primary Industries (DPI).

The following spatial datasets were utilised during the development of this report:

- Michell Landscapes Version V3.1 (OEH 2017)
- Interim Biogeographic Regionalisation of Australia (IBRA) Version 7 (DoEE 2018)
- NSW State Vegetation Type Map (SVTM) vC1.1.M1.1 (DPE 2022a)
- Six Maps (NSW Government Spatial Services 2025)

Other relevant datasets were accessed via the following viewers:

- NSW SEED (DPIE 2023).

Mapping undertaken during the site assessment was conducted using a hand-held GPS unit, mobile tablet computers running ArcGIS Field Maps™ and Survey123 for ArcGIS™ and aerial photo interpretation. Accuracy is subject to accuracy of GPS devices, generally ± 5 m. Mapping has been produced using a Geographic Information System (GIS; ArcGIS 10.8.1).

Spatial data relevant to this BDAR will be provided to NSW Conservation Programs, Heritage and Regulation Group (CPHR) and NSW Department of Planning, Housing and Infrastructure (DPHI) following lodgement of the BDAR.

1.6.4 Imagery

Imagery relied upon in this assessment include those sourced from:

- SIX Maps Viewer (Department of Customer Service – Spatial Services)
- ESRI – map service layer (Esri, Maxar, Earthstar Geographics, and the GIS User Community)
- MetroMap (Aerometrex 2025).

2 Legislative context

This chapter provides a brief outline of the key biodiversity legislation and government policy considered in this assessment.

2.1 Commonwealth legislation

2.1.1 Environmental Protection and Biodiversity Conservation Act 1999

The EPBC Act provides a legal framework to protect and manage nationally and internationally important flora, fauna, ecological communities, heritage places and water resources which are defined as MNES under the EPBC Act. These are:

- world heritage properties
- places listed on the National Heritage Register
- Ramsar wetlands of international significance
- threatened flora and fauna species and ecological communities
- migratory species
- Commonwealth marine areas
- the Great Barrier Reef Marine Park
- nuclear actions (including uranium mining)
- water resources, in relation to coal seam gas or large coal mining development.

Under the EPBC Act, an action that may have a significant impact on MNES is deemed to be a 'controlled action' and can only proceed with the approval of the Commonwealth Minister for the Environment and Water.

An action that may potentially have a significant impact on MNES is to be referred to Commonwealth DCCEEW for determination as to whether or not it is a controlled action. If deemed a controlled action the project is assessed under the EPBC Act, and a decision made as to whether or not to grant approval.

The project as modified is considered unlikely to have a significant impact on MNES. Assessment of relevant MNES is included in Section 7.1.

2.2 State legislation

2.2.1 Environmental Planning and Assessment Act 1979

The NSW *Environmental Planning and Assessment Act 1979* (EP&A Act) was enacted to encourage the consideration and management of impacts of proposed development or land-use changes on the environment and the community. The EP&A Act is administered by DPHI.

The EP&A Act provides the overarching structure for planning in NSW; however, is supported by other statutory environmental planning instruments (EPIs) including State Environmental Planning Policies (SEPPs). EPIs relevant to the natural environment are outlined further below.

i State Environmental Planning Policy (Biodiversity and Conservation) 2021

State Environmental Planning Policy (Biodiversity and Conservation) 2021 (Biodiversity and Conservation SEPP) was ratified on 1 March 2022 and consolidates, transfers and repeals provisions of numerous SEPPs, which includes the former State Environmental Planning Policy (Koala Habitat Protection), 2020 (Koala SEPP 2020) and State Environmental Planning Policy (Koala Habitat Protection) 2021 (Koala SEPP 2021). No policy changes have been made to the Koala SEPPs.

The former Koala SEPP 2020 and 2021 together aimed to encourage the proper conservation and management of areas of natural vegetation that provide habitat for Koalas to ensure a permanent free-living population over their present range and reverse the current trend of Koala population decline. In nine metropolitan Sydney local government areas (Blue Mountains, Campbelltown, Hawkesbury, Ku-Ring-Gai, Liverpool, Northern Beaches, Hornsby, Wollondilly) and the Central Coast LGA Koala SEPP 2021 applies to all land use zones. Outside of these areas Koala SEPP 2020 continues to apply to all land zoned RU1, RU2, and RU3.

The project is not a development application that requires approval from Council, and thus consideration of the Koala SEPP 2020 and Koala SEPP 2021 are not triggered. Nonetheless, consideration has been given to the potential occurrence and impacts upon the koala within this report.

2.2.2 Biodiversity Conservation Act 2016

The BC Act is the legislation responsible for the conservation of biodiversity in NSW through the protection of threatened flora and fauna species, populations and ecological communities. The BC Act, together with the Biodiversity Conservation Regulation 2017 (BC Regulation), established the Biodiversity Offsets Scheme (BOS).

The BOS includes establishment of the BAM (DPIE 2020a) for use by accredited persons in biodiversity assessment under the scheme. The purpose of the BAM (DPIE 2020a) is to assess the impact of actions on threatened species and threatened ecological communities (TECs), and their habitats and determine offset requirements.

The BAM (DPIE 2020a) sets out the requirements for a repeatable and transparent assessment of terrestrial biodiversity values on land in order to:

- identify the biodiversity values on land subject to proposed development
- determine the impacts of a proposed development, following all measures to avoid, minimise and mitigate impacts
- quantify and describe the biodiversity credits required to offset the residual impacts of proposed development on biodiversity values.

In addition, as the BDAR applies to a modification application, the BDAR must consider the previously approved and new impacts from the proposed modified development, including:

- measures to avoid and minimise impacts
- direct, indirect and prescribed impacts
- serious and irreversible impacts
- details of the previous biodiversity credit obligation from the original approved development that has been acquitted with documentary evidence.

This biodiversity assessment has been undertaken in accordance with the requirements of the BAM (DPIE 2020a).

2.2.3 *Fisheries Management Act 1994*

The *Fisheries Management Act 1994* (FM Act) contains provisions for the conservation of fish stocks, key fish habitat, biodiversity, threatened species, populations and ecological communities. It regulates the conservation of fish, vegetation and some aquatic macroinvertebrates and the development and sharing of the fishery resources of NSW for present and future generations. The FM Act lists threatened species, populations and ecological communities, key threatening processes (KTPs) and declared critical habitat. Assessment guidelines to determine whether a significant impact is expected are detailed in Section 220ZZ and 220ZZA of the FM Act.

Another objective of the FM Act is to conserve key fish habitat (KFH). These are defined as aquatic habitats that are important to the sustainability of recreational and commercial fishing industries, the maintenance of fish populations generally and the survival and recovery of threatened aquatic species. KFH is defined in Section 3.2.1 and 3.2.2 of the *Policy and Guidelines for Fish Conservation and Management* (DPI 2013).

The modification area does not contain KFH and is unlikely to have a significant impact on threatened aquatic species, populations, communities, habitats and KFH. Mitigation measures proposed to manage potential water quality impacts are provided in Section 6.3.

2.2.4 *Biosecurity Act 2015*

The primary objective of the *Biosecurity Act 2015* (Biosecurity Act) is to provide a framework for the prevention, elimination, and minimisation of biosecurity risks posed by biosecurity matter, dealing with biosecurity matter, carriers and potential carriers, and other activities that involve biosecurity matter, carriers, or potential carriers.

All plants in NSW are regulated by a general biosecurity duty to prevent, eliminate, or minimise any biosecurity risk they may pose. Any person who deals with any plant, who knows (or ought to know) of any biosecurity risk, has a duty to ensure the risk is prevented, eliminated, or minimised, so far as is reasonably practicable.

The Biosecurity Act places restrictions on the trade and movement of plants that harm the NSW environment, economy, and community. Those plants are called 'priority weeds' and the restrictions on trade and movement apply to all parts of the plant including cuts, cultivars, and hybrids. Priority weeds are any weeds identified in a local strategic plan that has been approved by the Minister under Division 2 of Part 4 of *the Local Land Services Act 2013*.

'State priority weeds' must not be sold anywhere in NSW. People that buy or sell state priority weeds in NSW are committing an offence under the Biosecurity Act that carries large penalties. The following legal instruments apply:

- Prohibited Matter – A person who deals with prohibited matter or a carrier of prohibited matter is guilty of an offence. The definition of 'dealing' is broad and includes having, buying, selling, moving, growing and disposal.
- Control Order – Requires all parts of the plant to be destroyed until eradicated.
- Mandatory Measure (Prohibition on Dealings) – Must not be imported into the State or sold.

'Regional priority weeds' should not be sold or moved in certain Local Land Services regions of NSW.

The provisions of the Biosecurity Act are discussed further in Section 7.2.1.

Part A

Stage 1 – Biodiversity values

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3 Landscape features

3.1 Landscape features

The landscape features described in the following sections are shown on Figure 3.1 and Figure 3.2.

3.1.1 Bioregions and landscapes

The project occurs across the NSW South Western Slopes IBRA region and Inland slopes IBRA subregion.

The buffer area occurs across two BioNet NSW Landscapes (formerly Mitchell Landscapes):

- Mullion Slopes
- Macquarie Alluvial Plains.

As most of the buffer area is in the Mullion Slopes BioNet NSW Landscape, this was the landscape unit used in this assessment.

3.1.2 Rivers, streams, estuaries and wetlands

The modification area is within the Macquarie-Bogan catchment. The Macquarie-Bogan catchment covers 74,800 km^2 of central-west NSW (DPIE n.d). The catchment originates from the Great Dividing Range to the east and generally flows north-west until it joins the Barwon River.

Wuuluman Creek occurs within the buffer area, north of the modification area. Wuuluman Creek flows to the west for 5.4 km and joins into the Macquarie River, which at its closest point occurs approximately 500 m to the south of the buffer area (Figure 3.1).

The buffer area also contains several waterways including:

- nine unnamed first-order water courses
- six unnamed second-order water courses
- two third-order water courses (one unnamed and Wuuluman Creek).

Most of these unnamed waterways flow into the Macquarie River to the south of the buffer area.

No watercourses and their associated riparian corridor buffers intersect the modification area (Figure 3.2). Nearby waterways lack aquatic habitat, filling with water only in periods of high and sustained rainfall. The first-order streams generally lack canopy or shrub stratum and consist of grasses whilst fragmented occurrences of native canopy vegetation occurs within the second-order stream riparian buffer.

The waterways adjacent to the modification area are not mapped as KFH (DPI 2021b), however the unnamed stream to the south which flows into the Macquarie River has been mapped as a waterway that could support the Purple-Spotted Gudgeon (*Mogurnda adspersa*) (DPI 2021a). Four additional fish distributions have also been mapped within the Macquarie River:

- Eel-tailed Catfish (*Tandanus tandanus)*
- Olive Perchlet (*Ambassis agassizii*)
- Silver Perch (*Bidyanus bidyanus*)
- Trout Cod (*Maccullochella macquariensis*).

No nationally important or RAMSAR wetlands have been mapped within the modification area or are located within the locality. No Coastal Wetlands defined under the State Environmental Planning Policy (Resilience and Hazards) 2021 (Resilience and Hazards SEPP) are mapped within the buffer area.

3.1.3 Connectivity

Native vegetation within the buffer area is considerably fragmented, often occurring as paddock trees and small patches of remnant woodland in addition to derived native grassland (Figure 3.1). The over-cleared landscape reflects an intensive history of land clearing for agricultural practices. Wooded vegetation within the buffer area consists of some larger but isolated extents of woodland and paddock trees, which provide some connectivity of the modification area for more mobile fauna to more vegetated woodland patches to the south and east, particularly toward the Macquarie River.

The watercourses within the buffer area support fragmented riparian corridors, which flow toward the Macquarie River. One unnamed first-order watercourse directly to the south-east of the modification area supports a larger patch of riparian and native vegetation (Figure 3.2). Despite this, connectivity to downstream riparian vegetation is limited due to historical tree clearance. Similarly, the unnamed second-order waterway which intersects the western corner of the approved development boundary has a sparse and largely cleared riparian corridor that restricts connectivity outside of the modification area.

3.1.4 Areas of geological significance

No areas of geological significance occur in the buffer area apart from cracks and crevices. There are no karsts, caves or cliffs within or nearby the modification area.

3.1.5 Areas of outstanding biodiversity value

There are no areas of outstanding biodiversity value, as declared by the NSW Minister for Energy and Environment, within the modification area.

3.2 Assessment of site context

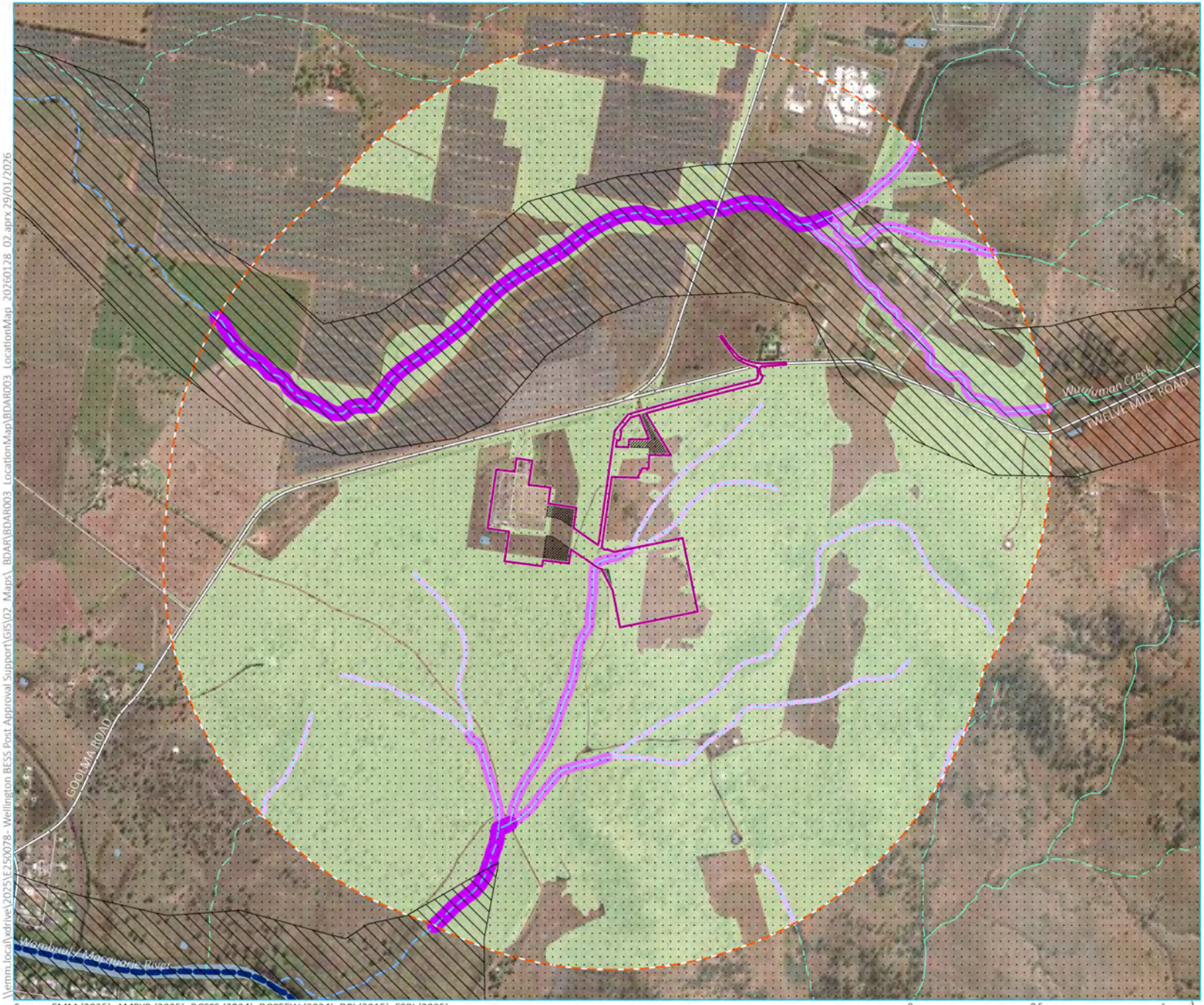
A review of NSW State Vegetation Type Map across the modification area and buffer area identified a range of native vegetation communities (DPE 2022a). To calculate native vegetation cover, these vegetation types were classified as native or non-native. The native vegetation extent was then assessed against aerial imagery to adjust for inconsistencies between the regional vegetation mapping and aerial imagery. Areas such as cropped farmland were excluded, whilst treed waterways and planted vegetation screens were included.

A 1,500 m buffer was placed around the modification area and the extent and percentage of native vegetation within this buffer area was then calculated in accordance with the BAM (DPIE 2020a). The extent of native vegetation cover based on this analysis is shown in Table 3.1.

Native vegetation cover within the buffer area is 61% (609.94 ha of native vegetation and 39.94 ha of exotic vegetation), as detailed in Table 3.1. Note that the buffer for the modified development boundary and approved development boundary fall within the same native vegetation cover class of 30-70%.

Table 3.1 Percentage of native vegetation cover

Native vegetation in buffer area (ha)	Buffer area (ha)	Approximate percentage of native vegetation in buffer area (%)	Cover class (%)
609.94	998.91	61	30–70



Location map

Bulabul Battery MOD1
Biodiversity Development Assessment Report
Figure 3.1

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KEY

- Modified development boundary
- Modification area
- Native vegetation cover

Strahler stream order

- 1st order
- 2nd order
- 3rd order

Riparian buffer

- 10 m
- 20 m
- 30 m

Existing environment

- Major road
- Minor road
- Vehicular track
- Waterbody
- Cadastral boundary

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Source: EMM (2025); AMPYR (2025); DCSSS (2024); DPI (2015); ESRI (2025)

0 250 500 m

GDA 1994 MGA Zone 55

N

Site map

Bulabul Battery MOD1
Biodiversity Development Assessment Report
Figure 3.2

EMM
creating opportunities

4 Native vegetation

An assessment of native vegetation within the modification area was undertaken in accordance with Section 4 of the BAM (DPIE 2020a) and is summarised within this chapter.

Note that the native vegetation assessed here is the additional native vegetation within the modification area to be impacted by the modification. For reference, the original vegetation mapping as approved by CPHR has been included within vegetation mapping.

4.1 Background review

A review of desktop information was undertaken to obtain a broad understanding of the regional vegetation types within the locality of the study area. This latest NSW State Vegetation Type Map vC1.1.M1.1 (DPE 2022a) was used as the basis for this review.

4.2 Methods

4.2.1 Field survey dates and tasks

Initial native vegetation mapping was undertaken within the modified development boundary on 7 to 9 May 2025. Vegetation mapping and BAM plots were then undertaken on 17 to 21 November 2025.

Vegetation was mapped in the field and involved the following survey techniques:

- random meander surveys on foot to ground-truth PCT boundaries and collect rapid data (or vegetation validation) points
- systematic plot-based floristic vegetation survey (i.e. 'BAM plots') consistent with Section 4.2.1 of the BAM (DPIE 2020a) to facilitate identification of the most likely PCTs as described in the BioNet Vegetation Classification database (DPE 2022c).

Vegetation mapping undertaken during the field studies was conducted using hand-held GPS units, and mobile tablet computers running ArcGIS Field Maps™ and Survey123 for ArcGIS™. Accuracy is subject to accuracy of GPS devices, generally ± 5 m.

Following fieldwork, the vegetation mapping was informed where required by systematic visual inspection of 2-dimensional digital aerial imagery. Vegetation mapping was undertaken using the Geographic Information System (GIS) platform ArcGIS™ 10.8.1.

PCTs were stratified into vegetation zones based on broad condition state, to meet the requirements of the BAM (DPIE 2020a) and better define TECs. Vegetation zones were delineated based on the definitions provided in Table 4.1, which are consistent with the original BDAR. There is only PCT 266 DNG low and PCT 266 DNG moderate within the modification area (Figure 4.1).

Table 4.1 Definitions used in delineation of vegetation zones

Condition class	Description
Moderate woodland	Forest and woodland with some disturbance, however most typical plant growth forms present, albeit in low density. Minimal establishment of exotic plants, with native grasses dominant within the lower stratum. Mature and hollow-bearing trees, suitable as animal nesting and breeding sites, are present at near-natural density. Moderate habitat value for arboreal and terrestrial animals. Moderate potential to support disturbance-sensitive plant species.
Low woodland	Small patches of trees with moderate disturbance of grazing and soil disturbance by livestock. The tree growth form is present but native species of shrubs are absent or occur at low density and low diversity. Exotic species encroachment is occurring; however, a moderate native ground cover of grasses and tussocks is dominant.
Poor woodland	Small patches of trees with high disturbance of grazing and soil disturbance by livestock. The tree growth form is present but native species of shrubs, forbs, grasses etc. are absent amongst dominant exotic species. Mature and hollow-bearing trees, suitable as animal nesting and breeding sites, are present but are isolated from substantial areas of woodland or forest and only likely to be available to mobile species such as birds and bats. Habitat value for arboreal and terrestrial animals is low. Minimal potential to support disturbance-sensitive plant species.
Good Derived Native Grassland (DNG)	Grassland derived from the clearing of native forest or woodland, that has been excluded from recent grazing and soil disturbance by livestock. High diversity of native grasses and herbs and a low level of establishment of exotic plants. Trees are absent or only represented by isolated individuals. A variety of native grasses and forbs dominate the ground layer. Exotic species occur at relatively low density and are mostly annual species and typically comprise of less than 40% of vegetation cover present. Habitat value for arboreal animals is low. Habitat value for terrestrial animals is moderate. Moderate potential to support disturbance-sensitive plant species.
Moderate DNG	Grassland derived from the clearing of native forest or woodland, that has been subject to grazing and soil disturbance by livestock, and a low to moderate level of establishment of exotic plants. Trees are absent or only represented by isolated individuals. A moderate variety of native grasses and forbs dominate the ground layer. Exotic species occur at relatively moderate density, are mostly annual species and typically comprise between 40–50% of vegetation cover present. Habitat value for arboreal animals is low. Habitat value for terrestrial animals is moderate. Moderate potential to support disturbance-sensitive plant species.
Low DNG	Grassland derived from the clearing of native forest or woodland, that has been subject to grazing and soil disturbance by livestock, and a high level of establishment of exotic plants. Trees are absent or only represented by a few isolated individuals. A low variety of native grasses and forbs. Exotic species occur at relatively high density, are mostly annual species and typically comprise between >50% of vegetation cover present. Habitat value for arboreal animals is negligible. Habitat value for terrestrial animals is low. Low potential to support disturbance-sensitive plant species.
Planted DNG	A native grassland derived from clearing of native forest or woodland which has also been planted with hedgerows of Old Man Saltbush (*Atriplex nummularia*). No canopy layer occurs. The shrub stratum is limited to the occurrence of Old man Saltbush. The ground stratum has a high diversity of native grass and forb species. Exotic species occur at low density at <1% cover. Moderate potential to support disturbance-sensitive plant species.
Non-native	Exotic or cropped patches of vegetation. No native present due to historical cropping practices. Highly unlikely to support native vegetation. The area is treeless and supports minimal flora or fauna habitat. Includes areas where recent cropping evident, due to monoculture of species and formed cropping tracks in the soil.

4.2.2 Vegetation integrity assessment

Following the stratification of vegetation zones within the study area, native vegetation integrity was assessed using data obtained via a series of plots, as per the methodology outlined in Section 4.2.1, 4.3.3 and 4.3.4 of the BAM (DPIE 2020a).

At each plot location the following was undertaken:

- one 400 m^2 plot, for assessment of composition and structure
- one 1,000 m^2 plot for assessment of function, including a series of five 1 x 1 m plots to assess average litter cover.

The assessment of composition and structure, based on a 400 m^2 plot, recorded species name, stratum, growth form, cover and abundance rating for each species present within the plot. Cover (foliage cover) was estimated for all species rooted in or overhanging the plot, and recorded using decimals (if less than 1%, rounded to whole number (1–5%) or estimated to the nearest 5% (5–100%). Abundance was counted (up to 20) and estimated above 20, and recorded using the following intervals: 1, 2, 3, 4, 5, 10, 20, 50, 100, 500, 1,000, 1,500, 2,000 et cetera.

The assessment of function recorded the number of large trees, the presence of tree stem size class, tree regeneration, number of trees with hollows and length of fallen logs, as well as leaf litter cover within the 1,000 m^2 plot and five 1 x 1 m subplots.

Five BAM plots associated with the two vegetation zones (i.e. moderate DNG and low DNG) within or adjacent to the modification area were utilised in the BAM calculator. Four plots were captured in 2025 as part of the preparation of this BDAR and one plot from the original BDAR was also used.

Datasheets are provided in Appendix A.

Surveys for flora and vegetation communities were completed under the authority of Scientific License (SL100409). A list of flora species was compiled for each plot and PCT. Records of all flora species will be submitted for incorporation into the Atlas of NSW Wildlife.

i Rainfall calibrated benchmarks

There was an annual rainfall of 730.7 mm prior to undertaking BAM plots for this report (BOM 2025). Based on the rainfall calibrated benchmarks for the sole PCT (PCT 266) within the modification area, this is consistent with average rainfall conditions for South West Slopes IBRA region (i.e. 480 to 748 mm). As such, average benchmark data was applied within the BAM Calculator (BAM-C).

4.3 Results

4.3.1 Vegetation description and environmental weeds

All of the vegetation within the modification area has been impacted by past land use, particularly with ongoing grazing. The modification area has been prone to a long history of livestock grazing. Both canopy and shrub stratum have been largely cleared, with native vegetation remaining as DNG only with scarce shrubs consisting primarily of Small-leaf Bluebush (*Maireana microphylla*). Small patches of intact woodland and paddock trees are located adjacent to the modification area, as well as exotic vegetation in the form of cropland.

Of the five BAM plots undertaken in and adjacent to the modification area, there was a total of 64 species (29 native and 35 exotic) recorded. All native species were grass and graminoid or forbs, except Small-leaf Bluebush (*Maireana microphylla*) being the only shrub recorded. No trees were recorded in the modification area.

Three high threat weeds were recorded within the modification area, which were Saffron Thistle (*Carthamus lanatus*), Great Brome (*Bromus diandrus*) and Blue heliotrope (*Heliotropium amplexicaule*).

4.3.2 Plant community types

PCT 266 – White Box grassy woodland in the upper slopes sub-region of the NSW South Western Slopes Bioregion was the only PCT recorded in the modification area (Table 4.2). When intact, PCT 266 is best described as a grassy woodland dominated by White Box (*Eucalyptus albens*). PCT 266 has broadly been impacted by previous agricultural practices such as cropping and grazing, which largely accounts for the over cleared (i.e. 94%) extent of this PCT. Areas of moderate DNG that align with PCT 266 were distinguished largely by the presence of nearby remnant White Box, which dominate this PCT.

There were two vegetation zones delineated within the modification area, which were a moderate and low condition DNG (Figure 4.1). Table 4.3 provides a description of these vegetation zones attributed to this PCT and justification for PCT selection and TEC alignment.

Table 4.2 Plant community types mapped within the modification area

Plant community type	Condition	Vegetation formation	Vegetation class	Percentage cleared	Direct impacts (ha)	Vegetation Integrity Score
PCT 266 – White Box grassy woodland in the upper slopes sub-region of the NSW South Western Slopes Bioregion	Moderate DNG	Grassy Woodlands	Western Slopes Grassy Woodlands	94	1.16	18.4
	Low DNG	Grassy Woodlands	Western Slopes Grassy Woodlands	94	1.54	7.9

Table 4.3 White Box grassy woodland in the upper slopes sub-region of the NSW South Western Slopes Bioregion

Attribute	Description
PCT ID	266
Common name	White Box grassy woodland in the upper slopes sub-region of the NSW South Western Slopes Bioregion
Vegetation formation, class	Grassy Woodlands, Western Slopes Grassy Woodlands
Description and condition	PCT 266 is characterised as a "*Tall woodland with trees to 25 m high dominated by White Box (Eucalyptus albens) often as the only tree species. Kurrajong (Brachychiton populneus subsp. populneus) is often present, particularly on limestone or rocky ground. Eucalyptus bridgesiana or Eucalyptus blakelyi or Eucalyptus melliodora may also be present as minor components of the canopy. The shrub layer is usually sparse or absent depending on grazing history or soil type. Floristic composition varies from north to south and on different aspects and soil types. Occurs between 300 - 600 m altitude in the 500 - 700 mm rainfall zone, most of which falls in winter. The soils are mainly red-brown earths, red or yellow podsols with some brown and black earths. The soils are derived from a variety of lithologies including shale, limestone, fine grained metamorphic rocks, granite and basalt. Species composition appears not to vary greatly across these lithologies. Mainly occurs on hillslopes in low hill or hill landform patterns in the NSW South-western Slopes Bioregion overlapping into the South Eastern Highlands Bioregion. Most of this community has been cleared and most of the extent of ground cover has been replaced by exotic annual plant species. Sheet erosion has lead to top soil loss on heavily grazed slopes. Small areas with an intact ground cover remain in cemeteries, roadsides and travelling stock reserves. While this community is poorly sampled in public reserves, some progress is being made in protecting remnants in non-reserve conservation measures. A highly threatened plant community due to ground cover change and clearing.*" (DPE 2025a) PCT 266 was the only PCT identified within the modification area. While no trees occur within the modification area, areas adjacent to part of the modification area are dominated by White Box (*Eucalyptus albens*), which is typical of PCT 266 (and consistent with PCT allocation for the approved project within the original BDAR). Other trees occur adjacent to the modification area including Kurrajong *(Brachychiton populneus subsp. populneus*). The occurrence of PCT 266 within the modification area has been subject to ongoing intensive grazing, which accounts for a low abundance and diversity of native species, especially in the mid stratum. Due to this, very few mid story species occur other than Small-leaf Bluebush (*Maireana microphylla*). The ground stratum was dominated by a combination of native and exotic species with low diversity. The dominant native grasses consistent with this PCT were Speargrass (*Austrostipa scabra*), Purple Wiregrass (*Aristida ramosa*), *Bothriochloa spp*. (Redgrass, Bluegrass) and Plains Grass (*Austrostipa aristiglumis*). There are few forb species present typical of a disturbed grassland but not necessarily diagnostic of PCT 266, which include Tarvine (*Boerhavia domini*), Corrugated Sida (*Sida corrugata*), Quena (*Solanum esuriale*), Smooth Senna (*Senna barclayana*) and Swamp Dock (*Rumex brownii*). Common exotic species include Saffron Thistle (*Carthamus lanatus*), Red-flowered Mallow (*Modiola caroliniana)*, Perennial Ryegrass (*Lolium perenne*), Soft Brome (*Bromus hordeaceus*), Great Brome (*Bromus diandrus*), Maltese Cockspur (*Centaurea melitensis*) and Purpletop (*Verbena bonariensis*).
Condition description	Across the modification area, the community has a variable cover of exotic species due to past and current disturbance associated with agricultural activities. The construction laydown area and easement (Figure 1.2) had a relatively high native groundcover, indicating a moderate condition DNG condition state; native groundcover ranged from 44 to 76% and exotic cover ranged from 24 to 56%. The substation bay (Figure 1.2) had a relatively high exotic cover, indicating a low condition DNG condition state; native groundcover ranged from 3.6% to 24.8% and exotic cover ranged from 43.5% to 73.4%. **266_DNG_moderate:** The canopy and mid story have been removed from this vegetation zone. Native and exotic groundcover species are present in similar proportions. **266_DNG_low:** The canopy and mid story have been removed from this vegetation zone. Exotic groundcover species are highly dominant, with little native ground cover.
Extent within modification area	2.7 ha, comprising: • 266_DNG_moderate: 1.16 ha • 266_DNG_low: 1.54 ha

Attribute	Description
Survey effort	Plots: • 266_DNG_moderate: PR01, BB03 and BAM11 • 266_DNG_low: PR03 and BB04 Note that BAM11 was undertaken as part of the original BDAR during the assessment of the approved project. It was located close to and in continuous vegetation (i.e. moderate DNG) as the additional easement. It has been applied here to improve measurement of vegetation integrity for this zone. At the time of the assessment of the modification, clearing to date for the approved project had constrained the remaining extent of this zone, so a plot was not possible to fit in the remaining area of the same paddock.
Justification of evidence and species used to identify the PCT	Several characteristics were used to identify PCT 266 including: • PCT 266 occurs within the NSW South Western Slopes Bioregion on slopes and crests in hill landform patterns- the bioregion and landform on which the site occurs • the dominant canopy species adjacent and in a comparable landscape and geological setting to the modification area are White Box, which is characteristic of PCT 266 • modification area falls within PCT 266 description of between 300 - 600 m altitude in the 500 – 700 mm rainfall zone • additional characteristic species within the modification area: – Wheatgrass, Common Wheatgrass (*Anthosachne scabra*) – Purple Wiregrass (*Aristida ramosa*) – Plains Grass (*Austrostipa aristiglumis*) – Redgrass (*Bothriochloa spp*.) – Windmill Grass (*Chloris truncata*) – Swamp Dock (*Rumex brownii*) – Ringed Wallaby Grass (*Rytidosperma caespitosum*) – A Fuzzweed (*Vittadinia cuneata*) • additional characteristic species adjacent to the modification area: – *Brachychiton populneus* subsp. *populneus* – Bear's Ear (*Cymbonotus lawsonianus*) – Bunch Wiregrass (*Aristida behriana*) – Red Grass (*Bothriochloa macra*) – Purple Wiregrass (*Aristida ramosa*) – Plains Grass (*Austrostipa aristiglumis*) – *Oxalis perennans* – Many-flowered Mat-rush (*Lomandra multiflora*) – Rock Fern (*Cheilanthes sieberi*) • the PCT often occurs as small patches or paddock trees with a weedy ground cover- the study area is fragmented and occurs as small patches • the Statewide Vegetation Map (DPE 2022a) maps PCT 266 across the study area • vegetation mapping that identified and justified PCT 266 as the only plant community immediately adjacent and in contiguous vegetation to the modification area.

Attribute	Description
Status	**BC Act** PCT 266 within the modification area represents the BC Act listed 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 (Box Gum Woodland) Critically Endangered Ecological Community (CEEC) as: • it occurs on fertile soils in the NSW South Western Slopes IBRA region, where the modification area is located • rainfall is 620.8 mm per year which is within the annual rainfall requirement of 500 – 800 mm (BOM 2025). • elevation is approx. 340 to 360 m ASL, which is within the elevation requirement of 170 to 1,200 m ASL • adjacent canopy is dominated by White Box (*Eucalyptus albens*), a representative canopy species which occurs commonly nearby to the modification area • although considerably degraded understory, the groundcover is still dominated by a few hardy native species. That is, there are some native grasses and herbs, which although occur at relatively low densities within and nearby the modification area, many of which are listed in the floristic description (e.g. *Anthosachne scabra*, *Aristida ramosa*, *Bothriochloa macra*, *Austrostipa aristiglumis*, *Austrostipa scabra*, *Einadia nutans*, *Sida corrugata*) • a shrub layer is largely missing (except scattered Small-leaf Bluebush (*Maireana microphylla*)), which is consistent with the description of this TEC having a sparse shrub layer • it has not been subject to intensive past cropping, noting that presence of cropping can rule out ability to restore this TEC. **EPBC Act** The EPBC Act Policy Statement for White Box – Yellow Box – Blakely's Red Gum grassy woodlands and derived native grasslands (DEH 2006) describes the listed community (under the EPBC Act) as a woodland or derived native grassland, characterised by a species-rich understorey of native tussock grasses, herbs and scattered shrubs, that is dominated by White Box, Yellow Box and/or Blakely's Red Gum. To be considered part of the listed community, remnants must also: • have a predominantly native understorey (i.e. more than 50% of the perennial ground layer must comprise native species) • be 0.1 ha or greater in size and contain 12 or more native understorey species (excluding grasses), including one or more identified important species, or • be 2 ha or greater in size and have either natural regeneration of the overstorey species or an average of 20 or more mature trees per ha. Using the above criteria, no areas of mapped PCT 266 within the modification area meet the criteria for White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland as listed under the EPBC Act (see Table 7.1 for detailed assessment).
Estimate of percent cleared value of PCT	94%
Patch size	>100 ha

Example photos



Photograph 4.1 **PCT 266 BAM plot (BB04): Low DNG vegetation zone**



Photograph 4.2 **PCT 266 BAM plot (PR03): Low DNG vegetation zone**



Photograph 4.3 **PCT 266 BAM plot (PR01): Moderate DNG vegetation zone**

Attribute	Description



Photograph 4.4 PCT 266 BAM plot (BB03): Moderate DNG vegetation zone

4.3.3 Vegetation integrity scores

A summary of the vegetation integrity score for each vegetation zone is provided in Table 4.4. The vegetation integrity score is based on the plot data which is compared with benchmark values for each vegetation type.

Table 4.4 Vegetation zone and impact summary

PCT ID	PCT name	Vegetation zones	Extents within modification area (ha)	Vegetation integrity score
266	White Box grassy woodland in the upper slopes sub-region of the NSW South Western Slopes Bioregion	266_DNG_moderate	1.16	18.4
		266_DNG_low	1.54	7.9

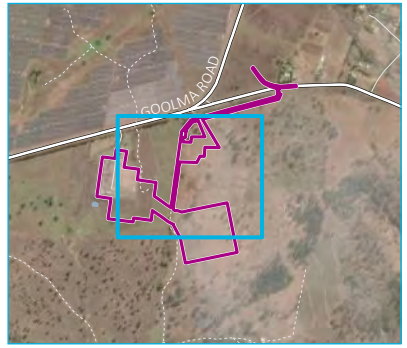
4.3.4 Threatened ecological communities

Candidate TECs were identified in Section 4.3.2 through review of the TEC associations in the BioNet Vegetation Classification database for PCTs recorded in the modification area. A summary is provided in Table 4.5 for TECs listed under the BC Act. Note that none of the vegetation zones within the modification area were consistent with any TECs listed under the EPBC Act (see Section 7.1.1).

Table 4.5 BC Act threatened ecological communities within the modification area

PCT ID	PCT Name	TEC Name	Vegetation zones consistent with TEC	Extent in modification area (ha)
266	White Box grassy woodland in the upper slopes sub-region of the NSW South Western Slopes Bioregion	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	266_DNG_moderate 266_DNG_low	2.7





KEY

- Modified development boundary
- Modification area
- BAM plot

Existing environment

- Major road
- Minor road
- Vehicular track

Plant community type

PCT 266 | White Box grassy woodland in the upper slopes sub-region of the NSW South Western Slopes Bioregion

- DNG (moderate)
- DNG (low)

Both vegetation zones are consistent with 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 Ecological Community.

Source: EMM (2026); AMPYR (2025); DCSSS (2024); DPI (2015); ESRI (2026)

0 100 200 m

GDA 1994 MGA Zone 55

N

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Plant community types and vegetation zones

Bulabul Battery MOD1
Biodiversity Development Assessment Report
Figure 4.1

EMM
creating opportunities

5 Threatened species

5.1 Threatened species habitat

The modification area has an extensive history of use for agricultural purposes, particularly for cropping and grazing. As a result, the modification area provides limited connectivity for fauna. Fauna habitat features within the modification area are limited, providing habitat primarily for ground dwelling fauna and foraging habitat for highly mobile fauna. Due to the high intensity of agriculture within and adjoining the modification area, these habitat features are largely degraded, fragmented and disconnected from any high value habitat.

Habitat features available for highly mobile fauna within the modification area are:

- small areas of rocky habitat (Photograph 5.1). These areas include surficial, scattered rock that may be suitable for some grassland associated reptiles
- grasslands would provide foraging resources for granivorous birds
- one culvert (approx. 30 cm diameter pipe culvert) was recorded within the modification area (Photograph 5.2). This was checked for evidence of bat utilisation, however, no evidence for this was found.

Habitat features available for highly mobile fauna nearby the modification area are:

- several scattered White Box located adjacent to the modification area that could provide habitat for arboreal mammals and hollow-dependent birds (Photograph 5.3). Hollows in these nearby habitat trees are important breeding and roosting habitat for hollow-dwelling fauna, like microbats and birds, with species having different requirements for hollow diameter and height off the ground. Most of the hollows recorded nearby were categorised as small (<5 cm diameter) or medium (5–20 cm diameter) and were more than 6 m off the ground
- remnant woodland and scattered trees adjacent to the modification area would be temporarily utilised by fauna species which may utilise the mature trees and associated mistletoe to forage by nectivorous species. Note that a lack of floral diversity (i.e. White Box only) is likely to provide foraging resources for one flowering season only, rather than providing year-round foraging resources
- an additional six culverts were located nearby along Goolma Road and internal roads adjacent to Goolma Road. These were checked for evidence of bat utilisation, however, no evidence for this was found
- waterways within the study area are highly degraded due to stock access, vegetation clearing and weed encroachment (Photograph 5.4). These waterways have a sparse cover of *Juncus* sp. and lack developed aquatic habitat suitable for threatened amphibians.

Note that the modification area lacks a mid-storey, whilst the groundcover consists of native and exotic grasses and forbs. Woody debris and leaf litter are scarce to absent. No large stick nests were observed within the modification area or nearby during field survey.



Photograph 5.1 Scattered rock habitat within the modification area



Photograph 5.2 Culvert along Goolma Road within proximity of the modification area



Photograph 5.3 White Box with a suitable hollow for Superb Parrot within the study area



Photograph 5.4 Ephemeral waterway south of the modification area

5.2 Ecosystem credit species

Ecosystem credit species are threatened species that can be reliably predicted to use an area of land based on habitat surrogates. For the purposes of the BAM (DPIE 2020a), ecosystem credit species are deemed to be offset through the habitat surrogates (PCTs) in which they occur.

A list of ecosystem credit species predicted to occur within the study area is provided in Table 5.1. The potential for these species to occur within the modification area was assessed in accordance with Section 5.2.2 of the BAM (DPIE 2020a).

Table 5.1 Ecosystem credit species assessment

Scientific name	Common name	Sensitivity to gain	Habitat/geographic constraint from the TBDC	Justification for exclusion
Anthochaera phrygia	Regent Honeyeater (Foraging)	High	-	Excluded. There are no trees within the modification area (see Section 4).
Aphelocephala leucopsis	Southern Whiteface	Low	-	Not excluded
Artamus cyanopterus cyanopterus	Dusky Woodswallow	Moderate	-	Not excluded
Callocephalon fimbriatum	Gang-gang Cockatoo (Foraging)	Moderate	-	Excluded. There are no trees within the modification area.
Calyptorhynchus lathami lathami	South-eastern Glossy Black-Cockatoo (Foraging)	High	• Presence of *Allocasuarina* and *Casuarina* species	Excluded. There are no trees within the modification area, including *Allocasuarina* or *Casuarina* spp.
Chthonicola sagittata	Speckled Warbler	High	-	Excluded. There are no trees within the modification area.
Circus assimilis	Spotted Harrier	Moderate	-	Not excluded
Climacteris picumnus victoriae	Brown Treecreeper (eastern subspecies)	High	-	Excluded. There are no trees within the modification area.
Daphoenositta chrysoptera	Varied Sittella	Moderate	-	Excluded. There are no trees within the modification area.
Dasyurus maculatus	Spotted-tailed Quoll	High	-	Not excluded
Falco subniger	Black Falcon	Moderate	-	Not excluded
Falsistrellus tasmaniensis	Eastern False Pipistrelle	High	-	Excluded. There are no trees within the modification area.
Glossopsitta porphyrocephala	Purple-crowned Lorikeet	High	-	Excluded. There are no trees within the modification area.
Glossopsitta pusilla	Little Lorikeet	High	-	Excluded. There are no trees within the modification area.
Grantiella picta	Painted Honeyeater	Moderate	• Mistletoes present at a density of greater than five mistletoes per hectare	Excluded. There are no trees (and hence mistletoe) within the modification area.

Scientific name	Common name	Sensitivity to gain	Habitat/geographic constraint from the TBDC	Justification for exclusion
Haliaeetus leucogaster	White-bellied Sea-Eagle (Foraging)	High	• Waterbodies; Within 1 km of a rivers, lakes, large dams or creeks, wetlands and coastlines	Excluded. Habitat constraint absent. That is, the modification area is over 1 km from suitable waterbodies for foraging by White-bellied Sea-Eagle. The nearest suitable waterbody is Macquarie River, approximately 2 km south-west of the modification area at its nearest point. Although Wuuluman Creek is a third order tributary within approx. 1 km of the modification area, it is highly ephemeral and lacks surface water except during episodes of high rainfall. Further, there are no trees within the modification area which are required to support breeding. Further, no suitable stick nests were found in trees nearby the modification area.
Hieraaetus morphnoides	Little Eagle (Foraging)	Moderate	-	Not excluded
Hirundapus caudacutus	White-throated Needletail	High	-	Not excluded
Lathamus discolor	Swift Parrot (Foraging)	Moderate	-	Excluded. There are no trees within the modification area.
Lophoictinia isura	Square-tailed Kite (Foraging)	Moderate	-	Not excluded
Melanodryas cucullata cucullata	South-eastern Hooded Robin	Moderate	-	Not excluded
Melithreptus gularis gularis	Black-chinned Honeyeater (eastern subspecies)	Moderate	-	Excluded. There are no trees within the modification area.
Miniopterus orianae oceanensis	Large Bent-winged Bat (Foraging)	High	-	Excluded. There are no trees within the modification area.
Neophema pulchella	Turquoise Parrot	High	-	Not excluded
Nyctophilus corbeni	Corben's Long-eared Bat	High	-	Not excluded
Petaurus australis	Yellow-bellied Glider	High	-	Excluded. There are no trees within the modification area.
Petroica boodang	Scarlet Robin	Moderate	-	Not excluded
Petroica phoenicea	Flame Robin	Moderate	-	Not excluded
Polytelis swainsonii	Superb Parrot	Moderate	-	Not excluded
Pomatostomus temporalis temporalis	Grey-crowned Babbler (eastern subspecies)	Moderate	-	Not excluded

Scientific name	Common name	Sensitivity to gain	Habitat/geographic constraint from the TBDC	Justification for exclusion
Pteropus poliocephalus	Grey-headed Flying-fox	High	-	Excluded. There are no trees within the modification area.
Saccolaimus flaviventris	Yellow-bellied Sheathtail-bat	High	-	Not excluded
Stagonopleura guttata	Diamond Firetail	Moderate	-	Not excluded

5.3 Species credit species

5.3.1 Candidate species assessment

In accordance with Step 3 (Section 5.2.3 of BAM (DPIE 2020a)), a field assessment of habitat constraints and microhabitats was undertaken in the field to determine the suitability of habitat within the modification area for:

- candidate species (species credit species associated with specific geographic and habitat feature constraints)
- species predicted to occur by the EPBC Act Protected Matters Search Tool.

Candidate species predicted by the BAM-C are shown in Table 5.2. An assessment of the geographic and landscape constraints has been provided for each species, with a justification provided where species have been excluded, in accordance with Steps 1 to 3 (Section 5.2.1 to 5.2.3) of the BAM (DPIE 2020a).

Table 5.2 Candidate species credit assessment

Scientific name	Common name	Habitat constraint from the TBDC	Habitat/geographic constraint present in the disturbance footprint? (Step 2)	Suitable microhabitats present and habitat not degraded? (Step 3)	Candidate species?	Justification	Sensitivity to gain class	BC Act status	EPBC Act status
Acacia ausfeldii	Ausfeld's Wattle	• Footslopes and low rises on sandstone	Yes. Variable sedimentary and volcanic rock, where sandstone occurs.	No	No	Habitat is too degraded. Species associates with eucalypt woodland (Royal Botanic Gardens and Domain Trust 2025), which has been cleared within the modification area through a long history of livestock grazing. Within the modification area, there is no shrub layer present. Further, no Acacia spp. were recorded at all throughout the modification area when undertaking threatened plant surveys nor when undertaking floristic surveys within BAM plots. This is consistent with the approved project where potential habitat that is contiguous and comparable in composition to the modification area were identified in the original BDAR as being too degraded, which was accepted by CPHR as a justification for removing *Acacia ausfeldii* as a candidate species.	High	V	-
Ammobium craspedioides	Yass Daisy	NA	No. Geographic constraint to south of Cowra.	NA	No	Geographic constraint absent. The modification area is north of Cowra. Note that CPHR accepted that geographic constraints for this species were lacking for the Approved project.	High	V	V
Anthochaera phrygia	Regent Honeyeater (Breeding)	• As per Important Habitat Map	No	No	No	The modification area is not a mapped important area. Note that CPHR accepted that habitat constraints for this species were lacking for the Approved project.	High	CE	CE
Aprasia parapulchella	Pink-tailed Legless Lizard	• Rocky areas, or within 50 m of rocky areas	Yes	Yes	Yes	Habitat constraint present. The modification area contains areas of Box Gum Woodland DNG with partially buried and scattered rocks.	High	V	V
Burhinus grallarius	Bush Stone-curlew	• Fallen/standing dead timber including logs	Yes	No	No	Habitat is too degraded. The modification area lacks open forest and woodland with fallen timber that this species associates with. That is, there are no trees within the modification area. Further there are scarce logs, as indicated by no logs being recorded with BAM plots in the modification area.	High	E	-
Callocephalon fimbriatum	Gang-gang Cockatoo	• Hollow bearing trees: Eucalypt tree species with hollows at least 3 m above the ground and with hollow diameter of 7 cm or larger	No. But habitat constraint adjacent to modification area.	NA	Yes	Habitat constraint present. The modification area lacks trees, which this species may associate with as a hollow-dependent species. However, there are suitable hollow bearing trees adjacent to the modification area, which could be included in a species polygon for Gang Gang Cockatoo if found or assumed to be present. Hence, species retained as a candidate species.	High	E	E

Scientific name	Common name	Habitat constraint from the TBDC	Habitat/geographic constraint present in the disturbance footprint? (Step 2)	Suitable microhabitats present and habitat not degraded? (Step 3)	Candidate species?	Justification	Sensitivity to gain class	BC Act status	EPBC Act status
Calyptorhynchus lathami lathami	South-eastern Glossy Black-Cockatoo	• Living or dead tree with hollows greater than 15 cm diameter and greater than 8 m above ground	No. But habitat constraint adjacent to modification area.	NA	Yes	Habitat constraint present. The modification area lacks trees, which this species may associate with as a hollow-dependent species. However, there are suitable hollow bearing trees adjacent to the modification area, which could be included in a species polygon for South-eastern Glossy Black Cockatoo if found or assumed to be present. Hence, species retained as a candidate species. As part of the approved project, potential habitat that is contiguous and comparable in composition to the modification area was identified in the original BDAR as being too degraded due to a lack of Allocasuarina and Casuarina spp.. This was accepted by CPHR as a justification for removing *Calyptorhynchus lathami lathami* as a candidate species. Nevertheless, the precautionary principle has been applied for this species since feed trees need to be nearby but not necessarily directly adjacent to breeding habitat.	High	V	V
Euphrasia arguta	*Euphrasia arguta*	NA	No	No	Yes	Habitat constraint present.	High	CE	CE
Grevillea wilkinsonii	Tumut Grevillea	NA	NA	No	No	Habitat is too degraded. Species associates with remnant bushland on flood terraces and adjacent slopes (Royal Botanic Gardens and Domain Trust 2025), whilst the modification area has been cleared of bushland due to a long history of livestock grazing. Within the modification area, there is no shrub layer present. Further, no Grevillea spp. were recorded at all throughout the modification area when undertaking threatened plant surveys nor when undertaking floristic surveys within BAM plots. This is consistent with the approved project where potential habitat that is contiguous and comparable in composition to the modification area were identified in the original BDAR as being too degraded. This was accepted by CPHR as a justification for removing *Grevillea wilkinsonii* as a candidate species.	High	CE	CE
Haliaeetus leucogaster	White-bellied Sea-Eagle	• Living or dead mature trees within suitable vegetation within 1km of a rivers, lakes, large dams or creeks, wetlands and coastlines	No	NA	No	Habitat constraint absent. That is, the modification area is over 1 km from suitable waterbodies for foraging by White-bellied Sea-Eagle. The nearest suitable waterbody is Macquarie River, approximately 2 km south-west of the modification area at its nearest point. Although Wuuluman Creek is a third order tributary within 1 km of the modification area, it is highly ephemeral and lacks surface water except during episodes of high rainfall. Further, there are no trees within the modification area which are required to support breeding. Further, no suitable stick nests were found in trees nearby the modification area.	High	V	-

Scientific name	Common name	Habitat constraint from the TBDC	Habitat/geographic constraint present in the disturbance footprint? (Step 2)	Suitable microhabitats present and habitat not degraded? (Step 3)	Candidate species?	Justification	Sensitivity to gain class	BC Act status	EPBC Act status
Hieraaetus morphnoides	Little Eagle	• Nest trees – live (occasionally dead) large old trees within vegetation	No	No	No	Habitat constraint absent. That is, there are no trees within the modification area, which are required to support breeding. Further, no suitable stick nests were found in trees nearby the modification area.	Moderate	V	-
Keyacris scurra	Key's Matchstick Grasshopper	-	Yes		Yes	Habitat constraint present.	High	E	E
Lathamus discolor	Swift Parrot (Breeding)	• As per Important Habitat Map	No	NA	No	The modification area is not a mapped important area. Note that CPHR accepted that habitat constraints for this species were lacking for the approved project.	Moderate	E	CE
Lophoictinia isura	Square-tailed Kite	• Nest trees	No	NA	No	Habitat constraint absent. That is, there are no trees within the modification area, which are required to support breeding. Further, no suitable stick nests were found in trees nearby the modification area.	Moderate	V	-
Miniopterus orianae oceanensis	Large Bent-winged Bat (Breeding)	• Caves • Cave, tunnel, mine, culvert or other known structure known or suspected to be used for breeding including species records in BioNet with microhabitat code 'IC – in cave • Observation type code 'E nest-roost' • With numbers of individuals >500 • Or from the scientific literature	No	NA	No	Habitat constraint absent. There are no suitable natural or manmade structures suitable to support a maternity roost for Large Bent winged Bat. This species forms maternity roosts in large structures, capable of supporting up to 100 to 150,000 individuals (DPE 2025a). Although there are 7 culverts located adjacent to the modification area, these culverts are small (30-50 cm diameter and one new box culvert) pipe culverts lacking signs of microbat usage (i.e. no guano, urine stains or microbats sighted, whilst abundant spider webs also suggest no bat usage). Note that CPHR accepted that habitat constraints for this species were lacking for the approved project.	Very High	V	-
Myotis macropus	Southern Myotis	• Waterbodies; Waterbodies with permanent pools/stretches 3m or wider, including rivers, large creeks, billabongs, lagoons, estuaries, dams and other waterbodies, on or within 200m of the site.	No	NA	No	Habitat constraint absent. There are no permanent waterbodies within 200 m of the modification area.	High	V	-
Ninox connivens	Barking Owl	• Hollow bearing trees; a living or dead tree with a hollow greater than 20 cm diameter that occurs greater than 4 metres above the ground	No	NA	Yes	Habitat constraint absent. The modification area lacks trees, which this species associates with since this species requires tree hollows for breeding. Precautionary approach applied by retaining as suitable hollows adjacent to modification area.	High	V	-
Petaurus norfolcensis	Squirrel Glider	-	Yes	No	No	Habitat constraint absent. The modification area lacks trees, which this species may associate with as an arboreal species.	High	V	-

Scientific name	Common name	Habitat constraint from the TBDC	Habitat/geographic constraint present in the disturbance footprint? (Step 2)	Suitable microhabitats present and habitat not degraded? (Step 3)	Candidate species?	Justification	Sensitivity to gain class	BC Act status	EPBC Act status
Petaurus norfolcensis - endangered population	Squirrel Glider in the Wagga Wagga Local Government Area	-	No	No	No	Geographic constraint absent. Modification area is outside of the Wagga Wagga LGA. Habitat constraint absent. The modification area lacks trees, which this species may associate with as an arboreal species.	High	E	-
Petrogale penicillata	Brush-tailed Rock-wallaby	• Land within 1 km of rocky escarpments, gorges, steep slopes, boulder piles, rock outcrops or clifflines	No	No	No	Geographic constraint absent. There are no rocky escarpments, gorges, steep slopes, boulder piles, rock outcrops or clifflines within 1 km of the modification area. Note that CPHR accepted that habitat constraints for this species were lacking for the approved project.	Very High	E	V
Phascogale tapoatafa	Brush-tailed Phascogale	-	No	No	No	Habitat constraint absent. The modification area lacks trees, which this species may associate with as a primarily arboreal species.	High	V	-
Phascolarctos cinereus	Koala	• Presence of koala use trees – refer to Survey Comments field in TBDC.	No	No	No	Habitat constraint absent. The modification area lacks trees, which this species may associate with as a primarily arboreal species.	High	E	E
Polytelis swainsonii	Superb Parrot	• Hollow bearing trees; living or dead *E. blakelyi*, *E. melliodora*, *E. albens*, *E. camaldulensis*, *E. microcarpa*, *E. polyanthemos*, *E. mannifera*, *E. intertexta*, *E. bridgesiana* with hollows greater than 5cm diameter that are greater than 4m above ground or trees with a DBH of greater than 30cm	No. But habitat constraint adjacent to modification area.	No	Yes	Habitat constraint present. The modification area lacks trees, which this species may associate with as a hollow-dependent species. However, there are suitable hollow bearing trees adjacent to the modification area, which could be included in a species polygon for Superb Parrot if found or assumed to be present. Hence, species retained as a candidate species.	High	V	V

Scientific name	Common name	Habitat constraint from the TBDC	Habitat/geographic constraint present in the disturbance footprint? (Step 2)	Suitable microhabitats present and habitat not degraded? (Step 3)	Candidate species?	Justification	Sensitivity to gain class	BC Act status	EPBC Act status
Prasophylum sp. Wybong	*Prasophylum sp. Wybong*	-	Yes	No	No	A detailed floristic study of derived grasslands in the upper Hunter Valley (Bell 2021) concluded that *Prasophyllum petilum* syn. *Prasophyllum sp. Wybong* occurred within grasslands dominated by native grasses in terms of both diversity and abundance. This orchid was only recorded in two grassland types, Dichanthium/ Sporobolus/ Chloris Grassland and Aristida/ Cymbopogon Grassland. Most exotic species are annual forbs and grasses, with some number of perennial forbs (e.g. *Hypochaeris radicata*, *Taraxacum officinale*) also present. The grassland of the subject site is similar to known habitats of the orchids in terms of the most abundant native grass species, with presence of Aristida spp. grasses. However, grassland in the modification area differs to habitat reported by Bell (2021) in having exotic species co-dominant and a lower diversity and abundance of native species. This is consistent with the approved project where potential habitat that is contiguous and comparable in composition to the modification area were identified in the original BDAR as being too degraded. This was accepted by CPHR as a justification for removing *Prasophyllum sp. Wybong* as a candidate species.	Moderate	-	CE
Pteropus poliocephalus	Grey-headed Flying-fox	• Breeding camps	No	NA	No	Habitat constraint absent. No breeding camps within or nearby the modification area. Note that CPHR accepted that habitat constraints for this species were lacking for the Approved project.	High	V	V
Swainsona recta	Small Purple-pea	-	Yes	No	Yes	Habitat constraint present. Nevertheless, this species was discounted due to habitat degradation as part of the approved project, with CPHR accepting this justification for removing *Swainsona recta* as a candidate species. However, given the species could be surveyed alongside *E. arguta*, it was retained as a candidate species.	Moderate	E	E
Swainsona sericea	Silky Swainson-pea	-	Yes	No	Yes	Habitat constraint present. Nevertheless, this species was discounted due to habitat degradation as part of the approved project., with CPHR accepting this justification for removing *Swainsona sericea* as a candidate species. However, given the species could be surveyed alongside *E. arguta*, it was retained as a candidate species.	High	V	-

Scientific name	Common name	Habitat constraint from the TBDC	Habitat/geographic constraint present in the disturbance footprint? (Step 2)	Suitable microhabitats present and habitat not degraded? (Step 3)	Candidate species?	Justification	Sensitivity to gain class	BC Act status	EPBC Act status
Synemon plana	Golden Sun Moth	• Wallaby grass (*Rytidosperma* sp), Chilean needlegrass (*Nassella nessiana*) or Serrated Tussock (*Nassella trichotoma*)	No	NA	No	Geographic constraint absent. The modification area is north of Mid-Western Highway. Note that CPHR accepted that geographic constraints for this species were lacking for the approved project.	Moderate	V	V
Tyto novaehollandiae	Masked Owl	• Hollow bearing trees; a living or dead tree with a hollow greater than 20 cm diameter that occurs greater than 4 metres above the ground	No	NA	Yes	Habitat constraint absent. The modification area lacks trees, which this species associates with since this species requires tree hollows for breeding. Precautionary approach applied by retaining as suitable hollows adjacent to modification area.	High	V	-

5.3.2 Candidate species requiring further assessment

From the assessment in Table 5.2, the candidate species requiring further assessment are listed in Table 5.3.

Table 5.3 Candidate species requiring further assessment

Scientific name	Common name	BC Act listing	EPBC Act listing	Flora or fauna
Aprasia parapulchella	Pink-tailed Legless Lizard	V	V	Fauna
Callocephalon fimbriatum	Gang-gang Cockatoo	E	E	Fauna
Calyptorhynchus lathami lathami	South-eastern Glossy Black-Cockatoo	V	V	Fauna
Euphrasia arguta	*Euphrasia arguta*	CE	CE	Flora
Keyacris scurra	Key's Matchstick Grasshopper	E	E	Fauna
Ninox connivens	Barking Owl	V	-	Fauna
Polytelis swainsonii	Superb Parrot	V	V	Fauna
Swainsona recta	Small Purple-pea	E	E	Flora
Swainsona sericea	Silky Swainson-pea	V	-	Flora
Tyto novaehollandiae	Masked Owl	V	-	Fauna

5.3.3 Targeted survey method

Field data relevant to the BDAR assessment include survey efforts undertaken for the original BDAR and additional surveys across the modified area and surrounds. Note that targeted survey efforts undertaken for the approved project are valid as they are within 5 years of submission of this BDAR (i.e. the earliest data used to inform this current assessment was collected in November 2021).

At the time of survey in November and December 2025, part of the additional substation bay had already been impacted as part of the construction of Orana BESS (SSD-45242780) and therefore did not require further targeted surveys.

Method and effort of targeted surveys for candidate species are presented below.

i Targeted flora surveys

Targeted flora searches were conducted in accordance with *Surveying threatened plants and their habitat: NSW survey guide for the Biodiversity Assessment Method* (DPIE 2020b). Parallel field traverses were conducted at 10 m apart across suitable habitat in the study area; 10 m wide parallel transects are required for herb and form lifeforms in open vegetation. Targeted threatened flora surveys to inform the current assessment are provided in Table 5.4. Threatened flora survey effort within and nearby the modification area is shown in Figure 5.1.

Table 5.4 Targeted flora survey method

Candidate species for modification	Scientific name	Common name	BAM-C/TBDC survey period	Survey date	Project stage
Yes	*Euphrasia arguta*	-	Jan – March, Nov - Dec	13 to 16 December 2021 8 March 2023	Approved project
Yes	*Euphrasia arguta*	-	Jan – March, Nov - Dec	17 to 19 November 2025	Modification
Yes	*Swainsona recta*	Small Purple-pea	September - October	17 to 19 November 2025	Modification
Yes	*Swainsona sericea*	Silky Swainson-pea	September - October	17 to 19 November 2025	Modification

All targeted flora traverses were recorded using GPS and are shown in Figure 5.1.

ii Targeted fauna survey

Targeted fauna survey methods and effort are summarised in Table 5.5. Survey method and effort for candidate species is further discussed for each fauna group below. Targeted fauna survey effort is shown in Figure 5.2.

Table 5.5 Targeted fauna survey method for species credit species

Target species group	Candidate species for modification	Target species	Credit Type	Survey method	Recommended survey period	Survey date	Approved project and modification
Reptiles	Yes	Pink-tailed Legless Lizard (*Aprasia parapulchella*)	Species	• Habitat search • Habitat mapping and rock searches (2021 and 2023 only)	September to November[1.]	18 to 20 November 2021 9 March 2023 17 to 19 November 2025 16 to 18 December 2025	Approved project and modification
Microbats	No	*Miniopterus orianae oceanensis* (Large Bent-winged Bat (Breeding))	Species/ecosystem	• Habitat search	December to February	17 to 20 November 2025	Approved project and modification
Arboreal mammals	No	Squirrel Glider (*Petaurus norfolcensis*)	Species	• Arboreal trapping. • Spotlighting • Camera trapping	Year-round	13 to 17 December 2021	Approved project
	No	Brush-tailed Phascogale (*Phascogale tapoatafa*)	Species	• Spotlighting • Camera trapping	December to June	16 December 2021 to 25 January 2022	Approved project
	No	Koala (*Phascolarctos cinereus*)	Species	• Spotlighting • SAT searches	Year-round	14 to 15 December 2021	Approved project
Diurnal birds	Yes	Gang-gang Cockatoo (*Callocephalon fimbriatum*)	Species/ecosystem	• Transect and area searches • Targeted nest surveys	October to January	14 to 15 December 2021 17 to 19 November 2025 16 to 19 December 2025	Approved project and modification
	No	White-bellied Sea-Eagle *(Haliaeetus leucogaster)*	Species/ecosystem		July to December		Approved project and modification
	No	Little Eagle (*Hieraaetus morphnoides*)	Species/ecosystem		August to October		Approved project and modification
	No	Square-tailed Kite (*Lophoictinia isura*)	Species/ecosystem		September to January		Approved project and modification
	Yes	Superb Parrot (*Polytelis swainsonii*)	Species/ecosystem		September to November		Approved project and modification

Target species group	Candidate species for modification	Target species	Credit Type	Survey method	Recommended survey period	Survey date	Approved project and modification
Nocturnal birds	No	Bush-stone Curlew (*Burhinus grallarius*)	Species	• Spotlighting • Call playback	Year-round	14 and 15 December 2021 15 to 18 December 2025	Approved project and modification
	Yes	Barking Owl (*Ninox connivens*)	Species	• Stag watches	Year-round	28 and 29 June 2023 15 to 18 December 2025	Approved project and modification
	Yes	Masked Owl (*Tyto novaehollandiae*)	Species		Year-round	28 and 29 June 2023 15 to 18 December 2025	Approved project and modification
Invertebrates	Yes	Keys Matchstick Grasshopper (*Keyacris scurra*)	Species	• Transect searches	March to May; September to November	14 and 15 December 2022 19 to 20 November 2025	Approved project and modification

Notes: 1. TBDC states that expert report is now recommended. Note that at the time of the approved project, survey effort for this species was a valid method. For this reason, potential habitat was surveyed by considering rocky habitat within 50 m of the approved or modified development boundary.

a Reptiles

Habitat assessment and targeted surveys were undertaken for Pink-tailed Legless Lizard. Targeted surveys were undertaken during assessment of the approved project, when targeted surveys were a valid survey method (with the approach taken developed in consultation with CPHR), and state and federal guidelines ((DEC 2004); (DPE 2022b) and (DSEWPaC 2011a)). For the modification; however, the TBDC states that an expert report is now recommended. To inform the extent of potential habitat for Pink-tailed Legless Lizard, habitat mark-up was undertaken across the modification area to inform species polygons as part of this assessment. The overall effort to survey for Pink-tailed Legless Lizard is detailed in Table 5.6. The survey effort is shown in Figure 5.2.

Table 5.6 Methods and survey effort – reptiles

Method	Survey description	Survey effort
Habitat assessment and rock search	Initial surveys were conducted within study area in November 2021, based on the best available advice at the time (DEC 2004). All rocks within suitable habitat were searched over a 30 minute search period from 18 to 20 November 2021. The species was not observed. Based on advice from CPHR, additional targeted surveys were completed. Targeted surveys were conducted on 9 March 2023 and comprised of a detailed habitat assessment within the subject land to map rocky habitat (using Collector for ArcGIS™). Where visibility was limited (due to tall grasses), 10 m parallel transects were conducted, whilst random meander transects were completed where sight of rocky habitat was not restricted. Where possible, rocks were flipped and checked for the target species. Whilst mapping rocky habitat, the number of rocks flipped was recorded. The targeted survey was conducted from 7:30am to 11:20am. Within this time frame, weather was monitored to ensure the survey was below the required temperature. As there are known records adjacent to the west of the site (DPE 2025a), priority areas adjacent to this site were searched at the start of the survey. A 50 m buffer from the subject land (for approved project) was also searched (where possible).	**CPHR advice:** The following survey methodology is recommended: • Search success appears to be highest in spring and early summer on warm but not hot days – note that detection probability is increased after a period of rainfall extending over several days. • Restrict searches to an area of relatively homogeneous habitat within each site and a search beneath all rocks that can be turned is made. • Rock cover density rather than fixed area size determines a survey area, and 200 rocks need to be turned to be reasonably confident of determining the species' presence. • During summer months surveys are carried out in the mornings or on cloudy days (at least 6/8 cover) when soil temperatures beneath the rocks are not too high. • During late autumn surveys are carried out on clear sunny days as warming of the rocks appears to attract individuals to the soil surface beneath the rocks. **State guidelines** (DPE 2022b)**:** • Habitat surveys consist of diurnal rock searches undertaken by turning over suitably sized rocks in areas of suitable habitat. • Turn over a minimum of 200 suitably sized rocks for every 5 ha of suitable habitat ((DPE 2022b) and references therein). Suitably sized rocks are approximately: – 300 mm wide and 50 mm deep (DPE 2022 and references therein) – 100–150 mm wide, 120–220 mm long, 50–150 mm deep (DPE 2022 and references therein). • Undertake surveys in the 2 hours after sunrise and 2 hours before sunset on sunny days (<50% cloud cover). • Cease surveys once temperatures exceed 25°C. A total of 194 rocks were searched across 0.4 ha of rocky habitat within the study area. Further mapping of suitable rocky habitat in or within 50 m of the modification area were undertaken using the same approach on 17 to 19 November 2025 and 16 to 18 December 2025 to inform species polygons as part of this assessment. Note that the TBDC now states that a species expert is recommended rather than to undertake survey. For this reason, the above survey methods were not used to inform the modification assessment.

b Microbats

The survey effort for Large Bent-winged Bat did not progress beyond the stage of habitat assessment as no suitable breeding habitat for Large Bent-winged Bat was found within the modification area. This survey effort was done concurrently with targeted flora searches on 17 to 20 November 2025.

Microbat surveys for the Large Bent-winged Bat were undertaken for the modification in accordance with 'Species credit' threatened bats and their habitats guidelines (DPIE 2021).

To rule out breeding habitat from the modification area, the following survey methods were undertaken:

- broad landscape assessment, using aerial photo interpretation and GIS within a 2 km buffer of the modification area, looking for rocky areas containing caves, overhangs, escarpments, outcrops, crevices, boulder piles, old mines, tunnels, old buildings, or sheds; and
- a site inspection within the site and for a 100 m buffer of the site, for the above listed roosting features.

c Arboreal mammals

Although no threatened arboreal mammals were retained as candidate species for the modification as there are no trees within the modification area, targeted surveys within adjacent areas are included here to document the full breadth of survey effort relevant to the modified development boundary. During the assessment of the approved project, targeted surveys were undertaken for the following species:

- Squirrel Glider
- Brush-tailed Phascogale
- Koala.

Methods and survey effort applied to the approved project were developed in accordance with relevant guidelines ((DEC 2004), (DSEWPaC 2011b) and (Phillips and Callaghan 2011)). Methods and survey effort are outlined in Table 5.7. The survey effort is shown in Figure 5.2.

Table 5.7 Methods and survey effort – arboreal mammals

Method	Survey description	Survey effort
Arboreal trapping	Twenty Elliot B were placed at 2 m above the ground. Where possible, traps were placed 50 m apart on suitable trees within the subject land (approved project): • traps were baited with a mixture of peanut butter, rolled oats and honey • a mixture of water and honey was sprayed on each tree trunk • traps were checked early in the morning and closed for the day • traps were re-opened and rebaited in the late afternoon.	DEC (2004) requires 24 trap nights over 3-4 consecutive days per 50 ha of stratification unit, with replication for every additional 100 ha. Based on the above stratification units, this would equate to a minimum survey effort of 72 trap nights. Due to the small size of stratification units within the subject land, traps were placed in suitable habitat within and adjacent to the subject land. This included riparian vegetation and connected vegetation which extends outside of the subject land. Surveys were undertaken within the subject land and adjacent habitat over 4 nights, equating to 80 trap nights. The minimum survey effort requirement was met.

Method	Survey description	Survey effort
Spotlighting	Spotlight surveys were undertaken using handheld LED spotlights and included: • 1 km transects were undertaken by two observers (2 km total transect length) • observers moved at a speed of less than 1 km per hour (i.e. one hour for the 1 km transect) scanning vegetation and trees for animals using both spotlights • all animals observed were recorded. Spotlighting for arboreal mammals was done concurrently with nocturnal bird spotlighting surveys.	DSEWPaC (2011b) recommends two parallel transects per 5 ha site, while DEC (2004) recommends two transects per 200 ha of stratification unit, repeated across two nights. In line with DSEWPaC (2011b) and DEC (2004), a survey effort of 2 x 1 km transects was undertaken within the subject land. Two transects (1 km minimum distance) were completed across two nights, totalling 2 km in length.
Camera trapping	Ten arboreal camera traps were placed in areas of poor to moderate condition woodland where the species is most likely to occur. The camera traps were placed on suitable trees within and adjacent to the subject land : • traps were baited with a mixture of peanut butter, rolled oats and honey • a mixture of water and honey was sprayed on each tree trunk.	DEC (2004) has not described camera trapping survey effort. The TBDC states that for the Brush-tailed phascogale survey effort must be undertaken using baited cameras: • A baited canister with small holes and capped at either end, to limit bait theft by other species, or honey-water, sprayed very liberally in front of each camera. Cameras should be set at head height, or above, facing the branch or tree trunk where a honey-based bait has been placed. • Cameras must remain in place for a minimum of 4 weeks with cameras checked and baits replaced after 2 weeks. • A minimum of four cameras, independent of the size of the subject land, must be used for sites up to 1 ha, then an additional two cameras for every ha of potential habitat thereafter. • For 1 ha of suitable habitat within the subject land, this equates to 112 camera trap nights. As per the arboreal trapping, cameras were placed in suitable habitat within and adjacent to the subject land. This included riparian vegetation and connected vegetation which extends outside of the subject land. A total of 10 camera traps were installed across the subject land over 40 nights, equalling a total of 400 camera trap nights. The minimum survey effort requirement was met.
Spot Assessment Technique (SAT) searches	The SAT (Phillips and Callaghan 2011) was undertaken, as follows: • centre tree was located and marked • the 29 nearest trees to the centre tree were also identified • Koala faecal pellets were searched for beneath each of the 30 trees within a distance of 1 m • initial inspections were checked in undisturbed ground surface, followed by a more thorough inspection involving disturbance of leaf litter and ground cover (if no faecal pellets were initially detected) • an average of approximately two person minutes per tree were dedicated to the faecal pellet search.	Two SAT searches were undertaken within the subject land. Due to the fragmented landscape, not all of these trees were in connected patches. Some patches are linear, in small patches (groups of three) or isolated. Sixty trees in total were surveyed, both within and immediately adjacent to the subject land.

d Diurnal birds

Habitat assessment and targeted surveys were undertaken for the following threatened diurnal birds as part of the original BDAR and this assessment:

- Gang-gang Cockatoo
- Superb Parrot.

Although no threatened birds of prey were retained as candidate species for this assessment as there are no trees within the modification area (or stick nests located nearby the modification area), targeted surveys within adjacent areas are included here to document the full breadth of survey effort relevant to the study area. During the assessment of the approved project, targeted surveys were undertaken for the following species:

- White-bellied Sea Eagle
- Little Eagle
- Square-tailed Kite.

Bird survey methods and survey effort have been developed in accordance with relevant guidelines ((DEC 2004), (DSEWPaC 2010), TBDC and (DCCEEW 2025c)). Methods include a mix of transect and area searches, to record bird activity, and targeted nest searches. Methods and survey effort are outlined in Table 5.8. The survey effort is shown in Figure 5.2.

Table 5.8 Methods and survey effort – diurnal birds

Method	Survey description	Survey effort
Transect and area searches	• Land based area searches and transects. • Surveyors walked transects and conducted area searches within the subject land. • All calls and habitat features were investigated. • Birds observed or heard were recorded.	DEC (2004) has not resolved bird survey requirements and does not provide guidance on survey effort. The TBDC outlines that signs of breeding should be assessed (lone individuals identified during the breeding season or an occupied nest). If these are observed, potential nest trees should be identified. For the Superb Parrot, the TBDC states that breeding habitat can be identified by the presence of habitat features and observed nest, or two or more birds seen on site. DSEWPaC (2010) was reviewed for Superb Parrot survey efforts, which indicated a requirement of 12 hours over 4 days (3 hours per day) for sites less than 50 ha. Morning surveys are preferable (sunrise to 10 am). During the assessment of the approved project, five transect and area searches were conducted over two hours across the study area. An additional 4 daily x 2 hr survey transects were also undertaken within the first 4 hours of light during the surveys to inform this assessment. This was undertaken with the Gang Gang Cockatoo. Note that for the Superb Parrot, the minimum survey effort was not met because the species was observed flying over the subject land, confirming presence of the species and thus not requiring further survey. No survey requirements for the Gang-gang Cockatoo have been outlined by DEC (2004), DSEWPaC (2010) or the TBDC. It was concluded during the assessment for the approved project that five transects and area searches over two hours across the study area provided a thorough survey effort and would be adequate to discount presence. However, since the assessment for the approved project, draft BAM survey guidelines were released to survey for hollow-dependent bird surveys, including Gang Gang Cockatoo (DCCEEW 2025c). To avoid any uncertainty in the rigour of the assessment, the requirements of these draft guidelines was met by doing additional surveys which included 4 daily x 2 hr survey efforts within the first 4 hours of light. The minimum survey effort requirement was met.

Method	Survey description	Survey effort
Targeted nest searches	• Observers travelled across available habitat, seeking out habitat features including nest trees and hollows. • Suitable nest or breeding hollows were marked and observed for breeding activity.	DEC (2004) has not resolved nest search requirements and does not provide guidance on survey effort. DSEWPaC (2010) was reviewed and sympatric species survey efforts indicated 12 hours over 4 days (3 hours per day). Nest searches were carried out in conjunction with transect and area searches and spotlighting during the assessment of the approved project. Nest searches were undertaken in conjunction with hollow-bearing tree surveys for the assessment of the modification. A total of 4 hours was completed across three days for the assessment for the approved project, whilst an additional 4 hours was completed across 2 days for the assessment of the modification. This was considered adequate, due to the lack of trees within the modification area, relatively few trees and small size of potential habitat adjacent to the modification area. The minimum survey effort requirement was met.

e Nocturnal birds

Although no threatened nocturnal birds were retained as candidate species for the modification assessment as there are no trees (i.e. habitat for threatened owls) or logs (i.e. habitat for Bush-stone Curlew) within the modification area, targeted surveys within adjacent areas are included here to document the full breadth of survey effort relevant to the study area. Further, a conservative approach was applied to include additional threatened owl surveys as part of assessment of the modification due to close proximity to potentially suitable hollows. Hence, survey effort has been presented for the following species:

- Barking Owl
- Masked Owl.

Bird survey methods and survey effort were developed in accordance with DEC (2004) and the TBDC. Methods included call playback, spotlighting, targeted nest searches and hollow watches. Methods and survey effort are outlined in Table 5.9. The survey effort is shown in Figure 5.2.

Table 5.9 Methods and survey effort – nocturnal birds

Method	Survey description	Survey effort
Call playback and spotlighting	DEC (2004) recommends call playback and spotlighting are undertaken to target the Bush-stone Curlew. • Surveys were commenced with a 15 minute listening period. Calls were played for 30 seconds, followed by 4.5 minutes of listening. This 5 minute cycle was repeated three times. • Call playback was conducted at each end of the subject land, at the furthest points from the previous call playback survey. Call playback was only conducted for the Bush-stone Curlew. • This was followed by spotlighting on foot for one hour throughout the subject land. All observed fauna species were identified and recorded.	DEC (2004) recommends a number of survey methods for the Bush-stone Curlew including: • call playback – 2–4 km apart and conducted during the breeding season • day habitat search- flushing of Bush-stone Curlew by walking through potential habitat • spotlighting: by foot or from a vehicle driven in first gear. Based on survey requirements during the assessment of the approved project, and availability of suitable habitat, two call playback sites were surveyed in conjunction with 1 x 1 km spotlight transect over two consecutive nights. The minimum survey effort requirement was met.
Targeted nest searches	Targeted nest searches were conducted concurrently during the diurnal bird surveys. A search for potential breeding habitat for Bush-stone Curlew occurred.	As above (Table 5.8).

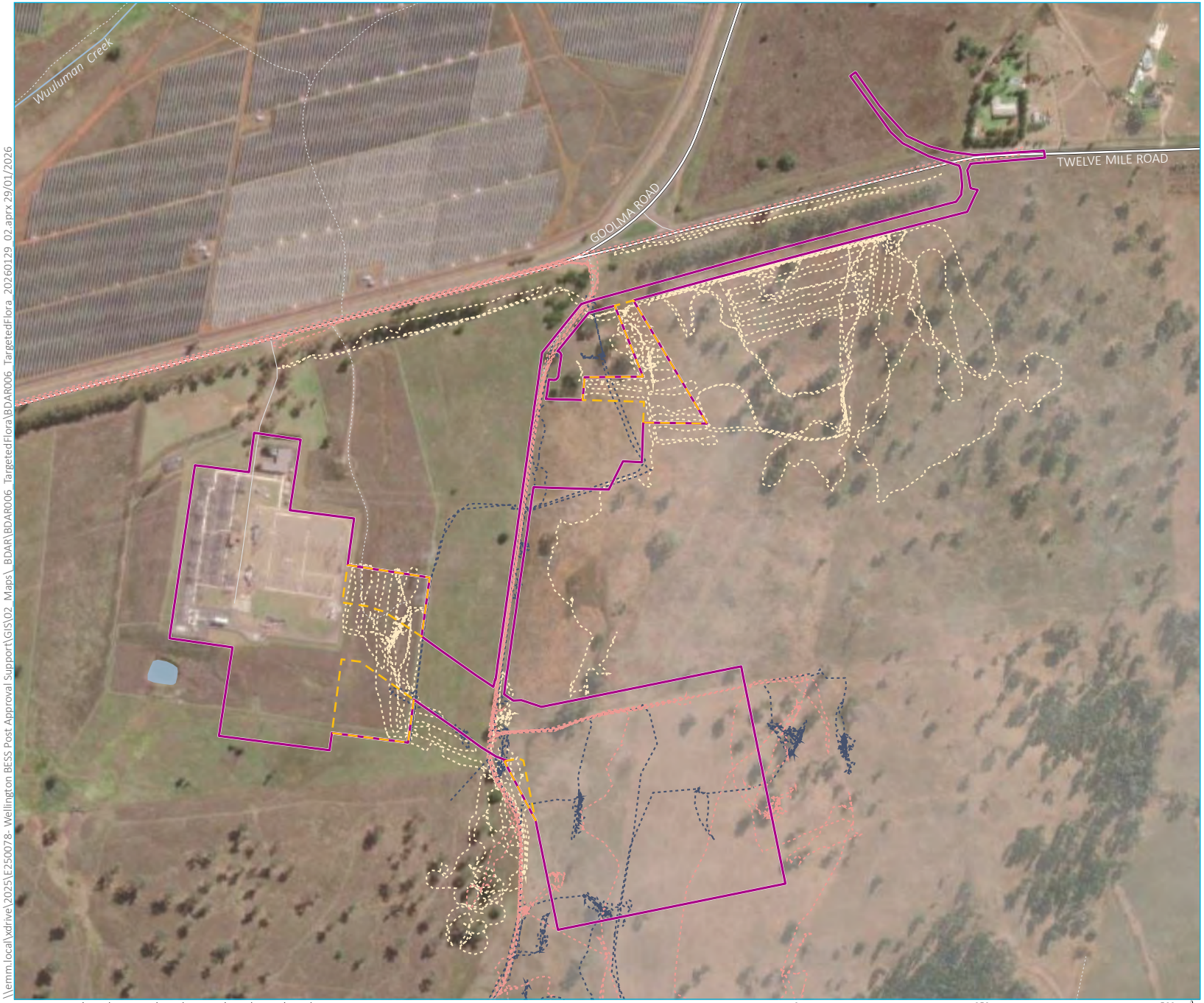
Method	Survey description	Survey effort
Hollow watches	DEC (2004) suggests call playback, but this should not be undertaken during the breeding season so as not to disturb breeding owls. DEC (2004) guidelines also recommend daytime habitat searches (for hollows and pellets) and stag watching (observe each hollow for 30 minutes prior to sunset and 60 minutes after sunset).	A total of seven hollow-bearing trees were considered suitable breeding habitat within 200 m of the modification area (i.e. dead or live tree with hollow >20 cm diameter that occurs >4 m above the ground). Note that no hollow-bearing trees are located within the modification area. Locations of suitable hollows are shown in Figure 5.3. In accordance with survey methodology during assessment of the approved project, suitable hollows were revisited at dusk and observed from a distance for a period of 90 minutes for any evidence of use by owls. These hollow watches were completed for two consecutive nights on 28 and 29 June 2023.
Call-playback	TBDC recommends using call playback, which involves listening and observing before call playback (10 min); evenly distributing call playback station (based on the modification area, 2 stations was considered sufficient); broadcast pre-recorded calls (e.g. single male, single female, duet and for masked owl, screech and chatter) for no more than 15 seconds followed by at least 30 seconds of listening time; at each station repeat the broadcast and listening sequence for 15 minutes for each target owl, unless the target owl is detected before 15 minutes expires, gradually increasing volume; Search for owls drawn in by the broadcast within a 1 hectare circular plot around each broadcast station using a spotlight for 15 minutes; record the direction of fly in and time to respond to playback of detected owls, to reduce multiple counts of the same owl at different sample stations; escalate sequence of calls for species, with the Masked Owl at the end of the sequence so that if birds respond with a single shriek the response is not obscured by further playback. Repeatedly sample at each survey station with up to 15 minutes of broadcast calls and listening sequences (as above), until an owl responds, or for at least 6 nights. Survey nights are best spread across multiple weeks.	An additional four nights targeted survey effort from 15 to 18 December 2025 was undertaken in accordance with current BAM survey methodology using the call playback method, as specified in the TBDC. This involved call playback at night with wind <29-38 km/hr and during dry weather following the stepwise process provided in survey comments in the TBDC for Barking Owl and Masked Owl. Note that since two nights of survey effort were undertaken using passive stag watching, which was the best practice method at the time of assessment of the approved project, four more survey nights are considered sufficient to rule out or confirm presence of these two threatened owl species. Further, the survey effort applied and temporal replication over multiple years is considered robust and to exceed the minimum survey effort, particularly since there are no trees within the modification area.

f Invertebrates

Targeted surveys were undertaken for Key's Matchstick Grasshopper during assessment of the approved and modified project. Methods and survey effort are outlined in Table 5.10. The survey effort is shown in Figure 5.2.

Table 5.10 Methods and survey effort- invertebrates

Method	Survey description	Survey effort
Transect searches	Targeted surveys were conducted within all native PCTs within the study area, primarily focused on derived native grasslands and open patches of native woodland (for assessment of the approved project). Surveys were conducted between 10:00am and 4:00pm to avoid the colder time periods of the day. Weather observations for the initial surveys on 14 and 15 December 2022 included a maximum temperature of 22˚C and 24˚C (BOM 2025). Weather during surveys undertaken on 19 to 20 November 2025 had a maximum of 33.2 and 35.3 (BOM 2025). No rain occurred during any monitoring event.	**CPHR advice** (EMM 2023)**:** • Survey between 10:00 am and 4:00 pm, on warm sunny days. Avoid wind in less active periods of August. • A slow meander through preferred habitat, slightly disturbing the vegetation to enhance detectability if present by encouraging movement. • Transects 5 m apart and up to 100 m long spatially covering all potential habitat. • Focus on open woodland (within approved development boundary only), derived native grassland and grassland that include relatively undisturbed Kangaroo Grass (*Themeda triandra*) and/or dense patches of Common Everlasting (*Chrysocephalum apiculatum*). Less likely in denser woodland with significant shading. Surveys were undertaken across the modification area on 14 and 15 December 2022 and 19 and 20 November 2025. The minimum survey effort requirement was met.



KEY

- Modified development boundary
- Modification area

Targeted flora survey tracks

- July 2021
- November 2021
- November 2025

Existing environment

- Major road
- Minor road
- Vehicular track
- Named watercourse
- Waterbody

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Source: EMM (2026); AMPYR (2025); DCSSS (2024); ESRI (2026)

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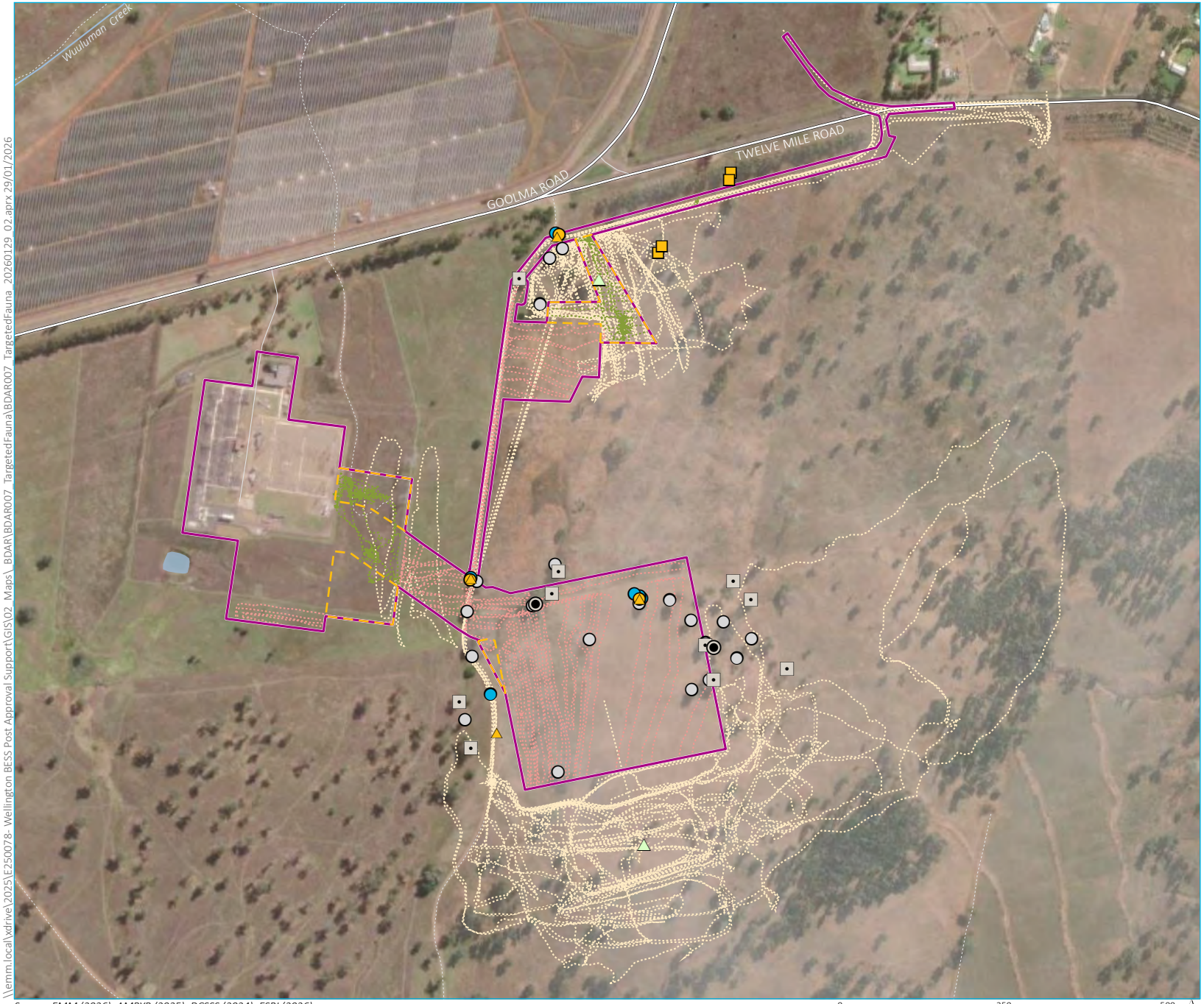
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Targeted flora survey effort

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Figure 5.1

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KEY

- Modified development boundary
- Modification area

Diurnal bird survey 2023
- Bird survey point

Mammal survey 2023
- SAT survey
- Camera trapping
- Arboreal Elliot trapping

Nocturnal survey 2023
- Call-playback
- Hollow watch
- Spotlight survey

Nocturnal survey 2025
- Call-playback

Matchstick grasshopper survey track
- December 2022
- November 2025

Diurnal bird survey
- December 2025

Existing environment
- Major road
- Minor road
- Vehicular track
- Named watercourse
- Waterbody

Source: EMM (2026); AMPYR (2025); DCSSS (2024); ESRI (2026)

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Targeted fauna survey effort

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Figure 5.2

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5.3.4 Targeted survey results

i Targeted flora searches

No targeted flora species were found during the surveys. This includes surveys undertaken across the study area within the approved and modified development boundary and the modification area.

ii Threatened fauna surveys

a Reptiles

Suitable rocky habitat for Pink-tailed Legless Lizard was recorded within 50 m of the modification area (Figure 5.3). In total, three patches of potential rock habitat for Pink-tailed Legless Lizard were recorded within 50 m of the modification area (i.e. within the species polygon buffer for this species).

Although targeted surveys failed to detect Pink-tailed Legless Lizard in the original BDAR, this species was assumed as present since there were recent records within proximity of the modification area.

Due to presence of suitable habitat in the modification area, with connectivity to the approved development boundary and areas where this lizard has been recorded, Pink Tailed Legless Lizard was assumed to be present for the purposes of this assessment.

b Microbats

The desktop analysis did not detect any caves, cliffs, crevices, overhangs, escarpments, or outcrops within 2 km of the modification area.

The habitat assessment detected one culvert within the modification area and an additional six culverts nearby (Figure 5.3; Photograph 5.2). No bats were observed to be roosting in the culverts and evidence of bat use was not recorded. The culverts were considered unsuitable for roosting and breeding habitat for Large Bent-winged Bat due to their relatively small size and smooth surfaces with no cracks to shelter in. Furthermore, there are no records of any maternity roost in proximity to the study area (DPE 2025a).

c Arboreal mammals

Although the study area lacks trees, no Koala or evidence of Koala were detected during spotlighting and SAT surveys in treed areas adjacent to the modification area, which were undertaken as part of the original BDAR. Further, there were no Squirrel Gliders or Brush-tailed Phascogale detected during arboreal trapping, spotlights or camera trapping undertaken for the original BDAR.

d Diurnal birds

Superb Parrot was the only threatened bird detected during targeted diurnal bird surveys for the approved and modified project.

The Superb Parrot was observed during diurnal bird surveys on multiple occasions in addition to an opportunistic record across 14 and 15 December 2021. Superb Parrot was not recorded during any other survey campaigns, including November and December 2025. Details of these observations are summarised in Table 5.11 and locations of detections are shown in Figure 5.3.

Table 5.11 Superb Parrot observation during targeted surveys

Date observed	Survey method	Number of individuals	Sex known?	Life stage
14 December 2021	Transect and area searches	4	Mixed sexes	Adult
14 December 2021	Transect and area searches	1	Female	Adult
14 December 2021	Transect and area searches	2	Unknown	Adult
15 December 2021	Opportunistic	1	Female	Juvenile

Due to the presence of two or more birds seen on site, it was assumed that suitable hollows present breeding habitat for Superb Parrot. However, no hollow-bearing trees were recorded within the modification area.

There were 11 suitable hollow bearing trees recorded within the 100 m species polygon buffer for Superb Parrot (i.e. hollows greater than 5 cm diameter that are greater than 4 m above ground or trees with a DBH of greater than 30 cm; Figure 5.3). No hollow-bearing trees were identified in the modification area.

There were 15 suitable hollow bearing trees recorded within the 200 m species polygon buffer for Glossy Black Cockatoo (i.e. hollows that are at least 8 m above the ground, in stems with a diameter of at least 30 cm, hollow diameter is at least 15 cm and stem angle is at least 45 degrees; Figure 5.3). No hollow-bearing trees were identified in the modification area.

e Nocturnal birds

Targeted surveys did not detect any evidence of Masked Owl, Barking Owl or Bush-stone Curlew.

f Invertebrates

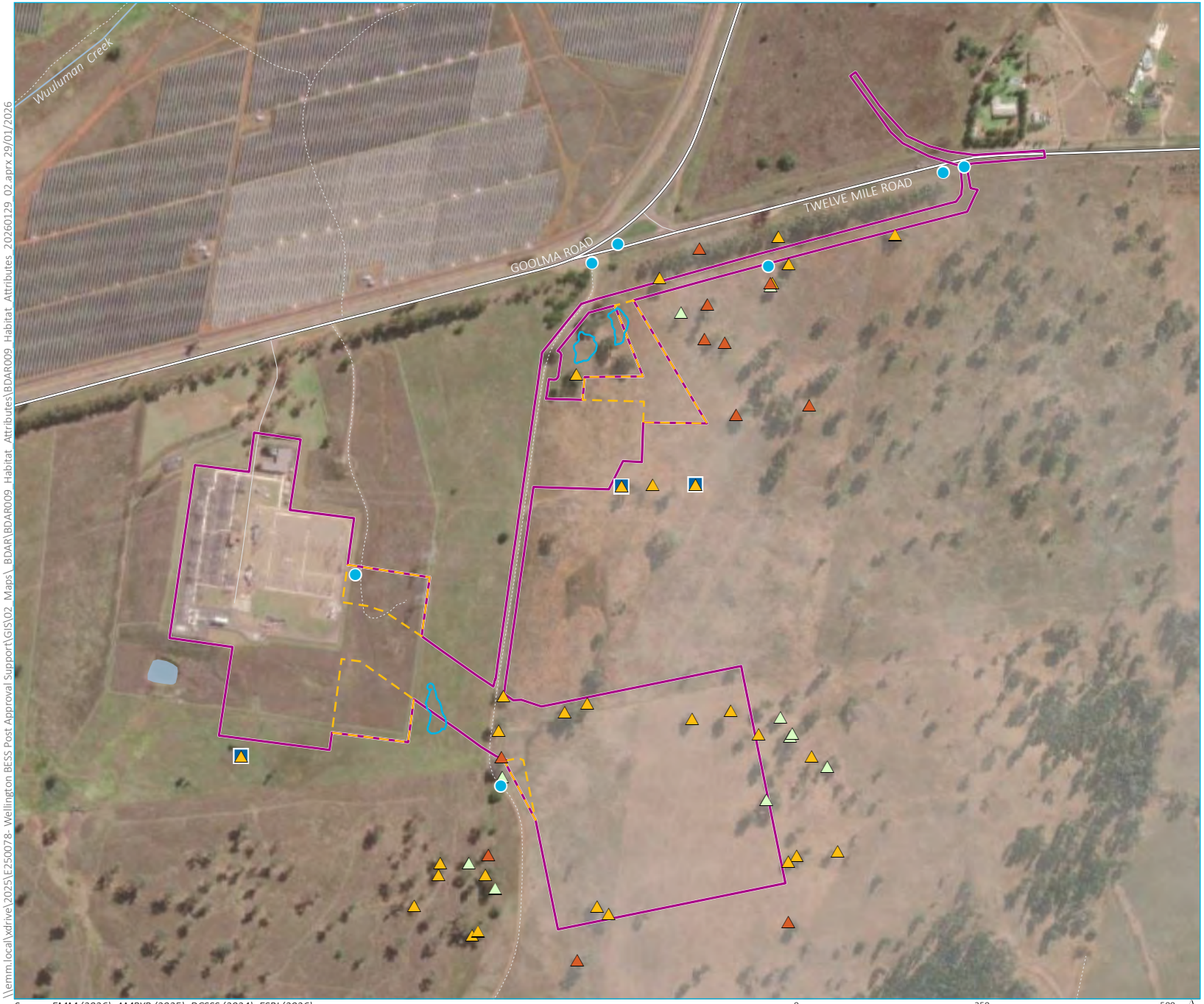
Key's Matchstick Grasshopper were not recorded during targeted surveys either within the approved or modified development boundary.

iii Candidate species presence, extent and habitat quality

Table 5.12 defines the presence (or absence) of candidate species in the modification area and habitat quality. The area of habitat impacted is provided for area-based species, noting there were no count-based candidate species detected. The area of habitat has been used to define the species polygon for area-based species, in accordance with Step 4 to 6 of the BAM (Section 5.2.4 to 5.2.6).

Table 5.12 Candidate species presence, extent and habitat quality

Scientific name	Common name	Step 4 – Determine candidate species presence/absence	Step 5 – Determine the area or count, and location of suitable habitat for a species credit species		Step 6 – Determine the habitat condition within the species polygon for species assessed by area	
			Individuals impacted (count-based species)	Area impacted (area-based species)	Associated vegetation zone/s	Vegetation integrity score
Aprasia parapulchella	Pink-tailed Legless Lizard	Assumed present	-	0.6	PCT266_DNG_moderate PCT266_DNG_low	18.4 7.9
Callocephalon fimbriatum	Gang-gang Cockatoo	Not recorded	-	-	-	-
Calyptorhynchus lathami lathami	South-eastern Glossy Black-Cockatoo	Assumed present	-	1.87	PCT266_DNG_moderate PCT266_DNG_low	18.4 7.9
Euphrasia arguta	*Euphrasia arguta*	Not recorded	-	-	-	-
Keyacris scurra	Keys Matchstick Grasshopper	Not recorded	-	-	-	-
Ninox connivens	Barking Owl	Not recorded	-	-	-	-
Polytelis Sansoni	Superb Parrot	Recorded	-	1.07	PCT266_DNG_moderate PCT266_DNG_low	18.4 7.9
Swainsona recta	Small Purple-pea	Not recorded	-	-	-	-
Swainsona sericea	Silky Swainson-pea	Not recorded	-	-	-	-
Tyto novaehollandiae	Masked Owl	Not recorded	-	-	-	-



KEY

- Modified development boundary
- Modification area
- Culvert
- Superb Parrot survey record
- Rocky habitat

Hollow-bearing tree

- < 5 cm
- 5- 20 cm
- > 20 cm

Existing environment

- Major road
- Minor road
- Vehicular track
- Named watercourse
- Waterbody

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Source: EMM (2026); AMPYR (2025); DCSSS (2024); ESRI (2026)

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Threatened species and habitat recorded

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Figure 5.3

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Part B

Stage 2 - Impact Assessment

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6 Impact assessment

This chapter identifies the potential impacts of the project on biodiversity values and the measures taken to avoid and minimise the impacts. Recommendations are also outlined to further avoid any residual impacts.

6.1 Potential direct and indirect impacts

6.1.1 Direct impacts

The modification will involve clearing of land and will therefore result in loss of native vegetation in affected areas.

A total area of approximately 2.70 ha of native vegetation of varying condition would be directly impacted by the modification. Although highly degraded, all of the vegetation to be impacted is consistent with BC Act listed White Box Yellow Box Blakley's Red Gum TEC.

The impact of the modification is in addition to the impact of 8.79 ha of native vegetation as assessed for the approved project. It is noted that approximately 0.9 ha of land within the approved development boundary (associated with part of the approved construction laydown area that cannot be used due to a transmission line easement) will no longer be impacted by the project (Figure 1.2). Credits for impacts to this area have already been retired; however, direct impacts to biodiversity values within this area will not occur as part of the project.

A summary of the impacts of the approved and modified project is provided in Table 6.1.

Table 6.1 Vegetation zone impact summary

PCT ID	PCT Name	TEC Name	Vegetation Zone	Direct impact in modified development boundary (ha)	Direct impact in approved development boundary (ha)	Direct impact for overall project (ha)
266	White Box grassy woodland in the upper slopes sub-region of the NSW South Western Slopes Bioregion	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.	PCT266_intact_moderate	0	0.12	0.12
			PCT266_intact_low	0	0.15	0.15
			PCT266_intact_poor	0	0.72	0.72
			PCT266_DNG_planted	0	0.70	0.70
			DNG_moderate	1.16	7.10	8.26
			DNG_low	1.54	0	1.54

6.1.2 Indirect impacts

Section 8.2 of BAM (DPIE 2020a) requires the assessment of indirect impacts on native vegetation, TECs and threatened species habitat.

Delineation of a project into different management zones allows for direct impacts (i.e. total loss of native vegetation and fauna habitat in a given area) and indirect impacts (e.g. decreasing condition in retained native vegetation and fauna habitat adjacent to direct impacts) to be quantified. The following section describes how the indirect impacts have been defined for the project. Mitigation measures have been provided in Section 6.3.3 to manage these indirect impacts.

The indirect impact area has been calculated using a 5 m buffer of the modification area. Due to the existing weed encroachment within the modification area, the nature of the proposed works and the flat slope associated with the modification area, a 5 m indirect impact buffer area was considered adequate. This is because weed encroachment is unlikely to be exacerbated or extend into areas which may be weed-free.

Without any measures to avoid, minimise or mitigate impacts, the project would result in the following indirect impacts on biodiversity:

- sedimentation and runoff impact to downstream vegetation during construction and operation of the project
- weed introduction and spread during construction and operation of the project
- disturbance from increased noise and dust levels resulting in disturbance of fauna species, and consequent abandonment of habitat, or changes in behaviour (including breeding behaviour).

A Biodiversity Management Plan (BMP) has been prepared in accordance with the conditions of consent for the approved project, which included review and endorsement by CPHR. As the modification is impacting similar biodiversity values in areas adjoining the approved project, this BMP would be updated and applied to the modification area. For reference, this BMP is provided in Appendix B.

i Sedimentation and runoff

Construction of the project may lead to erosion and sedimentation and potential reduction in water quality to the unnamed watercourse to the south of the modification area. During construction, sediment may be mobilised and transported by surface water during rainfall events, and potentially discharging into watercourses and drainage lines and potentially reducing water quality in downstream aquatic habitats and the Macquarie River. Increased suspended sediments can reduce light penetration into the water column, reducing photosynthesis of aquatic macrophytes, and decreasing dissolved oxygen levels.

Erosion and sediment control measures have been implemented during construction of the project to date, in accordance with the BMP, which includes strict controls to ensure sediment does not runoff into watercourses. These measures would also apply to the modification.

ii Weed introduction and spread

The project has the potential to facilitate dispersal of weed species. As the modification area contains high threat weeds and additional exotic species, weed spread has the potential to occur across the modification area. Uncontrolled movement of vehicles, equipment and personnel within the modification area is the key vector of transmission, in particular vehicles and equipment sourced from regions beyond the modification area which may also introduce new species. Many weed species thrive on ground disturbance and will rapidly colonise disturbed areas in advance of native species recolonisation.

Increased pest flora abundance has adverse impacts on native vegetation and biodiversity, as well as potential negative economic effects on local land uses.

Weed impacts have been mitigated during construction of the project to date through measures such as wash down protocols and weed containment measures, in accordance with the BMP. These measures would also apply to the modification.

iii Noise and dust disturbance

Noise may adversely affect fauna by interfering with communication (e.g. territorial bird song), masking the sound of predators and prey, causing avoidance reactions and displacement from habitat. Noise will be generated by the project through the use of equipment and vehicles.

Increased dust from vegetation clearing and vehicle movements during construction has the potential to temporarily and locally impact flora and fauna values in the vicinity of the modification area. Excess generation of dust and subsequent deposition on leaves can impair plant photosynthesis and productivity (also resulting in reduced habitat quality for fauna) and impact on respiratory systems of fauna.

Potential noise and dust impacts have been managed in accordance with the BMP. These measures would also apply to the modification. Noise impacts within the modification area will be temporary. Dust levels will be monitored and dust suppression applied as needed, such as wetting down dirt roads or reducing vehicle speeds.

6.2 Prescribed and uncertain impacts

An assessment of prescribed impacts is provided in Table 6.2.

No prescribed impacts have been identified for the project.

Table 6.2 Prescribed impacts

Feature	Present on site	Description of feature characteristics and location	Potential impacts	Threatened species or community using or dependent on feature	Section of report where prescribed impact is addressed
Karst, caves, crevices, cliffs, rocks and other geological features of significance	No	NA	None identified. The modification area does not contain geologically significant features.	NA	NA
Human-made structures	No	NA	No human made structures are present within the modification area.	NA	NA
Non-native vegetation	No	NA	None identified. The modification area does not include non-native vegetation.	NA	NA
Connectivity of habitat for threatened species	No	NA	Native vegetation and fauna habitats are highly degraded and fragmented in the modification area. Ecosystem and species credit species predicted to occur in the modification area predominantly comprise highly mobile birds and mammals, and therefore most species will not be impacted by fragmentation. The design of the modification area results in minimal fragmentation and no isolation as surrounding suitable habitat remains connected.	NA	NA
Waterbodies, water quality and hydrological processes that sustain threatened species and threatened ecological communities	No	NA	The modification area intersects and is upstream of first and second order unnamed tributaries. However, these waterways lack aquatic habitat, filling with water only in periods of high and sustained rainfall. The first-order streams generally lack canopy or shrub stratum and consist of grasses. Downstream second order tributaries also have a highly fragmented canopy cover. As the project will involve shallow excavation only, it is not expected to intersect groundwater. Hence, impacts on groundwater dependent ecosystems are not expected. Further, risks to downstream waterways from contamination and sedimentation are to be managed by the BMP (Appendix B).	NA	NA
Wind turbine strikes on protected animals	No	NA	None identified. There is no wind farm proposed in the modification area.	NA	NA

Feature	Present on site	Description of feature characteristics and location	Potential impacts	Threatened species or community using or dependent on feature	Section of report where prescribed impact is addressed
Vehicle strikes	No	NA	The modification is not expected to increase vehicle movements related to the project. The modified project would result in up to 100 light vehicle trips and up to 60 heavy vehicle trips per day during construction, and minor vehicle movements during operation. Construction traffic movements within the modification area will be restricted to 10 km/h and will be enforced by signposting, which should considerably reduce the potential for fauna strikes. Therefore, the project is not predicted to significantly increase animal vehicle strikes above existing levels. The risk of vehicle strike is managed by the BMP (Appendix B).	NA	NA

6.3 Avoidance, minimisation and mitigation

The BAM requires projects to outline the strategies and actions that may have been taken to avoid or minimise impacts on biodiversity values during proposal planning (DPIE 2020a). The following section summarises the key values within the modification area, in addition to the avoidance and minimisation strategies.

6.3.1 Key values within the modification area

As with the approved development boundary, the modification area has a long history of agricultural use, which has had a substantial influence on its current condition. Although stock grazing continues to be undertaken within the modification area, the modification area continues to feature derived native grasslands.

Avoidance and mitigation strategies presented in the following section are driven by the following key biodiversity values identified within the modification area and surrounds, which include:

- White Box – Yellow Box – Blakely's Red Gum Grassy Woodland and Derived Native Grassland (Box-Gum Grassy Woodland), which is listed under the BC Act and is also a serious and irreversible impact (SAII) entity (see Section 6.4.1)
- old growth trees with hollows suitable for fauna use
- suitable foraging and breeding habitat for Superb Parrot (listed under the BC Act and EPBC Act).

Box-Gum Grassy Woodland is critically endangered and is a potential SAII due to:

- over clearing (>90%) - i.e. reduction in geographic extent (Principle 1)
- continuing impacts from land use affecting quality of remaining extents and patch size (Principle 2).

Furthermore, Box-Gum Grassy Woodland is known to provide functional habitat for a suite of fauna species (including threatened species), including hollow-dependent fauna. The decline in Box-Gum Grassy Woodland has led to a decline in associated fauna assemblages (DECCW 2011).

6.3.2 Avoidance strategy

Surveys undertaken as part of and following the approval of the project were used to inform the evolution of the project design, including the modification area. EMM has carried out a number of technical assessments within the modification area and surrounds, including consultation with the host landowner and a constraints assessment to best site the location of the modification area. As part of the preparation of this assessment, several efforts to avoid biodiversity values were made:

- Five separate areas were considered including two options for the construction laydown area and additional land for the substation bay and easement.
- A biodiversity constraints assessment was undertaken to identify areas with high biodiversity values.
- The modification area was refined to include only one construction laydown area and to reduce the area required for the easement. The irregular shape of the construction laydown area is a result of AMPYR's efforts to avoid and minimise impacts to biodiversity.

The modification area lacks trees and is moderate to poor condition DNG only. It avoids higher condition TEC and potential habitat for hollow-associated threatened fauna.

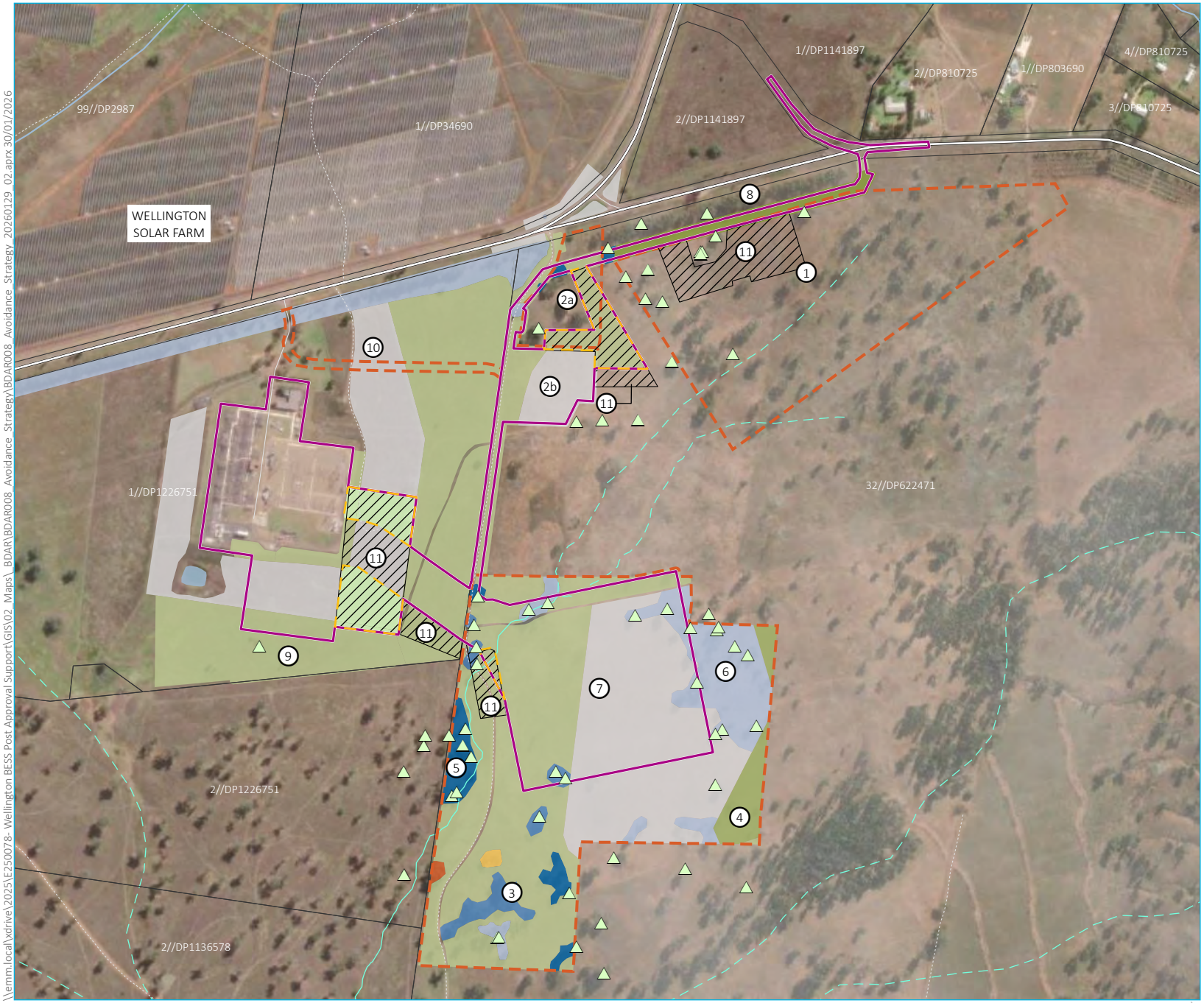
Key avoidance measures that have been implemented by AMPYR during the development design for the approved and modified project are provided in Table 6.3 and refers to the reference numbers provided in Figure 6.1.

Iterative project planning, informed by the baseline studies outlined above, has allowed a range of impacts to be avoided and others to be minimised throughout the life of the project. To compensate for unavoidable disturbance, biodiversity offsets will be provided.

Table 6.3 Avoidance strategy

Reference number (Figure 6.1)	Project component	Avoidance description
1	Approved project	This option was considered early in the project. This patch is primarily located in 100% Box-Gum Woodland and derived native grassland (inferred from regional mapping (DPIE 2015), which would leave no strategy for avoidance or minimisation. This patch occurs as one connected patch. This option was eliminated once biodiversity constraints, in addition to other environmental constraints, were considered.
2	Approved project	The location of the washdown bay was considered throughout the design process, originally being located at the property entrance within a patch of Box-Gum Woodland with a moderately diverse understorey (2a). Although the trees were sufficiently spaced apart to enable the washdown to be located between trees, it was recognised that this location could have potential to have indirect or adverse effects on the trees and surrounding grassland if the appropriate controls were not in place to manage dirty water and contaminants. The final washdown bay location is to the south of this location (2b), absent of trees within what is primarily cropped land with non-native grassland.
3	Approved project	Additional plant community types and better condition PCT 266 (low and moderate) occurs within the study area. These PCTs may have been suitable habitat for additional threatened species and resulted in a higher impact to these species. The design was moved to entirely avoid these PCTs. This avoids more suitable habitat, including approximately 280 m of the unnamed waterway.
4	Approved project	Better condition PCT 266 derived native grassland is located to the east of the study area. This derived native grassland is considered to be in good condition, due to apparent fencing exclusion to livestock. It was communicated early that this derived grassland contains good condition habitat, suitable for threatened flora and fauna species. The derived native grassland was ruled out on that basis.
5	Approved project	Approximately 280 m of the unnamed waterway which travels through the study area has been avoided. This waterway supports mature Box-Gum Woodland tree species and associated fauna habitat.
6	Approved project	The impact to hollows was identified as key constraint early in the project as they provide functional habitat for native fauna species. Avoiding impact to hollow-bearing trees was identified as a key opportunity for the project. The approved development boundary has been designed to avoid 81% of hollow-bearing trees which were recorded in the study area. Out of the total 37 hollow-bearing trees which occur within the study area, 30 will be avoided.
7	Approved project	The layout of the BESS was reconfigured to maximise the use of cropped land where there is no native vegetation. This resulted in prioritising the retention of high-moderate quality Box Gum Woodland and derived grassland within the property. This also avoids most of the creek line and moderate quality Box-Gum Woodland to the west of the creek. Locating the design on cropped land, minimises impact on Box Gum Woodland and derived grassland CEEC (BC Act) resulting from the project and to fauna habitat.

Reference number (Figure 6.1)	Project component	Avoidance description
8	Approved project	The access track into the battery energy storage system has been continuously considered throughout the project life. Designing the access track within this location has avoided clearing hollow-bearing trees and a potentially different PCT (including additional potential threatened species). The access track within the approved development boundary has been located to avoid planted and mature canopy species to the north and south which provide hollows for fauna. The planted hedgerow and grazed understorey is also unlikely to contain habitat for threatened flora species.
9	Approved project	The approved development boundary has been reduced to avoid direct impacts to a hollow-bearing tree suitable for Superb Parrot, in addition to rocky habitat for the Pink-tailed Legless Lizard.
10	Approved project	This access track into the Wellington Substation was considered as an option to utilise the existing driveway. The planted trees along the driveway included Yellow Box (*Eucalyptus melliodora*), Mugga Ironbark (*Eucalyptus sideroxylon*) and Kurrajong (*Brachychiton populneus*), which is likely a PCT different to PCT 266 within the approved development boundary. The avoidance of this route option results in avoidance of a new PCT and potentially additional threatened species.
11	Modified project	As part of the preparation of this assessment, multiple efforts to avoid biodiversity values were made: • Five separate areas were considered including two options for the construction laydown area and additional land for the substation bay and easement. • A biodiversity constraints assessment was undertaken to identify areas with scattered and remnant trees, including hollow-bearing trees, in an effort to site the modification area to avoid impacts to these features of higher biodiversity value (i.e. higher condition TEC and potential habitat for hollow-associated threatened fauna). • In an effort to avoid these features, the modification area was refined to include only one construction laydown area and to reduce the area required for the easement. The irregular shape of the construction laydown area is a result of AMPYR's efforts to avoid and minimise impacts on biodiversity. The modification area areas lack trees and hence avoids higher condition TEC and potential habitat for hollow-associated threatened fauna.



KEY

- Modified development boundary
- Modification area
- Hollow-bearing tree
- Modification options
- Previously considered areas

Plant community type

- Non-native vegetation

PCT 85 | River Oak forest and woodland

- Moderate (intact)

PCT 266 | White Box grassy woodland (Box Gum Woodland CEEC (BC Act))

- Moderate (intact)
- Low (intact)
- Poor (intact)
- DNG (planted)
- DNG (good)
- DNG (moderate)
- DNG (low)

PCT 279 | Blakeley's Red Gum- White Cypress Pine woodland

- Moderate (intact)

Strahler stream order

- 1st order
- 2nd order
- 3rd order

Existing environment

- Major road
- Minor road
- Vehicular track
- Named watercourse
- Cadastral boundary

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Source: EMM (2026); AMPYR (2025); DCSSS (2024); DPI (2015); ESRI (2026)

0 250 500 m

GDA 1994 MGA Zone 55

N

Avoidance strategy

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Figure 6.1

EMM creating opportunities

6.3.3 Minimisation, mitigation and amelioration measures

Table 6.4 summarises the minimisation, mitigation and amelioration measures to minimise the potential for development-related impacts on biodiversity. This table has been adapted from the original BDAR. Also, from the approved project, a BMP was prepared in consultation with CPHR to appropriately minimise, mitigate and ameliorate impacts to biodiversity values. This BMP has been implemented for the approved project and will be adapted and applied to the modification area (if approved). A copy of the BMP for the approved project is provided in Appendix B.

Table 6.4 Impact minimisation, mitigation and amelioration measures

Impact	Action	Intended outcome	Timing	Responsibility
Removal of Box Gum derived native grassland	Use existing access track within the modified development boundary wherever possible.	Minimise removal of Box Gum derived native grassland.	Design	Contractor
Removal of rocks (including embedded rocks) and debris from the modified development boundary	Retain all rocks and debris to be used post construction in remnant woodland. These will be relocated outside of the modified development boundary (within the cadastral boundary) in the remnant woodland to the east, south and west to retain species habitat and connectivity. Avoid relocation of rocks during Pink-tailed Legless Lizard breeding season (December to late March).	Retain and improve potential fauna habitat within the indirect impact area and study area post construction.	Post-construction	Contractor
	Pre-clearance surveys to be conducted immediately prior to removal of rocks and debris.	Avoid fauna fatalities by providing places for refuge and a mechanism to get to these refugia (by capture if necessary).	Pre-construction	Contractor Qualified Ecologist
Indirect impacts on White Box woodland to be retained	Retained trees will be marked for their protection during construction, where required. Markings will be monitored and reapplied where necessary during construction.	Avoid indirect impact to retained trees.	Pre-construction	Contractor
	All workers to be made aware of ecologically sensitive areas and the need to avoid impacts. This includes adjacent native vegetation.	Avoid unintentional impacts to Box Gum woodland and native vegetation.	Pre-construction	Contractor
Erosion and sedimentation to the indirect impact area	Sediment controls, including fencing and sediment traps, should be installed in any areas where works will occur in proximity to low lying vegetation. This includes along the boundaries upstream of unnamed watercourses.	Avoid increased sedimentation and erosion of the unnamed watercourse within the modified development boundary.	Pre-construction	Contractor
Weed introduction and spread	Remove weeds prior to clearing. Weeds are to be stockpiled appropriately prior to removal from the modification area to avoid the spread of seed and other propagules.	Minimise weed introduction and spread.	Construction	Contractor
	Weed hygiene protocols are in place prior to entering the modified development boundary. This includes wash-down procedures to all plant and machinery.	Avoid weed introduction from outside of the modified development boundary.	Construction	Contractor
Disturbance	Monitor dust levels and implement suppression strategies where required such as wetting down dirt roads or reducing vehicle speeds.	Reduce dust settlement on native vegetation and habitat for native species.	Construction	Contractor
Threatened species finds	Have a threatened species protocol; for managing threatened species which may be found on site during construction.	Identify and avoid impact and stress on threatened species (flora and fauna).	Pre-construction Construction	Contractor

6.4 Serious and Irreversible Impacts

An impact is to be regarded as a SAII if it is likely to contribute significantly to the risk of a threatened species (including endangered populations) or an ecological community becoming extinct based on the following four principles:

- Principle 1: The impact will cause a further decline of a species or ecological community that is currently observed, estimated, inferred or reasonably suspected to be in a rapid rate of decline.
- Principle 2: The impact will further reduce the population size of the species or ecological community that is currently observed, estimated, inferred or reasonably suspected to have a very small population size.
- Principle 3: The impact is made on the habitat of the species or ecological community that is currently observed, estimated, inferred or reasonably suspected to have a very limited geographic distribution.
- Principle 4: The impacted species or ecological community is unlikely to respond to measures to improve its habitat and vegetation integrity, and therefore its members are not replaceable.

The only SAII entity identified as being impacted by the modified project is White Box Yellow Box Blakely's Red Gum Woodland CEEC. An SAII assessment for this SAII entity is provided below.

6.4.1 Threatened ecological communities

Table 6.5 and Table 6.6 provide an assessment of White Box Yellow Box Blakely's Red Gum Woodland CEEC against the assessment criteria provided in Section 9.1.1 of BAM (DPIE 2020a).

Table 6.5 Current status of White Box Yellow Box Blakely's Red Gum Woodland and DNG CEEC

Criteria	Data/information	Data sources	Details of data deficiency, reasons for low confidence in information
Current total geographic extent (ha) of the threatened ecological community (TEC) in NSW.	White Box – Yellow Box – Blakely's Red Gum Grassy Woodland and Derived Native Grassland has undergone a very large reduction in geographic distribution. The best estimate of the extent of occurrence (EOO) is 702,800 km², based on a minimum convex polygon enclosing likely occurrences of the community. The best estimate of the area of occupancy (AOO) is 151,100 km².	(TSSC, Final Determination for White Box Yellow Box Blakelys Red Gum Grassy Woodland and Derived Native Grassland 2020)	Not all areas occupied by the community are covered by maps of appropriate scale and accuracy. Therefore, the values for EOO and AOO quoted above may underestimate the true values.
Estimated reduction in geographic extent of the TEC since 1970.	Approximately greater than 90% reduction in pre-1750 distribution. According to the NSW TSSC (2020): • The TSSC (2006) estimated that less than 5% of the original distribution remained, however the extent to which remaining examples continue to support characteristic biota, their interactions and function is unknown. • The very large historical decline in geographic distribution is corroborated by other sources although there is some uncertainty surrounding the current extent of the community and its pre-1750 distribution. Considering the evidence for historical, recent and contemporary clearing in combination, it is very likely that the reduction in the distribution of White Box– Yellow Box – Blakely's Red Gum Grassy Woodland and Derived Native Grassland exceeds 90% when averaged across the entire range of the community.	(TSSC, Final Determination for White Box Yellow Box Blakelys Red Gum Grassy Woodland and Derived Native Grassland 2020) (TSSC 2006)	No estimate of vegetation extent at or before 1970 is available.
Extent of reduction in ecological function, describing the degree of environmental degradation or disruption to biotic processes.	The Threatened Biodiversity Profile description (DPE 2025a) lists the following threats affecting the ecological function of the TEC: • Habitat loss, degradation and fragmentation from agricultural, forestry, mining, infrastructure and residential development. • Degradation by over grazing and trampling by introduced and native herbivores resulting in losses of plant species and structural diversity (simplification of the understorey and ground layer and suppression of overstorey regeneration), erosion and other soil changes (e.g. loss of cryptogams, increased nutrient status). • Degradation of remnants by non-native plant species, including noxious weeds, exotic pasture species and environmental weeds, including garden escapes, olives and pines. • Degradation of remnants by feral pest animals resulting in the loss or modification of habitat and predation of native fauna that are part of the White Box Yellow Box Blakely's Red Gum Woodland TEC.	(DCCEEW 2025b) (TSSC 2020)	Data on the extent of reduction is not available.

Criteria	Data/information	Data sources	Details of data deficiency, reasons for low confidence in information
	• Removal of native ground layer in box-gum woodland remnants where trees have been partially or fully removed. • Loss and decline of mature hollow-bearing trees that provide habitat for hollow-utilising fauna (e.g. possums, microbats, hollow-nesting birds). • Over exploitation of nectar resources by commercial apiaries, impacting on nectar availability for native nectivorous species • Occupation of tree hollows by feral honeybees. • Human disturbance by off road vehicles, camping, other recreational activities and dumping. • Altered fire regimes. Other threats included in the 2020 Determination (TSSC, Final Determination for White Box Yellow Box Blakelys Red Gum Grassy Woodland and Derived Native Grassland 2020) include: • invasion of native plant communities by exotic perennial grasses • Competition and grazing by the feral European Rabbit *Oryctolagus cuniculus* These threats affect the ecological function of the TEC at varying levels lead to different states of the TEC. The extent to which this reflects a permanent or temporary loss depends on the mechanism and severity of disturbance as well as any measures that are undertaken to reverse decline. As such, the extent of reduction in ecological function is unknown.		
Extent of occurrence (ha)	702,800 km²	(TSSC 2020)	Not all areas occupied by the community are covered by maps of appropriate scale and accuracy. Therefore, the values for EOO and AOO quoted above may underestimate the true values.
Area of occupancy (ha)	151,100 km²	(TSSC 2020)	Not all areas occupied by the community are covered by maps of appropriate scale and accuracy. Therefore, the values for EOO and AOO quoted above may underestimate the true values.

Criteria	Data/information	Data sources	Details of data deficiency, reasons for low confidence in information
Number of threat-defined locations	The BAM (DPIE 2020a) defines threat-defined locations in terms of threatened species but does not mention TECs. According to the Guidelines for the application of IUCN Red List of Ecosystems Categories and Criteria (IUCN 2017), a threat-defined location is: • A geographically or ecologically distinct area in which a single threatening event can rapidly affect all occurrences of an ecosystem type. The IUCN definition is similar to that included in the BAM and is considered to encompass the intent of the requirements of BAM for TECs. The most serious plausible threat to the TEC is land clearing, particularly for agriculture, including the intensification of agricultural activity through conversion of land use from grazing of native pastures to improved pastures or cropping. In line with the approach suggested in IUCN (2017), broad interpretation of threat-defined locations identifies two jurisdictional zones with different regulatory controls on land clearing: • the leasehold Western Division of New South Wales • the freehold Central Division and Eastern Division of New South Wales. An alternative interpretation of threat-defined locations based on biogeographical regions (bioregions) would produce an estimate of six threat-defined locations.	(DPIE 2020a) (IUCN 2017) (TSSC 2020)	Data is not strictly defined by the BAM. Assumptions have been made from additional data sources.

Table 6.6 Assessment of White Box Yellow Box Blakely's Red Gum Woodland and DNG CEEC

Criteria	Data/information	Data sources	Details of data deficiency, assumptions, reasons for low confidence in information
Impact on the geographic extent of the TEC (Principles 1 and 3)			
Area of TEC to be impacted by the proposal (ha).	The modification would impact 2.7 ha of vegetation consistent with the TEC, albeit only impacting highly disturbed DNG and no remnant box gum woodland. Overall, vegetation to be directly impacted by the modified project is 11.49 ha, including: • 10.5 ha of very poor condition DNG that has a few native grasses that just qualify as the TEC • 0.87 ha of low/poor intact condition woodland • 0.12 ha of moderate condition intact woodland.	-	-
Area of TEC to be impacted by the proposal as a % of the current geographic extent in NSW (%).	The best estimate of the extent of occurrence (EOO) is 702,800 km^2. The modified project would impact on 0.000016% of its current extent. Note that the full extent of the TEC is likely to be underestimated, given highly disturbed DNG can be part of this TEC.	(TSSC 2020)	Not all areas occupied by the community are covered by maps of appropriate scale and accuracy. Therefore, the values for EOO and AOO quoted above may underestimate the true values.
Direct/indirect impacts likely as a result of the proposal to contribute to loss of flora/fauna species characteristic of the TEC.	The modification would impact 2.7 ha of TEC, while the approved project is impacting 8.79 ha. The modified project would therefore result in the direct removal of 11.49 ha of the TEC, which is 0.000016% of the current extent. If inappropriately managed, potential indirect impacts to the TEC include weed introduction and spread and erosion and sedimentation. Retained areas of the TEC outside the modified development boundary will be avoided. Weed management and erosion mitigation measures in accordance with the existing BMP will be implemented. The BMP will be updated to consider the modification area and will ensure measures proposed in Table 6.4 are implemented for retained areas of the TEC, including paddock trees and remnant woodland adjacent to the modified development boundary. The modified project is not expected to change fire regimes.	-	-

Criteria	Data/information	Data sources	Details of data deficiency, assumptions, reasons for low confidence in information
Impacts likely to contribute to further environmental degradation or disruption of biotic processes (Principle 2)			
Remaining extent of isolated areas of TEC (ha).	The modified project would affect small discrete areas of the TEC within broader patches. It would not isolate any areas of the TEC and would not have a substantial impact on the patch size of the remaining areas of the TEC.	(TSSC 2020)	Patch connectivity has been assessed using regional vegetation mapping.
Average distance between remaining remnants – remnant is retained (m).	Assuming removal of TEC for the modified project, the remaining patch would remain connected to adjacent patches (including derived grasslands, scattered trees and remnant woodland patches of the TEC).	-	-
Average distance between remaining remnants – remnant is removed (m).	Were the remnants to be removed, the patch would remain connected to adjacent patches (including derived grasslands of the TEC). The modified project would result in the removal of the TEC across up to an approximate 338 m span at the widest point, however the TEC continues to be connected outside of the modified development boundary.	-	-
Estimated maximum dispersal distance of species associated with the TEC (km).	Typical maximum dispersal distances for different dispersal mechanisms are as follows: • No specialised mechanism 0–10 m • Ant dispersal 0–10 m • Wind (large-winged fruits) 10–100 m • Rodents 10–100 m • Small to medium-sized forest birds and arboreal mammals 100 m–1 km • Flying-foxes (large seeds) 100 m–1 km • Large and open-country birds 1 km–10 km • Wind (small plumed seeds) 1 km–10 km • Terrestrial mammals 1 km–10 km • Wind (tiny seeds/spores, and very small plumed seeds) > 10 km • Flying-foxes (small seeds) > 10 km. Although trees are lacking from the modification area, the approved development boundary involved removing some White Box (*E. albens*). *Eucalyptus* spp. (including *Eucalyptus albens* characteristic of the tree growth form component of the TEC within the modified development boundary) have very limited seed dispersal capabilities, likely in the 0–10 m range or 10–100 m range for any given event and species are considered capable of migrating across landscapes only in the order of ~71–142 m in 71 years.	(Booth 2017) (Corlett 2009)	-

<table>
<tr><th>Criteria</th><th>Data/information</th><th>Data sources</th><th>Details of data deficiency, assumptions, reasons for low confidence in information</th></tr>
<tr><td></td><td>No shrub species characteristic of the TEC occurs within the modification area or within the approved or modified development boundary. Hence, dispersal distances for shrubs are not relevant to the modified development boundary.
Three of the characteristic grass species of the TEC in the genera Aristida and Austrostipa are likely to be animal-dispersed and capable of dispersing between 1 and 10 km. The three grasses in the genera Chloris, Bothriochloa and Rytidosperma are likely wind-dispersed, as are most species of forbs in the family Asteraceae. The wind-dispersed grasses are likely to be capable of dispersing between 1 and 10 km. and very small plumed seeds of many species of in the Asteraceae (daisy family) are likely to be capable of dispersing more than 10 km. Many of the forb and grass species that make up the ground layer of the TEC are likely to have no specialised dispersal mechanism or to be ant-dispersed and only capable of dispersal to distances of less than 10 m.</td><td></td><td></td></tr>
<tr><td>Area to perimeter ratio of remaining remnants (ratio).</td><td>The modified project will increase the edge to area ratio of remaining areas of the TEC by a small amount. The increased edge length associated with the modified project is approx. 6,361 m, however the existing areas of the TEC are already exposed to edge effects including weed encroachment.</td><td>-</td><td>-</td></tr>
<tr><td>Vegetation integrity analysis</td><td>Vegetation integrity for the TEC to be impacted by the modified project is presented in the summary table below:
<table>
<tr><th>Vegetation zone</th><th>Approved Direct impacts (ha)</th><th>Modified Direct impacts (ha)</th><th>Total Direct Impacts (ha)</th><th>VI score Approved project</th><th>VI Score Modified project</th></tr>
<tr><td>PCT266_intact_moderate</td><td>0.12</td><td>0</td><td>0.12</td><td>49</td><td>-</td></tr>
<tr><td>PCT266_intact_low</td><td>0.15</td><td>0</td><td>0.15</td><td>48.9</td><td>-</td></tr>
<tr><td>PCT266_intact_poor</td><td>0.72</td><td>0</td><td>0.72</td><td>36.6</td><td>-</td></tr>
<tr><td>PCT266_DNG_planted</td><td>0.70</td><td>0</td><td>0.70</td><td>36.1</td><td>-</td></tr>
<tr><td>PCT266_DNG_moderate</td><td>7.10</td><td>1.16</td><td>8.26</td><td>10.1</td><td>18.4</td></tr>
<tr><td>PCT266_DNG_low</td><td>0</td><td>1.54</td><td>1.54</td><td>-</td><td>7.9</td></tr>
<tr><td>Total</td><td>8.79</td><td>2.70</td><td>11.49</td><td>-</td><td>-</td></tr>
</table></td><td>-</td><td>-</td></tr>
</table>

6.5 Impact summary

6.5.1 Impact areas already offset under original BDAR and no longer subject to impact

As part of the original BDAR, credits were retired for impacts to the approved construction laydown area (approximately 1.5 ha). As discussed in Section 6.1.1, approximately 0.9 ha of land within the approved construction laydown area cannot be used due to a transmission line easement and will no longer be impacted by the project (Figure 1.2). The avoidance of impacts within this area will reduce the project's impacts on biodiversity, including:

- avoidance of impacts to approximately 0.7 ha of non-native grassland
- avoidance of impacts to approximately 0.2 ha of PCT 266 (moderate DNG)
- avoidance of impacts to approximately 0.7 ha of habitat for Superb Parrot (as determined through the species polygon in the original BDAR).

6.5.2 Impacts not requiring offsets

In accordance with Section 9.3 of the BAM (DPIE 2020a), vegetation zone 266_DNG_low does not requiring offsets as this vegetation class has a vegetation integrity score of 7.9, which is below the threshold for offsetting a TEC (i.e. <15).

6.5.3 Impacts requiring offset

The area requiring offset is identified in Figure 6.2 and Figure 6.3. The offset liability for the residual impact of the modification is 13 ecosystem credits, and 22 species credits (Appendix C). Further details on the offset liability for native vegetation and species credits are provided in Sections i and ii below, respectively.

i Impacts on native vegetation

Impacts to native vegetation requiring offsets include:

- direct impacts on 1.16 ha of PCT 266.

A total of 13 ecosystem credits is required to offset the residual impacts of the modification. A summary of the ecosystem credits required for all vegetation zones, including changes in vegetation integrity score, are provided in Table 6.7. Impacts requiring ecosystem credit offsets are shown in Figure 6.2. A credit report is provided in Appendix C.

Offsets will be provided in accordance with the NSW Biodiversity Offset Scheme.

Table 6.7 Summary of impacts requiring offsets - native vegetation

Vegetation zone number	PCT	Vegetation zone name	Area	Vegetation integrity score	Future vegetation integrity score	Change in vegetation integrity score	Credits required
1	PCT 266 – White Box grassy woodland in the upper slopes sub-region of the NSW South Western Slopes Bioregion	PCT266_DNG_moderate	1.16	18.4	0	-18.4	13

ii Impacts on threatened species

Impacts to threatened species habitat requiring offsets include:

- 1.07 ha of breeding habitat for Superb Parrot
- 1.87 ha of breeding habitat for Glossy Black Cockatoo (assumed present)
- 0.60 ha of habitat for Pink-tailed Legless Lizard (assumed present)

Although no hollows that provide habitat for Superb Parrot and Glossy Black Cockatoo will be directly impacted, the modification will impact DNG within the buffer area for breeding habitat.

The threatened species polygons for offsetting for Superb Parrot were calculated based on a 100 m buffer of suitable hollow-bearing trees (hollows greater than 5 cm diameter; greater than 4 m above ground).

The threatened species polygons for offsetting for Glossy Black Cockatoo were calculated based on a 200 m radius buffer of all hollow-bearing trees with hollow diameter at least 15 cm; stem angle at least 45 degrees; and at least 8 m off the ground.

The threatened species polygon for Pink-tailed Legless Lizard has been calculated based on a 50 m buffer of suitable rocky habitat (Figure 6.3).

A summary of the species credits required for all vegetation zones occupied by the threatened species, including changes in vegetation integrity score, are provided in Table 6.8. A total of 29 species credits are required to offset the residual impacts of the modification. A credit report is provided in Appendix C.

Offsets will be provided in accordance with the NSW Biodiversity Offset Scheme.

Table 6.8 Summary of impacts requiring offsets – threatened species

Species	Vegetation zone name	Species Polygon area (ha)	Habitat condition (vegetation integrity loss)	Candidate SAII	Species credits
Superb Parrot	PCT266_DNG_moderate	1.07	-18.4	No	10
	PCT266_DNG_low	-	-7.9		-
Glossy Black Cockatoo	PCT266_DNG_moderate	1.16	-18.4	No	11
	PCT266_DNG_ low	0.70	-7.9		3
Pink-tailed Legless Lizard	PCT266_DNG_moderate	0.40	-18.4	No	4
	PCT266_DNG_low	0.19	-7.9		1



KEY

- Modified development boundary
- Modification area
- Impacts not requiring offsets
- Impacts requiring offsets

Plant community type

PCT 266 | White Box grassy woodland (Box Gum Woodland CEEC (BC Act))

- DNG (moderate)
- DNG (low)

Existing environment

- Major road
- Minor road
- Vehicular track
- Named watercourse
- Waterbody

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Source: EMM (2026); AMPYR (2025); DCSSS (2024); ESRI (2026)

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N

Impacts requiring offset
- ecosystem credits

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Figure 6.2

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KEY

- Modified development boundary
- Modification area
- Rocky habitat

Hollow bearing tree suitability

- Glossy Black Cockatoo
- Superb Parrot

Species polygon

- Glossy Black Cockatoo
- Superb Parrot
- Pink-tailed Legless Lizard

Plant community type

PCT 266 | White Box grassy woodland (Box Gum Woodland CEEC (BC Act))

- DNG (moderate)
- DNG (low)

Existing environment

- Major road
- Minor road
- Vehicular track
- Waterbody

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Source: EMM (2026); AMPYR (2025); DCSSS (2024); ESRI (2026)

0 250 500 m

GDA 1994 MGA Zone 55

N

Impacts requiring offsets
- species credits

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Biodiversity Development Assessment Report
Figure 6.3

EMM
creating opportunities

7 Assessment of other relevant biodiversity legislation

An assessment of other relevant biodiversity legislation is provided below as it relates to the project.

7.1 Commonwealth

7.1.1 *Environmental Protection and Biodiversity Conservation Act 1999* (EPBC Act)

An assessment of the impacts of the project on MNES was undertaken to determine whether referral of the project to the Commonwealth Minister for the Environment is required. MNES relevant to the project were predicted by the PMST (DCCEEW 2025a) and their likelihood of occurrence assessed below.

Note that an initial review and assessment of MNES was undertaken in the original BDAR as part of the approved project. This section considers the cumulative impacts of the project as modified.

i Likelihood of occurrence

a Threatened ecological communities

The PMST identified three TECs as having potential to occur in the modification area:

- Poplar Box Grassy Woodland on Alluvial Plains
- White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland
- Grey Box (*Eucalyptus microcarpa*) Grassy Woodlands and Derived Native Grasslands of South-eastern Australia

However, after comparing the vegetation to be impacted by the approved and modified project, none was consistent with these EPBC Act listed TECs. An assessment of the likelihood of these TECs occurring within the modified development boundary is provided in Table 7.1. More detailed assessment of the presence of vegetation against the EPBC listing for White Box – Yellow Box – Blakely's Red Gum Grassy Woodland and Derived Native Grassland TEC is provided in Table 7.2.

Table 7.1 Threatened ecological communities known or predicted to occur in the locality

Ecological community	Status	Habitat requirements	Likelihood of occurrence
Poplar Box Grassy Woodland on Alluvial Plains	Endangered	Is a grassy woodland or open grassy forest community characterised by the dominance of Poplar Box (*Eucalyptus populnea*) and a grass and herb understorey. This EEC is located west of the Great Dividing Range and typically occurs in gently undulating to flat landscapes on a range of alluvial and depositional soils, at altitudes less than 300 m above sea level. Due to its wide distribution, it occurs in areas with a mean annual rainfall from 400 to 800 mm per year.	Negligible. White Box is the dominant species within the study area. Poplar Box is absent from the modified development boundary. Poplar Box must be the dominant canopy species in this EEC (DoEE 2019).

Ecological community	Status	Habitat requirements	Likelihood of occurrence
White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland	Critically Endangered	This CEEC is characterised by current or prior dominance of White Box, Yellow Box (*Eucalyptus melliodora)*, and/or Blakely's Red Gum (*Eucalyptus blakelyi*), and the presence of a species-rich understory consisting of native grasses, herbs and scattered shrubs. Typically, it occurs on moderate to high fertile soils in areas with a mean annual rainfall between 400 and 1200 mm, at altitudes of 170 to 1200 m above sea level.	Negligible. PCT 266 is consistent with White Box – Yellow Box – Blakely's Red Gum Grassy Woodland and Derived Native Grassland CEEC. However, vegetation across the approved and modified development boundary fails to meet the EPBC Act listing for White Box – Yellow Box – Blakely's Red Gum Grassy Woodland and Derived Native Grassland, which is dependent on condition, patch size and presence or absence of important species. Table 7.2 outlines the assessment process taken to determine whether the vegetation zones from the approved and modified development boundary conform to the EPBC listing (TSSC 2006). All plots across the approved and modified development boundary failed to meet the criteria of 12 or more native understorey species present (excluding grasses) with at least one important species.
Grey Box (*Eucalyptus microcarpa*) Grassy Woodlands and Derived Native Grasslands of South-eastern Australia	Endangered	This EEC is characterised by a canopy layer dominated by Grey Box, a variable mid layer of shrubs and a variable ground layer comprising graminoids, forbs and chenopods. The ecological community occurs from central-western NSW, through northern and central Victoria into South Australia, typically occurring on low slopes and plains. This EEC tends to occur on soils derived from alluvial or colluvial materials in areas with a mean annual rainfall between 375 and 700 mm per year.	Negligible. White Box is the dominant species within the study area. Grey Box is absent from the modified development boundary. Grey Box must be the dominant canopy species in this EEC (DSEWPaC 2012).

Table 7.2 Assessment of vegetation against the EPBC listing for White Box – Yellow Box – Blakely's Red Gum Grassy Woodland and Derived Native Grassland

Criteria	Determination	Associated BAM plot: Approved project	Associated BAM plot: Modification area	Discussion
Is, or was previously, at least one of the most common overstorey species White Box, Yellow Box or Blakely's Red Gum (or Western Grey Box or Coastal Grey Box in the Nandewar Bioregion)?	Yes	All plots	All plots	All vegetation zones are dominated by White Box, or considered to be a derived grassland once dominated by White Box.
Does the patch have a predominantly native understorey?	Yes	BAM01; BAM06; BAM07, PCT266_DNG_planted	PR01	Percentages range from 51% to 99% cover.
	No	BAM02–BAM05; BAM09–BAM12	BB03; BB04; BAM11	Percentages fall below 50% cover. These plots do not meet the condition threshold.
Is the patch 0.1 ha or greater in size.	Yes	BAM01; BAM06; BAM07, PCT266_DNG_planted	All plots	Patch sizes exceed 0.1 ha. Precautionary principle applied assuming connective vegetation meets criteria.
	No	BAM13	-	This plot falls within a patch less than 0.1 ha. This patch does not meet the condition threshold.
There are 12 or more native understorey species present (excluding grasses). There must be at least one important species.	No	-	-	All plots failed to meet this condition threshold.

b Threatened species

The PMST predicted that 10 flora species and 29 fauna species listed under the EPBC Act could occur within the modification area.

No threatened flora species were considered to have a moderate or greater likelihood of occurrence. However, the following threatened fauna species were considered to have a moderate or greater likelihood of occurring:

- Regent Honeyeater (*Anthochaera phrygia*)
- Southern Whiteface (*Aphelocephala leucopsis*)
- Glossy Black Cockatoo (*Calyptorhynchus lathami lathami*)
- Swift Parrot (*Lathamus discolor*)
- Superb Parrot (*Polytelis swainsonii*)
- Diamond Firetail (*Stagonopleura guttata*)
- Grey-headed Flying Fox (*Pteropus poliocephalus*)
- Pink-tailed Legless Lizard (*Aprasia parapulchella*).

The likelihood of occurrence for threatened flora and fauna are assessed in Table 7.2 and Table 7.3, respectively.

Table 7.3 Threatened flora species known or predicted to occur in the locality

Scientific name	Common name	Status	Source[1]	Likelihood of occurrence
Androcalva procumbens	-	Vulnerable	PMST	Low. The species is not associated with the PCTs within the modification area and there are no known records nearby.
Austrostipa wakoolica	-	Endangered	PMST	Negligible. This species is confined to the floodplains of the Murray River tributaries of central-western and south-western NSW and is not associated with the PCTs within the modification area.
Euphrasia arguta	-	Critically Endangered	PMST BAM-C	Low. This species is associated with PCT 266, however targeted surveys failed to detect this species. Further, targeted surveys undertaken for assessment of the approved project failed to detect this species.
Lepidium aschersonii	Spiny Peppercress	Vulnerable	PMST	Low. Suitable habitat dominated by Brigalow (*Acacia harpophylla*), Belah (*Casuarina cristata*), Buloke (*Allocasuarina luehmanii*) and Grey Box (*Eucalyptus microcarpa*) does not occur within the modification area and there are no known records nearby.

[1] PMST - indicates that the species was returned from the EPBC Protected Matter Search Tool. BAM-C - indicates that the species was returned from the BAM Calculator based on the PCTs present.

Scientific name	Common name	Status	Source[1]	Likelihood of occurrence
Prasophyllum petilum	Tarengo Leek Orchid	Endangered	PMST	Low. This species is associated with PCT 266, however it has only been recorded in 5 sites, with populations known from near Boorowa, Queanbeyan area, Ilford, Delegate and 10 km west of Muswellbrook. Potential habitat within the modified development boundary is also highly degraded, so is unlikely to support this species which requires higher condition grassland and grassy woodland that is not dominated by weeds (see Section 5.3.1).
Prasophyllum sp. Wybong (C.Phelps ORG 5269)	a leek-orchid	Critically Endangered	PMST BAM-C	Low. This species is associated with PCT 266, however it has a very restricted geographic distribution, and is known from near Ilford, Premer, Muswellbrook, Wybong, Yeoval, Inverell, Tenterfield, Currabubula and the Pilliga area. Potential habitat within the modified development boundary is also highly degraded, so is unlikely to support this species which requires higher condition grassland and grassy woodland that is not dominated by weeds (see Section 5.3.1).
Swainsona murrayana	Slender Darling-pea	Vulnerable	PMST	Low. The species is not associated with the PCTs within the modification area and there are no known records nearby.
Swainsona recta	Small Purple-pea	Endangered	PMST BAM-C	Low. This species is associated with PCT 266, however there is a low number of recent records in proximity to the modification area and habitat within the modification area is degraded. Further, targeted surveys failed to detect this species.
Thesium australe	Austral Toadflax	Vulnerable	PMST	Low. This species is not associated with the PCTs within the modification area and there are no known records nearby. Further, the commonly symbiotic grass *Themeda triandra* (Kangaroo Grass) was not detected within the modified development boundary.
Vincetoxicum forsteri (*syn. Tylophora linearis*)	-	Endangered	PMST	Low. The distribution of this species overlaps with White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland, however it is known from eight localities outside of the Wellington area and there are no records nearby. This species is also a climber yet there is little shrub cover and no trees, which this species typically associates with. Further, no vines from the family Apocynaceae were found in floristic plots.

Table 7.4 Threatened fauna species known or predicted to occur in the locality

Scientific name	Common name	Status	Source[2]	Likelihood of occurrence
Birds				
Anthochaera phrygia	Regent Honeyeater	Critically Endangered	PMST BAM-C	Low (modification area) and moderate (approved development boundary). No potential foraging habitat in modification area (i.e. no trees). Potential foraging habitat within the approved development boundary. There are previous records nearby and the species is associated with PCT 266.
Aphelocephala leucopsis	Southern Whiteface	Vulnerable	PMST BAM-C	Moderate. This species is associated with PCT 266, but there are few local records. A few hollows present in approved development boundary only, but no breeding activity observed, nor was the species detected during bird surveys or opportunistically. Species may occasionally forage in grasslands within the modified development boundary.
Botaurus poiciloptilus	Australasian Bittern	Endangered	PMST	Negligible. There is no wetland habitat within the modified development boundary.
Calidris acuminata	Sharp-tailed Sandpiper	Vulnerable	PMST	Negligible. There is no marine or wetland habitat within the modified development boundary.
Calidris ferruginea	Curlew Sandpiper	Critically Endangered	PMST	Negligible. There is no marine habitat within the within the modified development boundary.
Callocephalon fimbriatum	Gang-gang Cockatoo	Endangered	PMST BAM-C	Low. Species not detected during targeted bird surveys or opportunistically.
Calyptorhynchus lathami lathami	South-eastern Glossy Black-Cockatoo	Vulnerable	PMST BAM-C	Moderate. This species is considered unlikely to occur in the modification area due to the absence of stands of sheoak and lack of records in the vicinity of the site. Further, species not detected during targeted bird surveys or opportunistically, however appropriate tree hollows are present adjacent to the modification area that may support breeding. As targeted surveys for this species were not undertaken in accordance with the BAM, breeding habitat for this species was assumed to be present. For this reason, the potential for this species to occur was increased to moderate, based on a lack of targeted surveys.

Scientific name	Common name	Status	Source[2]	Likelihood of occurrence
Climacteris picumnus victoriae	Brown Treecreeper (south-eastern)	Vulnerable	PMST BAM-C	Low. This species is associated with PCT 266, but there are few local records. A few hollows present in approved development boundary only, but no breeding activity observed nor was the species detected during bird surveys or opportunistically. Species may very infrequently use habitat within the modified development boundary due to the degraded and fragmented nature of remnant woodland habitat.
Falco hypoleucos	Grey Falcon	Vulnerable	PMST	Low. Not associated with the PCTs within the modification area. Outside of the known range, as reported in BioNet (DPE 2025a). Species also not detected during bird surveys or opportunistically.
Gallinago hardwickii	Latham's Snipe, Japanese Snipe	Vulnerable	PMST	Negligible. There is no wetland habitat within the modified development boundary.
Grantiella picta	Painted Honeyeater	Vulnerable	PMST BAM-C	Low. This species is associated with PCT 266, but there are few local records. A few hollows present in approved development boundary only, but no breeding activity observed nor was the species detected during bird surveys or opportunistically. Species may very infrequently use habitat within the modified development boundary due to the degraded and fragmented nature of remnant woodland habitat.
Hirundapus caudacutus	White-throated Needletail	Vulnerable	PMST BAM-C	Low. This species occurs over most types of habitat and is associated with PCT 266. The species may fly-over the site, but it is unlikely to utilise the habitat within the modified development boundary. Breeding habitat absent as it breeds in northern hemisphere.
Lathamus discolor	Swift Parrot	Critically Endangered	PMST BAM-C	Low (modification area) and moderate (approved development boundary). This species is associated with PCT 266 and there is potential foraging habitat within the approved development boundary, but not within the modification area (i.e. no trees). Species was most recently recorded in proximity to the site in 2014.
Leipoa ocellata	Malleefowl	Vulnerable	PMST	Low. Not associated with PCT 266. There is no suitable mallee vegetation within the modified development boundary. No malleefowl nests were observed, nor was the species observed during bird surveys or opportunistically.

Scientific name	Common name	Status	Source[2]	Likelihood of occurrence
Lophochroa leadbeateri leadbeateri	Major Mitchell's Cockatoo (eastern), Eastern Major Mitchell's Cockatoo, Pink Cockatoo (eastern)	Endangered	PMST	Low. Not associated with PCT 266. This species is found in arid and semi-arid woodlands, including those dominated by box eucalypts. However, very large hollows preferred by the species are absent from the modification area. Further, this species was not detected during bird surveys or opportunistically.
Melanodryas cucullata cucullata	South-eastern Hooded Robin, Hooded Robin (south-eastern)	Endangered	PMST BAM-C	Low. This species has been recorded approximately 8 km away from the modification area and is associated with PCT 266. However, the vegetation is in a degraded condition and is unlikely to offer the structurally diverse habitat required by the species (e.g. no fallen timber present or understory vegetation). Further, this species was not detected during bird surveys or opportunistically.
Neophema chrysostoma	Blue-winged Parrot	Vulnerable	PMST	Low. This species prefers grasslands and grassy woodlands and can be found in altered environments like paddocks, however it is only likely to utilise the modification area as foraging habitat as breeding occurs in Tasmania, coastal south-eastern South Australia and southern Victoria. The species is not associated PCT 266 and there is only one recent record approximately 8 km away from the modification area. Further, this species was not detected during bird surveys or opportunistically.
Polytelis swainsonii	Superb Parrot	Vulnerable	PMST BAM-C	High (in modification area) and known (in approved development boundary). Superb Parrot was recorded adjacent to the approved development boundary (Figure 5.3). Potential nesting habitat afforded by hollow-bearing trees in the approved development boundary. Foraging habitat only provided in modification area due to an absence of trees.
Rostratula australis	Australian Painted Snipe	Endangered	PMST	Negligible. The modification area does not provide suitable habitat for this species i.e; swamps, dams and nearby marshy areas where there is a cover of grasses, lignum, low scrub or open timber. There are no records in the vicinity of the site.
Stagonopleura guttata	Diamond Firetail	Vulnerable	PMST	High. This species is found in grassy eucalypt woodland and is associated with PCT 266. There are multiple recent records of the species within 10 km of the modification area, including during assessment of adjacent Orana BESS (NGH 2023). However, this species was not detected during bird surveys or opportunistically.
Fish				
Bidyanus bidyanus	Silver Perch, Bidyan	Endangered	PMST	Negligible. No permanent or ephemeral waterbodies for the species to occur.

Scientific name	Common name	Status	Source[2]	Likelihood of occurrence
Galaxias rostratus	Flathead Galaxias	Critically Endangered	PMST	Negligible. No permanent or ephemeral waterbodies for the species to occur.
Macquaria australasica	Macquarie Perch	Endangered	PMST	Negligible. No permanent or ephemeral waterbodies for the species to occur.
Mammals				
Chalinolobus dwyeri	Large-eared Pied Bat, Large Pied Bat	Endangered	PMST	Low. No known roosting habitat, such as sandstone cliffs/escarpments, mine shafts, caves and overhangs, within 2 km of the modification area.
Dasyurus maculatus maculatus (SE mainland population)	Spot-tailed Quoll, Spotted-tail Quoll, Tiger Quoll (southeastern mainland population)	Endangered	PMST BAM-C	Low. The modified development boundary provides low quality foraging habitat only, whilst there are no records in the vicinity of the site. The modification area lacks woodland, which this species may associate with. Further, this species was not detected during nocturnal mammal surveys or opportunistically.
Nyctophilus corbeni	Corben's Long-eared Bat	Vulnerable	PMST BAM-C	Low. This species is associated with PCT 266 and there is potential breeding habitat within the approved development boundary provided by hollow-bearing trees. However, there are no records for this species in the locality.
Phascolarctos cinereus (combined populations of Qld, NSW and the ACT)	Koala (combined populations of Queensland, New South Wales and the Australian Capital Territory)	Endangered	PMST	Low. Targeted surveys for Koala failed to detect this species or signs thereof.
Pteropus poliocephalus	Grey-headed Flying-fox	Vulnerable	PMST BAM-C	Low (modification area) and moderate (approved development boundary). No breeding camps were observed in or near the modified development boundary. The approved development boundary provides a few White Box trees which may present potential foraging habitat. The modification area lacks trees, so no additional foraging habitat will be impacted by the modification. Although there are records within the locality, they are largely centred in Wellington township. However, species may forage within approved development boundary.
Reptile				
Aprasia parapulchella	Pink-tailed Legless Lizard	Vulnerable	PMST BAM-C	High. Although targeted surveys failed to detect Pink-tailed Legless Lizard, there is suitable rocky habitat within the study area and this species was recorded on adjacent land.

c Migratory species

Eight species listed as migratory under the EPBC Act were predicted to occur in the modification area based on database searches undertaken. Table 7.5 provides an assessment of the likelihood of these species using the habitat within the modification area. However, after considering potential habitat afforded by the modification area, no migratory species were considered to have a moderate or greater chance of occurring.

Table 7.5 Likelihood of occurrence for migratory species

Scientific name	Common name	Status	Source	Likelihood of occurrence
Birds				
Actitis hypoleucos	Common Sandpiper	Migratory	PMST	Negligible. This species is a shoreland and coastal wetland species.
Apus pacificus	Fork-tailed Swift	Migratory	PMST	Low. There is potential foraging habitat present on-site, however there are no recent records in the vicinity of the modification area. The species may fly-over the site, but it is unlikely to utilise the habitat within the modified development boundary.
Calidris acuminata	Sharp-tailed Sandpiper	Vulnerable, Migratory	PMST	Negligible. This species is a shoreland and coastal wetland species.
Calidris ferruginea	Curlew Sandpiper	Critically Endangered, Migratory	PMST	Negligible. This species is a shoreland and coastal wetland species.
Calidris melanotos	Pectoral Sandpiper	Migratory	PMST	Negligible. This species is a shoreland and coastal wetland species.
Gallinago hardwickii	Latham's Snipe, Japanese Snipe	Vulnerable, Migratory	PMST	Negligible. There is no wetland habitat within the modified development boundary.
Hirundapus caudacutus	White-throated Needletail	Vulnerable, Migratory	PMST BAM-C	Low. This species occurs over most types of habitat and is associated with PCT 266, however there are no recent records in the vicinity of the modification area. May utilise the modification area to fly over as the species is exclusively aerial.
Motacilla flava	Yellow Wagtail	Migratory	PMST	Negligible. No suitable habitat within the modification area.

ii Significant impact assessments

Assessments of significance were undertaken and provided below for EPBC Act listed species considered to have a moderate or greater chance of occurring within the modification area. These assessments considered the cumulative impact of the project as modified.

a Regent Honeyeater (Critically Endangered)

The Regent Honeyeater has a patchy distribution and reduced range along south-east Australia which extends from south-east Queensland, through New South Wales (NSW) and the Australian Capital Territory (ACT), to central Victoria (DoE 2016a). It is most commonly associated with box-ironbark eucalypt woodland and dry sclerophyll forest, but also inhabits riparian vegetation and lowland coastal forest. In addition, it can be found in a range of other habitats including remnant trees in farmland, roadside reserves and travelling stock routes, and in planted vegetation in parks and gardens.

Within its current distribution there are four known key breeding areas where the Regent Honeyeater is regularly recorded. These are the Bundarra-Barraba, Capertee Valley and Hunter Valley districts in New South Wales, and the Chiltern area in north-east Victoria. The Regent Honeyeater is comprised of a single population and with the total population size estimated at 350–400 mature individuals in 2010.

The National recovery plan for the Regent Honeyeater defines habitat critical for survival of the species as any breeding or foraging areas where the species is likely to occur, in addition to any newly discovered breeding or foraging locations. The Regent Honeyeater is reliant on select species of eucalypt and mistletoe which provide rich nectar flows.

The Regent Honeyeater was not recorded during surveys of the modified development boundary. The modified development boundary does not occur in any known breeding areas of the species and so supports foraging only.

Table 7.6 provides an assessment of significance for the removal of up to 0.99 ha of potential Regent Honeyeater habitat, in accordance with the assessment criteria for critically endangered species (DoE 2013). Potential habitat for this species was considered vegetation zones with woodland habitat, which was PCT266_intact_moderate, PCT266_intact_low and PCT266_intact_poor. These three vegetation zones were impacted as part of the approved project. The modification area does not include trees, so further direct impacts to habitat for this species is not anticipated due to the modification.

Table 7.6 Assessment of significance for the Regent Honeyeater

Criteria	Discussion
Lead to a long-term decrease in the size of a population.	The modified development boundary is located approximately 80 km from the known breeding area of Capertee valley for the Regent Honeyeater. Whilst this species may utilise the modified development boundary to forage, it is likely to occur during the White Box flowering season, generally between April to November. The White Box community extends beyond the modified development boundary and locality. The removal of 0.99 ha of potential foraging habitat is unlikely to lead to a long-term decrease in the size of a population of the Regent Honeyeater.
Reduce the area of occupancy of the species.	The project will reduce the potential area of occupancy for this species by 0.99 ha, approximately 0.2% of potential woodland habitat within the buffer area.
Fragment an existing population into two or more populations.	The Regent Honeyeater is a highly mobile bird species. For this reason, the removal of 0.99 ha for the project is unlikely to fragment the existing populations. This species is able to fly over the modified development boundary.
Adversely affect habitat critical to the survival of a species.	Habitat critical for survival of the Regent Honeyeater includes (DoE 2016a): • any breeding or foraging areas where the species is likely to occur • in addition to any newly discovered breeding or foraging locations. There are no records of the Regent Honeyeater within the modified development boundary, with the nearest previous records occurring approximately 10 km away. The potential foraging habitat for the Regent Honeyeater within the modified development boundary represents foraging areas where the species is likely to occur, and therefore represents habitat critical to the survival of the species. Section 6.3.3 details avoidance measures implemented by AMPYR into the project design to minimise impacts on habitat for this species. The removal of 0.99 ha of potential foraging habitat is unlikely to adversely affect the survival of the species.

Criteria	Discussion
Disrupt the breeding cycle of a population.	The modified development boundary is not likely to support breeding habitat of the Regent Honeyeater. The breeding cycle of the populations are unlikely to be disrupted by the project.
Modify, destroy, remove or isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline.	The project will remove 0.99 ha of potential foraging habitat for the Regent Honeyeater. The modified development boundary occurs within a landscape of potential foraging habitat, including White Box woodland and the removal of 0.99 ha is unlikely to remove or modify the availability or quality of habitat such that the species is likely to decline.
Result in invasive species that are harmful to the critically endangered species becoming established in the critically endangered species habitat.	Soil disturbance for the project has potential to result in the spread of invasive weeds to indirect impact areas and potential habitat. Much of the surrounding vegetation is in moderate to poor condition, due to existing weed encroachment. Weed control procedures are provided in the BMP to minimise the impact on potential foraging habitat for the Regent Honeyeater. Any additional exotic species introduced to the modified development boundary are unlikely to further exacerbate invasive species impact to this species' habitat.
Introduce disease that may cause the species to decline.	The clearance of potential foraging habitat is unlikely to cause significant stress such that a disease outbreak would occur.
Interfere substantially with the recovery of the species	Recovery actions for the Regent Honeyeater include (DoE 2016a) • improve the extent and quality of the Regent Honeyeater habitat • bolster the wild population with captive-bred birds until the wild population becomes self-sustaining • increase understanding of the size, structure, trajectory and viability of the wild population • maintain and increase community awareness, understanding and involvement in the recovery program. The project will interfere with the quality and extent of potential habitat for this species, however this is unlikely to be substantial, removing 0.99 ha.
Conclusion	The project is unlikely to significantly impact the Regent Honeyeater due to: • the clearance of a 0.99 ha of potential foraging habitat is unlikely to result in a significant impact on this species given the highly mobile and non-specific foraging areas used by this species • the area to be removed does represent habitat critical to the survival of the Regent Honeyeater, however the amount to be removed is unlikely to adversely affect the survival of the species • the project is unlikely to disrupt the breeding cycle of a population • the project is unlikely to further exacerbate invasive species impact to this species' habitat • the project will not interfere with recovery of the species.

b Southern Whiteface (Vulnerable)

The Commonwealth Conservation Advice for the Southern Whiteface (EPBC Act: Vulnerable) (DCCEEW 2023a) describes the conservation status, distribution, biology/ecology and threats to the survival of this species. Southern whiteface occurs across most of mainland Australia south of the tropics, from the north eastern edge of the Western Australian wheatbelt, east to the Great Dividing Range. Southern whitefaces live in a wide range of open woodlands and shrublands where there is an understorey of grasses or shrubs, or both. Southern whiteface forage almost exclusively on the ground, favouring habitat with low tree densities and an herbaceous understorey litter cover.

Habitat critical to the survival of the Southern Whiteface includes areas of:

- relatively undisturbed open woodlands and shrublands with an understorey of grasses or shrubs, or both
- habitat with low tree densities and an herbaceous understory litter cover which provides essential foraging habitat

- living and dead trees with hollows and crevices which are essential for roosting and nesting.

Table 7.7 provides an assessment of significance for the removal of up to 11.49 ha of potential foraging habitat for the Southern Whiteface, in accordance with the assessment criteria for vulnerable species (DoE 2013).

Table 7.7 Assessment of significance for the Southern Whiteface

Criteria	Discussion
1. Long-term decrease of an important population	This species consists of a single subpopulation that is widely dispersed across south-eastern Australia, and so no important population has been identified. The modified development boundary is not located at the edge of the species range. Further, as this species is considered sedentary, a lack of detection within the modified development boundary suggests irregular occupancy of habitat available only, whilst breeding is unlikely. As such, the Southern Whiteface occurrence within the modified development boundary is not considered an important population.
2. Reduce occupancy area for important population	Southern Whiteface occurrence within the modified development boundary is not considered an important population. The project will reduce potential foraging habitat for Southern Whiteface by up to 11.49 ha, approximately 1.88% within the buffer area. Additional suitable habitat is also likely available in the locality. Further, as this species is considered sedentary, a lack of detection within the modified development boundary suggests irregular occupancy of habitat available only.
3. Fragment an important population	Southern Whiteface occurrence within the modified development boundary is not considered an important population. The modified development boundary occurs in an already fragmented grassy woodland landscape. The Southern Whiteface is considered sedentary. Hence, a lack of detection within the modified development boundary suggests irregular occupancy of habitat available only.
4. Adversely affect habitat critical to survival	Habitat critical to the Southern Whiteface is mature, relatively undisturbed open woodland with hollow-bearing trees important food trees. The modified development boundary contains limited vegetation which aligns with the definition of critical habitat for foraging, given the understory has been highly degraded by agriculture. The project will remove 11.49 ha of potential foraging habitat for Southern Whiteface, however the degraded nature of the site suggests this habitat is not critical for survival. Further, as this species is considered sedentary, a lack of detection within the modified development boundary suggests irregular occupancy of habitat available only. Section 6.3.3 details avoidance and mitigation measures implemented by AMPYR into the project design to minimise impacts on habitat for this species. The removal of 11.49 ha of degraded habitat is unlikely to adversely affect the survival of the species (approximately 1.88% of potential foraging habitat within the buffer area). The habitat within the modified development boundary is located within a much larger extent of habitat, which is also likely to be habitat critical to the survival of the species.
5. Disrupt breeding cycle	Breeding of the Southern Whiteface has not been recorded in or nearby the modified development boundary. Based on the lack of evidence of regular breeding of Southern Whiteface in or near the modified development boundary, it is considered unlikely that the project would disrupt the breeding cycle of a population.
6. Modify, destroy, remove, isolate or degrade habitat	The project will remove up to 11.49 ha of degraded foraging habitat for the Southern Whiteface. Based on the relatively minor extent and degraded nature of habitat to be removed and high level of connectivity of habitat in remaining, it is considered unlikely that the project would modify, destroy, remove, isolate or degrade habitat to the extent that the species is likely to decline.
7.Result in invasive species	Soil disturbance for the project has potential to result in the spread of invasive weeds to indirect impact areas and potential habitat. Much of the surrounding vegetation is in moderate to poor condition, due to existing weed encroachment. Weed control procedures in the BMP will minimise the impact on potential foraging habitat for the Southern Whiteface.
8. Introduce disease	There are no known diseases listed as a threatening process for the species. Hence, the project is unlikely to cause a disease outbreak.
9. Interfere with recovery	Actions proposed to achieve objectives for conservation and recovery include reduce habitat loss caused by clearing for agriculture, reduce habitat degradation by domestic livestock grazing, stakeholder engagement/community engagement, and survey and monitoring priorities. As the

Criteria	Discussion
	project impacts only 11.49 ha of degraded foraging habitat (1.88% of potential habitat in the buffer area), and given its widespread distribution and lack of detection within the modified development boundary, it is unlikely to interfere with recovery of the species.
Conclusion	The project is unlikely to significantly impact the Southern Whiteface due to: • the project is unlikely to lead to a long-term decrease in the size of an important population • the total amount of degraded foraging habitat to be removed equates to 11.49 ha, approximately 1.88% of potential habitat within the buffer area. Additional suitable habitat is also likely available in the locality • the project is unlikely to fragment the existing population • the project is unlikely to adversely affect habitat critical to the survival of the species • the project is unlikely to disrupt the breeding cycle of an important population • the project is unlikely to further exacerbate invasive species or cause new species to become established within the modified development boundary • the project is unlikely to interfere with recovery of the species.

c Glossy Black Cockatoo (Vulnerable)

The Commonwealth Conservation Advice for the Glossy-black Cockatoo (EPBC Act: Vulnerable) (DCCEEW 2022) describes the conservation status, distribution, biology/ecology and threats to the survival of this species. They are widespread, but uncommon, and can be found from Mitchell, Queensland, through eastern New South Wales to East Gippsland, Victoria. Their distribution is continuous through the forested parts of the Great Dividing Range but becomes more scattered inland, to as far west as the Riverina in New South Wales. South-eastern glossy black cockatoos feed almost exclusively on the seeds of sheoaks (Allocasuarina spp. and Casuarina spp.), usually relying on one or two species within a region. South-eastern glossy black cockatoos are hollow nesters, utilising large hollows in both living and dead eucalypt trees. The main threat causing the decline of south-eastern glossy black cockatoo is a result of habitat loss, degradation, and fragmentation.

Foraging habitat considered to be critical to the survival of the species in inland NSW is considered to be Drooping sheoak (*A. verticillata*), Broombush sheoak (*A. diminuta*), Mallee sheoak (*A. gymnanathera*), Belah (*C. cristata*) are all important food, although other species [e.g. Bulloak (*A. luehmannii*)] may be utilised in some years.

Breeding habitat considered critical to the survival of the species is living or dead trees with potential nest hollows that are >8 m above the ground, located in branches >30 cm diameter, branch or stem no more than 45° from vertical and minimum entrance diameter of >15 cm.

Table 7.8 provides an assessment of significance for the removal of up to three potential Glossy-black Cockatoo nest trees as part of the approved project, in accordance with the assessment criteria for vulnerable species (DoE 2013). Note that no suitable foraging habitat was located within the modified development boundary; that is there are no *Allocasuarina spp*. or *Casuarina spp*. Further, no potentially suitable nest trees will be directly impacted by the modification.

Table 7.8 Assessment of significance for the Glossy Black Cockatoo

Criteria	Discussion
1. Long-term decrease of an important population	This species consists of a single population that is widely dispersed across south-eastern Australia, and so no important population has been identified. The modified development boundary is not located at the edge of the species range. Further, despite intensive field surveys across the site as part of the approved and modified project, no Glossy Black Cockatoo were detected. As such, the potential occurrence of Glossy Black Cockatoo within the modified development boundary is not considered an important population.
2. Reduce occupancy area for important population	Glossy Black Cockatoo occurrence within the modified development boundary is not considered an important population. Although three trees were removed as part of the approved project that have

Criteria	Discussion
	the morphology that may support breeding of this species, a lack of detection within the modified development boundary suggests irregular occupancy of habitat available only.
3. Fragment an important population	Glossy Black Cockatoo occurrence within the modified development boundary is not considered an important population. The modified development boundary occurs in an already fragmented grassy woodland landscape. Although three trees were removed as part of the approved project that have the morphology that may support breeding of this species, a lack of detection within the modified development boundary suggests irregular occupancy of habitat available only.
4. Adversely affect habitat critical to survival	There is no foraging habitat present for Glossy Black Cockatoo. However, the approved project removed three trees that could be considered habitat critical to the Glossy Black Cockatoo; living or dead trees with potential nest hollows that are >8 m above the ground, located in branches >30 cm diameter, branch or stem no more than 45° from vertical and minimum entrance diameter of >15 cm. However, a lack of detection of Glossy Black Cockatoo within the modified development boundary, despite intensive fauna surveys across multiple years for the approved and modified project, suggests irregular occupancy of habitat available only. The habitat within the modified development boundary is also located within a much larger extent of comparable to better condition habitat, which is also likely to be habitat critical to the survival of the species. Note that the removal of these trees is subject to management in accordance with the BMP (Appendix B). The modification will not directly impact any potentially suitable nest trees for Glossy Black Cockatoo. As a precautionary approach, presence of breeding habitat has been assumed in absence of targeted surveys that meet the requirements of the BAM. Impacts to these areas will be offset in accordance with the NSW BOS.
5. Disrupt breeding cycle	Despite the approved project impacting three potentially suitable nest trees for Glossy Black Cockatoo, breeding of the Glossy Black Cockatoo has not been recorded in or nearby the modified development boundary. Based on the lack of evidence of regular occurrence of Glossy Black Cockatoo in or near the modified development boundary, it is considered unlikely that the project would disrupt the breeding cycle of a population.
6. Modify, destroy, remove, isolate or degrade habitat	The approved project removed three potentially suitable nest trees for Glossy Black Cockatoo. However, based on a lack of detection of this species, the relatively minor extent and degraded nature of habitat to be removed and high level of connectivity of habitat in remaining, it is considered unlikely that the project would modify, destroy, remove, isolate or degrade habitat to the extent that the species is likely to decline.
7.Result in invasive species	Soil disturbance for the project has potential to result in the spread of invasive weeds to indirect impact areas and potential habitat. Much of the surrounding vegetation is in moderate to poor condition, due to existing weed encroachment. Weed control procedures are documented in the BMP and will minimise the impact on potential foraging habitat for the Glossy Black Cockatoo.
8. Introduce disease	There are no known diseases listed as a threatening process for the species. Hence, the project is unlikely to cause a disease outbreak.
9. Interfere with recovery	A recovery plan has not yet been developed. Recovery priorities in the conservation advice list are clearing of native vegetation/timber harvesting and habitat fragmentation, inappropriate fire regimes and competition for nest hollows. As the approved project includes clearing of three potential nest trees, there is potential for the project to interfere with recovery. However, given the widespread distribution of the species and lack of detection within the modified development boundary despite fauna surveys spanning multiple years for the approved and modified project, it is considered unlikely to interfere with recovery of the species.
Conclusion	The project is unlikely to significantly impact the Glossy Black Cockatoo due to: • the project is unlikely to lead to a long-term decrease in the size of an important population • additional comparable and better condition habitat is available in the locality • the project is unlikely to fragment the existing population • the approved project directly impacts three potential nesting trees, whilst the modification does not directly impact any potential nesting trees. However, the species has not been detected despite fauna surveys spanning multiple years for assessment of the approved and modified project, suggesting irregular use of habitat resources within the modified development boundary only. Hence, it is considered unlikely that these removed trees are habitat critical to survival of the species. Further, no foraging habitat for this species is to be impacted by the modified project since no Allocasuarina or Casuarina spp. are present. • the project is unlikely to disrupt the breeding cycle of an important population

Criteria	Discussion
	• the project is unlikely to further exacerbate invasive species or cause new species to become established within the modified development boundary • the project is unlikely to interfere with recovery of the species.

d Swift Parrot (Critically Endangered)

The Swift Parrot is a highly mobile bird, breeding in Tasmania in summer and migrating north to mainland Australia for winter, primarily Victoria and NSW (DCCEEW 2024). In NSW, Swift Parrots forage in forests and woodlands throughout the coastal and western slopes regions each year. Coastal regions tend to support larger numbers of birds when inland habitats are subjected to drought.

The Swift Parrot occurs as a single, migratory population and with the total population size estimated at 1,000 pairs. The National recovery plan for the Swift Parrot defines habitat critical for survival of the species as those areas of priority habitat for which the Swift Parrot has a level of site fidelity or possesses phenological characteristics likely to be of importance to the Swift Parrot, or are otherwise identified by the recovery team.

The Swift Parrot was not recorded during surveys of the modified development boundary. The modified development boundary does not occur in any breeding areas of the species and likely supports foraging habitat only.

Table 7.9 provides an assessment of significance for the removal of up to 0.99 ha of potential Swift Parrot habitat, in accordance with the assessment criteria for critically endangered species (DoE 2013). Potential habitat for these birds was considered vegetation zones with woodland habitat, which was PCT266_intact_moderate, PCT266_intact_low and PCT266_intact_poor. These three vegetation zones were impacted as part of the approved project. The modification area does not include trees, so further direct impacts to habitat for these birds is not anticipated due to the modification.

Table 7.9 Assessment of significance for the Swift Parrot

Criteria	Discussion
Lead to a long-term decrease in the size of a population.	The modified development boundary does not constitute breeding habitat for the Swift Parrot. Whilst this species may utilise the modified development boundary to forage, it is likely to occur during the White Box flowering season, generally between April to November. The White Box community extends beyond the modified development boundary and locality. The removal of 0.99 ha of potential foraging habitat is unlikely to lead to a long-term decrease in the size of a population of the Swift Parrot.
Reduce the area of occupancy of the species.	The project will reduce the potential area of occupancy for this species by 0.99 ha, approximately 0.2% of potential woodland habitat within the buffer area.
Fragment an existing population into two or more populations.	The Swift Parrot are highly mobile bird species. For this reason, the removal of 0.99 ha for the project is unlikely to fragment the existing populations. This species is able to fly over the modified development boundary.
Adversely affect habitat critical to the survival of a species.	Habitat critical for the survival of the Swift Parrot includes: • All preferred foraging species within known and likely foraging habitat on the mainland including Yellow Gum (*E. leucoxylon*); Red Ironbark (*E. tricarpa*); Mugga Ironbark (*E. sideroxylon*); Grey Box (*E. macrocarpa*); White Box (*E. albens*); Yellow Box (*E. melliodora*); Swamp Mahogany (*E. robusta*); Forest Red Gum (*E. tereticornis*); Blackbutt (*E. pilularis*); and Spotted Gum (*Corymbia maculata*). There are no records of the Swift Parrot within the modified development boundary, with the nearest previous records occurring approximately 8 km away. Further the species has not been recorded within the modified development boundary, despite extensive field surveys within the modified development boundary. Hence, although there were a few White Box cleared during the approved project, a lack of records suggests the modified development boundary provides limited habitat critical to the survival of the Swift Parrot.

Criteria	Discussion
	Section 6.3.3 details avoidance measures implemented by AMPYR into the project design to minimise impacts on habitat for this species. The removal of 0.99 ha of potential foraging habitat is unlikely to adversely affect the survival of the species.
Disrupt the breeding cycle of a population.	The modified development boundary is not likely to support breeding habitat of the Swift Parrot. The breeding cycle of the populations are unlikely to be disrupted by the project.
Modify, destroy, remove or isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline.	The project will remove 0.99 ha of potential foraging habitat for the Swift Parrot. The modified development boundary occurs within a landscape of potential foraging habitat, including White Box woodland and the removal of 0.99 ha is unlikely to remove or modify the availability or quality of habitat that the species is likely to decline.
Result in invasive species that are harmful to the critically endangered species becoming established in the critically endangered species habitat.	Soil disturbance for the project has potential to result in the spread of invasive weeds to indirect impact areas and potential habitat. Much of the surrounding vegetation is in moderate to poor condition, due to existing weed encroachment. Weed control procedures in the BMP will minimise the impact on potential foraging habitat for the Swift Parrot. Any additional exotic species introduced to the modified development boundary are unlikely to further exacerbate invasive species impact to this species' habitat.
Introduce disease that may cause the species to decline.	Swift Parrots may be susceptible to beak and feather disease. Disease outbreaks usually occur in wild animal populations where significant stresses arise. The clearance of potential foraging habitat is unlikely to cause significant stress such that a disease outbreak would occur.
Interfere substantially with the recovery of the species	Recovery actions for the Swift Parrot also include identifying the extent and quality of habitat in addition to monitoring and managing habitat and creating awareness of the recovery program. The project will interfere with the quality and extent of potential habitat for this species, however this is unlikely to be substantial, removing 0.99 ha.
Conclusion	The project is unlikely to significantly impact the Swift Parrot due to: • the clearance of 0.99 ha of potential foraging habitat is unlikely to result in a significant impact on this species given the highly mobile and non-specific foraging areas used by this species • the area to be removed is limited to a few trees consistent with the criteria of habitat critical to the survival of the Swift Parrot • the project is unlikely to disrupt the breeding cycle of a population • the project is unlikely to further exacerbate invasive species impact to this species' habitat • the project will not interfere with recovery of the species.

e Superb Parrot (Vulnerable)

The Commonwealth Conservation Advice for the Superb Parrot (DoE 2016b) describes the conservation status, distribution, biology/ecology and threats to the survival of the Superb Parrot. In NSW, the Superb Parrot occurs west of the Great Dividing Range, in Canberra, Goulburn and west to Nyngan and Swan Hill. The Superb Parrot nests in large, living or dead trees with many hollow branches, typically near watercourses. On the inland slopes, they use at least six species of eucalypts, but have a particular reliance on Blakely's Red Gum (*E. blakelyi*). An assumed reliance on White Box (*E. albens*) and Yellow Box (*E. melliodora*) remains. Most nest sites are within 10 km of Box Gum Woodland. Following breeding, Superb Parrots disperse and forage on a variety woodland and other habitat types. Threats to the survival of the species comprise the loss and degradation of habitat, competition for nest hollows, roadkill, illegal collection of wild birds, Psittacine beak and feather disease and climate change.

The National Recovery Plan for the Superb Parrot (DAWE 2021a) details the species biology, ecology, distribution, populations, habitat and threats. The recovery plan describes the species as nomadic, resident, dispersive and migratory, making regular seasonal movements between breeding and non-breeding areas, in response to

changes in food availability. When making local foraging movements, the species usually moves through wooded corridors, rarely crossing large areas of open ground.

The breeding range of the Superb Parrot is concentrated on the NSW South Western Slopes and Riverina bioregions. The three main breeding areas comprise:

- the area bounded by Molong, Rye Park, Yass, Coolac, Cootamundra and Young
- along the Murrumbidgee River between Wagga Wagga and Toganmain Station to Goolgowi
- along the Murray and Edward Rivers, east of Barmah and Millewa State Forest to south of Taylors Bridge.

The total population of the Superb Parrot has been estimated at 20,000 mature individuals.

The recovery plan defines habitat critical to the survival of the Superb Parrot as breeding habitat that comprises riverine forests in the Riverina and Box-Gum Woodlands on the tablelands and slopes of Victoria, New South Wales and the Australian Capital Territory. Tree species typically selected for nesting on the slopes and tablelands comprise River Red Gum (*E. camaldulensis*), Blakely's Red Gum, Apple Box, Grey Box (*E. microcarpa*), White Box and Red Box (*E. polyanthemos*). Of the species described above, White Box occurs in the modified development boundary and surrounds. Potential nest trees with suitable hollows within a 10 km buffer zone of known breeding colonies are also considered habitat critical to the survival of the species, but no known breeding colonies are within 10 km of the modified development boundary.

Foraging habitat critical to the survival of the species is defined as preferred foraging habitat during both breeding and non-breeding season. Further, the recovery plan defines habitat important for long-term maintenance of the species as Boree Woodlands between the Barmah-Millewa, Murrumbidgee Red Gum and South-west Slopes of New South Wales Key Biodiversity Areas (KBAs). Note that the modified development boundary is outside of these three KBAs.

The Superb Parrot was recorded adjacent to the modified development boundary (Figure 5.3). The Superb Parrot was observed flying over the modified development boundary on all occasions. Potential habitat within the modified development boundary comprises areas of PCT 266 (all vegetation zones and conditions).

Table 7.10 provides an assessment of significance for the removal of up to 9.86 ha of potential breeding habitat, consisting of seven hollow-bearing trees as part of the approved project and 100 m buffer off suitable hollows that intercepts the modification area. The modified project will impact 11.49 ha of foraging habitat for Superb Parrot, in accordance with the assessment criteria for vulnerable species (DoE 2013). Note that all impacts to woodland providing potential nesting habitat for Superb Parrot were associated with the approved project, whilst the modification does not involve impact to any trees and will directly impact potential foraging habitat only.

Table 7.10 Assessment of significance for the Superb Parrot

Criteria	Discussion
Lead to a long-term decrease in the size of an important population.	Important populations have not been defined in the recovery plan for the Superb Parrot (DAWE 2021a). An important population is described as those that are key source populations for breeding or dispersal, populations that are necessary for maintaining genetic diversity, and/or populations that are near the limit of the species range (DoE 2013). The Superb Parrot is likely to be breeding within the locality and maintaining the genetic diversity within the population. The modified development boundary is not located at the edge of the species range. As such, the Superb Parrot occurrence within the modified development boundary is considered an important population. The Superb Parrot was observed flying over the modified development boundary during targeted surveys. No hollows were observed to be in use, however several potentially suitable hollows for breeding occur within and adjacent to the modified development boundary. Seven potential suitable hollows occur within the modified development boundary (approved development boundary only), with an additional 19 suitably sized hollow-bearing trees within the study area. Due

Criteria	Discussion
	to the extent of similarly established Box Gum Woodland within the buffer area and locality, it is expected that additional suitable hollows would be available to the species. The removal of up to seven potentially suitable hollow-bearing trees for the approved project is unlikely to significantly impact the breeding cycle of the Superb Parrot. Similarly, the extent of foraging habitat within the buffer area (in addition to the wider locality) is likely able to support foraging habitat for the species, after removal of 11.49 ha (approximately 1.88% of available habitat within the buffer area) due to the modified project. For the reasons stated above, the project is unlikely to lead to a long-term decrease in the size of an important population of the Superb Parrot.
Reduce the area of occupancy of an important population.	The project will reduce the potential area of breeding habitat by 9.86 ha (including seven hollow-bearing trees and hollows within a 100 m buffer of the modification area) and foraging habitat by a cumulative total of 11.49 ha for the Superb Parrot. The total amount of breeding and foraging habitat to be removed equates to 11.49 ha, approximately 1.88% of potential habitat within the buffer area. Additional suitable habitat is also likely available in the locality.
Fragment an existing important population into two or more populations.	The modified development boundary occurs in an already fragmented grassy woodland landscape. The Superb Parrot is a highly mobile species and was observed flying over the modified development boundary. The Superb Parrot's home range extends beyond the modified development boundary. The species is likely to traverse the modified development boundary with male birds foraging at least 9 km from their nesting colonies. Superb Parrots are considered nomadic, depending on foraging resources. As White Box is the only flowering tree resource to occur within the modified development boundary, the species is likely to utilise additional resources for foraging outside of the modified development boundary.
Adversely affect habitat critical to the survival of the species.	Habitat critical to the survival of the species has been defined by the recovery plan (DAWE 2021a) as breeding habitat that comprises riverine forests in the Riverina and Box Gum Woodlands on the tablelands and slopes and habitat within Barmah-Millewa, Murrumbidgee Red Gum and South-west Slopes of New South Wales KBAs that provide for long-term maintenance of the species. The modified development boundary contains vegetation which aligns with the definition of critical habitat for both breeding and foraging, but is outside of the three KBAs identified as important for future survival of the species. The project will remove 11.49 ha of habitat critical to the survival of the Superb Parrot. Section 6.3.3 details avoidance and mitigation measures implemented by AMPYR into the project design to minimise impacts on habitat for this species. The removal of 11.49 ha is unlikely to adversely affect the survival of the species, due to the small extent of clearing habitat critical to the survival of the species (approximately 1.88% of potential habitat within the buffer area). The habitat within the modified development boundary is located within a much larger extent of habitat, which is also likely to be habitat critical to the survival of the species. The habitat critical to the species, whilst somewhat fragmented, is sparsely connected throughout the locality due to the species ability to traverse the landscape.
Disrupt the breeding cycle of an important population.	As mentioned above, the Superb Parrot was observed flying over the modified development boundary during targeted surveys. No hollows were observed to be in use, however several potential suitable hollows for breeding occur within and adjacent to the modified development boundary. Seven potential suitable hollows occur within the approved development boundary. Due to the extent of similarly established Box Gum Woodland within the buffer area and locality, it is expected that additional suitable hollows would be available to the species. Section 6.3.3 details avoidance measures implemented by AMPYR into the project design to minimise impacts on habitat for this species. Mitigation measures include: • Pre-clearance surveys to inspect hollows prior to clearing. • If the Superb Parrot is found to be utilising a hollow, a hollow inspection will be undertaken using an elevated work platform, tree climber and/or inspection camera. The appropriate management action will then be taken to minimise impact to the species (see Table 6.4). • Weed management protocols to reduce impacts to foraging habitat. With limited potential breeding habitat available within the modified development boundary, and the mitigation measures mentioned above, the project is unlikely to disrupt the breeding cycle of an important population of the Superb Parrot.

Criteria	Discussion
Modify, destroy, remove or isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline.	The project will remove 11.49 ha of potential foraging and breeding habitat for the Superb Parrot. The modified development boundary occurs within proximity to the Macquarie River, in addition to a likely abundance of suitable foraging and breeding habitat within the locality. The removal of 11.49 ha is unlikely to remove or modify the availability or quality of habitat that the species is likely to decline.
Result in invasive species that are harmful to the species becoming established in the species habitat.	Soil disturbance for the project has potential to result in the spread of invasive weeds to indirect impact areas and potential habitat. Much of the surrounding vegetation is in moderate to poor condition, due to existing weed encroachment. Weed control procedures in the BMP will minimise the impact on potential foraging habitat for the Superb Parrot. Any additional exotic species introduced to potential Superb Parrot habitat as a result of the project, are unlikely to further exacerbate invasive species impact to Superb Parrot habitat.
Introduce disease that may cause the species to decline.	Superb Parrots may be susceptible to beak and feather disease. Disease outbreaks usually occur in wild animal populations where significant stresses arise. The clearance of 11.49 ha of potential habitat, with mitigation measures in place prior to construction, is unlikely to cause significant stress such that a disease outbreak would occur. Mitigation measures outlined in Section 6.3.3 would reduce the stress on the species if it occurs during the project.
Interfere substantially with the recovery of the species.	Recovery actions for the Superb Parrot aim to identify/manage areas of high conservation significance, determine population trends, increase knowledge of the species ecological requirements, develop and implement threat abatement strategies and increase community involvement and awareness of the recovery program. As the modification area is outside KBAs identified as important for long-term maintenance of the species, whilst the habitat to be impacted is largely degraded and breeding has not been detected within the modified development boundary, the project is considered unlikely to substantially interfere with recovery of the species.
Conclusion	The project is unlikely to significantly impact the Superb Parrot due to: • the project is unlikely to lead to a long-term decrease in the size of an important population • the total impact is clearing is seven trees that have suitable hollows to support breeding of Superb Parrot, noting that nesting of Superb Parrot has not been recorded within hollows observed within or adjacent to the modified development boundary • indirect impact on potential breeding habitat is 9.86 ha, which considers impacts to vegetation within 100 m of suitable nesting trees • the total amount of foraging habitat to be removed equates to 11.49 ha, approximately 1.88% of potential habitat within the buffer area. Additional suitable breeding and foraging habitat is also available in the locality • the project is outside KBAs identified as important for the long-term maintenance of the species • the species is highly mobile and the project is unlikely to fragment the existing population • the project is unlikely to adversely affect habitat critical to the survival of the species • the project is unlikely to disrupt the breeding cycle of an important population • the project is unlikely to further exacerbate invasive species or cause new species to become established within the modified development boundary • the project is unlikely to interfere with recovery of the species.

f Diamond Firetail (Vulnerable)

The Commonwealth Conservation Advice for the Diamond Firetail (EPBC Act: Vulnerable) (DCCEEW 2023b) describes the conservation status, distribution, biology/ecology and threats to the survival of this species. Diamond Firetail occurs on the south-east mainland of Australia from south-east Queensland to Eyre Peninsula, South Australia, and about 300 km inland from the sea. They have disappeared from many of the more settled parts of New South Wales.

Diamond firetails occur in eucalypt, acacia or casuarina woodlands, open forests and other lightly timbered habitats, including farmland and grassland with scattered trees. They prefer areas with relatively low tree density, few large logs, and little litter cover but high grass cover. Between August and January, groups separate into small colonies to breed. Nest either in base of the large stick-nest of a bird of prey or prickly foliage of shrubs.

Habitat critical to the survival of the Diamond Firetail includes areas of:

- Eucalypt, acacia or casuarina woodlands, open forests and other lightly timbered habitats
- low tree density, few large logs, and little litter cover but high grass cover for foraging, roosting and breeding
- Drooping she-oak (Allocasuarina verticillata) within the Mt Lofty Ranges.

Table 7.11 provides an assessment of significance for the removal of up to 11.49 ha of potential foraging habitat for the Diamond Firetail, in accordance with the assessment criteria for vulnerable species (DoE 2013).

Table 7.11 Assessment of significance for the Diamond Firetail

Criteria	Discussion
1. Long-term decrease of an important population	This species consists of a single subpopulation that is widely dispersed across eastern Australia, and so no important population has been identified. The modified development boundary is not located at the edge of the species range. Further, as this species is considered sedentary, a lack of detection within the modified development boundary suggests irregular occupancy of habitat available only, whilst breeding is unlikely due to a lack of suitable breeding habitat. As such, the Diamond Firetail occurrence within the modified development boundary is not considered an important population.
2. Reduce occupancy area for important population	Diamond Firetail occurrence within the modified development boundary is not considered an important population. The project will reduce the potential area of up to 11.49 ha of potential foraging habitat for the Southern Whiteface, approximately 1.88% within the buffer area. Additional suitable habitat is also likely available in the locality. Further, as this species is considered sedentary, a lack of detection within the modified development boundary suggests irregular occupancy of habitat available only.
3. Fragment an important population	Diamond Firetail occurrence within the modified development boundary is not considered an important population. The modified development boundary occurs in an already fragmented grassy woodland landscape. The Diamond Firetail is considered sedentary. Hence, a lack of detection within the modified development boundary suggests irregular occupancy of habitat available only, whilst breeding is unlikely due to a lack of suitable breeding habitat.
4. Adversely affect habitat critical to survival	Habitat critical to the Diamond Firetail includes lightly timbered Eucalypt open forests with few logs and litter and high grass cover, which is not degraded. The modified development boundary contains limited vegetation which aligns with this definition of critical habitat for foraging, given the understory has been highly degraded by agriculture. The project will remove potential foraging habitat by 11.49 ha for the Diamond Firetail, however the degraded nature of the site suggests this habitat is not critical for survival. Further, as this species is considered sedentary, a lack of detection within the modified development boundary suggests irregular occupancy of habitat available only, whilst breeding is unlikely due to a lack of suitable breeding habitat. Section 6.3.3 details avoidance and mitigation measures implemented by AMPYR into the project design to minimise impacts on habitat for this species. The removal of 11.49 ha of degraded habitat is unlikely to adversely affect the survival of the species (approximately 1.88% of potential foraging habitat within the buffer area). The habitat within the modified development boundary is located within a much larger extent of habitat, which is also likely to be habitat critical to the survival of the species.
5. Disrupt breeding cycle	Breeding of the Diamond Firetail has not been recorded in or nearby the modified development boundary. Further, there is no suitable habitat for breeding available within the modified development boundary. Hence, it is considered unlikely that the project would disrupt the breeding cycle of a population.

Criteria	Discussion
6. Modify, destroy, remove, isolate or degrade habitat	The project will remove up to 11.49 ha of degraded foraging habitat for the Diamond Firetail. Based on the relatively minor extent and degraded nature of habitat to be removed and high level of connectivity of habitat in remaining, it is considered unlikely that the project would modify, destroy, remove, isolate or degrade habitat to the extent that the species is likely to decline.
7.Result in invasive species	Soil disturbance for the project has potential to result in the spread of invasive weeds to indirect impact areas and potential habitat. Much of the surrounding vegetation is in moderate to poor condition, due to existing weed encroachment. Weed control procedures in the BMP will minimise the impact on potential foraging habitat for the Diamond Firetail.
8. Introduce disease	There are no known diseases listed as a threatening process for the species. Hence, the project is unlikely to cause a disease outbreak.
9. Interfere with recovery	Actions proposed to achieve objectives aims for conservation and recovery include reduce habitat loss (livestock and overabundant native animal grazing), invasive weeds, protect and maintain areas of high-quality habitat, stakeholder engagement/community engagement, and survey and monitoring priorities. As the project impacts only 11.49 ha of degraded foraging habitat (1.88% of potential habitat in the buffer area) and given its widespread distribution and lack of detection within the modified development boundary, it is unlikely to interfere with recovery of the species.
Conclusion	The project is unlikely to significantly impact the Diamond Firetail due to: • the project is unlikely to lead to a long-term decrease in the size of an important population • the total amount of degraded foraging habitat to be removed equates to 11.49 ha, approximately 1.88% of potential habitat within the buffer area. Additional suitable habitat is also likely available in the locality • the project is unlikely to fragment the existing population • the project is unlikely to adversely affect habitat critical to the survival of the species • the project is unlikely to disrupt the breeding cycle of an important population • the project is unlikely to further exacerbate invasive species or cause new species to become established within the modified development boundary • the project is unlikely to interfere with recovery of the species.

g Grey-headed Flying Fox (Vulnerable)

Grey-headed Flying-foxes are regularly found from the coast, inland to the tablelands and western slopes of northern New South Wales and the tablelands of southern Queensland. Broad trends in the distribution of plants with similar flowering and fruiting phenology support regular annual cycles of migration that are apparent at regional scales (DAWE 2021b). The Grey-headed Flying-fox feeds primarily on blossoms and fruit in canopy vegetation, and supplements this diet with leaves. Major food plants include the fruit and blossom of rainforest species, especially Ficus spp., and blossoms of myrtaceous species such as Eucalyptus, Corymbia and Angophora, melaleucas, banksias. Species that flower over winter are important to sustain the species. Grey-headed Flying-foxes forage over extensive areas and have been known to fly as far as 40 km to feed, before returning to their roost the same night.

Habitat critical to the survival of the Grey-headed Flying-fox may also be vegetation communities not containing the above tree species but which:

- contain native species that are known to be productive as foraging habitat during the final weeks of gestation, and during the weeks of birth, lactation and conception (August to May)
- contain native species used for foraging and occur within 20 km of a nationally important camp as identified on the Department's interactive flying-fox web viewer, or
- contain native and or exotic species used for roosting at the site of a nationally important Grey-Headed Flying-Fox camp as identified on the Department's interactive flying-fox web viewer.

Table 7.12 provides an assessment of significance for the removal of up to 0.99 ha of potential foraging habitat for the Grey-headed Flying-fox, in accordance with the assessment criteria for vulnerable species (DoE 2013).

Table 7.12 Assessment of significance for the Grey-Headed Flying-Fox

Criteria	Discussion
1. Long-term decrease of an important population	This species consists of a single subpopulation that is widely dispersed across south-eastern Australia, and so no important population has been identified. The modified development boundary is not located at the edge of the species range. As such, the Grey-Headed Flying-Fox occurrence within the modified development boundary is not considered an important population.
2. Reduce occupancy area for important population	Grey-Headed Flying-Fox occurrence within the modified development boundary is not considered an important population. The project will reduce the potential area of foraging habitat by 0.99 ha for the Grey-Headed Flying-Fox, approximately 0.2% of potential habitat within the buffer area. Additional suitable habitat is also likely available in the locality.
3. Fragment an important population	Grey-Headed Flying-Fox occurrence within the modified development boundary is not considered an important population. The modified development boundary occurs in an already fragmented grassy woodland landscape. The Grey-Headed Flying-Fox is a highly mobile species. Grey-Headed Flying-Fox's home range extends beyond the modified development boundary.
4. Adversely affect habitat critical to survival	Habitat critical to the Grey-Headed Flying-Fox includes mature woodland with important food trees (i.e. winter blossoming Eucalypts). The modified development boundary contains vegetation which aligns with the definition of critical habitat for foraging since White Box is listed as an important feed tree that provides food resources through winter and spring. The project will remove foraging habitat by 0.99 ha for the Grey-Headed Flying-Fox. Section 6.3.3 details avoidance and mitigation measures implemented by AMPYR into the project design to minimise impacts on habitat for this species. The removal of 0.99 ha is unlikely to adversely affect the survival of the species, due to the small extent of clearing habitat critical to the survival of the species (approximately 0.2% of potential habitat within the buffer area). The habitat within the modified development boundary is located within a much larger extent of habitat, which is also likely to be habitat critical to the survival of the species. The habitat critical to the species, whilst somewhat fragmented, is sparsely connected throughout the locality due to the species ability to traverse the landscape.
5. Disrupt breeding cycle	No Grey-Headed Flying-Fox have been recorded in or nearby the modified development boundary. Hence, it is considered unlikely that the Project would disrupt the breeding cycle of a population.
6. Modify, destroy, remove, isolate or degrade habitat	The project will remove 0.99 ha of foraging habitat for the Grey-Headed Flying-Fox. Based on the relatively minor extent of habitat to be removed and high level of connectivity of habitat in remaining, it is considered unlikely that the project would modify, destroy, remove, isolate or degrade habitat to the extent that the species is likely to decline.
7.Result in invasive species	Soil disturbance for the project has potential to result in the spread of invasive weeds to indirect impact areas and potential habitat. Much of the surrounding vegetation is in moderate to poor condition, due to existing weed encroachment. Weed control procedures will be documented in the BMP to minimise the impact on potential foraging habitat for the Grey-Headed Flying-Fox.
8. Introduce disease	There are no known diseases listed as a threatening process for the species. Hence, the project is unlikely to cause a disease outbreak.
9. Interfere with recovery	Within the National Recovery Plan for the Grey-Headed Flying-Fox, actions proposed to achieve objectives aim to manage/protect habitat critical for survival and roosting habitat, minimise/manage interactions of camps with urban settlements, increase public awareness, reduce/eliminate threats, increase knowledge of the species. As the project impacts only 0.99 ha foraging habitat critical to the survival of the species (0.2% of potential habitat in the buffer area), whilst there are no camps located nearby the project, it is unlikely to interfere with recovery of the species.
Conclusion	The project is unlikely to significantly impact the Grey-Headed Flying-Fox due to: • the project is unlikely to lead to a long-term decrease in the size of an important population • the total amount of foraging habitat to be removed equates to 0.99 ha, approximately 0.2% of potential habitat within the buffer area. Additional suitable habitat is also likely available in the locality • there are no camps present in or near the modified development boundary

Criteria	Discussion
	• the species is highly mobile and the project is unlikely to fragment the existing population • the project is unlikely to adversely affect habitat critical to the survival of the species • the project is unlikely to disrupt the breeding cycle of an important population • the project is unlikely to further exacerbate invasive species or cause new species to become established within the modified development boundary • the project is unlikely to interfere with recovery of the species.

h Pink-tailed Legless Lizard (Vulnerable)

The Pink-tailed Legless Lizard occurs in NSW, Victoria and the Australian Capital Territory where it is widely but patchily distributed along the foothills of the western slopes of the Great Dividing Range between Bendigo in Victoria and Gunnedah in NSW (TSSC 2015). Within this range, the species occurs in patchy and fragmented locations on sloping, open woodland areas with predominantly native grassy ground layers and partially embedded rocks. The species appears to be associated with microhabitat features such as rockiness and the presence of ground-layer species, primarily characteristic of Kangaroo Grass (*Themeda triandra*).

The species appears to have a stronghold primarily in the Canberra region, with most records occurring west of Belconnen and Fisher respectively, along the Murrumbidgee River. It also occurs south of Queanbeyan associated with the foothills and surrounds of Jerrabomberra Creek. The species was detected as part of surveys for the Orana BESS (NGH 2023) which is being constructed in a lot adjacent to the modified development boundary. Three individuals were detected across an area of 47.87 ha of suitable rocky habitat (NGH 2023). The species occurrence within the Orana BESS site (adjacent to the modified development boundary) is likely to be a small population over a diffuse area. Three individuals within a large area of suitable habitat (47.87 ha) are unlikely to be a stronghold population. The next closest known records occur approximately 32 km west of the modified development boundary, at Toongi, NSW (DPE 2025a). The records adjacent to the modified development boundary are unlikely to be part of the larger known population.

The Pink-tailed Legless Lizard is a dietary specialist which feeds mainly on the eggs and larvae of ants. The species is oviparous and has a clutch size of two, which it most likely laid inside ant nests (TSSC 2015). The estimated population size of the Pink-tailed Legless Lizard is highly varied due to its cryptic nature. It is estimated that populations size at single sites range from 37 individuals per 3000 rocks turned, up to 157 individuals per 40,000 rocks turned at the same site. This indicates that population estimates and densities are highly variable and may not be reliable. Male and female individuals have been observed to occur under the same rocks in groups of 2 to 5 individuals, whilst the species has been recorded below rocks and travelling above ground during the day (TSSC 2015).

The Pink-tailed Legless Lizard was not recorded during surveys undertaken by EMM in the modified development boundary undertaken when assessing the approved project. Surveys were undertaken in suitable habitat within peak survey period. The modified development boundary was also surveyed outside of peak survey period in accordance with survey advice from CPHR. The species was detected as part of surveys for the Orana BESS (NGH 2023) which is being constructed in a lot adjacent to the modified development boundary. Three individuals were sighted as part of NGH surveys (NGH 2023). For this reason, despite targeted survey, the species has been assumed present due to its known proximity to the modified development boundary.

Potential habitat within the modification area is 0.6 ha. This has been calculated based on rocky habitat within the modification area (0.2 ha), and a 50 m buffer surrounding the rocky habitat (the remaining 0.4 ha) in accordance with instructions to create a species polygon for Pink-tailed Legless Lizard detailed in the TBDC.

The cumulative impact of the project as modified on Pink-tailed Legless Lizard is 5.79 ha. This has been calculated based on rocky habitat within the modified development boundary (0.55 ha), and a 50 m buffer surrounding the rocky habitat (the remaining 5.24 ha) in accordance with instructions to create a species polygon for Pink-tailed Legless Lizard detailed in the TBDC.

Table 7.13 provides an assessment of significance for the removal of up to 5.79 ha of potential Pink-tailed Legless Lizard rocky habitat (0.55 ha of direct impact to rock habitat), in accordance with the assessment criteria for vulnerable species (DoE 2013).

Table 7.13 Assessment of significance for the Pink-tailed Legless Lizard

Criteria	Discussion
Lead to a long-term decrease in the size of an important population	Important populations have not been defined in the recovery plan for the Pink-tailed Legless Lizard (TSSC 2015). The significant impact guidelines (DoE 2013) describes an important population as those that are key source populations for breeding or dispersal, populations that are necessary for maintaining genetic diversity, and/or populations that are near the limit of the species range (DoE 2013). A known population occurs to the west of the modified project, where three individuals were observed in 2022 (NGH 2023). The nearest known population prior to these recent records is located at Toongi, NSW, approximately 32 km west of the modified development boundary (DPE 2025a). Whilst the Pink-tailed Legless Lizard was not recorded during surveys within the modified development boundary, the population adjoining the modified development boundary is likely to be its own sub-population. This population is likely to utilise the modified development boundary due to being in proximity within contiguous land. The affected population is located in a highly modified landscape in an agricultural setting. It is not at or near the edge of the geographic range of the species. The modified development boundary has a high diversity of exotic species and lacks Kangaroo Grass; one of the characteristic microhabitat features known to the species. The modified development boundary is hence likely to contain marginal habitat for the Pink-tailed Legless Lizard. Due to the marginal habitat in which it is located, it is unlikely to be a large population with potential as a key source population for breeding, dispersal or maintaining genetic diversity. Therefore, there is a low likelihood of it being an important population. The known population adjacent to the modified development boundary is unlikely to be part of an important population due to: • its unlikely occurrence as a stronghold population • low number of records • the modified development boundary is not at the edge of the species range. PCT 266 occurs across the locality, which characteristically occurs on the rolling rocky slopes within the region. The Orana BESS site will be retaining 37.15 ha of suitable habitat (NGH 2023), whilst the landscape provides a largely connected mosaic of marginal rocky habitat for the species. Approximately 5.79 ha of potential habitat for the Pink-tailed Legless Lizard will be removed by the modified project, consisting of areas containing surface rock and native vegetation within a 50 m buffer distance around such areas. Of this, direct impact would be 0.55 ha to rocky areas. The area of potential habitat to be impacted is considered a small amount of habitat to be removed when compared with suitable habitat within the locality. It is unlikely that the project will cause the species' population to experience a long-term decline. With appropriate control measures in place the project has potential to avoid causing a substantial decline in the quality of the important population where possible. The project is unlikely to lead to a long-term decrease in the size of an important population.
Reduce the area of occupancy of an important population	If present in the modified development boundary, occurrence of this species is unlikely to be part of an important population due to its unlikely occurrence as a stronghold population, low number of records and the modified development boundary is not at the edge of the species range. Habitat value is also marginal given the typically low cover of native grasses that this species typically associates with, including Kangaroo Grass. The modified development boundary is assumed to support marginal habitat for an important population which occurs west of the modified development boundary. The project will reduce the area of occupancy of the assumed important population by 5.79 ha. This is not a significant reduction when compared to potential habitat within the locality and immediate landscape.

Criteria	Discussion
Fragment an existing important population into two or more populations	If present in the modified development boundary, occurrence of this species is unlikely to be part of an important population due to its unlikely occurrence as a stronghold population, low number of records and the modified development boundary is not at the edge of the species range. The Pink-tailed Legless Lizard occurs as a fragmented population across its range. Within the landscape, there is likely to be rocky habitat that will provide suitable habitat for the species. Rocky habitat has been observed to the west and south of the modified development boundary. The modified development boundary adjoins Goolma Road, which is likely to be a barrier to the species to the north. Although movement patterns of the species are unknown, the species is known to utilise fragmented patches of rocky habitat. Having suitable rocky habitat within the surrounding landscape may allow for the species to traverse to these already fragmented areas outside of the modified development boundary. As the project does not impact connectivity of potential rock habitat south of Goolma Road, the project is considered unlikely to fragment an important population as it may still utilise land to the south.
Adversely affect habitat critical to the survival of the species	Habitat critical to the survival of the species has not been defined by the conservation advice. The significant impact guidelines (DoE 2013) state that habitat critical to the survival of a species are areas that are necessary for: • for activities such as foraging, breeding, roosting, or dispersal • for the long-term maintenance of the species or ecological community (including the maintenance of species essential to the survival of the species or ecological community, such as pollinators) • to maintain genetic diversity and long-term evolutionary development, or • for the reintroduction of populations or recovery of the species or ecological community. Habitat critical to the survival of the species may constitute stronghold populations of the species, such as those within the Canberra region and those located within larger areas of relatively intact native vegetation. These large populations are likely to retain the genetic diversity of the species and ensure long-term maintenance of the species. The landscape in general occurs as sloping hills with rocky outcrops and isolated rocks where management of the land has not altered the substrate. PCT 266 and associated rocky habitat is likely to occur in the locality. Any suitable habitat within the modified development boundary is part of a larger area of suitable habitat in the locality. The affected habitat is located in a highly modified landscape in an agricultural setting. It is not at or near the edge of the geographic range of the species. Due to the marginal habitat in which it is located, it is not likely to be a large population with potential as a key source population for breeding, dispersal or maintaining genetic diversity. Therefore, if any habitat is present within the modified development boundary, it is considered unlikely to constitute critical habitat. The project is unlikely to reduce the extent of habitat critical to the survival of the species.
Disrupt the breeding cycle of an important population	If present in the modified development boundary, occurrence of this species is unlikely to be part of an important population due to its unlikely occurrence as a stronghold population, low number of records and the modified development boundary is not at the edge of the species range. As the species has been found adjacent to the modified development boundary (NGH 2023), it is assumed that the area adjacent to the modified development boundary is also utilised for breeding. The Pink-tailed Legless Lizard was not found within the modified development boundary during targeted surveys, however the species could be utilising the modified development boundary due to its connectivity with the known population to the west. The project may disrupt the breeding cycle of individuals of Pink-tailed Legless Lizard if they were to be utilising the modified development boundary. As the population is known to occur outside of the modified development boundary, it can be surmised that breeding is likely to occur there. Any disruption within the modified development boundary is likely to interrupt the breeding cycles of individuals as opposed to an entire important population. As they are known to persist within areas outside of the modified development boundary, the breeding cycle of an important population is unlikely to be significantly disrupted. Mitigation measures include preclearance surveys and relocation of rocks outside of the breeding season (December to late March).

Criteria	Discussion
Modify, destroy, remove or isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline	The Pink-tailed Legless Lizard was not found within the modified development boundary during targeted surveys, however the species could be utilising the modified development boundary due to its connectivity with the known population to the west. Removal of 5.79 ha of suitable habitat will occur as a result of the project; consisting of 0.55 ha of direct impact to rocky habitat. However, the known extent of habitat which occurs within the locality (of which 37.15 ha will be retained as part of the Orana BESS (NGH 2023)), is likely to continue to support the known population. The species also occurs within a wide range across NSW, Victoria and the ACT, where the species has been recorded at highest known density. The project is likely to impact on a proportion of the known population, however it is not considered likely to have a significant impact on the species. For this reason, the removal of 5.79 ha of potential suitable habitat within the modified development boundary is unlikely to modify, destroy, remove, isolate or decrease the availability or quality of habitat to the extent that the species would decline.
Result in invasive species that are harmful to the species becoming established in the species habitat	Soil disturbance for the project has potential to result in the spread of invasive weeds to indirect impact areas and potential habitat. Much of the surrounding vegetation is in moderate to poor condition, due to existing weed encroachment. Weed control procedures in the BMP will minimise the impact on potential habitat for the Pink-tailed Legless Lizard. Foxes and feral cats have been recognised as potential predators which prey on the Pink-tailed Legless Lizard, however the project is unlikely to increase, or encourage this species' movements within the modified development boundary (TSSC 2015).
Introduce disease that may cause the species to decline	No diseases are known as a threat to the species (TSSC 2015). The project is unlikely to introduce disease that may cause the species to decline.
Interfere substantially with the recovery of the species	The conservation advice states that the species has several threats (TSSC 2015) including: • habitat loss and fragmentation • habitat degradation • removal of rocks • inappropriate fire regimes • predators. The project will impact on two of these threats by: • removing 5.79 ha of potential marginal habitat • removing rocks (0.55 ha). The removed rocks will be relocated outside of the modified development boundary to provide additional suitable habitat for the species outside of the modified development boundary and connectivity within the landscape. The project is unlikely to exacerbate habitat degradation, as the surrounding area within the study area is subject to grazing and weed pressures. The species has been found adjacent to the modified development boundary in similar conditions. The project is unlikely to increase the threat of inappropriate fire regimes or predators. With appropriate control measures in place including relocation of rocky habitat and individuals and pre-clearance surveys, it is considered unlikely that the project is unlikely to substantially interfere with the recovery of the species.
Conclusion	The project is unlikely to significantly impact the Pink-tailed Legless Lizard due to: • the project is unlikely to adversely affect any of habitat critical to the survival of the species • the project is unlikely to lead to a long-term decrease in the size of an important population • the total amount of potential suitable habitat to be removed equates to 5.79 ha, which includes 0.55 ha of rocky habitat. This is minimal when compared to potential habitat within the locality and immediate landscape • the project is unlikely to fragment an existing important population • the project is unlikely to disrupt the breeding cycle of an important population • the project is unlikely to affect habitat to the extent that the species is likely to decline • the project is unlikely to further exacerbate invasive species or cause new species to become established within the modified development boundary

Criteria	Discussion
	• the project is unlikely to introduce disease that may cause the species to decline • with appropriate control measures in place for the species including relocation and pre-clearance surveys, the project is unlikely to substantially interfere with the recovery of the species.

7.2 State

7.2.1 Biosecurity Act 2015

All plants in NSW are regulated with a general biosecurity duty under the *Biosecurity Act 2015*. There is an obligation for the project to ensure that the biosecurity risks of all weed species recorded on site are prevented, eliminated, or minimised, so far as is reasonably practicable.

One priority weed was detected nearby the modification area, African Boxthorn (*Lycium ferocissimum*), and has specific biosecurity duties under the Biosecurity Act as listed in Table 7.14. This species, and the biosecurity security duties described, should be a key focus of weed management activities associated with the project.

Table 7.14 Biodiversity duties for priority weeds

Priority weed	Biosecurity duty for the Central West Local Land Services region
African Boxthorn *Lycium ferocissimum*	• **Prohibition on certain dealings** *Must not be imported into the state, sold, bartered, exchanged or offered for sale.* • **General Biosecurity Duty** All pest plants are regulated with a general biosecurity duty to prevent, eliminate or minimise any biosecurity risk they may pose. Any person who deals with any plant, who knows (or ought to know) of any biosecurity risk, has a duty to ensure the risk is prevented, eliminated or minimised, so far as is reasonably practicable.

8 Conclusion

This BDAR has been prepared in accordance with BAM (DPIE 2020a). Section 7.1 of this report also provides an assessment of Commonwealth listed ecological communities, threatened species and migratory species as required by Commonwealth DCCEEW.

Surveys undertaken for this BDAR and that for the approved project have been used to inform the evolution of the project design, as detailed in Section 6.3.2. This process has avoided and minimised impacts on biodiversity values, as far as practicable.

Under the NSW BOS, the modification requires 13 ecosystem credits to compensate for impacts on native PCTs and ecosystem credit species. In addition to ecosystem credits, the project also requires 10 species credits for the Superb Parrot, 14 species credits for the Glossy Black Cockatoo and 5 species credits for Pink-tailed Legless Lizard.

The BDAR has also considered impacts on species and ecological communities listed under the EPBC Act. The project as modified is not expected to result in significant impacts on any MNES.

Offset obligation for the modified project will be provided in accordance with the NSW BOS through either purchase of credits from the market or pay into the Biodiversity Conservation Fund (BCF).

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Appendix A
BAM plot data sheets

EMM
creating opportunities

BAM Site – Field Survey Form

Plot ID:	BAM11	**Date:**	20/11/21	**Project number:**	J210534	**Plot dimensions:**	20x50
Datum:	GDA94	**Easting:**	684,810	**Recorders:**	CP		
Zone:	55	**Northing:**	6,399,105	**IBRA region:**	NSW South Western Slopes (Inland Slopes)	**Midline bearing:**	181
Plant Community Type:		266: White Box grassy woodland in the upper slopes sub-region of the NSW South Western Slopes Bioregion		**Condition class:**	DNG_moderate	**PCT confidence:**	high
Vegetation Class:		Western Slopes Grassy Woodlands		**EEC:**	yes	**EEC confidence:**	high

Record easting and northing at 0 m on midline. Dimensions (Shape) of 0.04 ha base plot.

BAM Attribute (400 m2 plot)		Sum values
Count of Native Richness	Trees:	0
	Shrubs:	1
	Grasses etc.:	4
	Forbs:	10
	Ferns:	0
	Other:	1
Sum of Cover of native vascular plants by growth form group	Trees:	0
	Shrubs:	0.1
	Grasses etc.:	11.2
	Forbs:	3.7
	Ferns:	0
	Other:	0.2
High Threat Weed cover:		0.1

BAM Attribute (1000 m2 plot) DBH			
DBH	Tree stem count	Length of logs (m) (≥10 cm diameter, >50 cm in length)	0
80 + cm:	0		
50 – 79 cm:	0		
30 – 49 cm:	0		
20 – 29 cm:	0	Tree hollow count	0
10 – 19 cm:	0		
5 – 9 cm:	0		
< 5 cm:	0		

Counts apply when no. of tree stems within a size class is ≤ 10. Estimates can be used when > 10 (eg. 10, 20, 30..., 100, 200, 300...). For multi-stemmed tree, only largest living stem is included in the count. Tree stems must be living.
For hollows, count only the presence of a stem containing hollows. For a multi-stemmed tree, only the largest stem is included in the count/estimate. Stems may be dead and may be shrubs.

BAM Attribute (1 x 1 m plots)	Litter cover (%)				
Subplot:	1	2	3	4	5
Subplot score (%):	20	30	10	25	10
Average litter cover (%):	19				

Litter cover is assessed as the average percentage ground cover of litter recorded from five 1 m x 1 m plots centred at 5, 15, 25, 35, 45 m along the plot midline. Litter cover includes leaves, seeds, twigs, branchlets and branches (less than 10 cm in diameter). Assessors may also record the cover of rock, bare ground and cryptogams.

Physiography and site features

Plot Disturbance

GF Code: see Growth Form definitions in Appendix 1; N: native, E: exotic, HTE: high threat exotic; GF – circle code if 'top 3'; Cover: 0.1, 0.2, 0.3, ..., 1, 2, 3, ..., 10, 15, 20, 25, ...100% (foliage cover)
Note: 0.1% cover represents an area of approximately 63 x 63 cm or a circle about 71 cm across, 0.5% cover represents an area of approximately 1.4 x 1.4 m, and 1% = 2.0 x 2.0 m, 5% = 4 x 5 m, 25% = 10 x 10 m
Abundance: 1, 2, 3, ..., 10, 20, 30, ... 100, 200, ..., 1000, ...

Project name:	J210534				
Recorders:	CP	**Plot ID:**	BAM11	**Date:**	20/11/21

GF Code	Scientific name	Cover	Abundance	Voucher	N, E or HTE
Forb (FG)	*Chamaesyce drummondii (Caustic Weed)*	0.1	1		N
	Lolium rigidum (Wimmera Ryegrass)	30	3000		E
	Bromus molliformis (Soft Brome)	0.2	20		E
	Medicago sativa (Lucerne)	0.1	20		E
Forb (FG)	*Dichondra repens (Kidney Weed)*	1	20		N
Forb (FG)	*Dichopogon fimbriatus (Nodding Chocolate Lily)*	0.1	10		N
Forb (FG)	*Vittadinia cuneata (A Fuzzweed)*	0.1	20		N
Forb (FG)	*Solanum esuriale (Quena)*	0.1	40		N
	Sonchus oleraceus (Common Sowthistle)	0.1	20		E
	Echium plantagineum (Patterson's Curse)	0.1	3		E
Grass & grasslike (GG)	*Austrostipa scabra (Speargrass)*	10	500		N
Forb (FG)	*Calotis lappulacea (Yellow Burr-daisy)*	0.1	1		N
Forb (FG)	*Sida corrugata (Corrugated Sida)*	1	300		N
	Avena barbata (Bearded Oats)	0.1	10		E
Forb (FG)	*Oxalis exilis*	1	500		N
	Salvia verbenaca (Vervain)	1	300		E
	Rapistrum rugosum (Turnip Weed)	0.1	10		E
	Erodium cicutarium (Common Crowfoot)	0.1	1		E
	Capsella bursa-pastoris (Shepherd's Purse)	0.1	1		E
	Trifolium campestre (Hop Clover)	0.1	30		E
Shrub (SG)	*Maireana microphylla (Small-leaf Bluebush)*	0.1	1		N
	Carthamus lanatus (Saffron Thistle)	0.1	1		HTE
Other (OG)	*Glycine tabacina (Variable Glycine)*	0.2	100		N
	Petrorhagia dubia	0.1	10		E
Forb (FG)	*Boerhavia dominii (Tarvine)*	0.1	30		N
Forb (FG)	*Einadia polygonoides (Knotweed Goosefoot)*	0.1	1		N
	Silybum marianum (Variegated Thistle)	0.1	1		E
	Centaurea solstitialis (St Barnabys Thistle)	0.1	20		E
Grass & grasslike (GG)	*Bothriochloa spp. (Redgrass, Bluegrass)*	0.1	1		N
Grass & grasslike (GG)	*Chloris truncata (Windmill Grass)*	0.1	2		N
	Trifolium arvense (Haresfoot Clover)	0.1	20		E
Grass & grasslike (GG)	*Aristida ramosa (Purple Wiregrass)*	1	15		N
	Marrubium vulgare (White Horehound)	0.1	1		E

BAM Site – Field Survey Form

Plot ID:	BB03	**Date:**	18/11/2025	**Project number:**	E250078	**Plot dimensions:**	20x50
Datum:	GDA94	**Easting:**	684,902	**Recorders:**	Ross Davey,Other, Aislinn Smealie		
Zone:	55	**Northing:**	6,399,710	**IBRA region:**	NSW South Western Slopes (Inland slopes)	**Midline bearing:**	175
Plant Community Type:		266: White Box grassy woodland in the upper slopes sub-region of the NSW South Western Slopes Bioregion		**Condition class:**	DNG moderate	**PCT % cleared:**	94.00%
Vegetation Formation:		Grassy Woodlands		**Veg. Class:**	Western Slopes Grassy Woodlands		

Record easting and northing at 0 m on midline. Dimensions (Shape) of 0.04 ha base plot.

BAM Attribute (400 m2 plot)		Sum values
Count of Native Richness	Trees:	0
	Shrubs:	1
	Grasses etc.:	6
	Forbs:	0
	Ferns:	0
	Other:	0
Sum of Cover of native vascular plants by growth form group	Trees:	0
	Shrubs:	0.5
	Grasses etc.:	5.9
	Forbs:	0
	Ferns:	0
	Other:	0
High Threat Weed cover:		1.6

BAM Attribute (1000 m2 plot) DBH			
DBH	Tree stem count	Length of logs (m) (≥10 cm diameter, >50 cm in length)	0
80 + cm:	0		
50 – 79 cm:	0		
30 – 49 cm:	0		
20 – 29 cm:	0	Tree hollow count	0
10 – 19 cm:	0		
5 – 9 cm:	0		
< 5 cm:	0		

Counts apply when no. of tree stems within a size class is ≤ 10. Estimates can be used when > 10 (eg. 10, 20, 30..., 100, 200, 300...). For multi-stemmed tree, only largest living stem is included in the count. Tree stems must be living.
For hollows, count only the presence of a stem containing hollows. For a multi-stemmed tree, only the largest stem is included in the count/estimate. Stems may be dead and may be shrubs.

BAM Attribute (1 x 1 m plots)	Litter cover (%)				
Subplot:	1	2	3	4	5
Subplot score (%):	20	15	10	15	15
Average litter cover (%):	15				

Litter cover is assessed as the average percentage ground cover of litter recorded from five 1 m x 1 m plots centred at 5, 15, 25, 35, 45 m along the plot midline. Litter cover includes leaves, seeds, twigs, branchlets and branches (less than 10 cm in diameter). Assessors may also record the cover of rock, bare ground and cryptogams.

Physiography and site features			
Soil colour:		**Landform element:**	
Soil texture:	Clay loam	**Landform pattern:**	Hills

Sloping to the SW

Plot Disturbance
Heavily grazed.

GF Code: see Growth Form definitions in Appendix 1; N: native, E: exotic, HTE: high threat exotic; GF – circle code if 'top 3'; Cover: 0.1, 0.2, 0.3, ..., 1, 2, 3, ..., 10, 15, 20, 25, ...100% (foliage cover)
Note: 0.1% cover represents an area of approximately 63 x 63 cm or a circle about 71 cm across, 0.5% cover represents an area of approximately 1.4 x 1.4 m, and 1% = 2.0 x 2.0 m, 5% = 4 x 5 m, 25% = 10 x 10 m
Abundance: 1, 2, 3, ..., 10, 20, 30, ... 100, 200, ..., 1000, ...

Project name:	E250078				
Recorders:	Ross Davey,Other, Aislinn Smealie	**Plot ID:**	BB03	**Date:**	18/11/2025

GF Code	Scientific name	Cover	Abundance	Voucher	N, E or HTE
	Carthamus lanatus (Saffron Thistle)	0.6	50		HTE
	Avena spp. (Oats)	1	120		E
	Bromus hordeaceus (Soft Brome)	2	300		E
	Centaurea melitensis (Maltese Cockspur)	0.3	50		E
	Lolium spp. (A Ryegrass)	1	100		E
	Centaurium spp.	0.2	30		E
Grass & grasslike (GG)	*Aristida ramosa (Purple Wiregrass)*	4	60		N
	Bromus diandrus (Great Brome)	1	80		HTE
	Trifolium spp. (A Clover)	2	250		E
Grass & grasslike (GG)	*Bothriochloa spp. (Redgrass, Bluegrass)*	0.2	40		N
Grass & grasslike (GG)	*Austrostipa scabra (Speargrass)*	0.2	30		N
Grass & grasslike (GG)	*Rytidosperma caespitosum (Ringed Wallaby Grass)*	0.2	30		N
Shrub (SG)	*Maireana microphylla (Small-leaf Bluebush)*	0.5	2		N
Grass & grasslike (GG)	*Anthosachne scabra (Wheatgrass, Common Wheatgrass)*	0.3	40		N
Grass & grasslike (GG)	*Austrostipa aristiglumis (Plains Grass)*	1	100		N

BAM Site – Field Survey Form

Plot ID:	BB04	**Date:**	18/11/2025	**Project number:**	E250078	**Plot dimensions:**	20x50
Datum:	GDA94	**Easting:**	684,573	**Recorders:**	Ross Davey,Other, Aislinn Smealie		
Zone:	55	**Northing:**	6,399,346	**IBRA region:**	NSW South Western Slopes (Inland slopes)	**Midline bearing:**	194
Plant Community Type:		266: White Box grassy woodland in the upper slopes sub-region of the NSW South Western Slopes Bioregion		**Condition class:**	DNG poor	**PCT % cleared:**	94.00%
Vegetation Formation:		Grassy Woodlands		**Veg. Class:**	Western Slopes Grassy Woodlands		

Record easting and northing at 0 m on midline. Dimensions (Shape) of 0.04 ha base plot.

BAM Attribute (400 m2 plot)		Sum values
Count of Native Richness	Trees:	0
	Shrubs:	1
	Grasses etc.:	3
	Forbs:	2
	Ferns:	0
	Other:	0
Sum of Cover of native vascular plants by growth form group	Trees:	0
	Shrubs:	0.4
	Grasses etc.:	2.2
	Forbs:	1
	Ferns:	0
	Other:	0
High Threat Weed cover:		60.6

BAM Attribute (1000 m2 plot) DBH			
DBH	Tree stem count	Length of logs (m) (≥10 cm diameter, >50 cm in length)	0
80 + cm:	0		
50 – 79 cm:	0		
30 – 49 cm:	0		
20 – 29 cm:	0	Tree hollow count	0
10 – 19 cm:	0		
5 – 9 cm:	0		
< 5 cm:	0		

Counts apply when no. of tree stems within a size class is ≤ 10. Estimates can be used when > 10 (eg. 10, 20, 30..., 100, 200, 300...). For multi-stemmed tree, only largest living stem is included in the count. Tree stems must be living.
For hollows, count only the presence of a stem containing hollows. For a multi-stemmed tree, only the largest stem is included in the count/estimate. Stems may be dead and may be shrubs.

BAM Attribute (1 x 1 m plots)	Litter cover (%)				
Subplot:	1	2	3	4	5
Subplot score (%):	20	5	20	1	10
Average litter cover (%):	11.2				

Litter cover is assessed as the average percentage ground cover of litter recorded from five 1 m x 1 m plots centred at 5, 15, 25, 35, 45 m along the plot midline. Litter cover includes leaves, seeds, twigs, branchlets and branches (less than 10 cm in diameter). Assessors may also record the cover of rock, bare ground and cryptogams.

Physiography and site features			
Soil colour:		**Landform element:**	
Soil texture:	Clay loam	**Landform pattern:**	Hills

Land sloping to the SE.

Plot Disturbance
Disturbed, grazed. Paddock.

GF Code: see Growth Form definitions in Appendix 1; N: native, E: exotic, HTE: high threat exotic; GF – circle code if 'top 3'; Cover: 0.1, 0.2, 0.3, ..., 1, 2, 3, ..., 10, 15, 20, 25, ...100% (foliage cover)
Note: 0.1% cover represents an area of approximately 63 x 63 cm or a circle about 71 cm across, 0.5% cover represents an area of approximately 1.4 x 1.4 m, and 1% = 2.0 x 2.0 m, 5% = 4 x 5 m, 25% = 10 x 10 m
Abundance: 1, 2, 3, ..., 10, 20, 30, ... 100, 200, ..., 1000, ...

Project name:	E250078				
Recorders:	Ross Davey,Other, Aislinn Smealie	**Plot ID:**	BB04	**Date:**	18/11/2025

GF Code	Scientific name	Cover	Abundance	Voucher	N, E or HTE
	Bromus diandrus (Great Brome)	60	7000		HTE
	Avena spp. (Oats)	10	1200		E
Grass & grasslike (GG)	*Austrostipa verticillata (Slender Bamboo Grass)*	1	100		N
Grass & grasslike (GG)	*Aristida ramosa (Purple Wiregrass)*	1	160		N
Forb (FG)	*Boerhavia dominii (Tarvine)*	0.5	60		N
Shrub (SG)	*Senna spp.*	0.4	10		N
	Trifolium spp. (A Clover)	1	140		E
Forb (FG)	*Salvia spp.*	0.5	40		N
	Centaurium spp.	0.1	10		E
	Heliotropium amplexicaule (Blue Heliotrope)	0.1	20		HTE
	Centaurea melitensis (Maltese Cockspur)	0.6	80		E
	Bromus hordeaceus (Soft Brome)	1	120		E
Grass & grasslike (GG)	*Rytidosperma caespitosum (Ringed Wallaby Grass)*	0.2	30		N
	Carthamus lanatus (Saffron Thistle)	0.5	20		HTE
	Verbena bonariensis (Purpletop)	0.1	1		E

BAM Site – Field Survey Form

Plot ID:	PR01	**Date:**	20/11/2025	**Project number:**	E260078	**Plot dimensions:**	50 x 20
Datum:	GDA94	**Easting:**	684,932	**Recorders:**	Paul Rossington		
Zone:	55	**Northing:**	6,399,651	**IBRA region:**	NSW South Western Slopes (Inland slopes)	**Midline bearing:**	170
Plant Community Type:		266: White Box grassy woodland in the upper slopes sub-region of the NSW South Western Slopes Bioregion		**Condition class:**	DNG moderate	**PCT % cleared:**	94.00%
Vegetation Formation:		Grassy Woodlands		**Veg. Class:**	Western Slopes Grassy Woodlands		

Record easting and northing at 0 m on midline. Dimensions (Shape) of 0.04 ha base plot.

BAM Attribute (400 m2 plot)		Sum values
Count of Native Richness	Trees:	0
	Shrubs:	1
	Grasses etc.:	5
	Forbs:	8
	Ferns:	0
	Other:	0
Sum of Cover of native vascular plants by growth form group	Trees:	0
	Shrubs:	0.2
	Grasses etc.:	57
	Forbs:	0.8
	Ferns:	0
	Other:	0
High Threat Weed cover:		7

BAM Attribute (1000 m2 plot) DBH			
DBH	Tree stem count		
80 + cm:	0	Length of logs (m) (≥10 cm diameter, >50 cm in length)	0
50 – 79 cm:	0		
30 – 49 cm:	0		
20 – 29 cm:	0	Tree hollow count	0
10 – 19 cm:	0		
5 – 9 cm:	0		
< 5 cm:	0		

Counts apply when no. of tree stems within a size class is ≤ 10. Estimates can be used when > 10 (eg. 10, 20, 30..., 100, 200, 300...). For multi-stemmed tree, only largest living stem is included in the count. Tree stems must be living.
For hollows, count only the presence of a stem containing hollows. For a multi-stemmed tree, only the largest stem is included in the count/estimate. Stems may be dead and may be shrubs.

BAM Attribute (1 x 1 m plots)	Litter cover (%)				
Subplot:	1	2	3	4	5
Subplot score (%):	10	5	5	5	5
Average litter cover (%):	6				

Litter cover is assessed as the average percentage ground cover of litter recorded from five 1 m x 1 m plots centred at 5, 15, 25, 35, 45 m along the plot midline. Litter cover includes leaves, seeds, twigs, branchlets and branches (less than 10 cm in diameter). Assessors may also record the cover of rock, bare ground and cryptogams.

Physiography and site features			
Soil colour:		Landform element:	
Soil texture:		Landform pattern:	

Plot Disturbance

GF Code: see Growth Form definitions in Appendix 1; N: native, E: exotic, HTE: high threat exotic; GF – circle code if 'top 3'; Cover: 0.1, 0.2, 0.3, ..., 1, 2, 3, ..., 10, 15, 20, 25, ...100% (foliage cover)
Note: 0.1% cover represents an area of approximately 63 x 63 cm or a circle about 71 cm across, 0.5% cover represents an area of approximately 1.4 x 1.4 m, and 1% = 2.0 x 2.0 m, 5% = 4 x 5 m, 25% = 10 x 10 m
Abundance: 1, 2, 3, ..., 10, 20, 30, ... 100, 200, ..., 1000, ...

Project name:	E260078				
Recorders:	Paul Rossington	**Plot ID:**	PR01	**Date:**	20/11/2025

GF Code	Scientific name	Cover	Abundance	Voucher	N, E or HTE
Grass & grasslike (GG)	*Aristida ramosa (Purple Wiregrass)*	35	700		N
	Carthamus lanatus (Saffron Thistle)	7	500		HTE
	Modiola caroliniana (Red-flowered Mallow)	0.2	100		E
	Medicago spp. (A Medic)	0.4	500		E
Forb (FG)	*Sida corrugata (Corrugated Sida)*	0.1	20		N
Forb (FG)	*Tribulus spp. (Cat-head, Caltrop)*	0.1	1		N
Forb (FG)	*Lepidium spp. (A Peppercress)*	0.1	1		N
Grass & grasslike (GG)	*Bothriochloa spp. (Redgrass, Bluegrass)*	15	200		N
Grass & grasslike (GG)	*Austrostipa scabra (Speargrass)*	5	800		N
Grass & grasslike (GG)	*Bromus spp. (A Brome)*	1	100		N
Forb (FG)	*Einadia nutans (Climbing Saltbush)*	0.1	4		N
	Lolium perenne (Perennial Ryegrass)	10	3000		E
	Avena spp. (Oats)	0.1	5		E
Grass & grasslike (GG)	*Cynodon dactylon (Common Couch)*	1	50		N
Forb (FG)	*Solanum esuriale (Quena)*	0.1	3		N
Shrub (SG)	*Maireana microphylla (Small-leaf Bluebush)*	0.2	1		N
	Hypochaeris spp. (A Catsear)	0.1	2		E
Forb (FG)	*Senna barclayana (Smooth Senna)*	0.1	1		N
	Conyza spp. (A Fleabane)	0.1	1		E
Forb (FG)	*Rumex brownii (Swamp Dock)*	0.1	1		N
Forb (FG)	*Boerhavia spp.*	0.1	1		N

BAM Site – Field Survey Form

Plot ID:	PR03	**Date:**	20/11/2025	**Project number:**	E250078	**Plot dimensions:**	50 x 20
Datum:	GDA94	**Easting:**	684,525	**Recorders:**	Paul Rossington		
Zone:	55	**Northing:**	6,399,380	**IBRA region:**	NSW South Western Slopes (Inland slopes)	**Midline bearing:**	87
Plant Community Type:		266: White Box grassy woodland in the upper slopes sub-region of the NSW South Western Slopes Bioregion		**Condition class:**	DNG poor	**PCT % cleared:**	94.00%
Vegetation Formation:		Grassy Woodlands		**Veg. Class:**	Western Slopes Grassy Woodlands		

Record easting and northing at 0 m on midline. Dimensions (Shape) of 0.04 ha base plot.

BAM Attribute (400 m2 plot)		Sum values
Count of Native Richness	Trees:	0
	Shrubs:	0
	Grasses etc.:	5
	Forbs:	2
	Ferns:	0
	Other:	0
Sum of Cover of native vascular plants by growth form group	Trees:	0
	Shrubs:	0
	Grasses etc.:	22.7
	Forbs:	2.1
	Ferns:	0
	Other:	0
High Threat Weed cover:		20.1

BAM Attribute (1000 m2 plot) DBH			
DBH	Tree stem count		
80 + cm:	0	Length of logs (m) (≥10 cm diameter, >50 cm in length)	0
50 – 79 cm:	0		
30 – 49 cm:	0		
20 – 29 cm:	0	Tree hollow count	0
10 – 19 cm:	0		
5 – 9 cm:	0		
< 5 cm:	0		

Counts apply when no. of tree stems within a size class is ≤ 10. Estimates can be used when > 10 (eg. 10, 20, 30..., 100, 200, 300...). For multi-stemmed tree, only largest living stem is included in the count. Tree stems must be living.
For hollows, count only the presence of a stem containing hollows. For a multi-stemmed tree, only the largest stem is included in the count/estimate. Stems may be dead and may be shrubs.

BAM Attribute (1 x 1 m plots)	Litter cover (%)				
Subplot:	1	2	3	4	5
Subplot score (%):	5	5	5	5	5
Average litter cover (%):	5				

Litter cover is assessed as the average percentage ground cover of litter recorded from five 1 m x 1 m plots centred at 5, 15, 25, 35, 45 m along the plot midline. Litter cover includes leaves, seeds, twigs, branchlets and branches (less than 10 cm in diameter). Assessors may also record the cover of rock, bare ground and cryptogams.

Physiography and site features			
Soil colour:		Landform element:	
Soil texture:		Landform pattern:	

Plot Disturbance

GF Code: see Growth Form definitions in Appendix 1; N: native, E: exotic, HTE: high threat exotic; GF – circle code if 'top 3'; Cover: 0.1, 0.2, 0.3, ..., 1, 2, 3, ..., 10, 15, 20, 25, ...100% (foliage cover)
Note: 0.1% cover represents an area of approximately 63 x 63 cm or a circle about 71 cm across, 0.5% cover represents an area of approximately 1.4 x 1.4 m, and 1% = 2.0 x 2.0 m, 5% = 4 x 5 m, 25% = 10 x 10 m
Abundance: 1, 2, 3, ..., 10, 20, 30, ... 100, 200, ..., 1000, ...

Project name:	E250078				
Recorders:	Paul Rossington	**Plot ID:**	PR03	**Date:**	20/11/2025

GF Code	Scientific name	Cover	Abundance	Voucher	N, E or HTE
	Bromus diandrus (Great Brome)	20	2000		HTE
	Salvia verbenaca (Vervain)	0.2	20		E
	Centaurea solstitialis (St Barnabys Thistle)	0.4	200		E
	Modiola caroliniana (Red-flowered Mallow)	0.1	8		E
Forb (FG)	*Boerhavia dominii (Tarvine)*	2	800		N
	Chondrilla juncea (Skeleton Weed)	0.1	70		E
	Avena spp. (Oats)	2	500		E
Grass & grasslike (GG)	*Aristida vagans (Threeawn Speargrass)*	8	200		N
Grass & grasslike (GG)	*Bothriochloa spp. (Redgrass, Bluegrass)*	4	300		N
Grass & grasslike (GG)	*Austrostipa scabra (Speargrass)*	10	1000		N
Grass & grasslike (GG)	*Rytidosperma spp.*	0.1	20		N
	Bromus hordeaceus (Soft Brome)	20	4000		E
	Heliotropium amplexicaule (Blue Heliotrope)	0.1	1		HTE
Grass & grasslike (GG)	*Cynodon dactylon (Common Couch)*	0.6	20		N
	Trifolium campestre (Hop Clover)	0.2	100		E
	Marrubium vulgare (White Horehound)	0.3	6		E
	Verbena bonariensis (Purpletop)	0.1	1		E
Forb (FG)	*Senna barclayana (Smooth Senna)*	0.1	15		N

Appendix B

Biodiversity Management Plan for approved project

EMM
creating opportunities

Biodiversity Management Plan

Wellington South Battery Energy Storage System

25 June 2025



Biodiversity Management Plan
Wellington South Battery Energy Storage System

AE1229

June 2025

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Contents

Abbreviations ..... **vi**

1 Introduction **1**

1.1 Purpose and scope of this document 2

1.2 Project overview 6

1.3 Project objectives 6

1.4 Strategic framework for environmental management 7

2 Statutory requirements **9**

2.1 Conditions of consent 9

2.2 Commitments in EIS and associated documentation 9

2.3 Legislation and planning documents 9

2.4 Project Commitments 13

3 Project description **15**

3.1 Project works 15

3.1.1 Fluence works 15

3.1.2 Transgrid works 16

3.2 Project schedule 16

3.3 Hours of operation 18

4 Environmental management framework **20**

4.1 Environmental and related policies 20

4.2 General environmental principles 20

5 Organisational structure, roles and responsibilities **23**

5.1 Key stakeholders 23

5.2 Project organisational structure 23

5.2.1 Applicant (Project Proponent) 25

5.2.2 EPC Contractor 25

5.2.3 BoP Contractors 25

5.2.4 Substation construction contractor 25

5.3 Roles and responsibilities of the project 25

5.3.1 The AMPYR project manager 25
5.3.2 Fluence management team 25
5.3.3 Fluence BoP subcontractors 26
5.3.4 Transgrid management team 26
5.3.5 Project Ecologist 27
5.4 Environmental management system 27
5.5 Risk assessment and register 30
5.6 Emergency response 30
5.7 Document management system 30
5.8 Administrative conditions 31
5.8.1 Terms of consent 31
5.8.2 Upgrading of Batteries and ancillary infrastructure 31
5.8.3 Structural adequacy 32
5.8.4 Demolition work 32
5.8.5 Protection of public infrastructure 32
5.8.6 Operation of plant and equipment 32
6 Biodiversity Management Plan 33
6.1 BMP Roles and Responsibilities 33
6.1.1 Construction Phase 33
6.1.2 Operational Phase 35
6.2 CPHR Consultation 36
7 Existing Environment 37
7.1 Land Use History 37
7.2 Landform, Geology and Soils 37
7.3 Biodiversity 37
7.4 Recorded Weed and Pest Species 38
8 Biodiversity Management Plan and Completion Criteria 39
8.1 Project Design Impact 39
8.2 Impact and Mitigation Measures 40
8.3 Trigger, Action, Response, Monitoring and Reporting 44
8.4 BMP Performance 58

8.5 Training 64
8.5.1 Induction 64
8.6 Website 64
8.7 Rehabilitation 65
8.8 BMP Review and improvement 66
9 Biodiversity Offsetting 68
10 Biodiversity Management Protocols 69
10.1 Protocol 1 – Vegetation Clearing – General 69
10.2 Protocol 2 – Vegetation Clearing - Habitat Trees 72
10.3 Protocol 3 – Management of Displaced Fauna 75
10.4 Protocol 4 – Stockpiles and Re-using Resources as Woody Debris 76
10.5 Protocol 5 – Weed Management 77
10.6 Protocol 6 – Feral Pest Management 77
10.7 Protocol 7 – Fencing Construction and Management 78
10.8 Protocol 8 – Erosion and Sediment Control 78
10.9 Protocol 9 – Dust Control 79
10.10 Protocol 10 – Lighting Design 79
10.11 Protocol 11 – Chemical Management 80
10.12 Protocol 12 – Vehicle Hygiene 81
10.13 Protocol 13 – Noise Management 82
10.14 Protocol 14 – Superb Parrot inspection protocol 83
10.15 Protocol 15 – Unexpected finds – threatened species protocol 84
10.16 Protocol 16 – Bush Rock Removal 85
10.17 Protocol 17 – Rehabilitation 86
11 Monitoring, auditing, reporting and review of the overarching EMS. 88
11.1 Monitoring 88
11.1.1 Site inspection 88
11.2 Incidents and non-compliances 91
11.2.1 Incident notification and response 91
11.2.2 Non-compliance notification and response 92
11.2.3 Corrective actions 93

11.3 Auditing 93
11.4 Record keeping 93
11.5 Review and update 93
11.6 Continuous improvement of environmental performance 94
12 Complaints management 95
12.1 Complaints Management Procedure 95
12.2 Contact details for complainants 96
12.3 Dispute Resolution 96
13 References 97
Appendix A: Conditions of Consent SSD 27014706 98
Appendix B: EIS and Amendment report commitments 128
Appendix C: Legislation and planning documents 151
Appendix D: CPHR Consultation 156
Appendix E: Response to CPHR feedback 165

Tables

Table 2-1: Relevant consent conditions. 9
Table 2-2: Consolidated EIS and Amendment report commitments relevant to BMP. 13
Table 3-1: Construction schedule 18
Table 3-2: Hours of operation 19
Table 5-1: Key stakeholders 23
Table 6-1: Construction roles and responsibilities within the BMP 33
Table 6-2: Operation roles and responsibilities within the BMP 35
Table 8-1:Site environmental risks, mitigation measures, monitoring responses and responsibilities. 40
Table 8-2: Multi-level Trigger, Action, Response, Monitoring and reporting requirements during construction. 44
Table 8-3: Multi-level Trigger, Action, Response, Monitoring and reporting requirements during operation. 51
Table 8-4: Specific completion criteria for the BMP 59
Table 8-5: Rehabilitation Objectives. 66
Table 11-1: Summary of monitoring required. 89

Table 11-2: Response agency contact details 92

Figures

Figure 1.1: Regional context..... 3
Figure 1.2: Local context 4
Figure 1.3: Schematic of environmental management documentation..... 5
Figure 3.1: Site configuration 17
Figure 4.1: Fluence Environmental Policy 21
Figure 4.2: TransGrid Environment Policy Statement..... 22
Figure 5.1: Project organisational structure 24
Figure 5.2: Environmental Management System Process 29
Figure 7-1: Ecological elements on site..... 38

Abbreviations

ACHMP	Aboriginal Cultural Heritage Management plan
AES	Accommodation and Employment Strategy
AMPYR	AMPYR Australia Pty Ltd
BCD	former Biodiversity Conservation Directorate
BESS	battery energy storage system
BMP	Biodiversity Management Plan
BoP	balance of plant
CEMP	Construction Environmental Management Plan
CPHR	Conservation Programs, Heritage and Regulation Group (part of DCCEEW)
CoC	condition of consent
DC	development consent
DCCEEW	Department of Climate Change, Energy, the Environment and Water (NSW)
DECC	Department of Environment and Climate Change (former)
DGs	dangerous goods
DPE	Department of Planning and Environment (DPE)
DPIE	Department of Planning, Industry and Environment (now and formerly DPE)
DPHI	Department of Planning, Housing and Infrastructure (Formerly DPIE)
DRC	Dubbo Regional Council
EIS	environmental impact statement
EMP	environmental management plan
EMS	environment management strategy
EPA	Environment Protection Authority
EPC	engineering, procurement and construction
ESCP	Erosion and Sediment Control Plan
FRNSW	Fire and Rescue NSW
HSE	health, safety and environment
HSEMP	health, safety and environmental management plan
IFC	Issued for Construction
km	kilometre
kV	kilovolt
LGA	local government area
Lumea	commercial arm of Transgrid
MW	megawatt

NEM	National Energy Market
NSW	New South Wales
NSW RFS	NSW Rural Fire Service
OEMP	Operational Environmental Management Plan
POEO Act	*Protection of the Environment Operations Act 1997*
RAP	registered aboriginal party
RtS	response to submissions
SEPP	state environmental planning policy
SSD	State Significant Development
SWMP	Soil and Water Management Plan
TBD	to be determined
TfNSW	Transport for NSW
TG	Transgrid
TMP	traffic management plan

1 Introduction

AMPYR Australia Pty Ltd (AMPYR) (The Principal) have received approval to develop, construct and operate the Wellington South Battery Energy Storage System (WSBESS or the project) State Significant Development (SSD) 27014706 dated 22 December 2023. The project is located approximately 2.2 kilometres (km) north-east of the township of Wellington in the Dubbo Regional Council local government area (LGA) adjacent to the Wellington Substation. The facility will connect to the Wellington Substation, operated by Transgrid, by way of an overhead or underground 330 kilovolt (kV) transmission line. Excess energy will be taken by the battery during periods of excess supply and inject energy back into the electrical grid during periods of peak demand. The battery will operate 24/7 and will have a design life of 20 years.

The project is located within the Central-West Orana Renewable Energy Zone (CWO REZ), a declared REZ by the New South Wales (NSW) Government. The regional setting and local context are shown on **Figure 1.1** and **Figure 1.2**.

The project incorporates a large-scale battery energy storage system (BESS) with a discharge capacity of 500 megawatts (MW) and a storage capacity of 1,000 megawatt hours (MWh), along with connection to the Wellington substation (and associated upgrade works) and associated ancillary infrastructure to facilitate transfer of energy to and from the electrical grid. It is intended that the project will be constructed in two separate stages as follows:

- Stage 1: will include 300 MW installed discharge capacity, civil and enabling works including the project access way, installation of batteries, one transformer and switchgear and associated structural, mechanical and electrical works, and connection to the Transgrid substation.
- Stage 2: would likely consist of 200 MW installed discharge capacity, civil and enabling works, including installation of a second transformer and associated switchgear and batteries, and connection to the Transgrid substation. Stage 2 will commence construction following completion of Stage 1 construction.

AMPYR (The Principal) are project owners and have engaged Fluence Energy as the Engineering, Procurement and Construction (EPC) contractor to manage the works for the WBESS, substation, ancillary operational facilities and earthworks bench for the battery storage for Stage 1 only. Fluence will manage ongoing operation and maintenance services of only Stage 1 of the Development for the first twenty years of operations.

Stage 2 is still under development and responsible parties associated with the construction and development shall be nominated separately at a later date.

The Principal have engaged Transgrid to connect the Project to the transmission network used by Transgrid to provide transmission services, which includes certain works that need to be completed by Transgrid to enable Transgrid to connect the Project to the transmission network.

The Development Consent (DC) – Application Number: SSD-27014706 Condition C1 requires the preparation, approval and implementation of an environmental management strategy

(EMS) and a number of management plans for both the construction and operation phases of the project (**Figure 1.3**). The DC is attached as Appendix A. Table A1 identifies the documentation in which each condition is addressed. Commitments were also made by in the environmental impact statement (EIS), the response to submissions (RtS) report and the Amendment report for inclusion in the management plans.

Condition B14 of the DC relevant to biodiversity management requires the preparation of a Biodiversity Management Plan (BMP). This BMP is part of a range of documents outlining the management measures required for managing the development of the site, relevant to the project.

Commitments were also made by the Principal in the environmental impact statement (EIS) (EMM 2022a) and the Biodiversity Development Assessment Report (BDAR) prepared by EMM (2023c) (see **Section** Error! Reference source not found.) regarding the preparation of an BMP.

There will be no clearance of native vegetation or fauna habitat outside the approved disturbance area described in the EIS.

Fluence has been engaged by The Principal to prepare this Biodiversity Management Plan.

1.1 Purpose and scope of this document

The purpose of this Plan is to provide detail on how Biodiversity will be managed during the construction and operation of Stage 1 of the WSBESS project. The relationship between this Plan, the EMS and the environmental management plans and subplans required for the construction and operation of the project are shown diagrammatically in **Figure 1.3**.

This Plan covers the construction works to be undertaken by Fluence and Transgrid as described in Section 3.1Project works.

Figure 1.1: Regional context

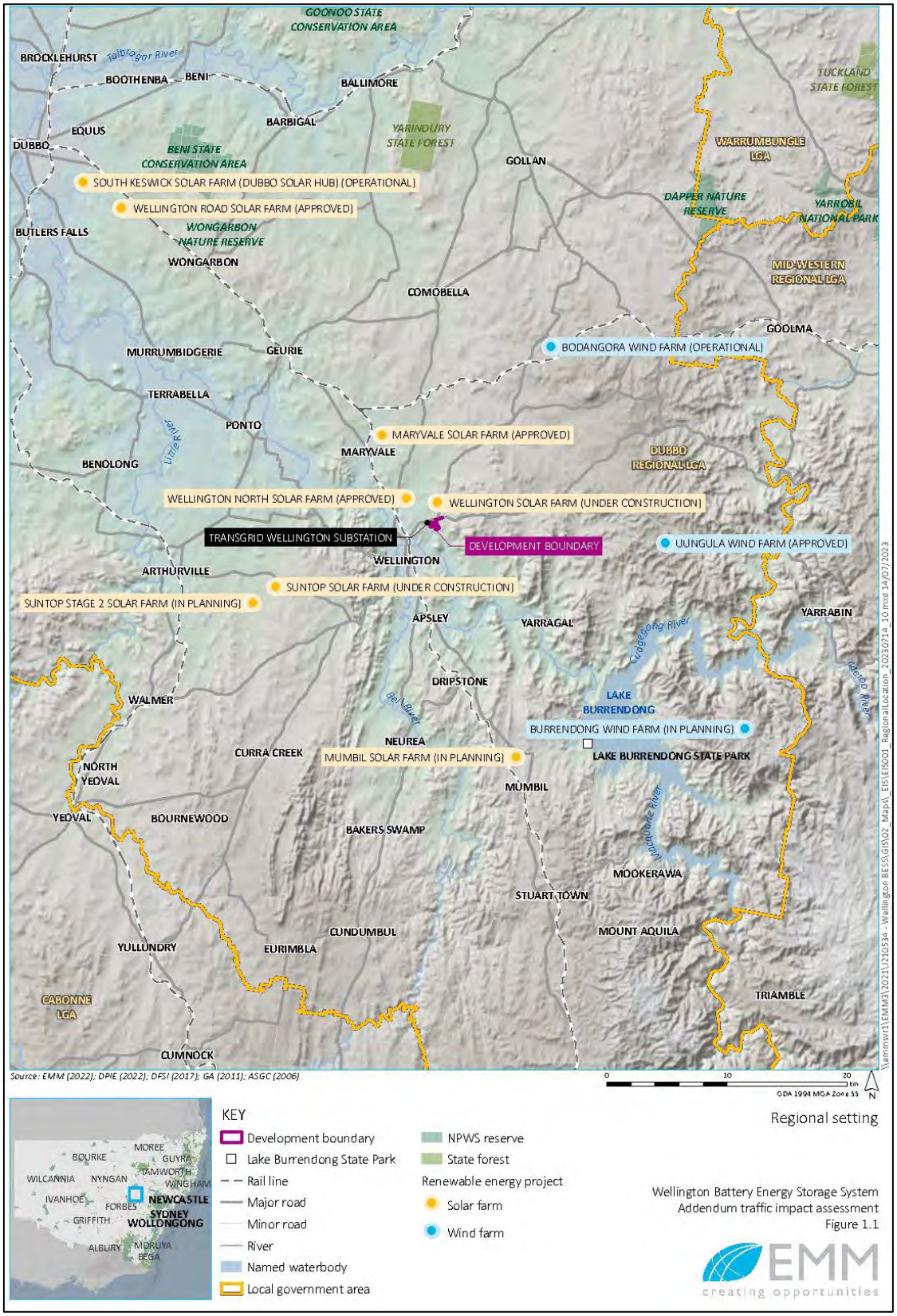


Figure 1.2: Local context

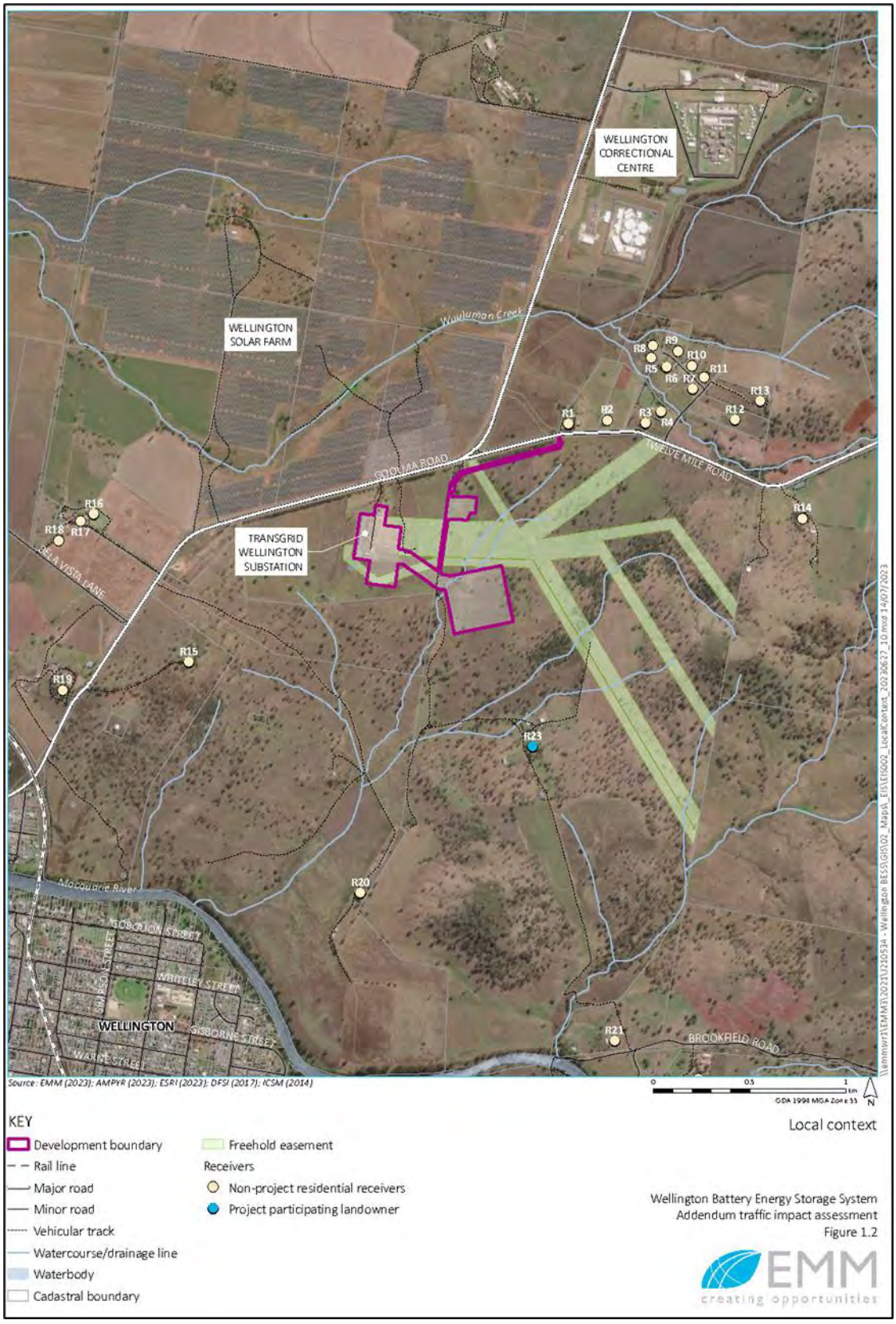
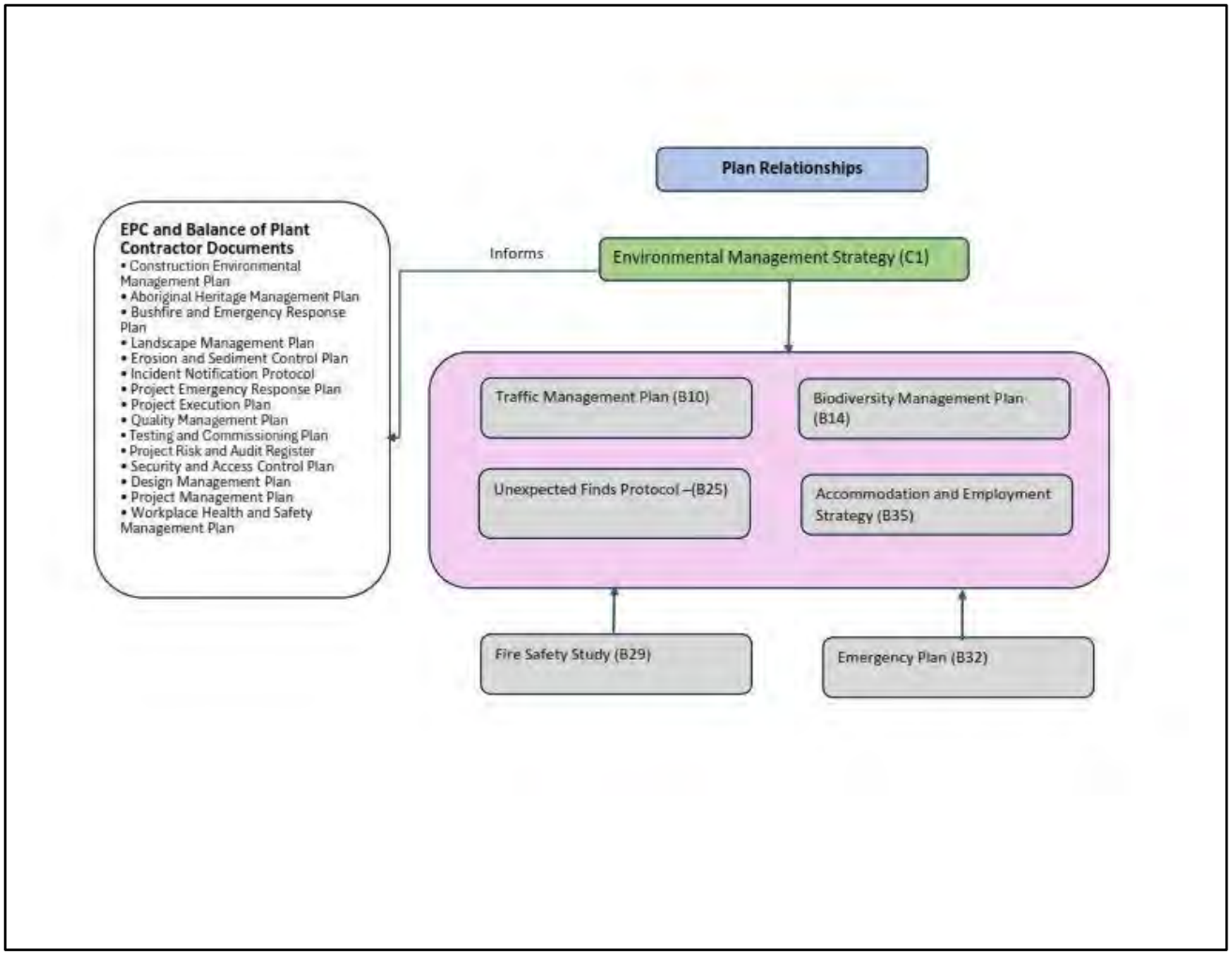


Figure 1.3: Schematic of environmental management documentation



1.2 Project overview

The project will comprise the following components:

- Construction and operation of electrical infrastructure, including:
    - lithium-ion (Li-ion) batteries inside battery enclosures;
    - power conversion systems (PCS) incorporating inverters and transformers;
    - an aboveground or underground transmission line and connection to the switchyard of the Wellington Substation and associated easement;
    - an on-site substation comprising two 330 kilovolt (kV) transformer bays and ancillary infrastructure; and
    - cabling and collector units.
- Upgrade of the TransGrid Wellington Substation, which may include installation of an additional 330 kV switch bay with power transformers, including switchyard bench extension to the south of the existing bench and relocation of security fencing.
- Construction/upgrade and maintenance of ancillary infrastructure and mitigative features, including:
    - an upgrade to the existing site access (currently at the intersection of Goolma Road and Twelve Mile Road) to facilitate safer connection to roadway network and to facilitate the entry of larger construction vehicles;
    - upgrades to existing access tracks;
    - control and office building and associated parking;
    - drainage and stormwater management;
    - security fencing, lighting and closed-circuit television;
    - connection to utilities (telecom, sewerage, etc);
    - an Asset Protection Zone (APZ);
    - and
    - planted landscaping around the BESS facility.

The project layout showing these components is presented in **Figure 3.1**

1.3 Project objectives

The Principal has established a number of objectives for the project which take into account factors such as contribution to community, the environment and safety. These objectives include the following of particular relevance to the BMP and the environmental management plans that sit below it:

- zero injuries or environmental harm during construction and operation of the works
- design for the safety of people, livestock, fauna and flora, and the environment throughout the life of the project in accordance with good industry practices
- using avoid, minimise, restore and offset during planning process to limit impacts on biodiversity where biodiversity is impacted, restoration of habitats using native vegetation plantings to be undertaken
- mutually beneficial relationships with host communities, First Nations and other stakeholders are in place throughout the life of the project

- the local community and First Nations peoples including Traditional Owners are provided with opportunities to actively participate in and benefit from the project through employment, training, procurement and social investment
- minimise adverse social and environmental impacts on the local community and environment
- contribute to Australia's transition to a clean energy future.

In accordance with CoC A1 (Schedule 2) of the DC, in meeting the specific environmental performance criteria established under the DC, Fluence and Transgrid will implement all reasonable and feasible measures to prevent and/or minimise any material harm to the environment that may result from the construction, operation, upgrading or decommissioning of the development (as relevant).

1.4 Strategic framework for environmental management

The EMS provides the means by which Fluence and Transgrid can manage project-related environmental risks. It achieves this by outlining the framework for:

- clearly setting out Fluence and Transgrid's environmental management obligations and the means by which they will be managed, implemented, monitored and reviewed
- systematically tracking and documenting compliance with DC Conditions of Consent (CoCs), EIS commitments, Response to Submissions (RtS) report commitments, Amendment report commitments, external regulatory requirements and internal policy obligations
- effectively communicating with external and internal stakeholders, including The Principal, regulators, government, Traditional Owners, the community, subcontractors and company personnel to achieve a high level of environmental management and ongoing, continuous improvement.

The requirements of this plan are detailed in Condition C1 of SSD-27014706.

Prior to commencing construction, the Applicant must prepare an Environmental Management Strategy for the development to the satisfaction of the Planning Secretary. This strategy must:

a) provide the strategic framework for environmental management of the development;

b) identify the statutory approvals that apply to the development;

c) describe the role, responsibility, authority and accountability of all key personnel involved in the environmental management of the development;

d) set out the procedures that would be implemented to:

I. keep the local community and relevant agencies informed about the operation and environmental performance of the development

II. receive, handle, respond to, and record complaints

III. resolve any disputes that may arise

IV. respond to any non-compliance

V. respond to emergencies; and

e) include:

I. references to any plans approved under the conditions of this consent; and

II. a clear plan depicting all the monitoring to be carried out in relation to the development

Following the Planning Secretary's approval, the Applicant must implement the Environmental Management Strategy

2 Statutory requirements

2.1 Conditions of consent

The CoCs from Schedule 2, Schedule 3 and Schedule 4 of the DC are listed in Table A1 in Appendix A. A cross-reference is provided to the documentation in which they are addressed.

Condition of Consent B14 (Schedule 2) requires a BMP to be developed to the satisfaction of the NSW Planning Secretary. This BMP has been prepared in accordance with this requirement. The DC for SSD-27014706 stipulates the requirements related to this Plan. These are summarised in **Table 2-1**Error! Reference source not found. and shown in full in **Appendix A**. Table 2-1 provides the cross references to where the conditions are addressed in the BMP.

2.2 Commitments in EIS and associated documentation

The EIS was prepared by EMM (2022). The commitments in the EIS include the relevant management and mitigation measures set out in Appendix D of the EIS report and Appendix C of the Amendment Report (EMM 2023b)

The combined commitments in the EIS and the Amendment report are listed in **Appendix B**.

2.3 Legislation and planning documents

Relevant legislation and planning documents relevant to the Wellington South Battery Energy Storage System are described in **Appendix C**.

Fluence and Transgrid and their sub-contractors will maintain a register of relevant environmental laws, both state and federal, and ensure that the register is kept up to date.

Table 2-1: Relevant consent conditions.

Condition of Approval	Requirements	BMP Section
Schedule 2 Condition A1	**OBLIGATION TO MINIMISE HARM TO THE ENVIRONMENT** In meeting the specific environmental performance criteria established under this consent, the Applicant must implement all reasonable and feasible measures to prevent and/or minimise any material harm to the environment that may result from the construction, operation, upgrading or decommissioning of the development.	**Section 1.3**
Schedule 2 Condition A2	**TERMS OF CONSENT** The applicant must carry out the development: a. generally in accordance with the EIS; and b. in accordance with the conditions of this consent [SSD-27014706]; c. in accordance with all written directions of the Planning Secretary d. generally in accordance with the Development Layout in Appendix 1 and Appendix 1A. *Note: The general layout of the development is shown in Appendix 1* [of SSD - 27014706].	**Section 5.8.1**

<table>
<tr><td>Schedule 2
Condition B11</td><td>BIODIVERSITY
Vegetation Clearance
The Applicant must not clear any native vegetation or fauna habitat located outside the approved disturbance areas described in the EIS.</td><td>Section 6
Protocol 1
Protocol 2
Protocol 16</td></tr>
<tr><td>Schedule 2
Condition B12</td><td>BIODIVERSITY
Biodiversity Offsets
Prior to commencing the development under this consent, the Applicant must retire biodiversity credits of a number and class specified in Table 1 to the satisfaction of BCD (now CPHR), unless the Planning Secretary agrees otherwise. The retirement of these credits must be carried out in accordance with the NSW Biodiversity Offsets Scheme and can be achieved by:
(a) acquiring or retiring ‘biodiversity credits’ within the meaning of the Biodiversity Conservation Act 2016;
(b) making payments into an offset fund that has been developed by the NSW Government; or
(c) funding a biodiversity conservation action that benefits the entity impacted and is listed in the ancillary rules of the biodiversity offset scheme

Table 1 | Ecosystem Credit Requirements
<table><tr><th>Ecosystem Credits</th><th>Credits Required</th></tr><tr><td>PCT266 – White Box grassy woodland in the upper slopes ub-region of the NSW South Western Slopes Bioregion</td><td>41</td></tr></table>Table 2 | Species Credit Requirements
<table><tr><th>Species Credit Species</th><th>Credits Required</th></tr><tr><td>Superb Parrot</td><td>56</td></tr><tr><td>Pink-tailed Legless Lizard</td><td>36</td></tr></table></td><td>Section 9</td></tr>
<tr><td>Schedule 2
Condition B13</td><td>Prior to carrying out any development that could directly or indirectly impact the biodiversity values requiring offset, the Applicant must provide evidence to the Planning Secretary that biodiversity credits have been retired.</td><td>Section 9</td></tr>
<tr><td>Schedule 2
Condition B14</td><td>BIODIVERSITY
Biodiversity Management Plan
Prior to commencing construction, the Applicant must prepare a Biodiversity Management Plan for the development in consultation with BCS (now CPHR), and to the satisfaction of the Planning Secretary. This plan must:</td><td></td></tr>
<tr><td></td><td>(a) be prepared in accordance with the revised Biodiversity Development Assessment Report (dated 13 September 2023)</td><td>Section 6, Table 6-2</td></tr>
<tr><td></td><td>(b) include a description of the measures and timeframes that would be implemented for:</td><td></td></tr>
<tr><td></td><td>I. protecting vegetation and fauna habitat outside the approved disturbance areas;</td><td>Section 6, Section 8 (including Tables 8.1, 8.2 and 8.3)
Protocol 1
Protocol 2
Protocol 3
Protocol 4
Protocol 5
Protocol 6
Protocol 7
Protocol 8
Protocol 9
Protocol 10
Protocol 11
Protocol 12</td></tr>
</table>

		Protocol 14 **Protocol 16** **Protocol 17**
	II. managing the remnant vegetation and fauna habitat on site;	**Section 6, Section 8 (including Tables 8.1, 8.2 and 8.3)** **Protocol 1** **Protocol 2** **Protocol 3** **Protocol 4** **Protocol 5** **Protocol 6** **Protocol 7** **Protocol 8** **Protocol 9** **Protocol 10** **Protocol 11** **Protocol 12** **Protocol 13** **Protocol 14** **Protocol 15** **Protocol 16** **Protocol 17**
	III. minimising clearing and avoiding unnecessary disturbance of vegetation that is associated with the construction and operation of the development;	**Section 6, Section 8 (including Tables 8.1, 8.2 and 8.3)** **Protocol 1** **Protocol 2** **Protocol 3** **Protocol 4** **Protocol 7** **Protocol 17**
	IV. minimising the impacts to fauna on site and implementing fauna management protocols;	**Section 6, Section 8 (including Tables 8.1, 8.2 and 8.3)** **Protocol 1** **Protocol 2** **Protocol 3** **Protocol 4** **Protocol 5** **Protocol 6** **Protocol 7** **Protocol 9** **Protocol 10** **Protocol 13** **Protocol 14** **Protocol 16** **Protocol 17**
	V. maximising the salvage of vegetative and soil resources within the approved disturbance area for beneficial reuse in the enhancement or the rehabilitation of the site;	**Protocol 1** **Protocol 2** **Protocol 3** **Protocol 4** **Protocol 5** **Protocol 7** **Protocol 8**

		Protocol 9 **Protocol 16**
	VI. and controlling weeds, feral pests and pathogens;	**Protocol 5** **Protocol 6** **Protocol 7** **Protocol 8** **Protocol 12** **Protocol 17**
	(c) include a program to monitor and report on the effectiveness of the mitigation measures	**Section 6, Section 8 (including Tables 8.1, 8.2 and 8.3)**
	(d) include an incidental threatened species finds protocol to identify the avoid and/or minimise and/or offset options to be implement if additional threatened species are discovered on sites	**Protocol 15**
	(e) include details of who would be responsible for monitoring, reviewing and implementing the plan; and timeframes for completion of actions.	**Section 6, Section 8 (including Tables 8.1, 8.2 and 8.3)** **Protocol 1** **Protocol 2** **Protocol 3** **Protocol 4** **Protocol 5** **Protocol 6** **Protocol 7** **Protocol 8** **Protocol 9** **Protocol 10** **Protocol 11** **Protocol 12** **Protocol 13** **Protocol 14** **Protocol 15** **Protocol 16** **Protocol 17**
	Following the Planning Secretary's approval, the Applicant must implement the Biodiversity Management Plan. *Note: If the biodiversity credits are retired via a Biodiversity Stewardship Agreement, then the Biodiversity Management Plan does not need to include any of the matters that are covered under the Biodiversity Stewardship Agreement*.	This document

2.4 Project Commitments

In addition to the consent conditions, a number of commitments were made in the BDAR (EMM 2023c) as part of the Environmental Impact Statement (EIS) (including the submissions report), and as the EIS was the basis for Development Consent, these commitments must be adhered to. The commitments that pertain to biodiversity management are presented in **Table *2-2***. The table identifies all the commitments relating to biodiversity impact and identifies where in the BMP individual requirements have been addressed.

Table 2-2: Consolidated EIS and Amendment report commitments relevant to BMP.

ID	Impact / Risk	Management/Mitigation measure – biodiversity	Section in this BMP
BIO01	Removal of Box Gum Woodland and derived native grassland	Retain vegetation where possible within the transmission line connection. Limit the removal of vegetation to necessary trees and trimming of branches.	Protocol 1
BIO02	Removal of Box Gum Woodland and derived native grassland	Locate the access of the BESS on most of the existing access track within the project boundary.	N/A – Design
BIO03	Removal of Box Gum Woodland and derived native grassland	Following construction, include species consistent with PCT 266 into landscaping and vegetation screens.	Protocol 1 Protocol 2 Protocol 17 Landscape Mgt Plan
BIO04	Removal of hollow-bearing trees	Minimise removal of hollow-bearing trees which occur within the project boundary, where possible. A visual screening area is included in the project boundary, where efforts to retain the 7 remaining trees will be made. Although this is the aim of AMPYR, impacts to hollow-bearing trees include the removal of the 7 trees within the subject land for the purpose of this assessment	Design Protocol 1 Protocol 2 Protocol 3
BIO05	Removal of hollow-bearing trees	Install 7 nest boxes or equivalent within the cadastral boundary of the site in remnant woodland. As a priority, the removed hollows should be retained to be re-installed on remnant trees within the site. Where this is not possible, nest boxes can be used.	Design Protocol 1 Protocol 2 Protocol 3
BIO06	Removal of potential habitat fauna (hollow-bearing trees) (for all species including the Superb Parrot)	Pre-clearance surveys to be conducted prior to removal of hollow-bearing trees (at the locations specified in the BDAR).	Protocol 1 Protocol 2 Protocol 3
BIO07	Removal of potential habitat fauna (hollow-bearing trees) (for all species including the Superb Parrot)	If the Superb Parrot is found to be utilising a hollow, a hollow inspection will be undertaken using an elevated work platform, tree climber and/or inspection camera. If eggs are present in the hollow, these eggs will be collected and provided to a wildlife carer for raising, prior to release. If hatchlings are present, removal of the hollow-bearing tree must be postponed until birds have fledged and left the hollow for the breeding season (September to December).	Protocol 14 (Note: eggs will remain in the tree until birds have fledged; and removal of tree postponed as per Protocol and CPHR advice)

BIO08	Removal of logs and debris from the subject land	Retain hollow logs, all rocks and debris to be used post construction in remnant woodland. These will be relocated outside of the subject land (within the cadastral boundary) in the remnant woodland to the east, south and west to retain species habitat and connectivity. Avoid relocation of rocks during Pink-tailed Legless Lizard breeding season (December to late March).	Protocol 4 Protocol 2 Protocol 16
BIO09	Removal of logs and debris from the subject land	Pre-clearance surveys to be conducted immediately prior to removal of logs, rocks and debris.	Protocol 4 Protocol 16
BIO10	Indirect impacts on White Box woodland to be retained	Retained trees will be marked for their protection during construction, where required. Markings will be monitored and reapplied where necessary during construction.	Protocol 1
BIO11	Indirect impacts on White Box woodland to be retained	All workers to be made aware of ecologically sensitive areas and the need to avoid impacts. This includes adjacent native vegetation.	This document Induction process Protocol 1 Protocol 7
BIO12	Erosion and sedimentation to the indirect impact area	Sediment controls, including fencing and sediments traps, should be installed in any areas where works will occur in proximity to low lying vegetation. This includes along the boundary of the unnamed watercourse. avoid the spread of seed and other propagules.	Protocol 8
BIO13	Weed introduction and spread	Remove weeds prior to clearing. Weeds are to be stockpiled appropriately prior to removal from the subject land to avoid the spread of seed and other propagules.	Protocol 5
BIO14	Weed introduction and spread	Weed hygiene protocols are in place prior to entering the subject land. This includes wash-down procedures to all plant and machinery.	Protocol 12
BIO15	Disturbance	Monitor dust levels and implement suppression strategies where required such as wetting down dirt roads or reducing vehicle speeds.	Protocol 9
BIO16	Threatened species finds	Have a threatened species protocol; for managing threatened species which may be found on site during construction.	Protocol 15

3 Project description

Section 7 provides details of the existing environment to be impacted. The project involves the removal of 7 habitat trees and clearing of up to 8.79 hectares (ha) of White box grassy woodland during the clearing and grubbing process.

Constraints associated with the potential presence of Superb Parrot (timing of tree clearing) and Pink-tailed Legless Lizard (PTLL) (timing of Bush Rock Removal) also impact the project and are addressed in Protocols 14 and 16 respectively.

3.1 Project works

3.1.1 Fluence works

The works to be managed by Fluence will include:

- Construction and operation of electrical infrastructure, including:
    - lithium-ion (Li-ion) batteries inside battery enclosures;
    - power conversion systems (PCS) incorporating inverters and transformers;
    - an aboveground or underground transmission line and connection to the switchyard of the Wellington Substation and associated easement;
    - an on-site substation comprising two 330 kilovolt (kV) transformer bays and ancillary infrastructure; and
    - cabling and collector units.
- Construction/upgrade and maintenance of ancillary infrastructure and mitigative features, including:
    - an upgrade to the existing site access (currently at the intersection of Goolma Road and Twelve Mile Road) to facilitate safer connection to roadway network and to facilitate the entry of larger construction vehicles;
    - upgrades to existing access tracks;
    - control and office building and associated parking;
    - drainage and stormwater management;
    - security fencing, lighting and closed-circuit television;
    - connection to utilities (telecom, sewerage, etc);
    - an Asset Protection Zone (APZ); and
    - planted landscaping around the BESS facility.

External road upgrade works were required in support of the project. These External Road Upgrades are detailed in Conditions B6 and B7 (Schedule 2) of the CoC. Which state:

> “B6. Unless the Planning Secretary agrees otherwise, prior to commencing construction, the Goolma Road / Twelve Mile Road intersection and realignment must be completed as per the scope and conditions of the Uungula Wind Farm SSD-6687.
>
> B7. Unless the Planning Secretary agrees otherwise, prior to commencing construction, the Applicant must design and construct the new access road intersection on Twelve Mile Road with Basic Left Turn (BAL) and Short Channelised Right-turn (CHR(s) treatments as shown in Appendix 6 (of Conditions of Consent).

Unless the relevant road authority agrees otherwise, these upgrades must comply with the current Austroads Guidelines, Australian Standards and TfNSW supplements, and be carried out to the satisfaction of the relevant roads authority."

The Goolma Road / Twelve Mile Road intersection upgrade is being undertaken by external contractors associated with the Uungula Wind Farm Project and is outside the scope of this BMP.

An erosion and sediment control plan will be prepared in accordance with Managing Urban Stormwater: Soils and Construction (Landcom, 2004) manual, or its latest version. This will ensure that all drainage and erosion and sediment controls correctly designed, installed and maintained.

3.1.2 Transgrid works

The Principal has engaged Transgrid to connect the Project to the transmission network used by Transgrid to provide transmission services, which includes certain works that need to be completed by Transgrid to enable Transgrid to connect the Project to its transmission network.

- Upgrade of the Transgrid Wellington Substation, which may include installation of an additional 330 kV switch bay with power transformers, including switchyard bench extension to the south of the existing bench and relocation of security fencing.
- Construction of a 330kV transmission line to connect the Wellington BESS substation to the Wellington Substation

3.2 Project schedule

The proposed construction schedule for the Project is summarised in **Table 3-1** and displayed in **Figure 3.1**. Construction will be undertaken in three overlapping sections:

- Section 1 comprises construction of storage system
- Section 2 comprises construction of a substation build by Fluence
- Section 3 comprises construction of the Connection Assets to the Wellington Substation by Transgrid

Construction will be followed by validation testing and a project closeout period. The civil works for Section 2 (Generating System #1) include earthworks to construct the bench for a future BESS.

As part of the project closeout period, Fluence will manage the defects liability period which extends over the first two years of operations. Fluence hold a contract with the Principal to operate the facility for a period of twenty years following Practical Completion.

Figure 3.1: Site configuration

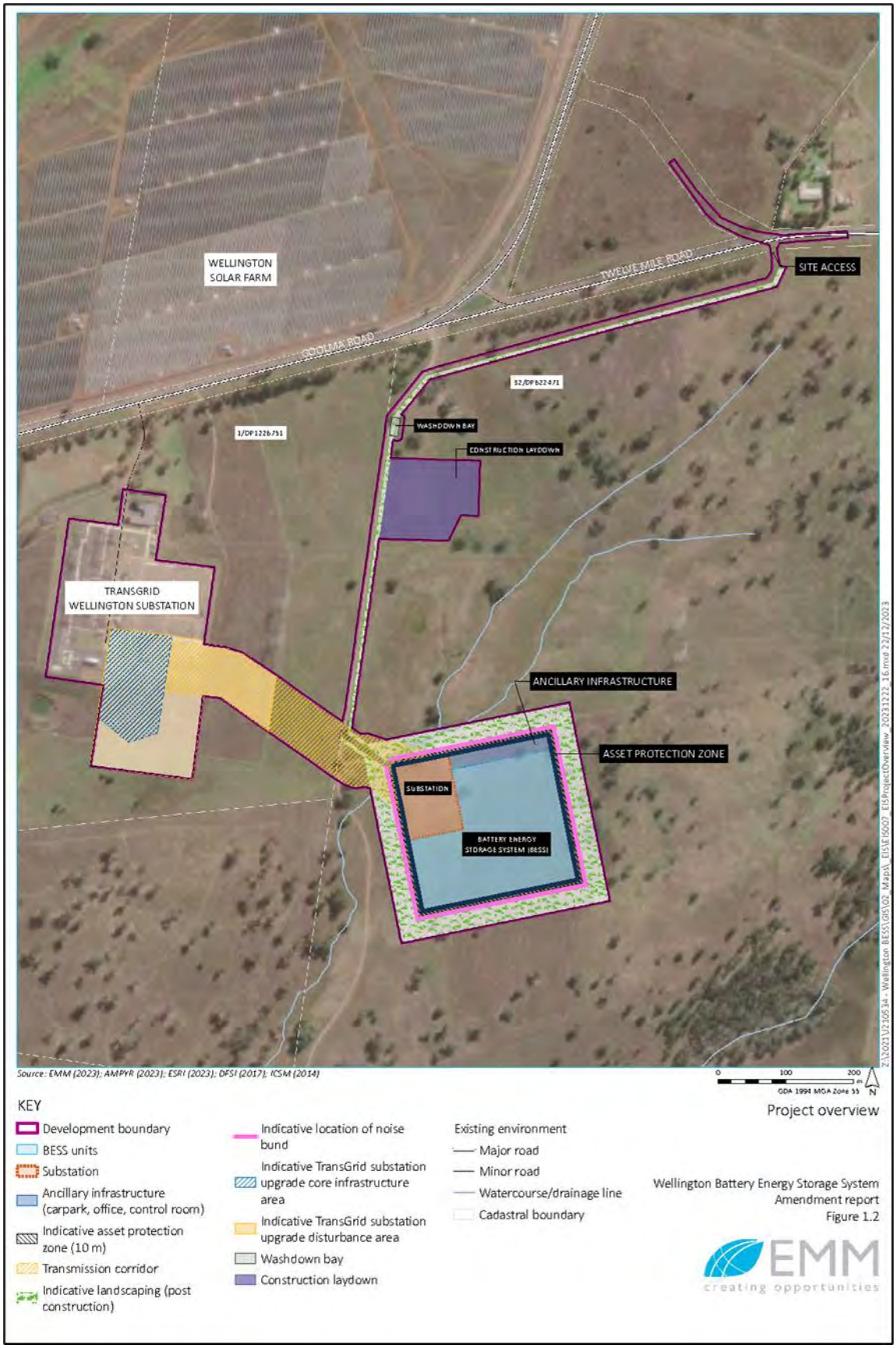


Table 3-1: Construction schedule

Activity	Start	Finish
Public Road Upgrades Completion by others (Uungula Wind Farm)	Q1 2024	Q1 2025
Section 1 (Substation Construction)		
Civil Works	Q3 2025	Q2 2026
Substation Electrical Works	Q1 2026	Q3 2026
Substation handover		Q3 2026
Section 2 (Storage System)		
Material Procurement	Q3 2025	Q2 2026
Civil Works	Q4 2025	Q2 2026
Battery Construction	Q1 2026	Q3 2026
Section 3 (Commissioning		
Commissioning Works	Q3 2026	Q1 2027
R2 Validation Testing		
R2 Validation Testing	Q3 2026	Q1 2027
Project Closeout		
Practical Completion - All Sections		Q1 2027
Defects Liability Period (24 Months)	Q1 2027	Q1 2029

*Note civil works will include clearing and grubbing

3.3 Hours of operation

In accordance with CoC B15 (Schedule 2) of the DC, unless the Planning Secretary and the applicable authority agree otherwise, Fluence and Transgrid and their sub-contractors will comply with the hours outlined in **Table 3-2**.

As per CoC B16, the following construction, upgrading or decommissioning activities may be undertaken outside these hours without the approval of the Planning Secretary:

a) commissioning activities that are inaudible at non-associated residences
b) the delivery or dispatch of materials as requested by the NSW Police Force or other public authorities for safety reasons; or
c) emergency work to avoid the loss of life, property or prevent material harm to the environment.

Table 3-2: Hours of operation

Day	Normal working hours
Monday to Friday	7:00 am - 6:00 pm
Saturday	8:00 am - 1:00 pm
Sundays	at no time on Sundays
NSW public holidays	at no time on NSW public holidays

Condition of Consent B17 (Schedule 2) allows for variations to construction hours under specific conditions and states:

The hours of construction activities specified in condition B15 of this approval may be varied with the prior written approval of the Planning Secretary. Any request to alter the hours of construction must be:

(a) considered on a case-by-case or activity-specific basis;
(b) accompanied by details of the nature and justification for activities to be conducted during the varied construction hours;
(c) accompanied by written evidence that appropriate consultation with potentially affected sensitive receivers and notification of Councils (and other relevant agencies) has been or will be undertaken;
(d) accompanied by evidence that all feasible and reasonable noise mitigation measures have been put in place; and
(e) accompanied by a noise impact assessment consistent with the requirements of the Interim Construction Noise Guideline (DECC, 2009), or latest version.

At the time of preparation of this BMP there are no intentions of varying the Operating Hours, however, The Principal in conjunction with Fluence and TransGrid will continually review the situation and if necessary, apply to the Planning Secretary for a variation.

4 Environmental management framework

Fluence and Transgrid will strive for excellence through their commitment to leading practice in environmental management and performance. Implementation of the project wide EMS will assist in minimising the adverse environmental impacts of construction-related activities (and maximising project benefits) by setting out a comprehensive framework for environmental management, mitigation, monitoring and review.

This BMP, in combination with the other management plans and subplans (see **Figure 1.3**), outlines the minimum standard to ensure that the Principal, Fluence and Transgrid manage the environmental aspects and impacts of the project in a manner that is planned, controlled, monitored, recorded and audited, using a management system that drives continual improvement.

Fluence has responsibility for all works within the project boundary.

4.1 Environmental and related policies

Fluence and Transgrid have adopted environmental and related policies which set out their environmental management and other relevant aims, objectives and values. **Figure 4.1** and **Figure 4.2** Fluence's HSE and environmental policy statements and Transgrid's environmental policy, respectively.

4.2 General environmental principles

The general environmental principles to be adopted by Fluence and Transgrid for the proposed works are:

- complying with statutory requirements (CoCs and legislation)
- minimising impacts on the community and environment
- the timely and efficient response to any environmental incidents and complaints
- rehabilitation of all disturbed land
- continual monitoring, review and reporting on the environmental impacts of the works.



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fluenceenergy.com

Fluence Global Environmental Policy

At Fluence, our mission is to create a more sustainable future by transforming the way we power our world. We believe in solving problems, building lasting partnerships with our customers, and the importance of the entire power ecosystem in forging a path to making a sustainable future certain.

We have developed an Environmental Policy that is tailored for our business, our customers, and our planet. This Policy demonstrates our dedication to sustainability, regulatory compliance, unwavering environmental stewardship, and continuous improvement. This is demonstrated by the following commitments to:

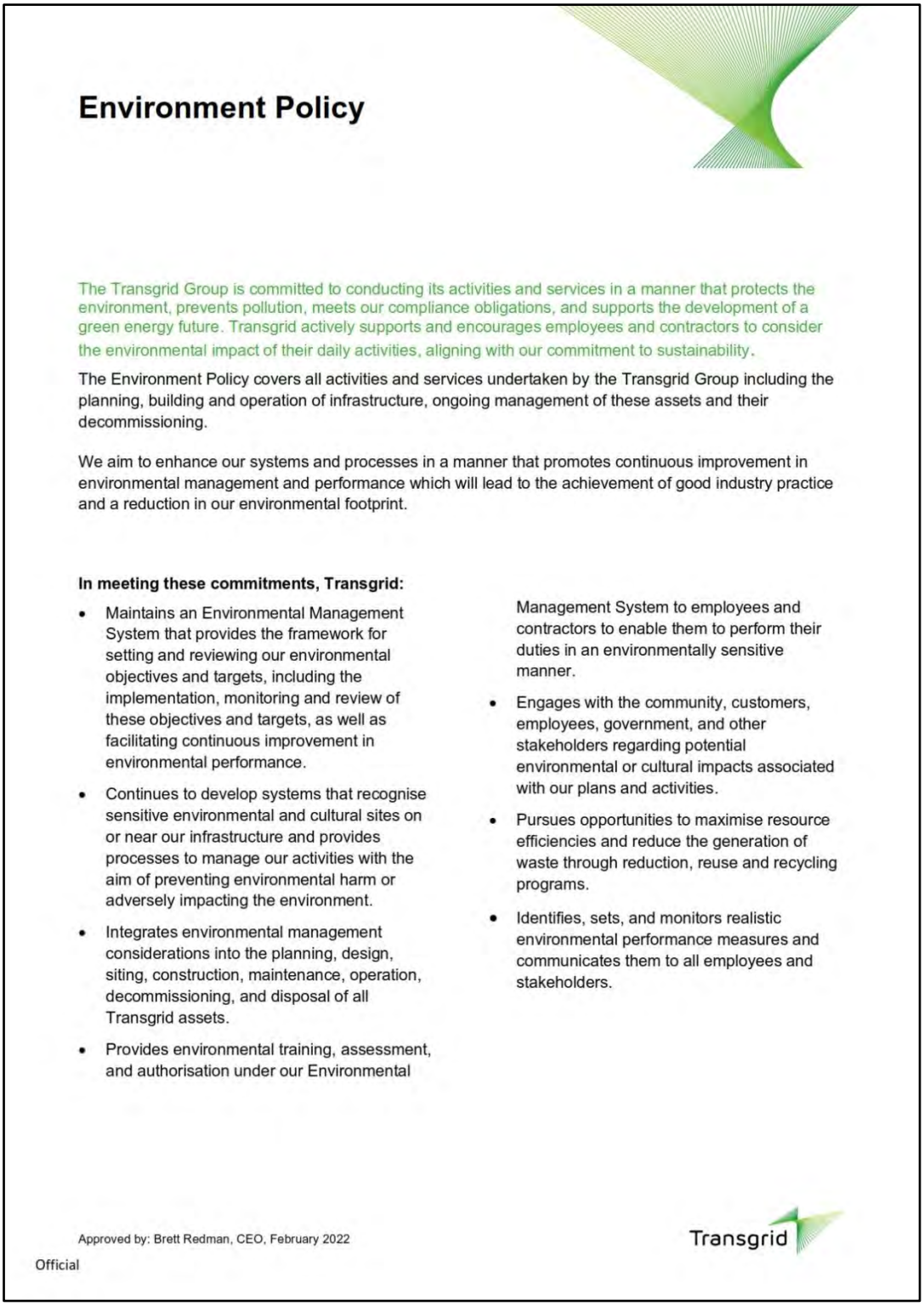
1. Draw active participation from all Fluence staff, subcontractors, suppliers, and leadership to maintain environmental integrity.
2. Undertake all business activities in a safe and professional manner.
3. Build and maintain facilities throughout the world with adherence to environmental standards and strict safety practices.
4. Minimize and, where practical, eliminate any adverse impact on the environment arising from routine business activities.
5. Meet or exceed all pertinent legal and client requirements to preserve environmental stewardship.
6. Promote responsible energy and water use, and waste management practices in all business, subcontractor, partner, and supplier operations.
7. Maximize reduction, reuse, and recycling of construction materials, and ensure environmentally responsible disposal of all waste in business activities.
8. Minimize the environmental impact of hazardous materials and dangerous goods in all activities.
9. Foster continuous improvement based on the concept of Plan-Do-Check-Act, consistent with ISO 14001:2015 methodologies.
10. Make appropriate resources available to manage environmental impacts and ensure roles and responsibilities are defined.
11. Ensure that the Fluence Environmental Policy is easily accessible to all staff and subcontractors, and that they are provided with the necessary training to effectively apply the policy and adhere to all pertinent regulations, in all activities.

Julian Nebreda / President & Chief Executive Officer, Fluence /

1

Transforming the way we power our world.

Figure 4.1: Fluence Environmental Policy



Environment Policy

The Transgrid Group is committed to conducting its activities and services in a manner that protects the environment, prevents pollution, meets our compliance obligations, and supports the development of a green energy future. Transgrid actively supports and encourages employees and contractors to consider the environmental impact of their daily activities, aligning with our commitment to sustainability.

The Environment Policy covers all activities and services undertaken by the Transgrid Group including the planning, building and operation of infrastructure, ongoing management of these assets and their decommissioning.

We aim to enhance our systems and processes in a manner that promotes continuous improvement in environmental management and performance which will lead to the achievement of good industry practice and a reduction in our environmental footprint.

In meeting these commitments, Transgrid:

- Maintains an Environmental Management System that provides the framework for setting and reviewing our environmental objectives and targets, including the implementation, monitoring and review of these objectives and targets, as well as facilitating continuous improvement in environmental performance.
- Continues to develop systems that recognise sensitive environmental and cultural sites on or near our infrastructure and provides processes to manage our activities with the aim of preventing environmental harm or adversely impacting the environment.
- Integrates environmental management considerations into the planning, design, siting, construction, maintenance, operation, decommissioning, and disposal of all Transgrid assets.
- Provides environmental training, assessment, and authorisation under our Environmental Management System to employees and contractors to enable them to perform their duties in an environmentally sensitive manner.
- Engages with the community, customers, employees, government, and other stakeholders regarding potential environmental or cultural impacts associated with our plans and activities.
- Pursues opportunities to maximise resource efficiencies and reduce the generation of waste through reduction, reuse and recycling programs.
- Identifies, sets, and monitors realistic environmental performance measures and communicates them to all employees and stakeholders.

Approved by: Brett Redman, CEO, February 2022

Transgrid

Official

Figure 4.2: TransGrid Environment Policy Statement

5 Organisational structure, roles and responsibilities

5.1 Key stakeholders

The stakeholders in the Wellington South Battery Energy Storage System project include regulators, project delivery partners and community stakeholders. **Table 5-1** lists the key stakeholders.

Table 5-1: Key stakeholders

Regulators	Project stakeholders	Community stakeholders
• DPHI • Dubbo Regional Council • Registered Aboriginal Parties (RAPs) • NSW Rural Fire Service (NSW RFS) • Department of Climate Change, Energy, the Environment and Water (DCCEEW) (Commonwealth) • Transport of NSW (TfNSW) • SafeWork NSW • Essential Energy	• AMPYR Australia • Fluence Energy • Transgrid • Balance of Plant (BoP) Contractor • Operations and Maintenance (O&M) Contractor • Specialist subcontractors • Specialist consultants • Transport and logistics companies • Project financiers/ investors • MAAS Civil (access road construction contractor)	Traditional Owners and First Nations peoples Host land holders • Neighbours • Local business owners • Local employers • Local suppliers • Local employees Local accommodation providers Local not for profit and community support organisations incl social investment recipients

5.2 Project organisational structure

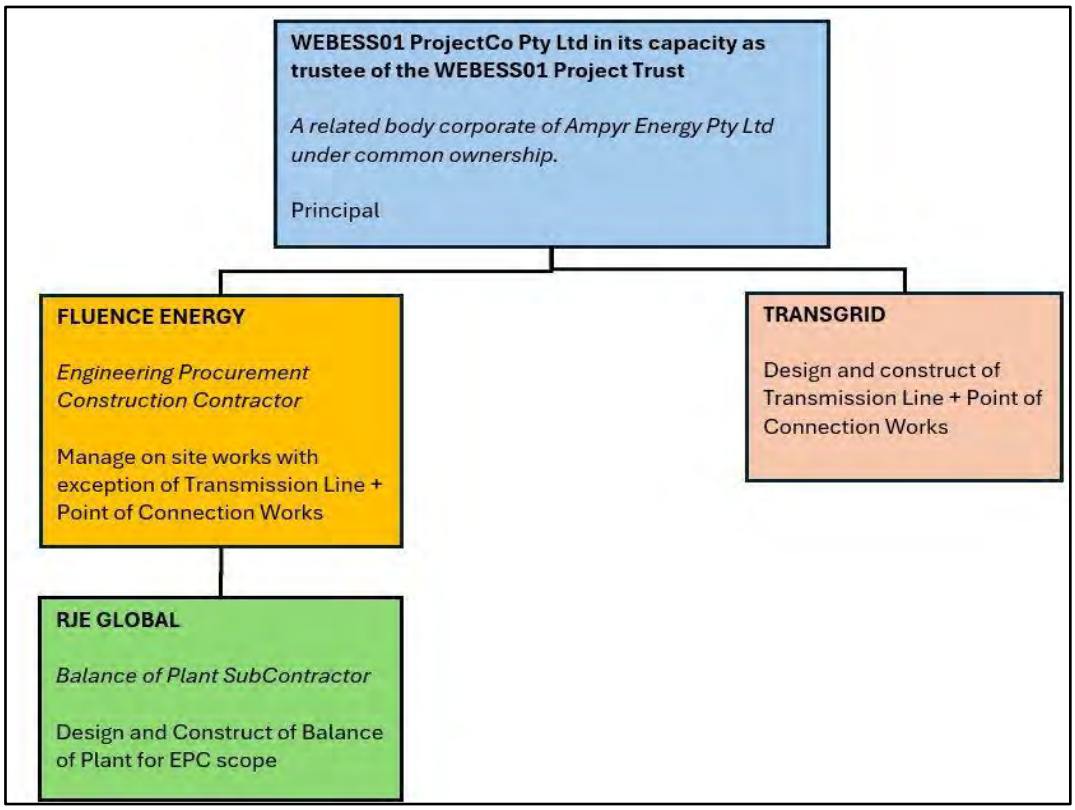
Knowledge of the organisational structure of the project is important when it comes to understanding the roles and responsibilities of the various project stakeholders.

Figure 5.1 is a schematic showing the organisational relationship between The Principal as project proponent, Fluence as EPC contractor, Fluence's balance-of-plant (BoP) subcontractors, and Transgrid as the contractor for the connection to the transmission network.

The Twelve Road access road intersection will be directly managed by The Principal.

Figure 5.1 shows the organisational structure of the Project Management Team.

Figure 5.1: Project organisational structure



5.2.1 Applicant (Project Proponent)

AMPYR is the project's proponent and will be referred to as The Principal

5.2.2 EPC Contractor

The Principal has engaged Fluence as the EPC contractor to undertake the works described in Section 3.1.1.

As the EPC contractor for the project, Fluence will design, procure, construct and commission the Battery Energy Storage System for The Principal.

5.2.3 BoP Contractors

Fluence will engage a Balance of Plant (BoP) contractor to assist with the delivery of the works.

5.2.4 Substation construction contractor

The Principal has engaged Transgrid to connect the Project to the transmission network as described in Section 3.1.2.

5.3 Roles and responsibilities of the project

The roles that AMPYR, Fluence and Transgrid have assigned to the project are described below. Detailed responsibilities for the implementation of this BMP are described in Section 6.1.

5.3.1 The AMPYR project manager

The Principal's Project Manager is to ensure that the works that are the subject of this plan are undertaken according to the CoCs of Development Consent SSD-27014706 and commitments outlined in the EIS.

The Principal's Project Manager is also responsible for engaging Fluence and Transgrid to undertake the works. In addition, the Principal's Project Manager will provide safety and environmental advice to the project team and engage with the regulators and the community.

5.3.2 Fluence management team

The key roles to be filled by Fluence as EPC contractor include a project manager, and a health, safety and environment (HSE) advisor.

The role of principal contractor will be nominated to Fluence's BoP subcontractor, so the BoP subcontractor will nominate the key roles of health, safety and environment (HSE) manager, and construction manager and site manager.

Lead Project Manager

The Fluence Lead Project Manager is responsible for the preparation of preconstruction constructability assessment, budget control, contract administration, planning subcontractor work, tendering and award, subcontract issuance, subcontractor liaison, change management, safety management, and district and owner reporting.

5.3.3 Fluence BoP subcontractors

Each of Fluence's BoP subcontractors will have their own HSE management with an obligation to plan, organize and implement training for their workers. The Fluence HSE manager will liaise with subcontractor HSE representatives to assist in achieving outcomes.

Lead Construction Manager

The BoP Lead Construction Manager has the responsibility to plan, coordinate and supervise all on-site functions to ensure that the project is constructed in accordance with design and quality expectations, within the stipulated budget and schedule. Develop and execute quality control plans, inspect work for conformity to specifications and arrange for correction of defects/ deficiencies. The Lead Construction Manager will also manage site communication between the construction team and project managers.

Health, Safety and Environment Manager

The BoP Health, Safety and Environment (HSE) Manager is responsible for direct supervision of the district HSE supervisors and coordinators on all major projects as well as conducting project audits and inspections. The HSE Manager is also responsible for:

- ensuring the safety training of all construction staff (in consultation with subcontractor HSE representatives)
- managing all field aspects of the project's HSE budget, schedule, safety and general performance
- providing proactive leadership in:
  - health, safety and environment, including construction procedures and safe work, and job safety analysis
  - and project planning and execution.

Construction Manager

The BoP Construction Manager is accountable to and draws authority from the Lead Construction Manager. The Construction Manager is responsible for building excellent relationships with peers, supervisors, direct reports, clients, trade contractors, and consultants.

Design and Commissioning Manager

The BoP Design and Commissioning Manager is responsible for managing the safe energisation of plant.

Refer to Section 6.1 for specific biodiversity related roles and responsibilities.

5.3.4 Transgrid management team

The key roles to be filled by Transgrid in connecting the Project to the connection assets and transmission network used by Transgrid include a project manager, a health, safety and environment (HSE) manager, a construction manager and a site manager. Their roles are described below.

Project Manager

The Transgrid Project Manager is responsible for the preparation of preconstruction constructability assessment, budget control, contract administration, planning subcontractor work, tendering and award, subcontract issuance, subcontractor liaison, change management, safety management, and district and owner reporting.

Construction Manager

The Transgrid Construction Manager has the responsibility to plan, coordinate and supervise all on-site functions to ensure that the project is constructed in accordance with design and quality expectations, within the stipulated budget and schedule. Develop and execute quality control plans, inspect work for conformity to specifications and arrange for correction of defects/ deficiencies. The Construction Manager will also manage site communication between the construction team and project managers.

Health, Safety and Environment Manager

The Transgrid Health, Safety and Environment (HSE) Manager is responsible for direct supervision of the district HSE supervisors and coordinators on all major projects as well as conducting project audits and inspections. The HSE Manager is also responsible for planning, organising and implementing safety training of all construction staff.

Site Manager

The Transgrid Site Manager is accountable to and draws authority from the Construction Manager. He is responsible for building excellent relationships with peers, supervisors, direct reports, clients, trade contractors, and consultants.

Commissioning Manager

The Transgrid Commissioning Manager is responsible for managing the safe energisation of plant and the safe connection of the Project to the connection assets and transmission network used by Transgrid.

5.3.5 Project Ecologist

The Project Ecologist shall have an applicable tertiary qualification or similar. The ecologist shall be familiar with the scope of works proposed, the project objectives and have a clear knowledge of the ecology of the locality. The role of the ecologist is to oversee specific activities as outlined in the BMP and may be subcontracted out on an as needs basis.

Proof of all licences, approvals and qualifications shall be provided at the commencement of the ecologist's involvement in this project.

5.4 Environmental management system

As required under the contract with the Principal, Fluence and Transgrid will develop and implement a Construction Environmental Management Plan (CEMP) for their works. The HSEMP will establish a set of minimum HSE requirements for the works and ensure HSE management in line with good industry practices and legislative requirements.

The CEMP describes in detail how environmental management will occur on the Project and shall be developed using the approach of the Australian and New Zealand standards:

- AS/NZS ISO 45001:2018 Occupational health and safety management systems
- AS/NZS ISO 9001 Quality management systems
- AS/NZS ISO 14001 Environmental management systems.

Prior to physical connection and energisation with the transmission system, an operational update to the CEMP shall be provided, reflecting the Contractor's changed role onsite. This update shall, at a minimum:

- document any modifications required to the HSE systems to reflect the operational status of the site
- document the process for assessing any new, changed or evolving hazards given the operational status of the site and confirming the adequacy of existing controls
- document minimum training requirements for access to and operation of any equipment that will be operational, energized or required for the purpose of exporting energy to the transmission network, from the period of First Synchronization through to Practical Completion.

A component of the HSEMP will be an environmental management system, developed using the approach of the AS/NZS ISO 14001a standard. A well designed and carefully implemented environmental management system provides an important framework for environmental management activities.

Fluence and Transgrid will implement environmental management systems consistent with that outlined below and the requirements of the Principal.

This environmental management system is a five-step iterative system which comprises the documented systems and processes used for the safe construction, operations and decommissioning of the Project. The system enables hazards to be identified and assessed to eliminate or minimise the risk of impact to the environment to a level that is as low as reasonably practical (ALARP) throughout construction of the project. The site's environmental management plans for construction and operations describe how the risks are assessed and managed, as outlined below and in and shown diagrammatically in Figure 5.2.

Step 1 – Policy establishment: The environmental management system development process starts with establishing an Environmental Policy that is tied to the organization's mission. Fluence and Transgrid both have environmental policies.

Step 2 – Planning: The planning step consists of identifying regulatory and other requirements; identifying processes, resources, and significant environmental impacts; identifying management and mitigation measures; developing objectives and targets for improvement efforts; and creating a planning, programming, and budgeting system.

The implementation and operation of various components of the environmental management system are detailed in the management plans, as appropriate.

Step 3 – Implementation: The implementation step consists of defining the structure, responsibilities, and programs; implementing induction and training; creating the

environmental management system documentation (including document control and record keeping); communicating the environmental management system to personnel; developing and implementing standard operating procedures [SOPs]; and developing and implementing emergency preparedness and response procedures.

The implementation and operation of various components of the environmental management system are detailed in the management plans, as appropriate.

Step 4 – Checking and correction: The checking and corrective action step includes monitoring and measuring (e.g., internal assessments), problem and cause identification, corrective and preventative action implementation, and an environmental management system review.

Step 5 – Review: In the management review step, upper management reviews the environmental management system, including the results of internal assessments. Modifications to the environmental management system are made, as necessary, to ensure compliance. The management review is designed to ensure continual improvement of the environmental management system, taking into account the results of checking and corrective actions undertaken in Step 4.

Refer to Section 8.3 for management of biodiversity related hazards and risks.

Figure 5.2: Environmental Management System Process



5.5 Risk assessment and register

Fluence and Transgrid will create and maintain a risk register that will be used to record identified hazards, risk assessment and risk control methods.

Risk assessments will be undertaken by Fluence and Transgrid that consider all HSE risks associated with the works. The risk assessments will be used to populate HSE risk registers. The risk registers will specifically include, identify and address environmental risks. The risk assessment process will be broadly consistent with the *ISO 31000, Risk management* standard (or Australian Standard equivalent).

The risk registers will be live documents that are consistently updated as the works progress, with risks and control methods added, reviewed, modified and retired as appropriate.

5.6 Emergency response

An Emergency Response Plan (ERP) has been prepared setting out the actions to be followed by Fluence and Transgrid in the event of an emergency, including safely evacuating site personnel; notifying emergency services, potentially affected, community and regulators, and hazard response/containment.

The ERP has been informed by a Fire Safety Study (FSS).

A Bushfire Management Plan has also been prepared and is appended to the ERP.

5.7 Document management system

Fluence and Transgrid will implement a web-based project and document management systems for project correspondence, including the communication and transmittal of all information requests and responses and the issue of all drawings and documents and the review and approval of the same.

The system shall maintain document registers which list all documents and drawings including those in relation to environmental management such as:

- environmental management plans and subplans
- aspects and impacts register
- risk register
- standards, codes and guidelines
- environmental procedures
- incident and non-compliance reports
- monitoring, inspection and auditing reports
- community engagement database and complaints register
- safety data sheets
- The Principal and regulator correspondence.

The system will record information including:

- title, document number and revision
- review status
- date of approval.

5.8 Administrative conditions

Schedule 2 of the DC sets out administrative conditions, a number of which are relevant to the works of Fluence and Transgrid, as outlined below (where not covered earlier in this EMS).

5.8.1 Terms of consent

In accordance with CoC A2 – A4, Fluence and Transgrid will assist the Principal in complying with any relevant requirement/s of the Planning Secretary arising from the Department's assessment of:

A2 The development may only be carried out:

(a) in compliance with the conditions of this consent;
(b) in accordance with all written directions of the Planning Secretary;
(c) generally in accordance with the EIS; and
(d) generally in accordance with the Development Layout in Appendix 1 (of Conditions of Consent).

A3. The Applicant must comply with any requirement/s of the Planning Secretary arising from the Department's assessment of:

(a) any strategies, plans or correspondence that are submitted in accordance with this consent;
(b) any reports, reviews or audits commissioned by the Department regarding compliance with this consent; and
(c) the implementation of any actions or measures contained in these documents.

A4. The conditions of this consent and directions of the Planning Secretary prevail to the extent of any inconsistency, ambiguity or conflict between them and a document listed in condition A2(c) or A2(d). In the event of an inconsistency, ambiguity or conflict between any of the documents listed in condition A2(c) or A2(d), the most recent document prevails to the extent of the inconsistency, ambiguity or conflict.

5.8.2 Upgrading of Batteries and ancillary infrastructure

In accordance with CoC A6, the Principal may upgrade the battery storage and ancillary infrastructure on site provided these upgrades remain within the approved development footprint of the site. Prior to carrying out any such upgrades, the Applicant must provide revised layout plans and project details of the development to the Planning Secretary incorporating the proposed upgrades.

5.8.3 Structural adequacy

In accordance with CoC A7, Fluence and Transgrid will ensure that all new buildings and structures, and any alterations or additions to existing buildings and structures, are constructed in accordance with the relevant requirements of the *Building Code of Australia*.

5.8.4 Demolition work

In accordance with CoC A8, Fluence and Transgrid will ensure that all demolition work on site is carried out in accordance with Australian Standard *AS 2601-2001: The Demolition of Structures*, or its latest version.

5.8.5 Protection of public infrastructure

In accordance with CoC A9, unless Fluence and the applicable authority agree otherwise, Fluence and Transgrid will:

(a) repair, or pay the full costs associated with repairing, any public infrastructure that is damaged by the development; and

(b) relocate or pay the full costs associated with relocating, any public infrastructure that needs to be relocated as a result of the development.

5.8.6 Operation of plant and equipment

In accordance with CoC A10, Fluence and Transgrid will ensure that all plant and equipment used on site, or in connection with the development, is:

(a) maintained in a proper and efficient condition; and operated in a proper and efficient manner.

(b)] operated in a proper and efficient manner.

6 Biodiversity Management Plan

6.1 BMP Roles and Responsibilities

The below roles and responsibilities supplement the overall project roles and responsibilities as described in Section 5.3.

6.1.1 Construction Phase

Whilst the construction of the Project is occurring, the following roles and responsibilities will apply as shown in **Table 6-1**.

Table 6-1: Construction roles and responsibilities within the BMP

Role	Responsibility in relation to the BMP	Contact details of staff (to be updated regularly)
AMPYR Project Manager	• Overall accountability for the compliance with the Development Consent conditions • Overall accountability for ensuring AMPYR, Fluence and Transgrid comply with the Development Consent conditions and the Management Protocols • Responsible for external reporting of incidents, non-compliances and complaints • Confirm that Protocols 1-17 are being implemented on site	• Name: • Number: • Email:
Fluence Lead Project Manager	• Overall accountability for the implementation of the BMP • Ensure that all works on site are undertaken in compliance with the BMP • Implementing the procedures and protocols contained in the BMP • Provide induction education and contact with all employees and contractors on issues. • Analysis of monitoring results and inclusion in reporting. • Timely reporting of environmental monitoring data. • Organise revisions of the plan as necessary. • Ensure that all training, auditing, reporting and incident management requirements are met. • Compliance with the Protocols 1-17 is being maintained	• Name: • Number: • Email:
Fluence Lead Construction Manager	• Ensure all site personnel (including contractors and sub-contractors) have received the appropriate inductions and training for their responsibilities. • Ensure controls provided in the Management Protocols of the BMP are implemented. • Report any incidences or complaints immediately to the Fluence Lead Project Manager. • Provide feedback on the adequacy and effectiveness of the BMP. • Implement Protocols 1-17 on site	• Name: • Number: • Email:
Principal Contractor Health, Safety and	• Organise pre-clearance surveys by the Subcontractor - Project Ecologist to identify habitat trees and evidence of fauna use. • Organise Subcontractor - Project Ecologist to supervise habitat tree clearing.	• Name: • Number: • Email:

Environment (HSE) Manager	• Organise Subcontractor - Project Ecologist to manage fauna impacted by habitat tree clearing • Identify if the BMP needs to be reviewed and updated. • Conduct regular inspections of the work area to monitor compliance with the BMP. • Coordinate the review of the BMP. • Oversee monitoring requirements as per Table 4-2. • Ensure that works are being undertaken in compliance with the Protocols 1-17	
Subcontractor - Project Ecologist	• Conduct pre-clearance surveys to identify habitat trees actively being used by fauna • Attend habitat tree clearing events to detect and capture any disturbed wildlife. • Relocate displaced fauna as appropriate • Provide advice on vertebrate pest management • Conduct fence monitoring during construction and post-construction if required. • Pre-clearance weeds identification and mapping • Participate in review of BMP • Ensure compliance with Protocols 1,2,3,4,5,6,7,9,14,15,16,17 • Provide formal "sign off" prior to clearing or ground disturbance activities to ensure that all relevant protocols are followed	• Subcontractor to be determined and engaged prior to construction
All Fluence contractors and sub-contractors	• Ensure the implementation of the BMP with respect to their specific work practices. • Act in accordance with the management procedures or protocols outlined in the BMP. • Ensure any potential or actual issues, including environmental incidents and non-compliances, are reported to the immediate supervisor.	• Compliance at all times
Transgrid HSE Advisor (or equivalent)	• Ensure all Transgrid personnel (and sub-contractors) have received the appropriate inductions and training for their responsibilities. • Ensure controls provided in the Management Protocols of the BMP are implemented. • Report any incidences or complaints immediately to the Fluence Lead Project Manager. • Provide feedback on the adequacy and effectiveness of the BMP. • Protocols 1,2,3,4,5,6,7,9,12,13,14,15,16,17	• To be provided

Transgrid's extent of work is confined to the substation site and a short length of overhead powerline within a defined easement. Once initial clearing of the site and easement have occurred Transgrid's impact on biodiversity will be minimal. However, they will manage biodiversity issues relating to their component of work, including vegetation clearance and weed pest animal management, in accordance with relevant procedures in this BMP and in accordance with relevant Conditions of Consent. The Transgrid HSE or equivalent will be responsible for monitoring the BMP and liaising with the Fluence HSE to identify and deficiencies, opportunities for improvement and potential revisions.

6.1.2 Operational Phase

During the operational phase, the following roles and responsibilities as shown in **Table 6-2** will apply. The contact details of the O&M staff will be provided closer to O&M phase commencing.

Table 6-2: Operation roles and responsibilities within the BMP

Role	Responsibility in relation to BMP	Contact details of staff (to be updated regularly)
AMPYR Site Manager	• Overall accountability for the compliance with the Development Consent conditions • Overall accountability for ensuring AMPYR, Fluence and Transgrid comply with the with the Development Consent conditions and the Management Protocols • Responsible for external reporting of incidents, non-compliances and complaints • **Note: Non-compliances which have been notified as an incident do not need to also be notified as a non-compliance.**	• Name: • Number: • Email:
O&M Supervisor	• Overall accountability for the implementation of the BMP • Ensure that all works on site are undertaken in compliance with the BMP. • Ensure monitoring responsibilities in accordance with the BMP. • Undertake consultation with relevant organisations or the Subcontractor - Project Ecologist regarding operational activities which may impact biodiversity values (e.g. weed control, tree trimming). • Ensure that all training, auditing, reporting and incident management requirements are met. • Organise fence monitoring • Coordinate review of the BMP • Protocols 3,5,6,7,8,9,10,11,12,13	• Name: • Number: Email:
O&M Contractors	• Ensure the implementation of the BMP with respect to their specific work practices. • Act in accordance with the management procedures or protocols outlined in the BMP. • Ensure any potential or actual issues, including environmental incidents, are reported to the immediate supervisor.	• To be managed by O&M Supervisor
Subcontractor - Project Ecologist	• Partake in fence monitoring • Monitor fauna mortality • Monitor remnant vegetation • BMP review in consultation with O&M Supervisor and AMPYR • Protocols 3,5,6,17	• To be engaged separately or activities completed by O&M Supervisor when required

6.2 CPHR Consultation

In accordance with Condition B14 of Schedule 2 of Development Consent SSD-27014706, the Biodiversity Conservation and Science Directorate (BCS) of the Department of Climate Change, Energy and the Environment, Water (DCCEEW) was consulted in June 2024 by the subcontractor OzArk Environment & Heritage on behalf of AMPYR in regard to the required contents for this BMP.

OzArk was provided with advice that has been incorporated into this BMP, namely that relevant conditions of consent are addressed. And that management plans include tailored, quantitative performance measures and targets, completion criteria, monitoring and trigger points using SMART principles. Management targets must be measurable and expressed such that evaluation of strategic goals and completion criteria can be achieved.

Appendix E provides tabular details of changes made to the BMP resulting from CPHR feedback.

7 Existing Environment

7.1 Land Use History

The land has previously been used for agricultural practices (cropping and grazing) which has resulted in native vegetation occurring as paddock trees and small patches of canopy. There are also areas of derived native grassland, though some of these areas are dominated by exotic grasses and herbaceous species. Other sections have been historically cropped and have no developed vegetation structure or native vegetation. Vegetation within the buffer area increases in density as larger patches are present. However, connectivity is still impacted due to historical land clearing.

7.2 Landform, Geology and Soils

The topography of the site is that of a consistent relief, sloping at around 5% to the southwest with a minor rise located to the west of the project site. Soil structure and fertility have been depleted over the years from this land use. Soils could be susceptible for rill and gully erosion.

7.3 Biodiversity

The current design boundary contains the following biodiversity elements see **Figure 7-1**:

- 8.79 ha of White Box grassy woodland in the upper slopes sub-region of the NSW South West Slopes Bioregion (PCT 266)
- Up 38 hollow-bearing trees, of which seven (7) will be removed
- A small number of nests were observed containing the Australian Magpie (*Gymnorhina tibicen*) and Brown Goshawk (*Accipiter fasciatus*)
- The Superb Parrot was the only threated species to be observed during targeted surveys
- Small areas of embedded rocky habitat occur which may be suitable for reptiles
- The Pink-tailed Legless Lizard is assumed present (due to rocky habitat)
- No threatened flora species were recorded on site
- Waterways on site are highly degraded due to stock access, vegetation clearing and weed encroachment, they do not contain regular flowing water.

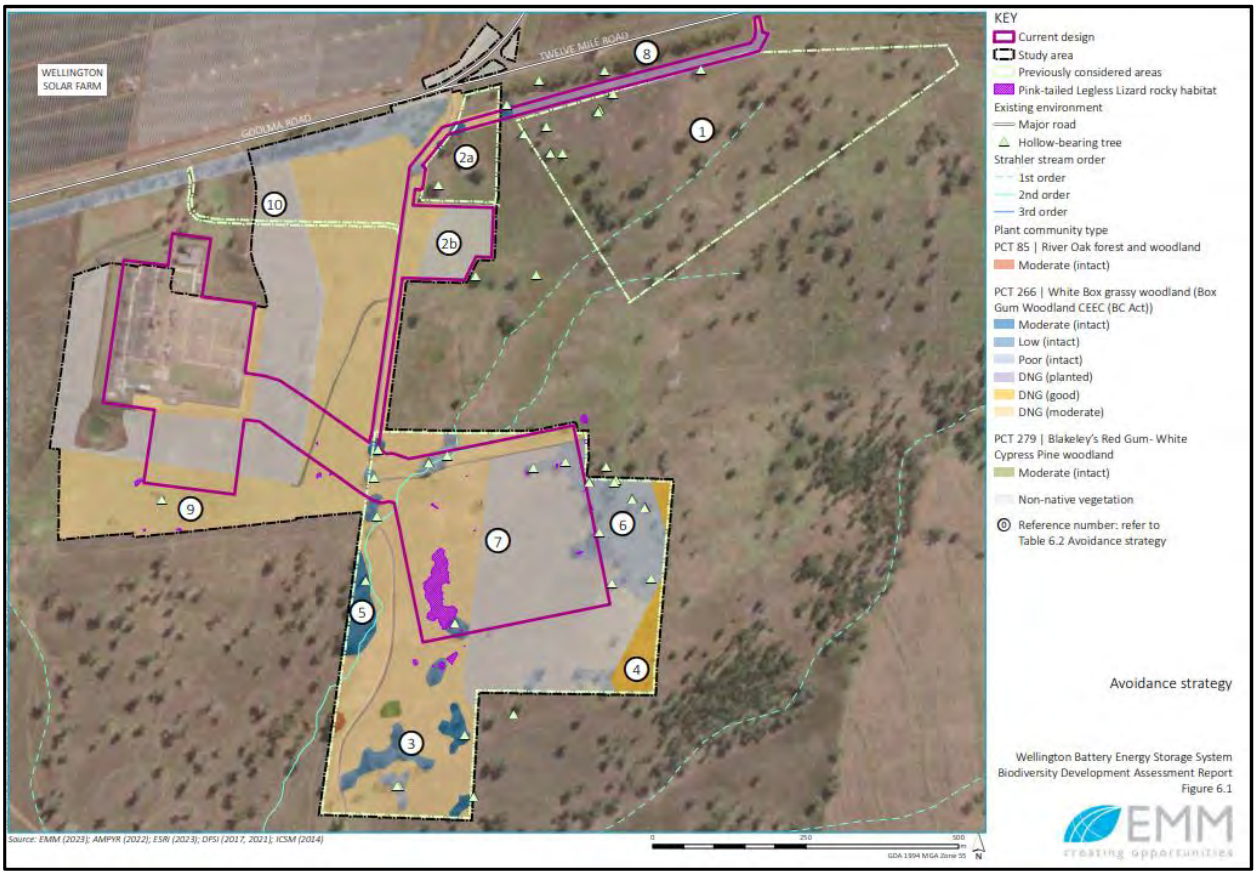
7.4 Recorded Weed and Pest Species

The BDAR (EMM 2023c) includes the following weed species gathered as part of the BAM plots required for the assessment process. There were four introduced flora species that are listed as High Threat Exotics, with African Boxthorn also listed as a Priority Weed and a Weed of National Significance recorded on site. These were:

- *Lycium ferocissimum* (African Boxthorn)
- *Xanthium spinosum* (Bathurst Burr)
- *Carthamus lanatus* (Saffron Thistle)
- *Paspalum dilatatum* (Paspalum)

No exotic mammal species were recorded on site during the development of the BDAR.

Figure 7-1: Ecological elements on site.



8 Biodiversity Management Plan and Completion Criteria

The BMP covers the construction and operation phase of the project. This BMP does not cover the decommissioning phase of the Project, however the BMP will be revised by the Applicant prior to the commencement of decommissioning to incorporate this phase. Information relating to the direct and indirect impacts, strategies/mitigation measures from the BDAR and development consent conditions form the basis of the plan (**Table 8-1**). Monitoring and Reporting, along with Triggers and Responses are included as **Table 8-2 (construction)** and **Table 8-3 (operation)**. Management Protocols referred to in these tables are listed in **Section 10** and are based on the **mitigation measures** from the BDAR. They primarily apply only to the development boundary of the project.

The requirements of the BMP should form a component of the site inductions that all contracted personnel are expected to undertake.

8.1 Project Design Impact

The Project is situated on largely disturbed and cropped land that has low vegetation integrity. As a result, impacts of the Project are limited to the following:

- 8.79 ha of White Box grassy woodland in the upper slopes sub-region of the NSW Sout West Slopes Bioregion (PCT 266) and associated fauna habitat
- Loss of 7 hollow-bearing trees

8.2 Impact and Mitigation Measures

Table 8-1 describes the risks and potential direct and indirect impacts of the Project on biodiversity; it also outlines mitigation measures to be implemented to reduce these risks and potential impacts. Finally, it describes the monitoring responses and responsibility for implementing these measures.

Table 8-1:Site environmental risks, mitigation measures, monitoring responses and responsibilities.

Risk/Impact to be managed	Consequences	Mitigation Measures	Summary of Monitoring	Responsibility
DIRECT IMPACTS				
1. Removal of native vegetation	General loss of flora including 8.79 ha of White Box grassy woodland General loss of habitat for fauna Loss of 7 hollow-bearing trees Hollow-dependent fauna species will be impacted due to loss of habitat trees. Impact to threatened species Superb Parrot and Pink-tailed Legless Lizard Creation of temporary disturbance areas in development footprint.	Where possible, clearing should be avoided and minimised. Ensure that only those areas identified and offset in the conditions of approval are cleared. Protocol 1 – Vegetation Clearing General Protocol 2 – Vegetation Clearing - Habitat Tree Protocol 3 – Management of Displaced Fauna Protocol 4 – Protocol 7 – Fencing Construction and Management **Objective: To mitigate risk associated with fence construction** Principal Contractor HSE Manager will share this protocol with relevant subcontractors, and will be	Sign off Project Ecologist that all relevant Protocols have been met prior to the commencement of clearing. Inspection and supervision of clearing site to ensure relevant protocol requirements are met. Maintain a log of salvaged animals and actions taken to relocate them. Rehabilitated areas to be monitored weekly for the first six months to ensure plant establishment, then monthly thereafter for next six months after construction is completed for success of work. See Section 8.7 for details. . Monthly monitoring of exclusion zone fencing during construction to ensure fence integrity and trapped fauna.	Principal Contractor HSE Manager to arrange mitigation measures, monitoring and ensure compliance. Subcontractor – Project Ecologist to undertake pre-clearance surveys, supervise clearing, undertake any fauna handling except where emergency situations require assistance from WIRES or local veterinarians.

Risk/Impact to be managed	Consequences	Mitigation Measures	Summary of Monitoring	Responsibility
		summarised in the site induction for all workers. Construction phase responsible position: AMPYR Project Manager, Fluence Lead Project Manager, Fluence Lead Construction Manager, Principal Contractor HSE Manager and Project Ecologist (subcontractor), Operational phase responsible position: O&M Supervisor To reduce the potential for impacts to fauna, the following fencing construction and management protocol be implemented. This protocol will be incorporated into the induction process for the project. Biodiversity Conservation Trust's *Essential Conservation Fencing Infrastructure (Nov 2022)* to be considered by Fluence and AMPYR when designing fences or when undertaking repairs, taking into consideration the definition of		

Risk/Impact to be managed	Consequences	Mitigation Measures	Summary of Monitoring	Responsibility
		'standard' and 'difficult' sites within the above-mentioned document. Protocol 14 – Superb Parrot inspection program Protocol 15 – Unexpected Finds – threatened species Protocol 16 – Bush Rock Removal Rehabilitation planting in development footprint to restore land for pasture/stock or to native vegetation where practical after construction is completed based on IFC timeframes. Maintain integrity of exclusion zone fencing		
2. Construction of battery systems and perimeter fencing	Trapped fauna may exhaust food resources and water supply, causing death. Trapped fauna may cause degradation of retained native vegetation. Security fences may obstruct the movement of larger terrestrial species such as kangaroos, wallabies and other fauna species. Vehicle strike causing injury to fauna on internal roads	Protocol 3 – Management of Displaced Fauna Protocol 7 – Fencing Construction and Management **Objective: To mitigate risk associated with fence construction** Principal Contractor HSE Manager will share this protocol with relevant subcontractors, and will be summarised in the site induction for all workers.	Inspection and supervision of clearing site to ensure relevant protocol requirements are met. Maintain a log of salvaged animals and actions taken to relocate them. Regular (weekly) inspection and maintenance of fencing during construction (See Protocol 7 – Fencing Construction and Management **Objective: To mitigate risk associated with fence construction** Principal Contractor HSE Manager will share this protocol with	Principal Contractor HSE Manager Project Ecologist to undertake any fauna handling.

Risk/Impact to be managed	Consequences	Mitigation Measures	Summary of Monitoring	Responsibility
		Construction phase responsible position: AMPYR Project Manager, Fluence Lead Project Manager, Fluence Lead Construction Manager, Principal Contractor HSE Manager and Project Ecologist (subcontractor), Operational phase responsible position: O&M Supervisor To reduce the potential for impacts to fauna, the following fencing construction and management protocol be implemented. This protocol will be incorporated into the induction process for the project. Biodiversity Conservation Trust's *Essential Conservation Fencing Infrastructure (Nov 2022)* to be considered by Fluence and AMPYR when designing fences or when undertaking repairs, taking into consideration the definition of 'standard' and 'difficult' sites within the above-mentioned document.	relevant subcontractors, and will be summarised in the site induction for all workers. Construction phase responsible position: AMPYR Project Manager, Fluence Lead Project Manager, Fluence Lead Construction Manager, Principal Contractor HSE Manager and Project Ecologist (subcontractor), Operational phase responsible position: O&M Supervisor To reduce the potential for impacts to fauna, the following fencing construction and management protocol be implemented. This protocol will be incorporated into the induction process for the project. Biodiversity Conservation Trust's *Essential Conservation Fencing Infrastructure (Nov 2022)* to be considered by Fluence and AMPYR when designing fences or when	

Risk/Impact to be managed	Consequences	Mitigation Measures	Summary of Monitoring	Responsibility
		Maintain speed limit of 20 kilometre per hour	undertaking repairs, taking into consideration the definition of 'standard' and 'difficult' sites within the above-mentioned document.) Monthly inspection for fencing for first three months of operations, then quarterly for the remainder of the year. Then annually or incident based. Implementation of TMP (noting location of vehicle strike as required).	
INDIRECT IMPACTS				
3. Changed management practices on Site.	Vegetation condition may decline over time due to increased abundancy of weeds.	Protocol 5 – Weed Management Protocol 8 – Erosion and Sediment Control Protocol 12 – Vehicle Hygiene	Visual inspections to detect new weed germination in disturbed area. At least monthly during construction	Principal Contractor HSE Manager
4. Increased traffic and visitation	Degradation and modification of adjacent habitat due to spread of weeds and feral pests.	Protocol 5 – Weed Management Protocol 6 – Feral Pest Management Protocol 9 – Dust Control Protocol 12 – Vehicle Hygiene Protocol 13 – Noise Management	Visual inspections to detect new weed germination in disturbed area. Monthly during construction Vehicle hygiene procedure implemented and recorded. Implementation of TMP.	Principal Contractor HSE Manager
5. Ground disturbance	Creation of dust and facilitation of waterborne sediment. Sedimentation	Protocol 8 – Erosion and Sediment Control	Sediment control measures and rehabilitation areas will be checked and	Principal Contractor HSE Manager

Risk/Impact to be managed	Consequences	Mitigation Measures	Summary of Monitoring	Responsibility
	could adversely affect the surrounding vegetation. Rehabilitation with respect to construction of laydown area.	Protocol 9 – Dust Control Protocol 9 – Dust Control Rehabilitate temporary disturbance areas with pre-development species. Works to be undertaken at an appropriate time of year to ensure survival of the planted species. Rehabilitation works should be completed within 18 months -post-construction as per Section 8.7.	maintained at regular intervals (weekly during construction and immediately following rainfall events that cause runoff). Quarterly inspections of rehabilitated areas for two years after works; half-yearly inspections for the life of the project. Implement appropriate responses if rehabilitation fails.	
6. Light Spill	Light spill from artificial light may affect nocturnal species such as arboreal mammals, large forest owls and foraging microbats.	Protocol 10 – Lighting Design	Inspection of site for potential light source spill against Australian Standard AS/NZS 4282:2019 at commencement of construction. Inspection of site for potential light source spill against Australian Standard AS/NZS 4282:2019 at commencement of operation then annually.	Principal Contractor HSE Manager
7. Pollution	Contamination of land and water from chemical spill.	Protocol 11 – Chemical Management	Fortnightly check of integrity and adequacy of bunding during construction. Check that vehicles involved in refuelling mobile plant away from a bunded area have spill kit and portable bund or drip tray.	Principal Contractor HSE Manager

8.3 Trigger, Action, Response, Monitoring and Reporting

Monitoring and reporting commitments are summarised below in **Table 8-2 (Construction)** and **Table 8-2 (Operation)**. Reports will be provided to the Applicant and DPHI. Any recommendations or changes to the ecological aspects of the monitoring should be acted upon by the Applicant. All monitoring actions/inspections will be recorded and used to meet reporting requirements.

Table 8-2: Multi-level Trigger, Action, Response, Monitoring and reporting requirements during construction.

Trigger Levels

Level 1	**Normal Level**
Level 2	**Early Warning Level**
Level 3	**Exceedance Level**

Impact from Table 8.1	Result of Impact	Performance Criteria	Decision Trigger	Action	Monitoring Action	Timing	Responsibility
Construction							
1 Vegetation Clearing	General loss of flora General loss of habitat for fauna Hollow-dependent fauna species will be impacted due to	Pre-clearance surveys completed No impact on vegetation and fauna outside the Development Footprint	Clearing in accordance with Protocol 1 – Vegetation Clearing Procedure and Protocol 2 – Habitat Tree Removal Vegetation is appropriately demarcated with fencing and/or flagging tape as per Protocol 1 –	Project Ecologist to review BMP and ensure vegetation to be removed vs vegetation to be retained is appropriately marked prior to continuing works	Principal Contractor to inspect the clearing site to ensure relevant protocol requirements are met. Project Ecologist complete post-clearing checklist	Daily during clearing activities	Principal Contractor HSE Manager to undertake monitoring and ensure compliance. Project Ecologist to undertake pre-clearance surveys, supervise clearing and undertake any fauna handling.

Impact from Table 8.1	Result of Impact	Performance Criteria	Decision Trigger	Action	Monitoring Action	Timing	Responsibility
Construction							
	loss of habitat trees. One Threatened Ecological Community is present and will be directly impacted (*White box grassy woodland in the upper slopes sub region of the NSW SWS bioregion*)	Displaced Fauna management completed as per protocol	Vegetation Clearing Procedure and Protocol 2 – Habitat Tree Removal. Manage any displaced fauna in accordance with Protocol 3 Management of Displaced Fauna.		and provide to HSE Manager		
			Development footprint demarcation down	Reinstate fallen demarcation measures	Inspect the clearing site to ensure relevant protocol requirements are met	Daily during clearing activities	Project Ecologist
			Development footprint demarcation removed. Unauthorised clearing	If any vegetation is removed outside the approved development footprint, stop work, and report incident. Reinstall demarcation measures If work not being completed in accordance	Inspect the clearing site to ensure relevant protocol requirements are met	Daily during clearing activities	Project Ecologist, HSE Manager, AMPYR Project Manager AMPYR Project Manager to report to DPHI, Planning Secretary

Impact from Table 8.1	Result of Impact	Performance Criteria	Decision Trigger	Action	Monitoring Action	Timing	Responsibility
Construction							
				with this BMP, stop work and review protocols Undertake additional training with operators and relevant site personnel.			
2 **Construction of batteries and perimeter fencing**	Trapped fauna may cause degradation of retained native vegetation. Security fences may obstruct the movement of larger terrestrial species such as kangaroos, wallabies and other fauna species.	Perimeter fencing intact No large terrestrial mammal species trapped by fencing	Fencing intact. Implement Protocol 7 – Fencing Construction and Management Salvaged animals relocated.	Regular (weekly) inspection and maintenance of fencing during construction Implement Protocol 7 – Fencing Construction and Management	Inspect and maintain fencing. Maintain a log of salvaged animals and actions taken to relocate them.	Weekly	Principal Contractor HSE Manager, Project Ecologist, Fluence Lead Construction Manager
			Fencing is damaged or not being maintained. Injured or deceased fauna is identified along or near fencing.	Repair fencing Implement Protocol 7 – Fencing Construction and Management	Inspect and maintain fencing. Inspect and maintain fencing. Maintain a log of salvaged animals and actions taken to relocate them.	Weekly	Principal Contractor HSE Manager, Project Ecologist, Fluence Lead Construction Manager

Impact from Table 8.1	Result of Impact	Performance Criteria	Decision Trigger	Action	Monitoring Action	Timing	Responsibility
Construction							
			Fencing is missing and has not been repaired. Fauna deaths Listed Threatened Species trapped inside the perimeter fence.	Replace and / or repair missing fencing, Implement Protocol 7 – Fencing Construction and Management Undertake additional training with operators and relevant site personnel. Project Ecologist to capture, if possible, listed Threatened Species and relocate. Implement Protocol 3 – Management of Displaced Fauna.	Inspect and maintain fencing. Maintain a log of salvaged animals and actions taken to relocate them.	Weekly	Principal Contractor HSE Manager, Project Ecologist, Fluence Lead Construction Manager AMPYR Project Manager to report to DPHI as required.
	Rehabilitation with respect to construction.	Rehabilitation of disturbance zones	Disturbed areas meeting rehabilitation objectives.	Inspect disturbed areas for compliance with agreed rehabilitation objectives.	Inspect disturbed areas for rehabilitation success.	Weekly	Principal Contractor HSE Manager, Fluence Lead Construction Manager.
			Disturbed areas not meeting rehabilitation objectives. Failed vegetation patches less than $10m^2$	Implement appropriate responses if rehabilitation fails. Identify and implement control measures in Protocol 5 – Weed	Inspect disturbed areas for rehabilitation success.	Weekly	Principal Contractor HSE Manager, Fluence Lead Construction Manager. Fluence Lead Project Manager.

Impact from Table 8.1	Result of Impact	Performance Criteria	Decision Trigger	Action	Monitoring Action	Timing	Responsibility
Construction							
			Proliferation of non-native vegetation or ground cover <70% in disturbance area.	Management and Protocol 19 - Rehabilitation Failed vegetation patches less than 10m^2 to be actively managed within 30 days using the most appropriate method per the prevailing climatic conditions.			AMPYR Project Manager to report to DPHI
			Updated Erosion and sediment control devices not functioning. Sedimentation occurring. Failed vegetation patches greater than 10m^2.	Implement appropriate responses if rehabilitation fails. Identify and implement control measures in Protocol 5 – Weed Management and Protocol 17 - Rehabilitation Failed vegetation patches less than 10m2 to be actively managed within 30 days using the most appropriate method per the prevailing climatic conditions.	Inspect disturbed areas for rehabilitation success.	Weekly	Principal Contractor HSE Manager, Fluence Lead Construction Manager. Fluence Lead Project Manager. AMPYR Project Manager to report to DPHI
6. Light Spill	Light spill from artificial light may affect nocturnal species.	Dark Sky Planning Guidelines implemented.	Works being undertaken in accordance with the Conditions of Consent and there is no light spill.	Implement management actions in Protocol 10 – Lighting Design in accordance with AS4282	Inspect lighting in project area. Compliance with approved hours of construction.	Weekly	Principal Contractor HSE Manager, Principal Contractor Lead Construction Manager.

Impact from Table 8.1	Result of Impact	Performance Criteria	Decision Trigger	Action	Monitoring Action	Timing	Responsibility
Construction							
			Works being undertaken outside of the Conditions of Consent and there is no light spill.	Implement management actions in Protocol 10 – Lighting Design in accordance with AS4282. Manage site in accordance with Dark Sky Planning Guideline Fluence Lead Construction Manager to investigate the circumstances regarding out of hours works.	Inspect lighting in project area. Compliance with approved hours of construction.	Weekly	Principal Contractor Lead Construction Manager. Fluence Lead Project Manager. AMPYR Project Manager to report to DPHI
			Works being undertaken in accordance with the Conditions of Consent and there is light spill	Implement management actions in Protocol 10 – Lighting Design in accordance with AS4282. Manage site in accordance with Dark Sky Planning Guideline Fluence Lead Construction Manager to investigate the circumstances regarding out of hours works and light spill	Inspect lighting in project area. Compliance with approved hours of construction.	Weekly	Principal Contractor HSE Manager, Principal Contractor Lead Construction Manager. Fluence Lead Project Manager. AMPYR Project Manager to report to DPHI
7. Pollution	Contamination of land and water from chemical spill.	No chemical spills	No spills.	Implement management actions in Protocol 11 – Chemical Management	Inspect chemical storage areas	Fortnightly	Principal Contractor HSE Manager, Fluence Lead Construction Manager.

Impact from Table 8.1	Result of Impact	Performance Criteria	Decision Trigger	Action	Monitoring Action	Timing	Responsibility
Construction							
			Minor spill, outside of definition of Incident in Conditions of Consent.	Stop work in the spill area. Clean up spill. Implement management actions in Protocol 11 – Chemical Management	Inspect chemical storage areas	Fortnightly	Principal Contractor Lead Construction Manager. Fluence Lead Project Manager. AMPYR Project Manager to report to DPHI
			Spill which is considered an Incident	Stop work in the spill area, Clean up spill, Report the incident. Review and update management actions in Protocol 11 – Chemical Management if required.	Inspect chemical storage areas	Fortnightly	Principal Contractor HSE Manager, Fluence Lead Construction Manager. Fluence Lead Project Manager. AMPYR Project Manager to report to DPHI

Table 8-3: Multi-level Trigger, Action, Response, Monitoring and reporting requirements during operation.

Trigger Levels

Level 1	**Normal Level**
Level 2	**Early Warning Level**
Level 3	**Exceedance Level**

Impact from Table 8.1	Result of Impact	Performance Criteria	Decision Trigger	Action	Monitoring Action	Timing	Responsibility
OPERATION							
2 **Operation of battery systems and perimeter fencing**	Security fences may obstruct the movement of larger terrestrial species such as kangaroos, wallabies and other fauna species.	No trapped fauna within development boundary	Fencing intact. No fauna detected. No vehicle strikes.	Regular monthly inspections and maintenance of fencing for the first three months post-construction, then quarterly for the remainder of the first-year post-construction. Then annually, provided fauna deaths are infrequent. Maintain a log of vehicle strikes. Implementation of TMP. Salvaged animals relocated. Implement Protocol 7 – Fencing Construction and Management	Inspect and maintain fencing. Maintain a log of salvaged animals and actions taken to relocate them.	Monthly for first three months of operations, then quarterly for the remainder of the year. Then annually or incident based.	O&M Supervisor, Project Ecologist
			Fencing is damaged or not being maintained.	Regular monthly inspections and maintenance of fencing for the first three months	Inspect and maintain fencing.	Monthly for first three months of operations, then quarterly for the	O&M Supervisor, AMPYR Operations Manager

Impact from Table 8.1	Result of Impact	Performance Criteria	Decision Trigger	Action	Monitoring Action	Timing	Responsibility
OPERATION							
			Injured or deceased fauna is identified along or near fencing or within the site.	post-construction, then quarterly for the remainder of the first-year post-construction. Then annually, provided fauna deaths are infrequent. Inspect and maintain fencing. Maintain a log of salvaged animals and actions taken to relocate them. Implement Protocol 7 – Fencing Construction and Management	Maintain a log of salvaged animals and actions taken to relocate them. Maintain a log of vehicle strikes. Implementation of TMP.	remainder of the year. Then annually or incident based.	
			Fencing is missing and has not been repaired. Fauna trapped. Fauna deaths. Listed Threatened Species trapped inside the perimeter fence.	Regular monthly inspections and maintenance of fencing for the first three months post-construction, then quarterly for the remainder of the first-year post-construction. Then annually, provided fauna deaths are infrequent. Replace and / or repair missing fencing.	Inspect and maintain fencing. Maintain a log of salvaged animals and actions taken to relocate them.	Monthly for first three months of operations, then quarterly for the remainder of the year. Then annually or incident based.	O&M Supervisor, AMPYR Operations Manager

Impact from Table 8.1	Result of Impact	Performance Criteria	Decision Trigger	Action	Monitoring Action	Timing	Responsibility
OPERATION							
				Investigate cause of death or injury and record details. Review fencing design if investigation identifies improvement required. Review Protocol 7 – Fencing Construction and Management			
3. Changed management practices on Site.	Vegetation condition may decline over time due to increased abundancy of weeds and presence of feral pests.	No decline in vegetation condition	Establishment of baseline weeds survey in operational phase No incursions of feral pests (eg rabbit, fox and pig) on site	Ongoing visual monitoring. On-going weed management as required by specific weeds. Log opportunistic sightings of feral pests.	Inspect for weeds Opportunistic sightings of ferals	Annual weed survey Ad hoc monitoring for ferals	O&M contractor
			Increase in weed density and distribution from baseline weed survey of 10%. Presence of feral animals within boundary	Identify and implement control measures in Protocol 5 – Weed Management Implement management actions in Protocol 6 – Feral Pest Management.	Inspect for weeds Engage approved contractor to undertake weed management as per Protocol 5. Opportunistic sighting of ferals.	Annual weed survey Ad hoc monitoring for ferals	O&M contractor

Impact from Table 8.1	Result of Impact	Performance Criteria	Decision Trigger	Action	Monitoring Action	Timing	Responsibility
OPERATION							
			Increase in weed density and distribution from baseline weed survey by more than 10%. Presence of feral animals within boundary	Identify and implement control measures in Protocol 5 – Weed Management. Reporting of Priority Weeds (Declared Noxious Weeds) to AMPYR and Local Land Services (LLS) Targeted control of priority weeds (Declared noxious Weeds). Consult LLS for advice on feral pest management.	Inspect for weeds Engage approved contractor to undertake weed management as per Protocol 5. Engage approved contractor to undertake feral pest management.	Annual weed survey Ad hoc monitoring for ferals	O&M Supervisor, AMPYR Operations Manager
5. Ground Disturbance Rehabilitation	Monitor rehabilitated areas	Rehabilitation ground cover at a minimum of 70%	Maintenance of non-native vegetation or ground cover >70% in disturbance area.	Continued monitoring	Quarterly inspections of rehabilitated areas for two years after works; half-yearly inspections for the life of the project.	Quarterly inspections of rehabilitated areas for two years after works; half-yearly inspections for the life of the project.	Project Ecologist O&M Supervisor
			Disturbed areas not meeting rehabilitation objectives.	Implement management actions in Protocol 8 – Erosion and Sediment Control Protocol 17 – Rehabilitation	Quarterly inspections of rehabilitated areas for two years after works; half-	Quarterly inspections of rehabilitated areas for two years after works; half-yearly	Project Ecologist O&M Supervisor

Impact from Table 8.1	Result of Impact	Performance Criteria	Decision Trigger	Action	Monitoring Action	Timing	Responsibility
OPERATION							
			Failed vegetation patches less than 10m^2 Proliferation of non-native vegetation or ground cover <70%.	Section 8.7 Identify and implement control measures in Protocol 5 – Weed Management Failed vegetation patches less than 10m^2 to be actively managed within 30 days using the most appropriate method per the prevailing climatic conditions.	yearly inspections for the life of the project.	inspections for the life of the project.	
			Failed vegetation patches greater than 10m^2 Proliferation of weeds, non-native vegetation within rehabilitated areas or ground cover <70% in disturbance area.	Implement management actions in Protocol 8 – Erosion and Sediment Control Protocol 17 – Rehabilitation Section 8.7 Identify and implement control measures in Protocol 5 – Weed Management Failed vegetation patches less than 10m2 to be actively managed within 30 days using the most appropriate method per the prevailing climatic conditions.	Quarterly inspections of rehabilitated areas for two years after works; half-yearly inspections for the life of the project.	Quarterly inspections of rehabilitated areas for two years after works; half-yearly inspections for the life of the project.	Project Ecologist O&M Supervisor

Impact from Table 8.1	Result of Impact	Performance Criteria	Decision Trigger	Action	Monitoring Action	Timing	Responsibility
OPERATION							
7. Light Spill	Light spill from artificial light may affect nocturnal species	Dark Sky Planning Guidelines implemented	Works being undertaken in accordance with the Conditions of Consent and there is no light spill.	Implement management actions in Protocol 10 – Lighting Design in accordance with AS4282 Manage site in accordance with Dark Sky Planning Guideline.	Inspect lighting in project area. Compliance with Conditions of Consent.	Upon commencement of operation then annually.	O&M Supervisor
			Works being undertaken in accordance with the Conditions of Consent and there is light spill.	Implement management actions in Protocol 10 – Lighting Design in accordance with AS4282. Manage site in accordance with Dark Sky Planning Guideline O&M Supervisor to investigate the circumstances regarding light generation and check for compliance with Conditions of Consent. If out of hours works are involved, then O&M Supervisor and AMPYR to seek Secretary's Approval for such works.	Inspect lighting in project area. Compliance with Conditions of Consent	Upon commencement of operation then annually.	O&M Supervisor. AMPYR Operations Manager to report to DPHI
			Works being undertaken in accordance with the Conditions of	Implement management actions in Protocol 10 – Lighting Design in accordance with AS4282.	Inspect lighting in project area.	Upon commencement of operation then annually.	O&M Supervisor. AMPYR Operations Manager to report to DPHI

Impact from Table 8.1	Result of Impact	Performance Criteria	Decision Trigger	Action	Monitoring Action	Timing	Responsibility
OPERATION							
			Consent and there is light spill	Manage site in accordance with Dark Sky Planning Guideline Manager O&M Supervisor to investigate light spill that doesn't conform with Conditions of Consent (eg light shining above the horizontal). If out of hours works are required AMPYR to seek Secretary's Approval for such works	Compliance with Conditions of Consent		

8.4 BMP Performance

Analysis of broad Completion Criteria across all risk/impacts to determine performance of the BMP in managing biodiversity of the development are shown below. Specific completion criteria activities are shown in **Table 8-4**. This will include:

- **Construction**
    - Habitat tree felling will only occur in summer, autumn or winter (1 December to 31 August) and will not occur in spring (1 September to 30 November) (see Protocol 2). Special provisions apply to Superb Parrot, see Protocol 14, which restricts tree felling from 1 September to 31 December.
    - If the Superb Parrot is found to be utilising a hollow, removal of the hollow-bearing tree must be postponed until the breeding pair has left the hollow for the breeding season and no eggs or hatchlings remain in the hollow (September to December). An exclusion zone must be installed should the Superb Parrot be found within a hollow.
    - Zero removal of 'to be retained' native vegetation during construction and operational phases.
    - Removal of 7 hollow bearing trees offset by installation of 7 nest boxes or equivalent.
    - Any post construction ground cover revegetation to occur within 3 months of construction completion or upgrading using native grasses. Rehabilitation works including reshaping, topsoil spreading will commence within 10 days of the completion of construction.
- **Operation**
    - Failed vegetation patches greater than $10m^2$ to be actively managed within 10 days using the most appropriate method per the prevailing climatic conditions.
    - Management of feral animals and weeds for the life of the project
    - Monitoring and reporting requirements as required in **Table 8-3** met for life of the project.

Table 8-4: Specific completion criteria for the BMP

Action	Where monitoring will be undertaken	Description	Short-term performance criteria During construction	Short Term performance criteria 6-12 months post construction	Medium Term performance criteria 1-5 years post construction	Long Term performance criteria > 5 years post construction	Corrective actions (adaptive management responses)	Completion Criteria (Long term outcome)
Rehabilitation areas monitored and maintained (as required)	Areas disturbed by construction will be rehabilitated within three months of completion of construction Other disturbed areas as identified in DC Appendix 7 will need to meet that criteria (see below).	Areas requiring rehabilitation, including temporary disturbance areas, will be reshaped, topsoiled and sown with suitable species (see protocol 17). Where climatic conditions require, the use of short-term seasonal sterile cover crop such as Rye Corn or Oats is permitted prior to establishment of native species.	**Responsibility – HSE Coordinator** **Performance Criteria:** Within 10 days of completion of construction activities, disturbed areas will have rehabilitation commenced. Within 3 months of construction being completed, disturbed areas will be rehabilitated	**Responsibility – HSE Coordinator** **Performance Criteria:** Maintain ground cover to 70% cover in the disturbance area with native pasture species Failed vegetation patches greater than 20m^2 actively managed within 10 days	**Responsibility – O&M Contractor** **Performance Criteria:** Maintain ground cover to 70% cover in the disturbance area with native pasture species Failed vegetation patches greater than 10m^2 actively managed within 10 days	**Responsibility – O&M Contractor** **Performance Criteria:** Maintain ground cover to 70% cover in the disturbance area with native pasture species Failed vegetation patches greater than 10m^2 actively managed within 10 days	**Short-term adaptive management action:** Scours greater than 100 mm deep and 20 metres long will be actively managed within 10 days.	**Long-term outcome:** The site will be rehabilitated with minimum 70% cover.

Action	Where monitoring will be undertaken	Description	Short-term performance criteria During construction	Short Term performance criteria 6-12 months post construction	Medium Term performance criteria 1-5 years post construction	Long Term performance criteria > 5 years post construction	Corrective actions (adaptive management responses)	Completion Criteria (Long term outcome)
Landscape plan monitored and maintained (as required)	The area as defined in DC Appendix 7 – Landscape Plan	Vegetation would be planted as per Landscape Plan	**N/A**	**Responsibility – HSE Coordinator** **Performance Criteria** 100% of planting completed	**Responsibility – O&M Contractor** **Performance Criteria** 60% survival rate of plants. Enact corrective action as required.	**Responsibility – O&M Contractor** **Performance Criteria** 80% survival rate of plants. Enact corrective action as required.	**Short-term adaptive management action:** Replace plantings to maintain a minimum of 90% successful growth at any one time.	**Long-term outcome** BESS is screened via vegetation as per Appendix 7 – Landscape Plan.
Native Fauna trapped within The Project	The Project area disturbance areas will be monitored	Inspections of fences will be undertaken. Monthly for first three months of operations, then quarterly for the remainder of the year. Then annually or incident based.	**Responsibility – HSE Coordinator** **Performance Criteria** Monthly for first three months of operations, then quarterly for the remainder of the year. Then	**Responsibility – HSE Coordinator** **Performance Criteria** 100% of fence lines in good repair.	**Responsibility – O&M Contractor** **Performance Criteria** 100% of fencelines in good repair. Native fauna not trapped within the project.	**Responsibility – O&M Contractor** **Performance Criteria** 100% of fencelines in good repair.	**Short-term adaptive management action:** Undertake repairs to fenceline as necessary. Removal and relocation of trapped native fauna by	**Long-term outcome** Fencing maintained for duration of project. No trapped fauna.

Action	Where monitoring will be undertaken	Description	Short-term performance criteria During construction	Short Term performance criteria 6-12 months post construction	Medium Term performance criteria 1-5 years post construction	Long Term performance criteria > 5 years post construction	Corrective actions (adaptive management responses)	Completion Criteria (Long term outcome)
			annually or incident based.	Native fauna not trapped within the project.		Native fauna not trapped within the project.	ecologist, WIRES representative or local Vet.	
Installation of 7 nest boxes or equivalent monitored and maintained (as required)	Across the site	Installation of 7 nest boxes or equivalent in suitable habitat.	**N/A**	**Responsibility – HSE Coordinator** **Performance Criteria** Installation of 7 nest boxes or similar in suitable habitat.	**Responsibility – O&M Contractor** **Performance Criteria** Annual assessment of 7 nest boxes or equivalent. 7 nest boxes in condition suitable for use by fauna (structurally sound)	**Responsibility – O&M Contractor** **Performance Criteria** Annual assessment of 7 nest boxes or equivalent. 7 nest boxes in condition suitable for use by fauna (structurally sound)	Replacement of structurally unsound nest boxes.	Structurally sound nest boxes on site.

Action	Where monitoring will be undertaken	Description	Short-term performance criteria During construction	Short Term performance criteria 6-12 months post construction	Medium Term performance criteria 1-5 years post construction	Long Term performance criteria > 5 years post construction	Corrective actions (adaptive management responses)	Completion Criteria (Long term outcome)
Undertake Baseline Weed Survey	The project area	A baseline weed survey will be undertaken at commencement of operation.	**Responsibility – HSE Coordinator** **Performance Criteria** Removal of weeds prior to or as part of the clearing process to the extent practicable and appropriately stockpiled to avoid spread of seed and other propagules	**Responsibility – HSE Coordinator** **Performance Criteria** Completion of weed baseline study. Completion of weed management	**Responsibility – O&M Contractor** **Performance Criteria** Completion of annual weed survey. Completion of weed management.	**Responsibility – O&M Contractor** **Performance Criteria** Completion of annual weed survey. Completion of weed management.	Review prevalent weeds and determine if nearby source	Weeds controlled on site for the duration of the project.

Action	Where monitoring will be undertaken	Description	Short-term performance criteria During construction	Short Term performance criteria 6-12 months post construction	Medium Term performance criteria 1-5 years post construction	Long Term performance criteria > 5 years post construction	Corrective actions (adaptive management responses)	Completion Criteria (Long term outcome)
Undertake Baseline Feral Pest Survey	The project area	A baseline feral pest survey will be undertaken at completion of construction.	**Responsibility – HSE Coordinator** **Performance Criteria** Completion of feral pest management survey at end of construction.	**Responsibility – HSE Coordinator** **Performance Criteria** Completion of feral pest management guided by ad-hoc survey and this BMP	**Responsibility – O&M Contractor** **Performance Criteria** To be confirmed based on previous pest surveys and management.	**Responsibility – O&M Contractor** **Performance Criteria** To be confirmed based on previous pest surveys and management.	Building on information in baseline pest survey to investigate source of pest species, implement management actions as per Protocol 6 of this BMP.	Feral pests controlled on site for the duration of the project.

8.5 Training

8.5.1 Induction

As part of the induction for **construction** phase of the Project, personnel and relevant subcontractors will become familiar with:

- the purpose of the BMP and all relevant Post approval plans
- the protocols of the BMP and environmental controls
- the processes for environmental emergencies and key contacts
- key roles and responsibilities relevant to BMP.

Protocols in this BMP relevant to that day's activities will be highlighted in the pre-start meeting, and protocols that relate specifically to managing flora and fauna on site are to be included in the induction material developed for the project.

The Site Induction will be updated prior to the commencement of operations to reflect the changes in onsite activities, environmental management and personnel. The Operations Site Induction will be administered by the O&M Manager.

This site will have Site Inductions and an induction register will be kept on-site, signed by inductees, with awareness of the requirements of the BMP highlighted.

As part of the induction for **operational** phase of the Project, personnel and relevant subcontractors will become familiar with:

- the purpose of the BMP and all relevant Post approval plans
- the protocols of the BMP and environmental controls
- the processes for environmental emergencies
- key roles and responsibilities relevant to BMP.

8.6 Website

A website has been established for the Project at https://wellingtonbess.com

This website will be maintained and kept up to date by the Proponent AMPYR. As the EPC, Fluence will provide AMPYR with information as required to ensure the website has up-to-date information. In accordance with Schedule 2, Condition C20, of the conditions of consent, the website will make the following information publicly available at a minimum, as relevant to the stage of the development:

- The EIS
- the final layout plans for the development
- current statutory approvals for the development
- approved strategies, plans or programs required under the conditions of this consent (other than the Fire Safety Study and Emergency Plan)

- the proposed staging plans for the development if the construction, operations or decommissioning of the development is to be staged
- a comprehensive summary of the monitoring results of the development, which have been reported in accordance with the various plans and programs approved under the conditions of this consent;
- how complaints about the development can be made
- any independent environmental audit, and the Applicant's response to the recommendations in any audit
- any other matter required by the Planning Secretary.

This information on the website will be kept up to date.

8.7 Rehabilitation

Any post construction ground cover revegetation to occur within 3 months of construction completion or upgrading using native grasses. Rehabilitation works including reshaping and topsoil spreading will commence within 10 days of the completion of construction.

It is recommended that the following list and supporting documents be used as a guide for providing the correct native species. 70% ground cover in accordance with the Landcom 2004 will be achieved in the disturbance area.

- *Themeda triandra* (Kangaroo Grass)
- *Austrodanthonia species* (Wallaby Grass)
- *Bothriochloa macra* (Red Grass, Red-Leg Grass)
- *Austrostipa scabra* (Rough Speargrass)
- *Chloris truncate* (Windmill Grass)
- Common native grasses of Central West NSW by the Local Land Service LLS https://www.lls.nsw.gov.au/__data/assets/pdf_file/0007/567628/native-grasses-guide.pdf)
- Grazing Management for Native Pastures on the North West Slopes of NSW (https://www.dpi.nsw.gov.au/__data/assets/pdf_file/0018/162252/grazing-native.pdf)

Within 18 months of cessation of operations, as per Schedule 2, Condition B36, the applicant must rehabilitate the site to the satisfaction of the Planning secretary, as shown in **Table 8-5**. A detailed decommissioning and rehabilitation plan will be developed at the time of decommissioning.

Table 8-5: Rehabilitation Objectives.

Feature	Objective
Site	• Safe, stable and non-polluting
Battery Storage infrastructure	• To be decommissioned and removed, unless the Planning Secretary agrees otherwise, with the exception of assets held by the Network Service Provider
Land use	• Restore land capability to pre-existing use
Community	• Ensure public safety at all times

8.8 BMP Review and improvement

Continuous improvement of this BMP will be achieved by the ongoing evaluation of performance.

During operations, a review and evaluation of the BMP to identify opportunities for improvement will be completed by AMPYR, Fluence and Project Ecologist.

This BMP will be reviewed and updated, if required, at the following times of the project:

- Prior to upgrading or decommissioning activities on site
- In accordance with Condition 2, Schedule 4, within 1 month of:
    - Submission of an incident report under condition 7 of Schedule 4
    - Submission of an audit report under condition 9 of Schedule 4
    - Any modifications to the conditions of this consent
- Within three years after the project commences operations, then 5 years thereafter.
- The reviewed BMP will be provided to DPHI for the Secretary's approval of modified/updated plans

Part of the continuous improvement process will also include an annual meeting held during the operation phases of the project, and be designed to:

- identify areas of opportunity for improvement of environmental management and performance.
- determine the cause or causes of non-compliance and deficiencies.
- develop and implement a plan of corrective and preventative action to address any non-compliances and deficiencies.
- verify the effectiveness of the corrective and preventative actions.
- document any changes in procedures resulting from process improvement.
- make comparisons with objectives and targets.

Outcomes associated with the continuous improvement process will be distributed to relevant personal via internal communication networks. The updates will also be uploaded to the project website.

9 Biodiversity Offsetting

The BMP has been prepared cognisant that offsetting biodiversity impacts of the development will be required under Schedule 2, Condition B14. Prior to commencing construction, unless the Secretary agrees otherwise, the Proponent must retire biodiversity credits of a number and class specified in Table 1 of Schedule 2, Condition B12 (see **below**).

Table 1 | Ecosystem Credit Requirements

Ecosystem Credits	Credits Required
PCT266 – White Box grassy woodland in the upper slopes ub-region of the NSW South Western Slopes Bioregion	41

Table 2 | Species Credit Requirements

Species Credit Species	Credits Required
Superb Parrot	56
Pink-tailed Legless Lizard	36

AMPYR will pay the offset credit liability prior to construction commencing and will receive a certificate from BCT under section 6.3.3 of the BC Act to confirm receipt of payment. Evidence will be provided to DPHI and posted on the project website.

10 Biodiversity Management Protocols

The following protocols have been developed to make the implementation of the BMP easier to manage for both the Construction and Operation phases.

10.1 Protocol 1 – Vegetation Clearing – General

Objective: To mitigate risk associated with vegetation clearing

Principal Contractor HSE Manager will share this protocol with relevant subcontractors, and will be summarised in the site induction for all workers.

This protocol is to be read in conjunction with Protocol 2.

Construction phase responsible position: AMPYR Project Manager, Fluence Lead Project Manager, Fluence Lead Construction Manager, Principal Contractor HSE Manager and Project Ecologist (subcontractor), Transgrid

Specific measures to minimise the impact of vegetation clearing include:

1. Refer to Figure 7-1 for guidance on trees to be removed vs retained. The protocol for habitat tree removal is Protocol 2, which stipulates that habitat tree felling will only occur in summer, autumn or winter (1 December - 31 August) and will not occur in spring (1 September to 30 November). Special provisions apply to Superb Parrot, see Protocol 14, which restricts tree felling from 1 September to 31 December.
2. Retain vegetation where possible within the transmission line connection and limit the removal of vegetation to necessary trees and trimming of branches in accordance with the Transgrid Easement Guidelines June 2024 or the latest version.
3. All workers are to be made aware of ecologically sensitive areas and the need to avoid impacts, including adjacent native vegetation (BIO 11).
4. Clearing will not be undertaken during periods of potentially extreme weather (temperatures are greater than 35^{o}C to reduce stress to fauna), or when the clearance activity is deemed to be a high risk by the Principal Contractor HSE Manager.
5. Using GIS data, areas of vegetation to be retained are to be clearly demarcated by the Principal Contractor HSE Manager with high visibility fencing to prevent accidental clearing during the construction phase.
    a. Clearly marked on Issued for Construction Plans (IFC), which will delineate areas to be cleared, exclusion zones, Heritage Items (refer to Heritage Management Plan for further details)

b. Non-habitat trees to be removed will be spray painted with a red X on the trunk

c. Habitat tree to be removed will be spray painted with white H on the trunk and encircled with red and white flagging (see Protocol 2 for details)

6. Existing cleared areas, farm tracks or areas of existing disturbance will be utilized where possible for laydown areas, boundary fences and access tracks to minimise the amount of vegetation clearing required.

7. All material stockpiles, vehicle parking and machinery storage will be signposted and located within cleared areas or areas proposed for clearing, and not within areas of vegetation to be retained.

8. The Principal Contractor HSE Manager will regularly record the clearing as undertaken and confirm that approved disturbance areas align with actual clearing conditions. GIS and digital records will be kept and updated regularly. These actions/management measures that will minimise unnecessary clearance during construction and include:

    a. Digital recording (photographs, GPS coordinates and GIS shapefiles) of areas to be cleared prior to clearing

    b. IFC drawings to clearly show areas to be cleared.

    c. Digital recording (photographs, GPS Coordinates and GIS shapefiles) of cleared areas after clearing

9. Pre-clearance surveys must be undertaken by the Project Ecologist 1-2 weeks prior to commencement of any clearing activities; the Project Ecologist will conduct pre-clearing surveys to identify:

    a. Fauna species likely to be encountered during construction and potential impacts to those fauna during vegetation clearing

    b. Habitat actively used by native fauna within the Project Site (digital note taken and species spray painted onto tree)

    c. Suitable locations to relocate fauna near to the Project Site (collect GPS co-ordinates)

    d. Retained trees will be marked for their protection during construction, where required with green flagging tape. These markings will be monitored and reflagged during construction where necessary (BIO 09). Signage to be placed

near trees providing reasons why the green flagging tape is in place, and a warning not to remove and to seek additional details from HSE manager or ecologist.

e. Local WIRES representatives or local vets willing to care for injured animals will be notified

f. Vegetation removal within the transmission line connection area will be minimised (BIO 01)

10. Prior to all clearing operations the Project Ecologist will verify and certify that all the relevant Protocols have been satisfied.

11. The Project Ecologist is to be present on site during all native vegetation tree clearing operations.

12. Native Vegetation should be cleared in a way that will allow fauna species living in or near the clearing site enough time to move out of the area without additional human intervention. Specifically, clearing should begin with non-habitat trees and start at the centre of the Project site, working towards the boundary, to encourage wildlife to disperse to remnant patches.

13. No clearing should occur at dawn, dusk or at night, as this is when fauna are most likely to be on the move and are more vulnerable to injury. Specifically, works should begin a minimum of two hours after first light, and cease a minimum of 90 minutes prior to sunset.

14. Habitat links must be maintained during clearing to allow fauna species to move safely from the site to adjacent areas.

15. Clearing should begin in the area that is farthest from vegetation to be retained.

16. The direction of clearing should also ensure that fauna species are directed away from threats such as roads, developed areas or disturbed areas (e.g. residential areas or cleared spaces >100m). Directional felling of trees may be achieved with an excavator or may require specialised equipment such as feller buncher, swivel grab attachment for excavator or chainsaw.

17. To avoid soil disturbance and prevent inadvertent damage, use of a chainsaw is preferable in situations where partial clearing is proposed.

18. The removal of 7 hollow bearing trees will be offset by the installation of 7 nest boxes or equivalent. These should include the reuse of the removed hollows into the remaining trees on site. (BIO 04; BIO 05).

10.2 Protocol 2 – Vegetation Clearing - Habitat Trees

Objective: To mitigate risk associated with vegetation clearing of Habitat Trees

Principal Contractor HSE Manager will share this protocol with relevant subcontractors, and will be summarised in the site induction for all workers.

This protocol is to be read in conjunction with Protocol 1 and Protocol 16.

Construction phase responsible position: AMPYR Project Manager, Fluence Lead Project Manager, Fluence Lead Construction Manager, Principal Contractor HSE Manager and Project Ecologist (subcontractor), Transgrid

Habitat trees must be carefully felled under the supervision of the Project Ecologist (BIO 06). The following recommendations have been developed in consideration of best practise guidelines:

1. Project Ecologist to sign off that all mitigation measure have been implemented.
2. All habitat trees to be cleared are to be surveyed and marked with high visibility red and white flagging tape 1-2 weeks prior to clearing taking place.
3. Non habitat trees will be removed first, followed by habitat trees, with at least 24 hours separating the two events.
4. Habitat tree felling will only occur in summer, autumn or winter (1 December - 31 August) and will not occur in spring (1 September to 30 November). Special provisions apply to Superb Parrot, see Protocol 14, which restricts tree felling from 1 September to 31 December.
5. Suitably qualified persons, such as arborists to be used for the felling/branch removal process.
6. Check weather conditions prior to removal, habitat trees may only be removed when temperatures are less than 35^{o}C to reduce stress to fauna, i.e., habitat tree clearing must cease if temperatures exceed 35^{o}C.
7. Habitat links must be maintained during clearing to permit fauna species to move safely from the site to adjacent areas:

8. Clearing should begin in the area that is farthest from those areas of vegetation that are to be retained and move progressively towards the area retained. i.e, clearing should begin in the centre of the site and work towards the perimeter.
9. Sequential clearing should not create an 'island' of habitat that is isolated from adjoining habitat by roads, or cleared and disturbed areas
10. The direction of clearing should ensure that fauna species are directed away from threats such as roads, developed areas or disturbed areas
11. Trees should be felled in a staged manner, with removal of non-hollow bearing limbs should occur first.
12. Habitat trees are to be mechanically shaken or agitated multiple times immediately prior to felling to encourage any remaining animals to either leave the tree or show themselves and subsequently be removed by the Project Ecologist prior to felling. The contractor should wait a minimum of two minutes between shaking the tree and felling the tree to allow time for fauna to emerge.
13. Felling will involve gently pushing the tree and lowering or felling using a forestry harvester (such as feller buncher) to avoid sudden falling as this is likely to injure or kill wildlife; or if this is infeasible due to a lack of access to forestry harvesting equipment, trees will be gently shaken and agitated multiple times prior to implementing traditional felling methods.
14. Directional felling of trees may be achieved with an excavator or may require specialised equipment such as feller buncher, swivel grab attachment for excavator or chainsaw.
15. To avoid soil disturbance and prevent inadvertent damage, use of a chainsaw is preferable in situations where partial clearing is proposed.
16. Following felling, habitat trees will be systematically checked from the ground by the Project Ecologist for any remaining fauna.
17. Uninjured fauna must be relocated to suitable nearby habitat by the Project Ecologist
18. Injured fauna must be taken to a local Vet or a Wildlife Rehabilitator identified by the Project Ecologist.

19. Felled habitat trees will be left in position overnight to allow any undetected fauna further opportunity to escape.
20. If any hollow-bearing tree is found or suspected to contain any threatened species, the tree should be left in place for a minimum of two days and must be reinspected no more than two hours prior to felling to ensure that the threatened species is no longer present. If the species is still present these steps should be repeated.
21. If Superb Parrot is found in any hollow bearing tree, refer to Protocol 14 BIO 07)
22. The removal of 7 hollow bearing trees will be offset by the installation of 7 nest boxes or equivalent. These should include the reuse of the removed hollows into the remaining trees on site. (BIO 04; BIO 05)
23. Bush Rock pre-clearance surveys to be conducted immediately prior to removal of logs, rocks and debris (BIO 09).
24. Avoid relocation of rocks during Pink-tailed Legless Lizard breeding season (December to late March) (BIO 08). Special provisions apply to Pink-tailed Legless Lizard, see Protocol 16.
25. Relocate collected specimens as close as possible to disturbed habitat or in an area that closely mimics the disturbed habitat.
26. Retain hollow logs, all rocks and debris to be used post construction in remnant woodland. These will be relocated outside of the subject land (within the cadastral boundary) in the remnant woodland to the east, south and west to retain species habitat and connectivity (BIO 10).
27. Records of the habitat clearing must be kept by Project Ecologist and submitted to Principal Contractor HSE Manager. Information recorded to include tree species, tree size, hollow number and size, fauna encountered, the outcome for those fauna (e.g., relocated to nearby habitat, taking to a wildlife rehabilitator, deceased etc), and staff/contractors involved in clearing.

10.3 Protocol 3 – Management of Displaced Fauna

Objective: To manage displaced fauna if found in the development boundary

Principal Contractor HSE Manager will share this protocol with relevant subcontractors, and will be summarised in the site induction for all workers.

Construction phase responsible position: AMPYR Project Manager, Fluence Lead Project Manager, Fluence Lead Construction Manager, Principal Contractor HSE Manager and Project Ecologist (subcontractor), Transgrid

Operational phase responsible position: O&M Supervisor, Project Ecologist (subcontractor)

Construction

1. All handling of fauna should be conducted by the Project Ecologist except where emergency situations require assistance from WIRES or local veterinarians.
2. If any injured fauna species are found, works in the immediate vicinity of the fauna must stop immediately so that the injured animal can be taken to a veterinarian or wildlife carer by the Project Ecologist as has been sourced prior to construction commencement.
3. Any vehicle strike incidents will be recorded.

Operation

4. All handling of fauna should be conducted by the Wires or other organisations trained to undertake fauna handling.
5. Operational staff trained in snake handling, may undertake the relocation of snakes if they are interfering with operational activities.

10.4 Protocol 4 – Stockpiles and Re-using Resources as Woody Debris

Objective: To mitigate risk associated with location of stockpiles and reusing resources

Principal Contractor HSE Manager will share this protocol with relevant subcontractors, and will be summarised in the site induction for all workers.

Construction phase responsible position: AMPYR Project Manager, Fluence Lead Project Manager, Fluence Lead Construction Manager, Principal Contractor HSE Manager and Project Ecologist (subcontractor), Transgrid

This protocol is to be read in conjunction with Protocol 16.

To reduce the potential for impacts to native vegetation and fauna species, it is recommended that the following methods for re-using resources be implemented:

1. Identify and mark out/sign post suitable stockpile locations as per ESCP. The location of Salvaged native vegetation and coarse woody debris stockpiles will be identified in IFC drawings and ESCPs.
2. Stockpiles to be located away from native vegetation and drainage paths and in areas already cleared/disturbed. Minimum distance 40 m.
3. Salvaged native vegetation, coarse woody debris and soil from construction would be inspected and reserved for beneficial re-use on site in similar locations/environments as suitable. Suitable salvage vegetation includes limbs with hollows (>10 cm in diameter), coarse woody debris (>10 cm in diameter and >50 cm long), and vegetation that can be mulched and reused on site to stabilise cleared areas. Soil would be suitable for reuse provided it is not contaminated with chemicals or weeds. Woody debris, including logs with hollows, should be placed within the areas of the Project Site where vegetation is to be retained.
4. Pre-clearance surveys to be conducted immediately prior to removal of logs, rocks and debris (BIO 09).
5. Retain hollow logs, all rocks and debris to be used post construction in remnant woodland. These will be relocated outside of the subject land (within the cadastral boundary) in the remnant woodland to the east, south and west to retain species habitat and connectivity.
6. There will be no removal of timber habitat material from site.

10.5 Protocol 5 – Weed Management

Objective: To mitigate risk associated with potential weeds on site

Principal Contractor HSE Manager will share this protocol with relevant subcontractors, and will be summarised in the site induction for all workers.

Construction phase responsible position: Principal Contractor Lead Project Manager

Operational phase responsible position: O&M Supervisor

Refer to and implement the Landscaping Plan (LP).

- Weeds … within development envelope… are to be removed prior to or as part of the clearing process to the extent practicable and appropriately stockpiled to avoid the spread of seed and other propagules (BIO 13)
- No foreign vegetative or fill material will be bought on site unless it is certified as being weed free or virgin excavated natural material (VENM)

10.6 Protocol 6 – Feral Pest Management

Objective: To mitigate risk associated with managing feral pests

Principal Contractor HSE Manager will share this protocol with relevant subcontractors, and will be summarised in the site induction for all workers.

Construction phase responsible position: AMPYR Project Manager, Fluence Lead Project Manager, Fluence Lead Construction Manager, Principal Contractor HSE Manager and Project Ecologist (subcontractor), Transgrid

Operational phase responsible position: O&M Supervisor, Project Ecologist (subcontractor)

Measures to control feral animals.:

1. Conduct fence inspection prior to completion of fencing to reduce risk of animals being trapped within the Project site.
2. Keep a log of opportunistic sightings of feral pests in the Project site, including location or sighting, species sighted, and any relevant details (e.g., damaged fence that they are entering through)
3. Ad hoc monitoring (via vehicular visual inspection) of project site will be used to determine presence of feral animals.
4. Feral pest management activities to be in consultation, and coordinated with, Local Lands Service (LLS).

10.7 Protocol 7 – Fencing Construction and Management

Objective: To mitigate risk associated with fence construction

Principal Contractor HSE Manager will share this protocol with relevant subcontractors, and will be summarised in the site induction for all workers.

Construction phase responsible position: AMPYR Project Manager, Fluence Lead Project Manager, Fluence Lead Construction Manager, Principal Contractor HSE Manager and Project Ecologist (subcontractor),

Operational phase responsible position: O&M Supervisor

To reduce the potential for impacts to fauna, the following fencing construction and management protocol be implemented. This protocol will be incorporated into the induction process for the project.

Biodiversity Conservation Trust's *Essential Conservation Fencing Infrastructure (Nov 2022)* to be considered by Fluence and AMPYR when designing fences or when undertaking repairs, taking into consideration the definition of 'standard' and 'difficult' sites within the above-mentioned document.

1. The perimeter fence will meet safety requirements, whilst taking into consideration biodiversity needs where practicable.
2. Weekly inspection of perimeter fencing will be undertaken during construction.
3. The perimeter fence is to meet the Australian/International standard required for a Substation.
4. All workers to be made aware of ecologically sensitive areas and the need to avoid impacts, including adjacent native vegetation (BIO 11).

10.8 Protocol 8 – Erosion and Sediment Control

Objective: To mitigate risk associated with managing erosion and sediments on site

Principal Contractor HSE Manager will share this protocol with relevant subcontractors, and will be summarised in the site induction for all workers.

Construction phase responsible position: Principal Contractor Lead Project Manager

Operational phase responsible position: O&M Supervisor

Refer to and implement the Erosion and Sediment Control Management Plan (ESCP).

- The ESCP will be developed in accordance with CoC B28(b) and will include measures to reduce sediments within waters entering low lying areas of vegetation. The ESCP will identify these habitat features.
- Commitment BIO 12 is covered in the ESCP.
- Pre-starts and/or Tool-box talks will be held to discuss the ESCP as it is progressively updated.

10.9 Protocol 9 – Dust Control

Objective: To manage dust generation

Principal Contractor HSE Manager will share this protocol with relevant subcontractors, and will be summarised in the site induction for all workers.

Construction phase responsible position: Principal Contractor Lead Project Manager

Operational phase responsible position: O&M Supervisor

As per Condition B20, measures to minimise the generation of dust and associated impacts on adjacent natural environments are provided for in the CEMP and ESCP.

1. Review activities during adverse weather conditions to reduce excessive dust.
2. Monitor dust levels and implement suppression strategies such as wetting down dirt roads and reducing vehicle speeds (BIO 15).

10.10 Protocol 10 – Lighting Design

Objective: To mitigate risk of light spill from impacting fauna within the project site and surrounds

Principal Contractor HSE Manager will share this protocol with relevant subcontractors, and will be summarised in the site induction for all workers.

Construction phase responsible position: Principal Contractor Lead Project Manager

Operational phase responsible position: O&M Supervisor

Construction

The hours of construction, upgrading and decommissioning are contained in Condition B23 Schedule 2: Unless the Planning Secretary agrees otherwise, the Applicant may only undertake road upgrades, construction, upgrading or decommissioning activities between:

(a) 7 am to 6 pm Monday to Friday;

(b) 8 am to 1 pm Saturdays; and

(c) at no time on Sundays and NSW public holidays.

The following construction, upgrading or decommissioning activities may be undertaken outside these hours without the approval of the Planning Secretary:

- Activities that are inaudible at non-associated receivers;
- the delivery of materials as requested by the NSW Police Force or other authorities for safety reasons; or
- emergency work to avoid the loss of life, property and/or material harm to the environment.

Lighting design will be undertaken to minimise light spill as contained in Condition B23. Measures to minimise light spill (as outlined in the CEMP and will be covered in the OEMP) include:

1. Minimising light spillage from the development to road users, residential sensitive receivers and fauna species (mostly nocturnal species) by ensuring external lighting associated with the development:
    a. Is installed as low intensity lighting (except where required for safety or emergency purposes)
    b. Does not shine above the horizontal
    c. Complies with AS/NZS 4282:2019 – Control of Obtrusive Effects of Outdoor Lighting, and the Dark Sky Planning Guideline (DPE 2023) or their latest versions
    d. Follows the Best Practice Lighting Design guidance in the National Light Pollution Guidelines for Wildlife (DEE 2020).

Operation

2. During operation, lighting will continue to minimise light spill by ensuring external lighting associated with the development:
    a. Does not shine above the horizontal
    b. Complies with AS/NZS 4282:2019 – Control of Obtrusive Effects of Outdoor Lighting, and the Dark Sky Planning Guideline (DPE 2023) or their latest versions
    c. Is directed away from the exclusion zone where practicable.

10.11 Protocol 11 – Chemical Management

Objective: To mitigate risk associated with chemical management

Principal Contractor HSE Manager will share this protocol with relevant subcontractors, and will be summarised in the site induction for all workers.

Construction phase responsible position: Principal Contractor Lead Project Manager

Operational phase responsible position: O&M Supervisor

Refer to and implement the Soil and Water Management Plan (SWMP).

Chemical storage would be located away from habitat features such as the unnamed waterway, and rocky areas.

All chemicals will be stored appropriately when not in use and spill kits will be present on the site

Chemical application, such as herbicide used to control weeds, would be applied by qualified personnel.

10.12 Protocol 12 – Vehicle Hygiene

Objective: To mitigate risk associated with transference of biohazards into and on site

Principal Contractor HSE Manager will share this protocol with relevant subcontractors, and will be summarised in the site induction for all workers.

Construction phase responsible position: AMPYR Project Manager, Fluence Lead Project Manager, Fluence Lead Construction Manager, Principal Contractor HSE Manager, Transgrid

Vehicle hygiene procedures will be implemented for any vehicle that enters the development site (BIO 14). During the initial construction phase when ground clearing occurs, the procedures outlined below will be followed.

When the hardstand area is constructed, and delivery vehicles are dropping of equipment, self-certification will be required and random audits will be undertaken by the HSE Manager.

Training for personnel involved in vehicle inspections will be provided during the site inductions.

The **Clearing and Civil Works** procedures will include:

1. All machinery will be inspected and cleaned prior to entering the site.
2. If plant / machinery leaves site for 12 weeks or more, it will require reinspection.
3. Plant and light vehicle authorisations (including weed and seed inspections) upon arrivals in laydown area.
4. Driver induction and vehicle inspection prior to vehicles being given approval to enter indirect disturbance areas and weed and seed sticker applied to plant or light vehicle. Principal Contractor HSE Manager is responsible during the construction phase. O&M Contractor is responsible during the operational phase.
5. If dirt, seeds or vegetative matter are present, the vehicle should be refused entry.
6. Inspection after leaving disturbance areas and prior to leaving the site. Responsible staff will determine if off-site washing will be required for vehicles should they become dirty from on-site activities.
7. Inspections will be recorded and kept on a Vehicle Hygiene Register and kept on site. Principal Contractor HSE Manager is responsible during the construction phase. O&M Supervisor is responsible during the operational phase.

8. Any machinery or equipment that has been used in Queensland needs to adhere to the requirements of a Carrier Biosecurity Certificate in relation to Parthenium weed. Details are available at https://www.dpi.nsw.gov.au/biosecurity/weeds/parthenium-greatest-threat

The **Post Clearing** procedures will include:

1. Self-certification of cleanliness of the vehicle is required and will be spot checked.
2. Any machinery or equipment that has been used in Queensland needs to adhere to the requirements of a Carrier Biosecurity Certificate in relation to Parthenium weed. Details are available at https://www.dpi.nsw.gov.au/biosecurity/weeds/parthenium-greatest-threat

10.13 Protocol 13 – Noise Management

Objective: To mitigate risk associated with noise generating activities

Principal Contractor HSE Manager will share this protocol with relevant subcontractors, and will be summarised in the site induction for all workers.

Construction phase responsible position: AMPYR Project Manager, Fluence Lead Project Manager, Fluence Lead Construction Manager, Principal Contractor HSE Manager, Transgrid

Operational phase responsible position: O&M Supervisor

The hours of road upgrades, construction, commissioning, demolition, upgrading or decommissioning activities are contained in Condition B15 Schedule 2: Unless the Planning Secretary agrees otherwise, the Applicant may only undertake road upgrades, construction, upgrading or decommissioning activities between:

(a) 7 am to 6 pm Monday to Friday;

(b) 8 am to 1 pm Saturdays; and

(c) at no time on Sundays and NSW public holidays.

Condition B16 allows for the following activities to be carried out outside the hours specified in Condition B15 above:

- Commissioning activities that are inaudible at non-associated receivers;
- The delivery of materials as requested by the NSW Police Force or other authorities for safety reasons; or
- Emergency work to avoid the loss of life, property and/or material harm to the environment.

Specific measures relating to the Noise Management include:

1. Minimise the noise generated by an construction, upgrading or decommissioning activities on site in accordance with the best practice requirements outlined in the *Interim Construction Noise Guideline (*DECC, 2009), or its latest version; and
2. Ensure that the noise generated by the operation of the development does not exceed 35 dB(A) LAeq, 15min to be determined in accordance with the procedures in the NSW Noise Policy for Industry (EPA, 2017) at any non-associated residence.
3. Provide awareness training during site inductions and toolbox talks and-emphasise the importance of limiting noise generation during construction and operation.
4. Machinery, trucks and equipment will be restricted to designated parking areas away from existing vegetation.
5. Minimise night works carried out on site to reduce impact to fauna.

10.14 Protocol 14 – Superb Parrot inspection protocol

Objective: To mitigate risks associated with Superb Parrot

Principal Contractor HSE Manager will share this protocol with relevant subcontractors, and will be summarised in the site induction for all workers.

Construction phase responsible position: AMPYR Project Manager, Fluence Lead Project Manager; Project Ecologist

Inspections will be carried out as per Protocol 1 and Protocol 2.

If Superb Parrot/s are found to be utilising a hollow, the following steps must be undertaken.

1. A hollow inspection will be undertaken using an elevated work platform, tree climber and/or inspection camera.
2. If eggs are present in the hollow, these eggs will remain in place and removal of the hollow-bearing tree must be postponed until birds have fledged and left the hollow for the breeding season (September to December).
3. If hatchlings are present, removal of the hollow-bearing tree must be postponed until birds have fledged and left the hollow for the breeding season (September to December).
4. An exclusion zone must be established around the tree with a 5 metre buffer from the drip line.

10.15 Protocol 15 – Unexpected finds – threatened species protocol

Objective: To mitigate risks associated with an unexpected find associated with threatened species

Principal Contractor HSE Manager will share this protocol with relevant subcontractors, and will be summarised in the site induction for all workers.

Construction phase responsible position: AMPYR Project Manager, Fluence Lead Project Manager; Project Ecologist

This Unexpected Finds Protocol is to be used in the event that a new threatened flora or fauna species is found on site during construction, which is likely be affected by the construction. The process is outline below (BIO 16).

1. Stop Work Immediately.
    a) The worker/contractor is to stop work and notify the Site Manager and other workers in the immediate area.
    b) Site Manager is to notify the Lead Project Manager and HSE Manager
    c) Lead Project Manager will notify AMPYR Project Manager
2. The Site Manager/Project Manager will demarcate the site/area and prevent access to reduce impact to the species and if practical, move works to an alternative location.
3. The Site Manager and Project Ecologist will record and document the unexpected find, including species, abundance, location etc. Should the Project Ecologist be unavailable at short notice, species identification via the use of photographs may be undertaken remotely.
4. Delay any ground or tree clearance works within the immediate vicinity to allow the species to naturally vacate the area. This is a minimum of one day.
5. Where possible, the fauna species will be captured by a qualified person
6. If not possible, attempts to actively encourage the species to relocate may be attempted. This would be done under the supervision and guidance of the Project Ecologist, If the individual does not leave, follow the requirements of 'soft felling' a tree if needed; i.e., lowered gently under supervision of an arborist so that impact to the individual is mitigated
7. The Site Manager, Project Manager and Project Ecologist to assess the situation
    a) The Project Ecologist to determine the level of impact significance to the threatened species and develop appropriate management options.
    b) These options will be discussed with AMPYR
    c) AMPYR to consult with DPHI and CPHR regarding this unexpected find

d) AMPYR to obtain relevant approvals, permits and/or licences if the threatened species is likely to be impacted

e) Additional offsets may be required to account for the impact to the threatened species

8. All management measures or requirements from approvals will be implemented under supervision of Project Ecologist and Site Manager
9. Once management measures (as required) are completed, the site may be demarcated and work recommence.
10. A report outlining the above actions will be prepared and relevant species information included into the induction process and toolbox talks.
11. Regular inspections will be maintained

10.16 Protocol 16 – Bush Rock Removal

Objective: To mitigate risks associated with the Pink-tailed Legless Lizard and bush rock removal

Principal Contractor HSE Manager will share this protocol with relevant subcontractors, and will be summarised in the site induction for all workers.

This protocol is to be read in conjunction with Protocol 1 and 2.

Construction phase responsible position: AMPYR Project Manager, Fluence Lead Project Manager, Fluence Lead Construction Manager, Principal Contractor HSE Manager and Project Ecologist (subcontractor), Transgrid

Bush rock must be carefully removed/relocated under the supervision of the Project Ecologist (BIO 06). The following procedure has been developed in consideration of best practise guidelines:

1. Bush Rock pre-clearance surveys to be conducted immediately prior to removal of logs, rocks and debris (BIO 09).
2. Avoid relocation of rocks during Pink-tailed Legless Lizard breeding season (December to late March) (BIO 08).
3. Undertake a survey of the rocks during September – November to determine whether any individuals are present on site. If individuals are found, then no clearing can take place from December until after March. If no individuals are found, then instigate the protocol procedure of clearing on the day of relocation.
4. If one specimen is found, relocate collected specimens as close as possible to disturbed habitat or in an area that closely mimics the disturbed habitat. If more than one specimen is found, then stop work, follow Protocol 15 for guidance on

demarcating the site and seek advice from a herpetologist regarding relocation of specimens.

5. Retain hollow logs, all rocks and debris to be used post construction in remnant woodland. These will be relocated outside of the subject land (within the cadastral boundary) in the remnant woodland to the east, south and west to retain species habitat and connectivity (BIO 10) and will be done in accordance with Protocol 4.

6. Records of the habitat clearing must be kept by Project Ecologist and submitted to Principal Contractor HSE Manager. Information recorded to include tree species, tree size, hollow number and size, fauna encountered, the outcome for those fauna (e.g., relocated to nearby habitat, taking to a wildlife rehabilitator, deceased etc), and staff/contractors involved in clearing.

7. Bushrock to be retained on site and used in a beneficial manner such as erosion and sediment control. Further guidance is available in the Transport for NSW Biodiversity Guidelines, available at: https://roads-waterways.transport.nsw.gov.au/business-industry/partners-suppliers/documents/guides-manuals/biodiversity_guidelines.pdf

8. There will be no removal of bush rock or timber habitat material from site.

10.17 Protocol 17 – Rehabilitation

Objective: To mitigate risks associated rehabilitation of the development boundary

Principal Contractor HSE Manager will share this protocol with relevant subcontractors, and will be summarised in the site induction for all workers.

Construction phase responsible position: AMPYR Project Manager, Fluence Lead Project Manager, Fluence Lead Construction Manager, Principal Contractor HSE Manager and Project Ecologist (subcontractor),

Operational phase responsible position: O&M Supervisor

Rehabilitation of disturbed ground will be completed using the following as a guide.

1. Vegetating and/or rehabilitating disturbed land surfaces and stockpiles as soon as practicable as outlined in the SWMP and ESCP.

2. The areas disturbed by construction will be rehabilitated within 3 months of construction being completed. Rehabilitation includes the reshaping, spreading of topsoil and sowing of suitable species on disturbed areas.

3. Suitable local grass species (from PCT 266) will be used as ground cover in any rehabilitation areas to meet the requirements in section 8.7 (BIO 03).

    a. *Themeda triandra* (Kangaroo Grass)

    b. *Austrodanthonia species* (Wallaby Grass)

c. *Bothriochloa macra* (Red Grass, Red-Leg Grass)

d. *Austrostipa scabra* (Rough Speargrass)

e. *Chloris truncate* (Windmill Grass)

11 Monitoring, auditing, reporting and review of the overarching EMS.

During construction there will be continuous monitoring, auditing, reporting and review by Fluence and Transgrid of their construction areas and construction activities. Individuals and work crews will be required to demonstrate that the requirements of this Plan, the EMS and other management plans and subplans are being adhered to.

Monitoring, auditing, reporting and review of site activities will also be undertaken during the operation and decommissioning of the project.

All reports, reviews, and audits will be maintained by the Fluence and Transgrid Project Managers (and equivalent manager during operation/decommissioning) and will be made be available on request to the appropriate managers (The Principal and subcontractors). Audit results will be used to review management techniques to ensure compliance with the DC.

11.1 Monitoring

Monitoring of environmental impacts is an essential component of effective environmental management. Specific monitoring requirements for individual environmental aspects during the construction works by Fluence and Transgrid and during operation and decommissioning are set out in the management plans and subplans shown in Figure 1.3.

11.1.1 Site inspection

Regular site inspections will be a key component of the environmental monitoring program.

During the works, Fluence, Transgrid and their subcontractors will conduct regular inspections to confirm compliance with the CEMP/OEMP and management subplans and to ensure all construction footprints are compliant with approved development plans. Inspection records will be maintained by Fluence and Transgrid and reported to The Principal on a regular basis as detailed in Table 7.1 of the EMS.

Inspection reports will be circulated to the Fluence and Transgrid Project Managers and the on-site teams. Key environmental risks and issues will be discussed at pre-start team meetings and toolbox meetings.

A summary of the inspections required as listed in section 8 of the BMP is provided in Table 11.1.

Daily inspections

The Fluence and Transgrid Construction Managers (or their delegates) will ensure that site personnel are undertaking daily inspections of the construction activities they are overseeing to ensure general compliance with the EMS and other management plans and subplans. All areas identified for improvement will be addressed directly and added to the Incident Register.

Weekly monitoring

Once per week (at least) during construction, the Fluence and Transgrid Construction Managers and/or delegate(s) will conduct monitoring of construction activities to ensure compliance with the EMS and other management plans. All areas identified for improvement will be added to a corrective action register.

Monthly inspections

Once per month (at least) during construction, the Fluence and Transgrid Project Managers and/or delegate(s) will conduct a thorough inspection of construction activities to ensure compliance with the EMS and other management plans. All areas identified for improvement will be added to a corrective action register. The Fluence and Transgrid Project Managers and/or delegate(s) will also conduct an inspection of the condition of the roads for, and responding to, any emergency repair and/or maintenance requirements.

Table 11-1: Summary of monitoring required.

Plan	**Plan Reference**	**Aspect to be monitored**	**Frequency**	Phase	**Responsibility**
BMP	Table 8.2	Inspect the clearing site to ensure relevant protocol requirements are met	Weekly during clearing activities	Construction	Project Ecologist
BMP	Table 8.2	Inspect and maintain fencing.	Weekly	Construction	Principal Contractor HSE Manager
BMP	Table 8.2	Inspect disturbed areas for rehabilitation success.	Weekly	Construction	Principal Contractor HSE Manager
BMP	Table 8.2	Inspect lighting in project area.	Weekly	Construction	Principal Contractor Lead Construction Manager
BMP	Table 8.2	Inspect chemical storage areas	Fortnightly	Construction	Principal Contractor Lead Construction Manager

BMP	Table 8.2	Inspect and maintain fencing.	Monthly for first three months of operations, then quarterly for the remainder of the year. Then annually or incident based.	Operations	O&M Supervisor,
BMP	Table 8.2	Maintain a log of salvaged animals and actions undertaken to relocate them.	Incident based	Operations	O&M Supervisor,
BMP	Table 8.2	Maintain a log of vehicle strikes.	Incident based	Operations	O&M Supervisor,
BMP	Table 8.2 Section 8.7	Maintenance of non-native vegetation or ground cover >70% in disturbance area.	Quarterly inspections of rehabilitated areas for two years after works; annual inspections for the life of the project.	Operations	Project Ecologist
BMP	Table 8.2	Inspect lighting in project area.	Upon commencement of operation then annually.	Operations	O&M Supervisor
BMP	Table 8.4	Installation of 7 nest boxes or equivalent	Annual	Operations	O&M Contractor
BMP	Table 8.4	Weed inspection	Annual	Operations	O&M Contractor
BMP	Table 8.4	Feral pest survey	Annual	Operations	O&M Contractor

11.2 Incidents and non-compliances

11.2.1 Incident notification and response

Any incident or accident that results in harm to the environment and/or off-site receptors is to be regarded as an environmental incident.

As defined in the DC an incident is a set of circumstances that causes or threatens to cause material harm to the environment. Material harm is defined in the DC as harm that:

- involves actual or potential harm to the health or safety of human beings or to ecosystems that is not trivial; or
- results in actual or potential loss or property damage of an amount, or amounts in aggregate, exceeding $10,000 (such loss includes the reasonable costs and expenses that would be incurred in taking all reasonable and practicable measures to prevent, mitigate or makegood harm to the environment.

In accordance with CoC C10, the Department must be notified via the Major Projects website immediately after the Applicant becomes aware of an incident. Notification is required to be given under this condition even if the Applicant fails to give the notification required under condition C10 of Schedule 2 or, having given such notification, subsequently forms the view that an incident has not occurred. Accordingly, Fluence and Transgrid will notify the Principal immediately after an incident occurs to enable prompt reporting by the Principal to the Planning Secretary.

The incident notification to the Principal must set out the location and nature of the incident. Subsequent notification requirements must be given, and reports submitted in accordance with the requirements set out in Appendix 8 (of Conditions of Consent).

The written notification of an incident must:

(a) identify the development and application number;
(b) provide details of the incident (date, time, location, a brief description of what occurred and why it is classified as an incident);
(c) identify how the incident was detected;
(d) identify when the applicant became aware of the incident;
(e) identify any actual or potential non-compliance with conditions of consent;
(f) describe what immediate steps were taken in relation to the incident;
(g) identify further action(s) that will be taken in relation to the incident; and
(h) identify a project contact for further communication regarding the incident.

Within 30 days of the date on which the incident occurred or as otherwise agreed to by the Planning Secretary, the Applicant must provide the Planning Secretary and any relevant public authorities (as determined by the Planning Secretary) with a detailed report on the incident addressing all requirements below, and such further reports as may be requested.

The Incident Report must include:

(a) a summary of the incident;

(b) outcomes of an incident investigation, including identification of the cause of the incident;
(c) details of the corrective and preventative actions that have been, or will be, implemented to address the incident and prevent recurrence; and
(d) details of any communication with other stakeholders regarding the incident.

Response agencies need to be informed of pollution incidents quickly, so action can be coordinated to prevent or limit harm to the environment and human health generally. These are listed in Table 7.12 of the EMS.

Incidents will be recorded in an Incident Register, as outlined in Section 5.4.

Table 11-2: Response agency contact details

Response agency	Contact details
Environment Protection Authority NSW (EPA NSW)	131 555 or (02) 9995 5555
Ministry of Health NSW	(02) 9391 9000
SafeWork NSW	131 050
Dubbo Regional Council	(02) 6801 4000
Fire and Rescue NSW	000 or, for Mobiles only, 112
Rural Fire Service Orana Region	(02) 6881 3900
Heritage NSW (for Aboriginal finds, as per HMP)	(02) 9873 8500
NSW Police (for human remains, as per HMP)	131 444

11.2.2 Non-compliance notification and response

A project non-compliance is defined in the DC as an occurrence, set of circumstances or development that is a breach of the consent but is not an incident.

Environmental non-compliances will be reported and actioned through the incident management procedures detailed in Section 7.2.1 of the EMS.

In accordance with CoC C11 of the DC, The Principal is required to notify the Department in writing via the Major Projects website within 7 days after the Principal becomes aware of any non-compliance with the conditions of this consent. Accordingly, Fluence and Transgrid will notify the Principal immediately after a non-compliance is identified to enable prompt reporting by the Principal to the Planning Secretary.

In accordance with CoCs C12 and C13 of the DC the non-compliance notification to the Principal will set out the condition of consent that the development is non-compliant with, the way in which it does not comply and the reasons for the non-compliance (if known) and what actions have been, or will be, undertaken to address the non-compliance. A non-compliance which has been notified as an incident does not need to also be notified as a non-compliance.

11.2.3 Corrective actions

Once an environmental incident or non-conformance has been reported to the Principal's Project Manager, a set of appropriate corrective actions will be raised by Fluence and Transgrid. Measures already implemented, additional measures to be implemented as a result and any corrective actions will be reported to the Principal's Project Manager. Actions will be implemented to the satisfaction of the Principal's Project Manager and their effectiveness confirmed to demonstrate appropriate measures have been implemented to acceptably minimise the risk of reoccurrence.

11.3 Auditing

In accordance with CoC C14, the Principal is obliged to commission independent environmental audits of the development in accordance with the *Independent Audit Post Approval Requirements* (2020) within 3 months of commencing construction and within 3 months of commencement of operations and submitted to Planning Secretary within two months of undertaking the independent audit.

Fluence and Transgrid will provide support to the independent environmental auditing process by making documents and site personnel available as required and by helping host the independent auditors while on site. Fluence and Transgrid will also assist the Principal in implementing the recommendations of the audits.

11.4 Record keeping

Fluence and Transgrid will maintain an Incident Register for the project and will make this available to the Principal upon request. The Incident Register will document, record, track, manage and report all environmental (and safety) incidents and observations.

Fluence and Transgrid will also maintain a Complaints Register for the project and will make this available to the Principal upon request. The Complaints Register will document, record, track, manage and report all complaints.

Inspections will be recorded and kept on site. Principal Contractor HSE Manager and Principal Contractor Lead Construction Manager are responsible during the construction phase.

11.5 Review and update

Fluence and Transgrid will undertake ongoing review and improvement of existing systems and controls.

In accordance with CoC C2, this EMS (and any strategy, plan or program required under the DC) will be reviewed to the satisfaction of the Secretary of DPHI. The EMS will be:

(a) update the strategies, plans or programs required under this consent to the satisfaction of the Planning Secretary prior to carrying out any upgrading or decommissioning activities on site; and
(b) review and, if necessary, revise the strategies, plans or programs required under this consent to the satisfaction of the Planning Secretary within 1 month of the:
    i. submission of an incident report under condition C10 of Schedule 2;

ii. submission of an audit report under condition C14 of Schedule 2; or
iii. any modification to the conditions of this consent.

When revised, the revision status of this Plan will be indicated on the title page of this document. This Plan will be made publicly available on the project website in accordance with CoC C20 of the DC. A hard copy of this Plan will also be kept at the site project office during construction.

Review is a critical element of any environmental management systems and involves a formal evaluation of the adequacy of the environmental management plans and documents – taking into account any new environmental issues, legislation, changing circumstances and continual improvement.

To ensure a rigorous, all-encompassing review process, Fluence and Transgrid will conduct quarterly management review meetings with the Principal. These meetings should be attended by individuals with either executive or specialist responsibility. At this stage of the development this may include:

- the Principal's Project Manager
- the Fluence /Transgrid Project Manager
- the Fluence /Transgrid HSE Manager
- the Fluence /Transgrid Construction Manager
- the Fluence /Transgrid Site Manager
- the subcontractor management representatives, as appropriate.

Fluence and Transgrid commit to complying with CoC A3 and will comply with any requirement/s of the Secretary arising from the Department's assessment of:

a. any strategies, plans or correspondence that are submitted in accordance with this consent
b. any reports, reviews or audits commissioned by the Department regarding compliance with this consent; and
c. the implementation of any actions or measures contained in these documents

Fluence and Transgrid commit to complying with CoC A3 in full.

11.6 Continuous improvement of environmental performance

Areas for improvement identified during daily inspections will be addressed by the Fluence and Transgrid environment teams at daily pre-start (Toolbox) meetings with the appropriate construction supervisor and crew.

At the discretion of the environment team, identified areas of improvement may also form the basis for more formalised weekly project meeting. Addressing non-conformance and areas for improvement with the construction crews in this forum is aimed at continuously improving the environmental performance of the project and driving environmental awareness on site.

Audits also play an important part in the continuous improvement process and the results of the audits should be considered when updating the BMP.

12 Complaints management

To facilitate open communication and active complaint resolution, it is important that local stakeholders are able to raise issues and complaints in a formal way.

Concerns and issues raised are recorded and responded to in a timely and consistent manner, and in accordance with regulatory standards and company policies. The following are key principles adhered to by Fluence and the project in responding to issues or concerns raised by local stakeholders:

- timeliness – complaints will be dealt with in a timely and efficient manner.
- sensitivity – ensure that both parties' feelings and perspectives are respected.
- fairness and impartiality – both parties will be afforded substantive and procedural fairness in the resolution process; and
- confidentiality – only parties directly involved in the complaint or those involved in decision making about outcomes will have access to information about the complaint.

In the event that a complaint is received from the community, the Fluence and Transgrid Project Managers (or their representative) will ensure the complaint is recorded, reported to the Principal and that further investigation is undertaken.

The process for managing complaints is described below.

12.1 Complaints Management Procedure

The details of the complaint will be recorded by Fluence and Transgrid in Complaints Registers, which will include the following:

- the date and time, where relevant, of the complaint
- the means by which the complaint was made (telephone, mail, email or in person)
- who received the complaint
- any personal details of the complainant that were provided, or if no details were provided, a note to that effect
- the nature of the complaint
- any actions taken in relation to the complaint, including timeframes for initial and ongoing responses and implementing the action
- if no action was taken in relation to the complaint, the reason(s) why no action was taken
- the status of the complaint (i.e. open/closed)
- measures to avoid reoccurrence (if any).

The Complaints Registers will be managed and maintained by the Fluence and Transgrid Project Managers or their representative during construction. They will be responsible for:

- notifying the Principal of the complaint

- confirming that the Principal provides a response to the person complaining within a reasonable time frame of the complaint being made
- logging all details of the complaint and supporting documentation in the Complaints Register while meeting privacy requirements; and
- notifying the relevant management staff as appropriate

The Principal will ensure the Complaints Register is made available on the Project website and updated regularly, in accordance with CoC B10 (iv), C1 and C20, with personal details kept private.

12.2 Contact details for complainants

The following avenues are available for complaints and enquiries to be lodged by the community and other stakeholders:

Email: info@wellingtonbess.com

Online contact form: up to date version can be downloaded from http://www.wellingtonbess.com

Phone: 1800 718 538

They are communicated via the Project website and signage at the site entrance and will be coordinated between Fluence and AMPYR.

12.3 Dispute Resolution

In the event that the actions taken to address a complaint, including the measures for avoiding a recurrence, are not sufficient to satisfy the complainant and a dispute arises, the Principal will do the following:

- advise DPHI that there is a dispute
- provide DPHI with copies of the relevant complaint history
- if determined necessary by DPHI, engage a specialist with expertise relevant to the issue at hand to investigate the dispute and provide recommendations for resolution
- advise the third party in dispute (the complainant) and DPHI in writing, as to when the dispute investigation will be completed
- provide the third party and DPHI a copy of the dispute investigation report, inclusive of the Principal's intentions with regards to the implementation of the recommendations for resolution.

Fluence and Transgrid will support the Principal, where appropriate, in the reporting, understanding and resolution of disputes.

13 References

EMM (2022) Wellington South Battery Energy Storage System Environmental Impact Statement, prepared for AMPYR Australia Pty Ltd by EMM Australia Pty Ltd. October 2022

EMM (2023a) Wellington South Battery Energy Storage System: Response to Submissions Report, for AMPYR Australia Pty Ltd by EMM Australia Pty Ltd. July 2023

EMM (2023b) Wellington South Battery Energy Storage System: Amendment Report, for AMPYR Australia Pty Ltd by EMM Australia Pty Ltd. July 2023

EMM (2023c) Wellington South Battery Energy Storage System: Biodiversity Development Assessment Report (Version 2), for AMPYR Australia Pty Ltd by EMM Australia Pty Ltd. 13 September 2023

Transgrid (2024) Easement Guidelines – Living and working with electricity transmission lines, Transgrid June 2024.

Appendix A:
Conditions of Consent SSD 27014706

Condition No.	Condition Description	Reference
Schedule 2 Administrative Conditions		
Obligations to minimise harm to the environments		
A1	*In meeting the specific environmental performance criteria established under this consent, the Applicant must implement all reasonable and feasible measures to prevent and/or minimise any material harm to the environment that may result from the construction, operation, upgrading or decommissioning of the development.*	EMS Section 1.3/ CEMP/OEMP
Terms of Consent		
A2	*The Applicant must carry out the development:* *(a) in compliance with the conditions of this consent;* *(b) in accordance with all written directions of the Planning Secretary;* *(c) generally in accordance with the EIS; and* *(d) generally in accordance with the Development Layout in Appendix 1 (of Conditions of Consent)*	EMS Section 2/ CEMP/OEMP
A3	*The Applicant must comply with any requirement/s of the Planning Secretary arising from the Department's assessment of:* *(a) any strategies, plans or correspondence that are submitted in accordance with this consent;* *(b) any reports, reviews or audits commissioned by the Department regarding compliance with this consent; and* *(c) the implementation of any actions or measures contained in these documents.*	EMS Section 5.10.1
A4	*The conditions of this consent and directions of the Planning Secretary prevail to the extent of any inconsistency, ambiguity or conflict between them and a document listed in condition A2(c) or A2(d). In*	

Condition No.	Condition Description	Reference
	the event of an inconsistency, ambiguity or conflict between any of the documents listed in condition A2(c) or A2(d), the most recent document prevails to the extent of the inconsistency, ambiguity or conflict.	
Battery Storage Restriction		
A5	*Unless the Planning Secretary agrees otherwise in writing, the battery storage associated with the development must not exceed a total delivery capacity of 500 MW.* *Note: This condition does not prevent the Applicant from seeking to lodge a separate development application or modify this consent to increase the capacity of the battery storage in the future*	
Upgrading of Battery Storage and Ancillary Infrastructure		
A6	*The Applicant may upgrade the battery storage and ancillary infrastructure on site provided these upgrades remain within the approved development footprint of the site. Prior to carrying out any such upgrades, the Applicant must provide revised layout plans and project details of the development to the Planning Secretary incorporating the proposed upgrades.*	EMS Section 5.10.2
Structural Adequacy		
A7	*The Applicant must ensure that all new buildings and structures, and any alterations or additions to existing buildings and structures, are constructed in accordance with the relevant requirements of the Building Code of Australia.* *Notes:* • *Under Part 6 of the EP&A Act, the Applicant is required to obtain construction and occupation certificates for the development.*	EMS Section 5.10.3

Condition No.	Condition Description	Reference
	• *The EP&A Regulation sets out the requirements for the certification of the development.*	
Demolition		
A8	*The Applicant must ensure that all demolition work on site is carried out in accordance with Australian Standard AS 2601-2001: The Demolition of Structures, or its latest version.*	EMS Section 5.10.4
Protection of Public Infrastructure		
A9	*Unless the Applicant and the applicable authority agree otherwise, the Applicant must:* *(a) repair, or pay the full costs associated with repairing, any public infrastructure that is damaged by the development; and* *(b) relocate, or pay the full costs associated with relocating, any public infrastructure that needs to be relocated as a result of the development.* *This condition does not apply to the upgrade and maintenance of the road network, which is expressly provided for in the conditions of this consent.*	EMS Section 5.10.5
Operation of Plant and Equipment		
A10	*The Applicant must ensure that all plant and equipment used on site, or in connection with the development, is:* (a) *maintained in a proper and efficient condition; and* (b) *operated in a proper and efficient manner.*	EMS Section 5.10.6
Subdivision		

Condition No.	Condition Description	Reference
A11	*The Applicant may subdivide land comprising the site for the purposes of carrying out the development as identified in Appendix 3 (of Conditions of Consent) and in accordance with the requirements of the EP&A Act, EP&A Regulation and the Conveyancing Act 1919 (NSW).* *Notes:* • *Under Part 6 of EP&A Act, the Applicant is required to obtain a subdivision certificate for a plan of subdivision.* • *Division 6.4 of Part 6 of the EP&A Act sets out the application requirements for subdivision certificates.*	Outside scope of EMS/EMPs
Applicability Of Guidelines		
A12	*References in the conditions of this consent to any guideline, protocol, Australian Standard or policy are to such guidelines, protocols, Standards or policies in the form they are in as at the date of this consent.* *However, consistent with the conditions of this consent and without altering any limits or criteria in this consent, the Planning Secretary may, when issuing directions under this consent in respect of ongoing monitoring and management obligations, require compliance with an updated or revised version of such a guideline, protocol, Standard or policy, or a replacement of them.*	
Compliance		
A13	*The Applicant must ensure that all of its employees, contractors (and their sub-contractors) are made aware of, and are instructed to comply with, the conditions of this consent relevant to activities they carry out in respect of the development.*	Anyone entering the site, including, but not limited to, all employees, contractors, subcontractors and all

Condition No.	Condition Description	Reference
		others will be required to undertake any induction as required per management plans prepared for the project.
Evidence of Consultation		
A14	*Where conditions of this consent require consultation with an identified party, the Applicant must:* *(a) consult with the relevant party prior to submitting the subject document to the Planning Secretary for approval; and* *(b) provide details of the consultation undertaken including:* *(i) the outcome of that consultation, matters resolved and unresolved; and* *(ii) details of any disagreement remaining between the party consulted and the Applicant and how the Applicant has addressed the matters not resolved.*	Refer to consultation undertaken with CPHR in Appendix D.
Community Enhancement		
A15	*Subject to the agreement of Council, prior to commencing construction, or other timeframe agreed by the Planning Secretary, the Applicant may enter into a VPA with Council in accordance with:* *(a) Division 7.1 of Part 7 of the EP&A Act; and* *(b) the terms of the letter of offer dated 8 November 2023, which are summarised in Appendix 5* (of Conditions of Consent).	Outside scope of EMS/EMPs

Condition No.	Condition Description	Reference
Part B Environmental Conditions - General		
Transport: Heavy Vehicles Requiring Escort and Heavy Vehicle Restrictions		
B1	*The Applicant must ensure that the:* *(a) development does not generate more than:* *I. 60 heavy vehicle movements a day during construction, upgrading and decommissioning;* *II. 80 Light movements and 30 heavy vehicle movements during the AM (6 - 7 am) or PM (5 - 6 pm) project peak hour during construction, upgrading or decommissioning; and* *III. 20 over-dimensional vehicle movements during construction, upgrading and decommissioning; and* *(b) length of any vehicles (excluding over-dimensional vehicles) used for the development does not exceed 26 metres, unless the Planning Secretary agrees otherwise.*	Traffic Management Plan (TMP)
B2	*The Applicant must keep accurate records of the number of over-dimensional and heavy vehicles entering or leaving the site each day for the duration of the project.*	TMP
Transport: Access Route		
B3	*All heavy vehicles and heavy vehicles requiring escort associated with the development must travel to and from the site via:* *(a) Castlereagh Highway, Goolma Road and Twelve Mile Road; or* *(b) Mitchell Highway, Goolma Road and Twelve Mile Road,* *as shown in Appendix 4 (of Conditions of Consent).*	TMP

Condition No.	Condition Description	Reference
	Note: The Applicant is required to obtain relevant permits under the Heavy Vehicle National Law (NSW) for the use of heavy vehicles requiring escort on the road network.	
Transport: Site Access		
B4	*Unless the Planning Secretary agrees otherwise, all vehicles associated with the development must enter and exit the site via the site access point off Twelve Mile Road as identified in Appendix 1 (of Conditions of Consent) identified in Condition B7.*	TMP
B5	*The existing site access off Twelve Mile Road must be closed by the applicant prior to the commencement of any construction activities.*	TMP
Transport: Road upgrades		
B6	*Unless the Planning Secretary agrees otherwise, prior to commencing construction, the Goolma Road / Twelve Mile Road intersection and realignment must be completed as per the scope and conditions of the Uungula Wind Farm SSD-6687*	Outside scope of EMS/EMPs
B7	*Unless the Planning Secretary agrees otherwise, prior to commencing construction, the Applicant must design and construct the new access road intersection on Twelve Mile Road with Basic Left Turn (BAL) and Short Channelised Right-turn (CHR(s) treatments as shown in Appendix 6 (of Conditions of Consent).* *Unless the relevant road authority agrees otherwise, these upgrades must comply with the current Austroads Guidelines, Australian Standards and TfNSW supplements, and be carried out to the satisfaction of the relevant roads authority.*	
Transport: Road Maintenance		

Condition No.	Condition Description	Reference
B8	*The Applicant must, in consultation with Council:* *(a) undertake an independent dilapidation survey to assess the:* *I. existing condition of Twelve Mile Road on the transport route, prior to construction, upgrading or decommissioning works; and* *II. condition of Twelve Mile Road on the transport route, following construction, upgrading or decommissioning works;* *(b) repair Twelve Mile Road on the transport route if dilapidation surveys identify that the road has been damaged during construction, upgrading or decommissioning works.* *If there is a dispute between the Applicant and Council about the repair of Twelve Mile Road, then either party may refer the matter to the Planning Secretary for resolution.*	TMP
Transport: Operating Conditions		
B9	*The Applicant must ensure:* *(a) the internal roads are constructed and maintained as all-weather roads;* *(b) any existing internal roads are maintained as all-weather roads;* *(c) there is sufficient parking on site for all vehicles, and no parking occurs on the public road network in the vicinity of the site;* *(d) the capacity of the existing roadside drainage network is not reduced;* *(e) all vehicles are loaded and unloaded on site, and enter and leave the site in a forward direction; and* *(f) development-related vehicles leaving the site are in a clean condition, with loads appropriately covered or contained, to minimise dirt being tracked onto the sealed public road network*	TMP
Transport: Traffic Management Plan		

Condition No.	Condition Description	Reference
B10	*Prior to commencing road upgrades identified in Condition B6 and B7, the Applicant must prepare a Traffic Management Plan for the development in consultation with TfNSW and Council, and to the satisfaction of the Planning Secretary. This plan must include details of the transport route to be used for all development-related traffic.* *(a) details of the transport route to be used for all development-related traffic;* *(b) details of the road upgrade works required by condition B6 and B7;* *(c) details of the measures that would be implemented to minimise traffic impacts during construction, upgrading or decommissioning works, including:* *I. details of the dilapidation surveys required by condition B8;* *II. temporary traffic controls, including detours and signage;* *III. notifying the local community about development-related traffic impacts;* *IV. procedures for receiving and addressing complaints from the community about development related traffic;* *V. minimising potential cumulative traffic impacts with other State significant development projects in the area;* *VI.) minimising potential for conflict with school buses and other road users as far as practicable, including preventing queuing on the public road network;* *VII. minimising dirt tracked onto the public road network from development-related traffic;* *VIII. details of employee shuttle bus service, including pick-up and drop-off points and associated parking arrangements for construction workers, and measures to encourage employee use of this service as described in the EIS;* *IX. facilitate car-pooling or ride sharing by employees;* *X. scheduling of heavy vehicle movements to minimise convoy length or platoons, and to minimise conflict with light vehicles;* *XI. responding to local climate conditions that may affect road safety such as fog, dust, wet weather and flooding;*	TMP

Condition No.	Condition Description	Reference
	XII. responding to any emergency repair or maintenance requirements; and *XIII. a traffic management system for managing heavy vehicles requiring escort;* *(d) driver's code of conduct that addresses:* *a. driver fatigue* *b. procedures to ensure that drivers adhere to the designated transport routes and speed limits; and* *c. procedures to ensure that drivers implement safe driving practices; and* *(e) a program to ensure drivers working on the development receive suitable training on the code of conduct and any other relevant obligations under the Traffic Management Plan.* *Following the Planning Secretary's approval, the Applicant must implement the Traffic Management Plan*	
Biodiversity: Vegetation Clearance		
B11	*The Applicant must:* *(a) not clear any native vegetation or fauna habitat located outside the approved disturbance areas described in the EIS.*	Biodiversity Management Plan (BMP)
Biodiversity: Biodiversity Offsets		
B12	*Prior to carrying out any development that could directly or indirectly impact on biodiversity values requiring NSE Government Offset, the Applicant must retire biodiversity credits of a number and class specified in Table 1 and Table 2 below, unless the Planning Secretary agrees otherwise.* *The retirement of these credits must be carried out in accordance with the NSW Biodiversity Offsets Scheme and can be achieved by:*	BMP – Section 9

<table>
<tr><th>Condition No.</th><th>Condition Description</th><th>Reference</th></tr>
<tr><td></td><td>
(a) acquiring or retiring 'biodiversity credits' within the meaning of the Biodiversity Conservation Act 2016;
(b) making payments into an offset fund that has been developed by the NSW Government; or
(c) funding a biodiversity conservation action that benefits the entity impacted and is listed in the ancillary rules of the biodiversity offset scheme.

Table 1: Ecosystem Credit Requirements
<table>
<tr><th>Ecosystem Credits</th><th>Credits Required</th></tr>
<tr><td>PCT266 – White Box grassy woodland in the upper slopes sub-region of the NSW South Western Slopes Bioregion</td><td>41</td></tr>
</table>
Table 2 Species Credit Requirements
<table>
<tr><th>Ecosystem Credits</th><th>Credits Required</th></tr>
<tr><td>Superb Parrot</td><td>56</td></tr>
<tr><td>Pink – tailed Legless Lizard</td><td>26</td></tr>
</table>
</td><td></td></tr>
<tr><td>B13</td><td>Prior to carrying out any development that could directly or indirectly impact the biodiversity values requiring offset, the Applicant must provide evidence to the Planning Secretary that biodiversity credits have been retired.</td><td>BMP – Section 9</td></tr>
<tr><td colspan="3">Biodiversity: Biodiversity Management Plan</td></tr>
</table>

Condition No.	Condition Description	Reference
B14	*Prior to commencing construction road upgrades, the Applicant must prepare a Biodiversity Management Plan for the development in consultation with BCS, and to the satisfaction of the Planning Secretary. This plan must:* *(a) be prepared in accordance with the revised Biodiversity Development Assessment Report (dated 13 September 2023);* *(b) include a description of the measures and timeframes that would be implemented for:* *I. protecting vegetation and fauna habitat outside the approved disturbance areas;* *II. managing the remnant vegetation and fauna habitat on site;* *III. minimising clearing and avoiding unnecessary disturbance of vegetation that is associated with the construction and operation of the development;* *IV. minimising the impacts to fauna on site and implementing fauna management protocols;* *V. maximising the salvage of vegetative and soil resources within the approved disturbance area for beneficial reuse in the enhancement or the rehabilitation of the site; and* *VI. controlling weeds, feral pests and pathogens.* *(c) include a program to monitor and report on the effectiveness of mitigation measures;* *(d) include an incidental threatened species finds protocol to identify the avoid and/or minimise and/or offset options to be implemented if additional threatened species are discovered on site; and* *(e) include details of who would be responsible for monitoring, reviewing and implementing the plan.* *Following the Planning Secretary's approval, the Applicant must implement the Biodiversity Management Plan.* *Note: If the biodiversity credits are retired via a Biodiversity Stewardship Agreement, then the Biodiversity Management Plan does not need to include any of the matters that are covered under the Biodiversity Stewardship Agreement*	BMP – see Table 2-1

Condition No.	Condition Description	Reference
Amenity: Construction Hours		
B15	*Road upgrades, construction, Commissioning, demolition, upgrading or decommissioning activities (excluding blasting) may be only undertaken between:* *(a) 7 am to 6 pm Monday to Friday;* *(b) 8 am to 1 pm Saturdays; and* (c) *at no time on Sundays and NSW public holidays.*	EMS Section 3.3 /CEMP/OEMP
Amenity: Exceptions to Construction Hours		
B16	The following activities may be carried outside the hours specified in condition B15 above: (a) *commissioning activities that are inaudible at non-associated residences* (b) *the delivery or dispatch of materials as requested by the NSW Police Force or other public authorities for safety reasons; or* (c) *emergency work to avoid the loss of life, property or prevent material harm to the environment.*	
Amenity: Variation of Construction Hours		
B17	The hours of construction activities specified in condition B15 of this approval may be varied with the prior written approval of the Planning Secretary. Any request to alter the hours of construction must be: (a) considered on a case-by-case or activity-specific basis; (b) accompanied by details of the nature and justification for activities to be conducted during the varied construction hours; (c) accompanied by written evidence that appropriate consultation with potentially affected sensitive receivers and notification of Councils (and other relevant agencies) has been or will be undertaken;	

<table>
<tr><th>Condition No.</th><th>Condition Description</th><th>Reference</th></tr>
<tr><td></td><td>(d) accompanied by evidence that all feasible and reasonable noise mitigation measures have been put in place; and
(e) accompanied by a noise impact assessment consistent with the requirements of the Interim Construction Noise Guideline (DECC, 2009), or latest version.</td><td></td></tr>
<tr><td colspan="3">Amenity: Noise</td></tr>
<tr><td>B18</td><td>The Applicant must:
a) minimise the noise generated by any construction, upgrading or decommissioning activities on site in accordance with the best practice requirements outlined in the Interim Construction Noise Guideline (DECC, 2009), or its latest version; and
b) take all reasonable and feasible steps to minimise operational noise and ensure that the noise generated by the operation of the development does not exceed the noise limits in Table 3 below to be determined in accordance with the procedures in the NSW Noise Policy for Industry (EPA, 2017) at any non-associated residences unless the Planning Secretary agrees otherwise;
Table 3 Operational Noise Limit Requirements
<table>
<tr><th rowspan="3">Location</th><th colspan="4">Noise Limits in dB(A)</th></tr>
<tr><td>Day</td><td>Evening</td><td>Night</td><td>Night</td></tr>
<tr><td>L Aeq (15min)</td><td>L Aeq (15min)</td><td>L Aeq (15min)</td><td>L AF max</td></tr>
<tr><td>Non – Associated Residences</td><td>40</td><td>35</td><td>35</td><td>52</td></tr>
</table>
</td><td>CEMP/OEMP</td></tr>
</table>

Condition No.	Condition Description	Reference
B19	*Unless the Planning Secretary agrees otherwise, within 3 months of the commencement of operation, the Applicant must prepare and submit a Noise Monitoring Report for the development to the satisfaction of the Planning Secretary. The Noise Monitoring Report must:* *(a) be prepared by a suitably qualified, experienced and independent acoustic consultant;* *(b) demonstrate that noise monitoring:* *I. has been carried out in accordance with the procedures in the Noise Policy for Industry (EPA, 2017); and* *II. includes monitoring during the day, evening and night periods during operational, temperature and meteorological conditions that would represent typical worst-case scenarios where reasonable and feasible; and* *(c) include:* *I. 1/3 octave data and calculated sound power levels along with a discussion of any excessive annoying characteristics and directionality;* *II. an analysis of compliance with the noise limits specified in condition B18 at R15;* *III. an outline of implemented at-source and transmission pathway mitigation measures and their effectiveness at reducing operational noise; and* *IV. a description of contingency measures in the event implemented mitigation measures are not effective at reducing noise levels to comply with limits specified in condition B18 at R15 at all times.* *The Applicant must undertake further noise monitoring of the development if required by the Planning Secretary.*	
Amenity: Dust		
B20	*The Applicant must minimise the dust generated by the development.*	CEMP/OEMP

Condition No.	Condition Description	Reference
Amenity: Visual		
B21	*The Applicant must:* *a) minimise the off-site visual impacts of the development, including the potential for any glare or reflection;* *b) ensure the visual appearance of all ancillary infrastructure (including paint colours) blends in as far as possible with the surrounding landscape; and* *c) not mount any advertising signs or logos on site, except where this is required for identification or safety purposes.*	CEMP/OEMP
Amenity: Vegetation Buffer		
B22	*Unless the Planning Secretary agrees otherwise, the Applicant must establish and maintain a vegetation buffer (landscape screening), at the locations identified in the landscape plan in Appendix 7 of this consent and as described in the EIS. The landscape screening must:* *(a) be planted prior to commencing operation;* *(b) be comprised of species that are endemic to the area;* *(c) be designed and maintained in accordance with RFS's Planning for Bushfire Protection 2019 (or equivalent); and* *(d) be properly maintained with appropriate weed management.*	
Amenity: Lighting		
B23	*The Applicant must:* *(a) minimise the off-site lighting impacts of the development; and*	CEMP/OEMP

Condition No.	Condition Description	Reference
	(b) ensure that any external lighting associated with the development: *I. is installed as low intensity lighting (except where required for safety or emergency purposes);* *II. does not shine above the horizontal; and* *III. complies with Australian/New Zealand Standard AS/NZS 4282:2019 – Control of Obtrusive Effects of Outdoor Lighting, and the Dark Sky Planning Guidelines (DPE 2018) or its latest versions.*	
Heritage: Protection of Heritage Items		
B24	*The Applicant must ensure the development does not cause any direct or indirect impacts on the Aboriginal heritage items located outside the approved development footprint.*	Heritage Management Plan (HMP)
Heritage: Unexpected Finds Protocol – Aboriginal Heritage		
B25	*Prior to the commencement of construction, the Applicant must prepare a Chance Finds Protocol for the development in consultation with the Aboriginal Stakeholders, and to the satisfaction of heritage NSW. Following approval, the Applicant must implement the Chance Finds Protocol.*	
Soil and Water: Water Supply		
B26	*The Applicant must ensure that it has sufficient water for all stages of the development, and if necessary, adjust the scale of the development to match its available water supply.* *Note: Under the Water Act 1912 and/or the Water Management Act 2000, the Applicant is required to obtain the necessary water licences for the development*	Soil and Water Management Plan (SWMP)

Condition No.	Condition Description	Reference
Soil and Water: Water Pollution		
B27	*The Applicant must ensure that the development does not cause any water pollution, as defined under Section 120 of the POEO Act.*	ESCP
Soil and Water: Operation Conditions		
B28	*The Applicant must:* *a) minimise erosion and control sediment generation;* *b) ensure that construction, upgrading or decommissioning of the development have appropriate drainage and erosion and sediment controls designed, installed and maintained in accordance with Managing Urban Stormwater: Soils and Construction (Landcom, 2004) manual, or its latest version;* *c) ensure the battery and ancillary infrastructure (including security fencing) are designed, constructed and maintained to reduce impacts on surface water, localised flooding and groundwater at the site;* *d) ensure the battery and ancillary infrastructure (including security are designed, constructed and maintained to avoid any erosion on site:*	ESCP
Hazards: Fire Safety Study		
B29	*Prior to commencing construction of the battery storage facility, the Applicant must prepare a Fire Safety Study for the development, to the satisfaction of FRNSW and the Planning Secretary. The study must:* *a) be consistent with the Department's Hazardous Industry Planning Advisory Paper No. 2 'Fire Safety Study' guideline;* *b) describe the final design of the battery storage facility.*	Fire Safety Study (FSS)

Condition No.	Condition Description	Reference
	c) include reasonable worst-case fire scenario to and from the battery storage and the associated fire management; and *d) identify measures to eliminate the expansion of any fire incident including:* *I. adequate fire safety systems and appropriate water supply;* *II. separation and / or compartmentalisation of battery units; and* *III. strategies and incident control measures specific to the battery storage design.* *Following approval by the Planning Secretary, the Applicant must implement the measures described in the Fire Safety Study.* *Note: 'to the satisfaction of FRNSW' above means confirmation in writing from FRNSW that the study meets the requirements of FRNSW as required by the Department's Hazardous Industry Planning Advisory Paper No. 2 'Fire Safety Study' guideline.*	
Hazards: Storage and Handling of Dangerous Goods		
B30	*The Applicant must store and handle all chemicals, fuels and oils used on-site in accordance with:* *a) the requirements of all relevant Australian Standards; and* *b) the NSW EPA's Storing and Handling of Liquids: Environmental Protection – Participants Handbook if the chemicals are liquids* *In the event of an inconsistency between the requirements (a) and (b) above, the most stringent requirement must prevail to the extent of the inconsistency.*	SWMP
Hazards: Operating Conditions		

Condition No.	Condition Description	Reference
B31	*The Applicant must:* *a) minimise the fire risks of the development, including managing vegetation fuel loads on-site;* *b) ensure that the development:* *I. complies with the relevant asset protection requirements in the RFS's Planning for Bushfire Protection 2019 (or equivalent) and Standards for Asset Protection Zones; and* *II. is suitably equipped to respond to any fires on site, including provision of a 10,000 litre water supply tank fitted with a 65 mm Storz fitting and a FRNSW compatible suction connection;* *c) ensure that the battery storage area:* *I. includes a 10 metre defendable space between the vegetation hazard and the infrastructure that permits unobstructed vehicle access; and* *II. is managed as an asset protection zone (including the defendable space);* *d) assist the RFS and emergency services as much as practicable if there is a fire in the vicinity of the site; and* *e) notify the relevant Local Emergency Management Committee following construction of the development, and prior to commencing operations.*	Emergency Plan (EP)/Bushfire Management Plan
Hazards: Emergency Plan		
B32	*Prior to commencing commissioning, the Applicant must develop and implement a comprehensive Emergency Plan (including an emergency responders induction plan) and detailed emergency procedures for the development, and provide a copy of the plan to the relevant NSW RFS Fire Control Centre and FRNSW. The plan must:* *a) be prepared in accordance with the findings of the Fire Safety Study required under Condition B29 of Schedule 2;*	EP

Condition No.	Condition Description	Reference
	b) be consistent with the Department's Hazardous Industry Planning Advisory Paper No. 1, 'Emergency Planning' and RFS's Planning for Bushfire Protection 2019 (or equivalent); *c) include details on how the battery storage and sub-systems can be safely isolated in an emergency;* *d) include bushfire emergency management planning, including:* *I. details of the location, management and maintenance of the Asset Protection Zone;* *II. a list of works that should not be carried out during a total fire ban;* *III. iii) details of how RFS would be notified, and procedures that would be implemented, in the event that:* *i. there is a fire on-site or in the vicinity of the site;* *ii. there are any activities on site that would have the potential to ignite surrounding vegetation; or* *iii. there are any proposed activities to be carried out during a bushfire danger period; and* *e) include an Emergency Services Information Package in accordance with Emergency services information and tactical fire plan (FRNSW, 2019), to the satisfaction of FRNSW and RFS..*	
B33	*The Applicant must:* *a) implement the Emergency Plan and the Emergency Services Information Package for the duration of the development; and* *b) following commencement of commissioning of the battery storage, keep a copy of the Emergency Services Information Package on-site in a prominent position adjacent to the site entry points at all times.*	
Waste		

Condition No.	Condition Description	Reference
B34	*The Applicant must:* *a) minimise the waste generated by the development;* *b) classify all waste generated on site in accordance with the EPA's Waste Classification Guidelines 2014 (or its latest version);* *c) store and handle all waste on site in accordance with its classification;* *d) not receive or dispose of any waste on site; and* *e) remove all waste from the site as soon as practicable, and ensure it is reused, recycled or sent to an appropriately licensed waste facility for disposal.*	Waste and Resource Management Plan
Accommodation and Employment Strategy		
B35	*Prior to commencing construction, the Applicant must prepare an Accommodation and Employment Strategy for the development in consultation with Council, and to the satisfaction of the Planning Secretary. This strategy must:* *a) propose measures to ensure there is sufficient accommodation for the workforce associated with the development;* *b) consider the cumulative impacts associated with other State significant development projects in the area and tourism activity;* *c) investigate options for prioritising the employment of local workers for the construction and operation of the development, where feasible; and* *d) include a program to monitor and review the effectiveness of the strategy over the life of the development, including regular monitoring and review during construction.* *Following the Planning Secretary's approval, the Applicant must implement the Accommodation and Employment Strategy.*	Accommodation and Employment Strategy (AES)

<table>
<tr><th>Condition No.</th><th>Condition Description</th><th>Reference</th></tr>
<tr><td colspan="3">Decommissioning and Rehabilitation</td></tr>
<tr><td>B36</td><td>Within 18 months of the cessation of operations, unless the Planning Secretary agrees otherwise, the Applicant must rehabilitate the site to comply with the objectives in Table 4.

Table 4: Rehabilitation Objectives
<table><tr><th>Feature</th><th>Objective</th></tr><tr><td>Site</td><td>•Safe, stable and non-polluting</td></tr><tr><td>Battery Storage infrastructure</td><td>•To be decommissioned and removed, unless the Planning Secretary agrees otherwise, with the exception if assets held by the Network Service Provider</td></tr><tr><td>Land use</td><td>•Restore land to pre-existing use</td></tr><tr><td>Community</td><td>•Ensure public safety at all times</td></tr></table></td><td>Decommissioning Plan (see OEMP)</td></tr>
<tr><td colspan="3">Part C Environmental Management, Reporting and Auditing</td></tr>
<tr><td colspan="3">Environmental Management: Environmental Management Strategy</td></tr>
<tr><td>C1</td><td>Prior to commencing construction, the Applicant must prepare an Environmental Management Strategy for the development to the satisfaction of the Planning Secretary. This strategy must:

a) provide the strategic framework for environmental management of the development;
b) identify the statutory approvals that apply to the development;</td><td>Environmental Management Strategy (EMS)</td></tr>
</table>

Condition No.	Condition Description	Reference
	c) describe the role, responsibility, authority and accountability of all key personnel involved in the environmental management of the development; *d) set out the procedures that would be implemented to:* *I. keep the local community and relevant agencies informed about the operation and environmental performance of the development* *II. receive, handle, respond to, and record complaints* *III. resolve any disputes that may arise* *IV. respond to any non-compliance* *V. respond to emergencies; and* *e) include:* *I. references to any plans approved under the conditions of this consent; and* *II. a clear plan depicting all the monitoring to be carried out in relation to the development* Following the Planning Secretary's approval, the Applicant must implement the Environmental Management Strategy.	
Environmental Management: Revision of Strategies, Plans and Programs		
C2	*The Applicant must:* *a) update the strategies, plans or programs required under this consent to the satisfaction of the Planning Secretary prior to carrying out any upgrading or decommissioning activities on site; and* *b) review and, if necessary, revise the strategies, plans or programs required under this consent to the satisfaction of the Planning Secretary within 1 month of the:* *I. submission of an incident report under condition C10 of Schedule 2.* *II. submission of an audit report under condition C14 of Schedule 2; or* *III. any modification to the conditions of this consent.*	CEMP/OEMP

Condition No.	Condition Description	Reference
Environmental Management: Updating and Staging of Strategies, Plans or Programs		
C3	*With the approval of the Planning Secretary, the Applicant may stage the development and may:* *(a) prepare and submit any strategy, plan or program required by this consent on a staged basis (if a clear description is provided as to the specific stage and scope of the development to which the strategy, plan or program applies, the relationship of the stage to any future stages and the trigger for updating the strategy, plan or program);* *(b) combine any strategy, plan or program required by this consent (if a clear relationship is demonstrated between the strategies, plans or programs that are proposed to be combined); and* (c) *update any strategy, plan or program required by this consent (to ensure the strategies, plans and programs required under this consent are updated on a regular basis and incorporate additional measures or amendments to improve the environmental performance of the development)*.	CEMP/OEMP
C4	*If the Planning Secretary agrees, a strategy, plan or program may be staged or updated without consultation being undertaken with all parties required to be consulted in the relevant condition in this consent*	
C5	*If approved by the Planning Secretary, updated strategies, plans or programs supersede the previous versions of them and must be implemented in accordance with the condition that requires the strategy, plan or program*	
C6	*If the Planning Secretary agrees, a strategy, plan or program may be staged without addressing particular requirements of the relevant condition of this consent if those requirements are not applicable to the particular stage.*	

Condition No.	Condition Description	Reference
Notification: Notification of Department		
C7	*Prior to commencing the construction, operations, upgrading or decommissioning of the development or the cessation of operations, the Applicant must notify the Department in writing via the Major Projects website portal of the date of commencement, or cessation, of the relevant phase.* *If any of these phases of the development are to be staged, then the Applicant must notify the Department in writing prior to commencing the relevant stage, and clearly identify the development that would be carried out during the relevant stage.*	CEMP/OEMP
Notification: Final Layout Plans		
C8	*Prior to commencing construction, the Applicant must submit detailed plans of the final layout of the development to the Department via the Major Projects website and to Council, showing comparison to the approved layout and including details on the siting of battery storage and ancillary infrastructure.* *The Applicant must ensure that the development is constructed in accordance with the Final Layout Plans.*	CEMP
Notification: Work as Executed Plans		
C9	*Prior to commencing operations or following the upgrades of any battery storage components or ancillary infrastructure, the Applicant must submit work as executed plans of the development showing comparison to the final layout plans to the Department via the Major Projects website and also to Council and NSW Subsidence Advisory.*	CEMP/OEMP
Notification: Incident Notification		

Condition No.	Condition Description	Reference
C10	*The Department must be notified in writing via the Major Projects website immediately after the Applicant becomes aware of an incident. The notification must identify the development (including the development application number and the name of the development if it has one) and set out the location and nature of the incident. Subsequent notification requirements must be given, and reports submitted in accordance with the requirements set out in Appendix 8* (of Conditions of Consent).	CEMP/OEMP
Notification: Non-Compliance Notification		
C11	*The Planning Secretary must be notified in writing via the Major Projects website within seven days after the Applicant becomes aware of any non-compliance*	CEMP/OEMP
C12	*A non-compliance notification must identify the development and the application number for it, set out the condition of consent that the development is non-compliant with, the way in which it does not comply and the reasons for the non-compliance (if known) and what actions have been, or will be, undertaken to address the non-compliance.*	CEMP/OEMP
C13	*A non-compliance which has been notified as an incident does not need to also be notified as a non-compliance.*	CEMP/OEMP
Independent Environmental Audit		
C14	*Independent Audits of the development must be conducted and carried out in accordance with the Independent Audit Post Approval Requirements (2020) to the following frequency:* *(a) within 3 months of commencing construction; and* *(b) within 3 months of commencement of operations.*	CEMP/OEMP

Condition No.	Condition Description	Reference
C15	*Proposed independent auditors must be agreed to in writing by the Planning Secretary prior to the commencement of an Independent Audit.*	CEMP/OEMP
C16	*The Planning Secretary may require the initial and subsequent Independent Audits to be undertaken at different times to those specified in condition C14 of Schedule 2 upon giving at least 4 weeks' notice to the Applicant of the date upon which the audit must be commenced.*	CEMP/OEMP
C17	*In accordance with the specific requirements in the Independent Audit Post Approval Requirements (2020), the Applicant must:* *a) review and respond to each Independent Audit Report prepared under condition C14 of Schedule 2 of this consent, or condition C16 of Schedule 2 where notice is given by the Planning Secretary;* *b) submit the response to the Planning Secretary; and* *c) make each Independent Audit Report, and response to it, publicly available within 60 days of submission to the Planning Secretary. unless otherwise agreed by the Planning Secretary.*	CEMP/OEMP
C18	*Independent Audit Reports and the Applicant's response to audit findings must be submitted to the Planning Secretary within 2 months of undertaking the independent audit site inspection as outlined in the Independent Audit Post Approvals Requirements (2020) unless otherwise agreed by the Planning Secretary.*	CEMP/OEMP
C19	*Notwithstanding the requirements of the Independent Audit Post Approvals Requirements (2020), the Planning Secretary may approve a request for ongoing independent operational audits to be ceased, where it has been demonstrated to the Planning Secretary's satisfaction that independent operational audits have demonstrated operational compliance.*	OEMP
Access to Information		

Condition No.	Condition Description	Reference
C20	*The Applicant must:* *a) make the following information publicly available on its website as relevant to the stage of the development:* *I. the EIS;* *II. the final layout plans for the development;* *III. current statutory approvals for the development;* *IV. approved strategies, plans or programs required under the conditions of this consent (other than the Fire Safety Study and Emergency Plan);* *V. the proposed staging plans for the development if the construction, operation and/or decommissioning of the development is to be staged;* *VI. a comprehensive summary of the monitoring results of the development, which have been reported in accordance with the various plans and programs approved under the conditions of this consent;* *VII. how complaints about the development can be made;* *VIII. any independent environmental audit, and the Applicant's response to the recommendations in any audit; and* *IX. any other matter required by the Planning Secretary; and* *b) keep this information up to date.*	EMS Section 7.4/CEP

Appendix B:
EIS and Amendment report commitments

Table C1 Consolidated EIS and Amendment report commitments

Impact/risk	ID	Measure	Timing
Biodiversity			
Removal of Box Gum Woodland and derived native grassland	BIO01	Retain vegetation where possible within the transmission line connection. Limit the removal of vegetation to necessary trees and trimming of branches.	Construction; post-construction
Removal of Box Gum Woodland and derived native grassland	BIO02	Locate the access of the BESS on most of the existing access track within the project boundary.	Design
Removal of Box Gum Woodland and derived native grassland	BIO03	Following construction, include species consistent with PCT 266 into landscaping and vegetation screens.	Post-construction
Removal of hollow-bearing trees	BIO04	Minimise removal of hollow-bearing trees which occur within the project boundary, where possible. A visual screening area is included in the project boundary, where efforts to retain the 7 remaining trees will be made. Although this is the aim of AMPYR, impacts to hollow-bearing trees include the removal of the 7 trees within the subject land for the purpose of this assessment	Design
Removal of hollow-bearing trees	BIO05	Install 7 nest boxes or equivalent within the cadastral boundary of the site in remnant woodland. As a priority, the removed hollows should be retained to be re-installed on remnant trees within the site. Where this is not possible, nest boxes can be used.	Construction
Removal of potential habitat fauna (hollow-bearing trees) (for all species including the Superb Parrot)	BIO06	Pre-clearance surveys to be conducted prior to removal of hollow-bearing trees (at the locations specified in the BDAR).	Pre-construction
Removal of potential habitat fauna (hollow-bearing trees) (for all species including the Superb Parrot)	BIO07	If the Superb Parrot is found to be utilising a hollow, a hollow inspection will be undertaken using an elevated work platform, tree climber and/or inspection camera. If eggs are present in the hollow, these eggs will be collected and provided to a wildlife carer for raising, prior to release. If hatchlings are present, removal of the hollow-bearing tree must be postponed until birds have fledged and left the hollow for the breeding season (September to December).	Pre-construction
Removal of logs and debris from the subject land	BIO08	Retain hollow logs, all rocks and debris to be used post construction in remnant woodland. These will be relocated	Post-construction

		outside of the subject land (within the cadastral boundary) in the remnant woodland to the east, south and west to retain species habitat and connectivity. Avoid relocation of rocks during Pink-tailed Legless Lizard breeding season (December to late March).	
Removal of logs and debris from the subject land	BIO09	Pre-clearance surveys to be conducted immediately prior to removal of logs, rocks and debris.	Pre-construction
Indirect impacts on White Box woodland to be retained	BIO10	Retained trees will be marked for their protection during construction, where required. Markings will be monitored and reapplied where necessary during construction.	Pre-construction
Indirect impacts on White Box woodland to be retained	BIO11	All workers to be made aware of ecologically sensitive areas and the need to avoid impacts. This includes adjacent native vegetation.	Pre-construction
Erosion and sedimentation to the indirect impact area	BIO12	Sediment controls, including fencing and sediments traps, should be installed in any areas where works will occur in proximity to low lying vegetation. This includes along the boundary of the unnamed watercourse. avoid the spread of seed and other propagules.	Pre-construction
Weed introduction and spread	BIO13	Remove weeds prior to clearing. Weeds are to be stockpiled appropriately prior to removal from the subject land to avoid the spread of seed and other propagules.	Construction
Weed introduction and spread	BIO14	Weed hygiene protocols are in place prior to entering the subject land. This includes wash-down procedures to all plant and machinery.	Construction
Disturbance	BIO15	Monitor dust levels and implement suppression strategies where required such as wetting down dirt roads or reducing vehicle speeds.	Construction
Threatened species finds	BIO16	Have a threatened species protocol; for managing threatened species which may be found on site during construction.	Pre-construction Construction
Ground disturbance			
Ground disturbance	ACH01	All site personnel should be made aware that there are registered Aboriginal sites within the vicinity of the project area and therefore must not undertake ground disturbance outside of approved areas. Appropriate signage and temporary fencing should be erected around AHIMS 36-4-0203 to ensure no inadvertent impacts occur to this site.	Prior to ground disturbance
Impact to known heritage items	ACH02	Appropriate signage and temporary fencing should be erected around AHIMS	Pre-construction

		36-4-0203 to ensure no inadvertent impacts occur to this site.	
Reporting and record keeping	ACH03	Prior to ground disturbance an Aboriginal cultural heritage management plan (ACHMP) must be developed by a heritage specialist in consultation with the Aboriginal stakeholders and consent authority to provide the post-approval framework for managing Aboriginal heritage within the project area. The ACHMP should include the following aspects: • • A workshop between the archaeologists and the RAPs prior to undertaking the ACHMP to develop the approach to the document as requested by WVWAC during the ACHA review period. • Liaise with the RAPs in developing suitable visual strategies to minimise impacts of the project to the broader cultural landscape (eg cultural plantings, screening, paint styles, etc). • Process, timing, and communication methods for maintaining Aboriginal community consultation and participation through the remainder of the project. • Description and methods for undertaking further Aboriginal heritage assessment, investigation and mitigation of any areas of the project area that have changed following completion of the Aboriginal heritage assessment and/or during the final design and construction phases of the project. • Procedures for managing the unexpected discovery of Aboriginal objects, sites and/or human remains during the project and delivered through an Aboriginal Cultural Heritage Induction Program developed and delivered by the RAPs onsite to ensure culture, heritage and artefactual materials are identified and managed appropriately • Procedures for the curation and long-term management of cultural materials if recovered as part of unexpected finds.	Pre-construction

		• Processes for reviewing, monitoring, and updating the AHMP as the project progresses.	
Reporting and record keeping	ACH04	The Construction Environment Management Plan (CEMP), or equivalent, should reinforce how the cultural landscape is considered throughout the project and detail the rehabilitation of the project area. This should be undertaken in consultation with the RAPs. The CEMP should be distributed to the RAPs for their records.	Pre-construction
Consultation	ACH05	Consultation should be maintained with the RAPs during the finalisation of the assessment process and throughout the construction phase of the project. Details for how this consultation should be undertaken will be outlined in the ACHMP.	Pre-construction
Consultation	ACH06	A copy of the ACHA should be lodged with AHIMS and provided to each of the RAPs.	Pre-construction
Information management	ACH07	Where the heritage consultant changes through the project, suitable hand over should occur to minimise loss or mistranslation of the intent of the information, findings and future steps in heritage management.	Pre-construction
Noise and vibration			
Construction noise and vibration	NV01	Regular reinforcement (such as at toolbox talks) of the need to minimise noise and vibration amongst construction personnel.	Construction
Construction noise and vibration	NV02	Use of portable radios, public address systems or other methods of site communication that may unnecessarily impact upon nearby residents will be avoided.	Construction
Construction noise and vibration	NV03	Routes for the delivery of materials and parking of vehicles to minimise noise will be developed.	Construction
Construction noise and vibration	NV04	Where possible, use of equipment that generates impulsive noise will be avoided.	Construction
Construction noise and vibration	NV05	Nearby residents will be notified prior to the commencement of intensive works.	Construction
Plant and equipment noise and vibration	NV06	Where possible, quieter plant and equipment based on the optimal power and size to most efficiently perform the required tasks will be selected.	Design and construction
Plant and equipment noise and vibration	NV07	Plant and equipment to be operated in the quietest and most efficient manner.	Design and construction
Plant and equipment noise and vibration	NV08	Plant and equipment will be regularly inspected and maintained to minimise	Construction and operation

		noise and vibration level increases and to ensure that all noise and vibration reduction devices are operating effectively.	
Operational noise and vibration	NV09	To address the residual noise exceedance at R1 negotiations have commenced between the applicant and the landholder for treatment to the dwelling (upgraded glazing and where necessary alternative ventilation) to ensure equivalent internal noise levels are achieved (-10dB or more) below the relevant external PNTL and will be documented in the form of a negotiated agreement. It is recommended that the treatment to the dwelling contained in the agreement be implemented during the early stages of Phase 1 construction in order to further mitigate construction noise impacts.	Construction and operation
Operational noise and vibration	NV10	During the detailed design phase of the project all plant and equipment will be reviewed to ensure noise levels predicted in the NVIA can be achieved through: • selection of plant and equipment; • site layout and orientation of equipment; • provision of acoustic barrier (wall/retaining wall and batter or earth mounds) four metres in height to the north, east, south and west with site access provision provided in north-west corner; • utilisation and operational procedures consistent with the assumptions in this NVIA; • consideration of additional earth mound to the north-east three metres in height adjacent the Twelve Mile Road site boundary; or • a combination of the above measures.	Design
Operational noise and vibration	NV11	An EMP will be prepared to manage environmental impacts during the operational phase of the project. For operations, the EMP will address noise management and mitigation options (where required) prior to commencement of operations. The EMP will outline a procedure to: • Measure operational noise levels at early stages during commissioning or	Pre-construction

		within 3 months of operation to validate • the predicted operational noise levels. • Re-evaluate the predicted operational noise levels at assessment locations, and where required review noise • management, mitigation measures and site management to reduce levels where required. This may include (but is • not limited to): – equipment noise controls; – provision of additional or amended acoustic barriers; – at receiver noise treatment; – negotiated agreement; and – measuring operational noise levels at assessment locations, especially during the evening and night-time period, if relevant, and implementing further noise management and mitigation measures where an exceedance of approved noise levels is identified.	
Historic Heritage			
Unexpected finds	HER01	If unexpected finds of historical nature are discovered during work, work within 5 m of the find must cease and the any following steps taken: • an archaeologist will be contacted to assess the find, where relic moderate to high potential to be a relic (this may require additional); • if the find is determined to be a relic, a s146 (of the *Heritage Act*) is to be forwarded to the Heritage Council who will be consulted on the appropriate management measure; and • if the find is assessed and is not a relic, work inside the area that was made a no-go area can re-commence."	Construction and operation
Human remains	HER02	In the event that known or suspected human remains (generally in skeletal form) are encountered during the activity, the following procedure will be followed immediately upon discovery:	Construction and operation

		• all work in the immediate vicinity will cease and the find will be immediately reported to the work supervisor who will advise the Environment Manager or other nominated senior staff member; • the Environment Manager or other nominated senior staff member will promptly notify the police (as required for all human remains discoveries); • the Environment Manager or other nominated senior staff member will contact Heritage NSW for advice on identification of the human remains; • if it is determined that the human remains are Aboriginal ancestral remains, the Local Aboriginal Land Council will be contacted, and consultative arrangements will be made to discuss ongoing care of the remains; and • if it is determined that the human remains are not Aboriginal ancestral remains, further investigation will be conducted to determine if the remains represent a historical grave or if police involvement is required.	
Hazards and Risks			
Offsite safety incidents	HAZ01	AMPYR to consult with Fire and Rescue NSW (FRNSW) during detailed design of the facility to ensure that the relevant aspects of fire protection measures have been included. These may include: 1. type of firefighting or control medium; and 2. demand, storage and containment measures for the medium. The above aspects will form an input to the Fire Safety Study which may be required as part of the development consent conditions, for review and approval by FRNSW.	Design
Offsite safety incidents	HAZ02	AMPYR to review the investigation reports on the Victorian Big Battery Fire (occurred on 31 July 2021) and implement relevant findings for the project. The publicly available investigation reports include:	Design

		• Energy Safe Victoria: Statement of Technical Findings on fire at the Victorian Big Battery. • Fisher Engineering and Energy Safety Response Group: Report of Technical Findings on Victorian Big Battery Fire.	
Land Resources			
Impacts to land and soil capability	LR01	As part of the CEMP, soil management measures are recommended to ensure the preservation of soil resources, including: • assessment of topsoil depths to be stripped prior to stripping to minimise the mixing of topsoil and subsoil; • attempt to strip and manage different soils types separately; • avoid mixing topsoil with subsoil during stripping operations; • avoid stripping topsoil following heavy rain periods that leaves the soil structure saturated; • avoid compaction of topsoil during stripping and stockpiling operations; • amelioration of topsoil and, where necessary, subsoil during stripping operations in accordance with a soil scientists' recommendations. Ameliorants should be applied prior to stripping of their respective layers, to maximise mixing of the ameliorants during the stripping process; • stockpile topsoil separately from subsoil (if it is necessary to strip subsoil); • where practical and possible, the subsoils and topsoils should be located so that stockpiled material is placed on the same underlying soil unit; protection of stockpiles from erosion using soil stabilising polymers, cover crops or other forms of stabilisation; • revegetation of long-term topsoil stockpiles with native plant community types to minimise stockpile water logging, the generation of anaerobic conditions, help maintain topsoil	Design

		biological viability and to create a seed store; and • test stockpiled subsoil and topsoil to determine amelioration requirements prior to reinstatement.	
Erosion and sedimentation	LR02	Drainage and landform design to: • avoid concentration of flow and maintain sheet flow conditions where practicable; • avoid excavating drains in dispersive soils and locate roads, hardstands and pads to utilise the natural slope so that water drains away as required • maintain the velocity of flows below 0.3m/s; • avoid the use of structures that pond water and can cause tunnel erosion such as check dams and channel banks in concentrated flows and benches on cut and fill batters; • use back-push diversion in lieu of channel banks if it is necessary to divert flow; • ameliorate dispersive soils particularly in cable trenches and fill embankments where there is a high risk of tunnel erosion; and • use high efficiency sediment basins (Type B) with flow activated dosing systems to treat turbid runoff to protect downstream receivers.	Design
Land disturbance extent and duration	LR03	As part of the CEMP, land disturbance processes will be developed to ensure unnecessary land disturbance does not occur, including provision for site inspection by the site Environmental Manager or delegate prior to disturbance to identify any necessary environmental, cultural, drainage and erosion and sediment controls are planned and implemented as required.	Design
Land disturbance extent and duration	LR04	Initial earthworks and major land disturbing activities to avoid high rainfall erosivity period (summer storm season) November through to March where practical to minimise erosion. Where major land disturbing works need to occur in high rainfall erosivity periods then a commensurate level of erosion and sediment control will be adopted.	Design

Land disturbance extent and duration	LR05	The timing of stabilisation and rehabilitation works are to consider: • proximity to sensitive receptors • soil erosivity; • slope gradient and length; • time of year (rainfall risk); and • site access.	Design
Water movement through the site	LR06	Clean upslope run-on should be diverted around areas of ground disturbance to minimise the erosion potential and volume of turbid runoff that needs to be treated.	Design
Water movement through the site	LR07	Access tracks should be designed and constructed to avoid the concentration of flow where possible. The roads should have a crowned profile in most instances with a minimum cross fall of 4% to minimise the formation of corrugations, with infall and outfall drainage only where necessary.	Design
Water movement through the site	LR08	Track drainage should be turned out using back push diversion banks or trapezoidal mitre drains where possible. Drains will need to be lined (generally rock) where flow velocities exceed the maximum permissible velocity of the soil.	Design
Water movement through the site	LR09	Track surfaces should be stabilised using a soil stabilising polymer emulsion design to minimise erosion, turbid runoff, dust emissions, watering and maintenance.	Design
Water movement through the site	LR10	The waterway crossings should be a low-level concrete causeway with low flow culverts and a stilling pond type energy dissipator to minimise erosion of the watercourse downstream of the crossing.	Design
Water movement through the site	LR11	Early installation of the causeway should be a priority during track construction to allow the safe passage of clean run- on water.	Construction
Water movement through the site	LR12	Rainfall falling onto the roofs of offices and workshop facilities is clean water and should be captured using gutters and stored in tanks for re-use and overflows directed away from active construction areas.	Operation
Water movement through the site	LR13	Turbid water runoff from the substation/BESS, laydown and where practicable, access tracks should be diverted to Type B sediment basins for treatment.	Design
Water movement through the site	LR14	Sediment Basins should be constructed as a priority before any other land disturbances to maximise the capture of sediment and turbid runoff.	Construction

Water movement through the site	LR15	Fuel storages should be self-bunded and other hydrocarbon and chemical storages bunded in accordance with AS1940.	Design
Stabilisation	LR16	Progressive stabilisation and rehabilitation of disturbed areas should be undertaken to minimise erosion and the generation of sediment and turbid runoff. Due to the gentle slope gradients on site and presence of suitable quality topsoil, bonded fibre matrix hydro-mulches (BFM) are considered appropriate for site rehabilitation purposes. For slopes steeper than 1:2 a hydraulically applied growth medium (HGM) is recommended.	Construction
Stabilisation	LR17	Ensure that non-water soluble, mineral based, biologically inoculated fertilisers are used in any revegetation works to not impact on background landowners participating in organic or carbon farming initiatives.	Construction
Sediment retention	LR18	Type B high efficiency sediment basins with flow activated dosing systems are recommended where calculated soil loss exceeds 150 t/ha/y (Substation/BESS and Laydown Area) or control of turbidity is required to protect creek systems.	Design
Sediment retention	LR19	In-stream sediment controls should be avoided where possible by scheduling works in creeks to avoid the summer storm season.	Construction
Sediment retention	LR20	As part of the CEMP, water movement processes will be developed to minimise the potential for accidental turbid water discharge during pumping and dewatering activities on site.	Design
Erosion and sedimentation	LR21	Drainage, erosion and sediment control measures at all times until their function is no longer required.	Construction and operation
Erosion and sedimentation	LR22	Inspections of control measures need to be undertaken following rainfall that causes run-off or monthly during dry conditions.	Construction and operation
Erosion and sedimentation	LR23	Inspections should be undertaken by the site Environmental Manager or delegate. That person shall have the following knowledge: • an understanding of site environmental values that could be impacted by site construction and operation; • an understanding of the requirements of the Ministers Conditions of Approval and	Construction and operation

		Environmental Protection Licence that are relevant to drainage, erosion and sediment control; • a good working knowledge of drainage, erosion and sediment control fundamentals and the project specific application thereof; • ability to provide advice and guidance on appropriate measures and procedures to maintain the site at all times in a condition representative of regionally specific best practice, and that is reasonably likely to achieve the required standards; and • a good working knowledge of the correct installation, operation and maintenance procedures for the full range of drainage, erosion and sediment control measures used on the project.	
Erosion and sedimentation	LR24	Control measures to be maintained to the maximum practicable extent so that control measures: • will best achieve the sites required environmental protection including achieving the water quality criteria specified in the Environmental Protection Licence in the nominated design storm event; • are in accordance with the specified operational standard for each drainage, erosion and sediment control measure; and • prevents or minimises safety risks.	Construction and operation
Erosion and sedimentation	LR25	All water, debris and sediment removed from control measures shall be disposed of in a manner that will not create an erosion or pollution hazard.	Construction and operation
Erosion and sedimentation	LR26	It is recommended that a hierarchical ESC planning system be adopted for construction and operation of the project consisting of an overarching project wide ESCP with Progressive ESCP's for all disturbance areas to ensure that the projects ESCP's are living documents that can and will be modified as site conditions change, or if the adopted control measures fail to achieve the desired treatment standard.	Design

Erosion and sedimentation	LR27	The ESCP's are recommended to be prepared and certified by a suitably qualified and experienced Certified Professional in Erosion and Sediment Control.	Design
Erosion and sedimentation	LR28	If a site inspection or environmental monitoring identifies a significant failure of the adopted drainage, erosion and sediment control measures, a critical evaluation of the failure should be undertaken to determine the cause and appropriate modifications made to the control measures on site and ESCP's amended.	Construction and operation
Erosion and sedimentation	LR29	All project personnel including contractors are recommended to have an appropriate level of drainage, erosion and sediment training. Three levels of competency training for personnel are recommended: Level 1 – basic awareness level training and provided during the site induction. Level 2 – half day training for foreman, engineers, project managers etc on the legal aspects of drainage, erosion and sediment control, fundaments and site-specific strategies, techniques and requirements. Level 3 – detailed one day training course where drainage, erosion and sediment control is a regular component of their daily activities and competence is required.	Construction and operation
Social			
Amenity related to traffic noise	SOC01	Implement ongoing community engagement mechanism (i.e. dedicated project phone number and email), which provides the opportunity for stakeholders to raise complaints, grievances, and provide feedback.	Construction and operation
Community related to community investment, social cohesion, and resilience	SOC02	Develop funding and grant opportunities within the local and regional area where need is determined.	Pre-construction and operation
Community related to community investment, social cohesion, and resilience	SOC03	Develop a strategy for the enhanced identification and implementation of shared value opportunities within the local area.	Pre-construction and operation
Community related to community investment, social	SOC04	Utilise a community and stakeholder engagement strategy to facilitate funding decisions that are informed by the local community, including regular meetings	Pre-construction and operation

cohesion, and resilience		with local MP's, Dubbo Regional Council, local community groups, and local community members.	
Public safety related to increased traffic on Goolma Road and through Goolma Road and Twelve Mile Road intersection	SOC05	Action the recommendations of the TIA to improve road safety objectives along the Goolma Road.	Pre-construction and operation
Public safety related to increased traffic on Goolma Road and through Goolma Road and Twelve Mile Road intersection	SOC06	Liaise with Dubbo Regional Council and TfNSW to explore the potential and utility of a reduction in the speed limit along Goolma Road as well as for an increase in road maintenance. AMPYR should look to implement a corporate policy that restricts its heavy vehicle fleet to travelling a maximum of 80 km/h along Goolma Road.	Pre-construction and operation
Public safety related to increased traffic on Goolma Road and through Goolma Road and Twelve Mile Road intersection	SOC07	Implement driver inductions, including a driver code of conduct, requiring compliance with road safety procedures and prohibiting unsafe driving practices such as tailgating, convoying, and speeding. Explore carpooling and utilisation of a bus service as a way to mitigate public safety impacts and manage driver fatigue.	Pre-construction and operation
Public safety related to increased traffic on Goolma Road and through Goolma Road and Twelve Mile Road intersection	SOC08	Continue community engagement to monitor compliance with road safety measures and encourage local residents to report any instances of unsafe driving of construction vehicles using community engagement grievance mechanisms.	Pre-construction and operation
Public safety related to increased traffic on Goolma Road and through Goolma Road and Twelve Mile Road intersection	SOC09	Implementing a risk prevention strategy to limit heavy vehicle traffic occurring along the school bus route during school commuting times. The school bus route occurs between 7.52 am – 8.47 am and 3.07 pm – 4.18 pm and it is recommended that heavy vehicles are restricted from travelling during these times. As a precaution, AMPYR should ensure that there is a reduction in heavy vehicle speed along the school bus route on Goolma Road during school commuting hours.	Pre-construction and operation
Public safety related to increased traffic on Goolma Road and through Goolma Road and Twelve Mile Road intersection	SOC10	Liaison between the proponent, TfNSW, local Council and the bus operator is recommended to establish safe rural bus stops to enable the bus to draw fully off the road in conjunction with school bus zone signage.	Pre-construction and operation
Public safety related to increased traffic on	SOC11	Implementation a Driver's Code of Conduct which would manage AMPYR's	Pre-construction and operation

Goolma Road and through Goolma Road and Twelve Mile Road intersection		contribution to these safety issues. The Driver's Code of Conduct should include a requirement for all truck drivers to give way to school bus movements.	
Public safety related to increased traffic on Goolma Road and through Goolma Road and Twelve Mile Road intersection	SOC12	AMPYR to be involved in consultation with other developments in the area, namely the proponents of Wellington North Solar Farm and Uungula Wind Farm as well as Dubbo Regional Council, Wellington schools and bus service operator to establish community meetings if required to serve as a consistent means of monitoring the safety of school bus route during construction.	Pre-construction and operation
Public safety related to fire	SOC14	Action the recommendations stated in the PHA to mitigate any potential public safety risks stemming from fire hazards.	Pre-construction and construction
hazards	SOC15	Consult with Fire and Rescue NSW (FRNSW) during detailed design of the facility to ensure that the relevant aspects of fire protection measures have been included.	Pre-construction and construction
Public safety related to fire	SOC16	Consult with the local Wellington Fire Service and the Rural Fire Service to implement a Fire Management Plan.	Pre-construction and construction
Livelihood related to increased local employment opportunities	SOC17	Seek to appoint a construction contractor(s) who adopts a preferential approach to hiring which prioritises employment of workers with relevant skills residing within the local area, then the regional area, followed by hiring outside of these areas.	Pre-construction and construction
Livelihood related to increased local employment opportunities	SOC018	The proponent and/or its construction contractor(s) to work with local employment, apprenticeship and training agencies to enhance the potential of hiring of local and regional workers thereby minimising the need to hire workers from outside of the local and regional areas.	Pre-construction and construction
Livelihood related to increased local employment opportunities	SOC19	Partnership with local employment and training agencies could create specific benefits for at-risk youth and people struggling to find employment by providing direct employment opportunities.	Pre-construction and construction
Livelihood related to increased local employment opportunities	SOC20	Provision of apprenticeship and training opportunities.	Pre-construction and construction
Livelihood related to training and	SOC21	To maximise potential benefits, it is recommended that AMPYR and/or its construction contractor(s) partner with	Pre-construction and construction

apprenticeship opportunities		local employment training agencies to provision for apprenticeships and training programs that are tailored to the local community and promote skilled employment pathways for the project.	
Livelihood related to training and apprenticeship opportunities	SOC22	It is recommended that AMPYR and/or its construction contractor(s) explore the opportunity to sponsor the licenses required for employment in the construction industry, which would enable youth, particularly in the regional area, to gain meaningful employment as well as increase their employability.	Pre-construction and construction
Livelihood related to training and apprenticeship opportunities	SOC23	Apprenticeship and employment opportunities can be further enhanced through the implementation of vocational education and training (VET) programs and work experience for schools in the local and regional area. This could encourage pathways to local employment, thereby encouraging youth retention.	Pre-construction and construction
Traffic safety			
Traffic safety	T01	A BAL will be installed for left turning traffic from Twelve Mile Road westbound to site access road and a CHR(S) will be required for right turning traffic from Twelve Mile Road southbound to site access road.	Pre-construction
Traffic safety	T02	A detailed construction traffic management plan (CTMP) will be developed by the construction contractor in consultation with Dubbo Regional Council prior to the commencement of works.	Pre-construction
Traffic safety	T03	Obtain a permit (from NHVR) to allow OSOM vehicles to use the road network as part of construction.	Pre-construction
Traffic safety	T04	Consider removal of tree hence allowing visibility to a greater distance. Construction stage traffic management measures such as warning signs for trucks entering (sign no. t2-25, to be confirmed in the CTMP).	Pre-construction
Visual			
Visual impacts	VIS01	Development of the project design has included and will continue to include general measures to reduce the degree of contrast between project infrastructure and the surrounding rural landscape, having regard to the form, scale, height, colour and texture of materials incorporated as part of the project.	Design

Visual impacts	VIS02	Where possible, suitable colours and finishes will be chosen for project infrastructure to minimise visual impacts (including glare/reflectivity), including the O&M buildings/facilities and the acoustic wall surrounding the BESS area. These buildings and materials will be designed to blend in with the local rural/farming landscape. If practicable, the wall may be painted in a neutral colour (eg khaki, beige, green or similar) rather than white, so as to better blend in with the local rural landscape.	Design
Visual impacts	VIS03	Landscaping to be installed along all boundaries of the BESS compound in accordance with the conceptual landscape plan, including use of suitable vegetation species identified in the VIA. The final location and extent of landscaping will be determined during detailed design and following subsequent discussions with the property owners of R23 and local suppliers as part of preparation of the environmental management plan (EMP).	Design
Surface water			
Impacts to watercourses and riparian corridors	SW01	Final project layout to be adjusted, where possible, during detailed design to avoid encroachment into the inner 50% of the vegetated riparian zone along Watercourse A. This should apply to permanent works as well as any temporary works required during construction.	Design
Impacts to watercourses and riparian corridors	SW02	Detailed design to develop a bed level or culvert waterway crossing design for Watercourse A that is consistent with guidance in DoPI (2012).	Design
Impacts to water quality	SW03	Implementation of erosion and sediment control measures and site rehabilitation and revegetation in accordance with best practice. The LSEA (EMM 2020) describes a range of proposed measures for adoption. Proposed measures will be considered further and formalised as part of detailed design and documented in the CEMP. Access tracks to incorporate appropriate water quality treatment measures such as vegetated swales to minimise the opportunity of dirty water leaving the site and entering waterways. Implementation of procedures for hazardous material storage and spill management to be	Design and pre-construction

		prepared and documented within the CEMP.	
Flood impacts	SW04	Construction site planning at detailed design stage to: • consider flood risk and locate temporary site works, compounds, storage areas and plant/equipment away from flood prone areas where practicable; • ensure connectivity of temporary drainage to Watercourse A and retention of overland flow paths from the site; and • maintain riparian corridor setbacks along watercourses.	Design and pre-construction
Water security	SW05	A water supply work approval is to be obtained to convert the existing landholder bore to a water supply bore and a WAL is to be obtained for the required construction water take, should onsite groundwater sources be utilised to supplement other water sources.	Pre-construction
Impacts to watercourses and riparian corridors	SW06	Monitoring of watercourse and riparian corridor condition for Watercourse A immediately adjacent to the project will be undertaken at an appropriate frequency, with maintenance undertaken as required to minimise scouring and erosion in particular in the vicinity of the new watercourse crossing.	Construction and operation
Impacts to water quality	SW07	Continuation of erosion and sediment control and site rehabilitation and revegetation measures as appropriate, and monitoring and maintenance of ground cover vegetation and other stabilised surfaces throughout operation to limit erosion and transport of sediment to watercourses. The LSEA (EMM 2020) describes a range of proposed measures for adoption. Proposed measures will be considered further and formalised as part of detailed design and documented in the OEMP. Implementation of procedures for hazardous material storage and spill management to be prepared and documented within the OEMP.	Construction and operation
Flood impacts	SW08	Detailed design of project to minimise potential for offsite flooding impacts up to and including 1% AEP event by: • ensuring finished ground levels are constructed at-grade and not materially higher than existing	Design

		levels, in particular along potential hydraulic controls that could be formed by the proposed internal access roads; • maintaining connectivity of internal stormwater drainage to Watercourse A and retention of overland flow paths from the site; • incorporation of a detention function for the site water management basin, to maintain predeveloped storm flows to existing conditions up to the 1% AEP event; and • maintaining riparian corridor setbacks along watercourses. Flood emergency management protocols and procedures to be developed and documented in a FERP (or equivalent).	
Water security	SW09	The WAL obtained for the required construction water take, will also be required to cover nominal water use for potential irrigation of the visual screening during operation.	Pre-operation
Air Quality			
Reporting and record keeping	AQ01	Develop appropriate communications to notify the potentially impacted residences of the project (duration, types of works, etc), relevant contact details for environmental complaints reporting.	Pre-construction
Reporting and record keeping	AQ02	A complaints logbook will be maintained throughout the construction phase which should include any complaints related to dust; where a dust complaint is received, the response actions should be detailed in the logbook.	Construction
Reporting and record keeping	AQ03	Record any exceptional incidents that cause dust and/or air emissions, either on or off site, and the action taken to resolve the situation in the logbook.	Construction
Reporting and record keeping	AQ04	Carry out regular site inspections, record inspection results, and make the logbook available for review as requested.	Construction
Dust	AQ05	Erect shade cloth barriers to site fences around potentially dusty activities such as trench excavations and material stockpiles where practicable.	Construction
Dust	AQ06	Keep site fencing and barriers clean using wet methods.	Construction
Dust	AQ07	Deploy water carts to ensure that exposed areas and topsoils/subsoil are kept moist.	Construction

Dust	AQ08	Provide an adequate water supply on the construction site for effective dust/particulate matter suppression/mitigation.	Construction
Dust	AQ09	Modify working practices by limiting activity during periods of adverse weather (hot, dry and windy conditions) and when dust is seen leaving the site.	Construction
Dust	AQ10	Minimise drop heights from loading or handling equipment.	Construction
Site inspections – dust monitoring	AQ11	Undertaking daily on-site and off-site inspections, where receptors are nearby, to monitor dust. The inspection results should be recorded in a specific log. Inspection should include regular dust soiling checks of surfaces such as street furniture and cars.	Construction
Site inspections – dust monitoring	AQ12	At the commencement of each day's activities, the local meteorological forecast should be reviewed, including the timing of notable increases in wind speed and/or temperature. Appropriate increased intensity or additional mitigation measures should be planned for the day based on this forecast review. The likely meteorological conditions and implications for dust emissions and impacts should be discussed at the morning toolbox meeting.	Construction
Site inspections – dust monitoring	AQ13	Increasing the frequency of site inspections when activities with a high potential to produce dust are being carried out and during prolonged dry or windy conditions. Should notable visual dust emissions be observed leaving the site boundary, increased intensity or additional mitigation measures should be deployed.	Construction
Site inspections – dust monitoring	AQ14	Undertaking daily on-site and off-site inspections, where receptors are nearby, to monitor dust. The inspection results should be recorded in a specific log. Inspection should include regular dust soiling checks of surfaces such as street furniture and cars.	Construction
Site inspections – dust monitoring	AQ15	At the commencement of each day's activities, the local meteorological forecast should be reviewed, including the timing of notable increases in wind speed and/or temperature. Appropriate increased intensity or additional mitigation measures should be planned for the day based on this forecast review. The likely meteorological conditions and	Construction

		implications for dust emissions and impacts should be discussed at the morning toolbox meeting.	
Site inspections – dust monitoring	AQ16	Increasing the frequency of site inspections when activities with a high potential to produce dust are being carried out and during prolonged dry or windy conditions. Should notable visual dust emissions be observed leaving the site boundary, increased intensity or additional mitigation measures should be deployed.	Construction
Speed limit	AQ17	Impose a maximum-speed-limit of 20 km/h on all internal roads and work areas during construction.	Construction
Vehicle fuel combustion emissions	AQ18	Ensure proper maintenance and tuning of all equipment engines.	Construction
Clearing	AQ19	Limit the extent of clearing of vegetation and topsoil to the designated footprint required for construction and appropriate staging of any clearing.	Construction
Exposed soils	AQ20	Re-vegetate earthworks and exposed areas/soil stockpiles to stabilise surfaces as soon as practicable.	Construction
Materials handling	AQ21	Minimise drop heights from loading or handling equipment.	Construction
Track out from vehicles	AQ22	Access gates to be located at least 10 m from receptors where possible.	Construction
Track out from vehicles	AQ23	Use water-assisted dust sweeper(s), to remove, as necessary, any material tracked out of the site onto public roads.	Construction
Track out from vehicles	AQ24	Avoid dry sweeping of large areas.	Construction
Track out from vehicles	AQ25	Ensure vehicle loads entering and leaving sites are covered to prevent escape of materials during transport.	Construction
Track out from vehicles	AQ26	Trips and trip distances should be controlled and reduced where possible, for example by coordinating delivery and removal of materials to avoid unnecessary trips.	Construction
Contamination			
Contamination	CON01	An unexpected finds protocol will be developed and contained within the CEMP to include procedures to identify potentially contaminated land, such as: • the observation of discolouration or staining of soils; • visible signs of plant stress, presence of drums or other waste material; • stockpiles or fill material, or odours.	

		Where signs of contamination are identified, whether from known or unexpected sources, construction work within the affected areas would cease until a contamination assessment was undertaken to advise the need for further investigation or remediation.	
Handling and storing waste	CON02	Procedures for handling and storing waste be developed and implemented and contained within the CEMP, including detail on the handling of potentially or known contaminated material and protocols for waste classification and disposal.	Duration of project
Waste			
Waste classification	W01	All waste will be assessed, classified, managed, and disposed of in accordance with the Waste Classification Guidelines (NSW EPA 2014).	Construction
Reporting and recordkeeping	W02	a construction waste and resource management plan will be developed and contained within the CEMP to outline appropriate management procedures and include, but not be limited to: • identify waste types and volumes that are likely to be generated by the project; • adherence to the waste minimisation hierarchy principles of avoid / reduce / reuse / recycle / dispose; • waste management procedures to manage the handling and disposal of waste, including unsuitable material or unexpected waste volumes; and • identification of reporting requirements and procedures for tracking of waste types and quantities.	

Appendix C: Legislation and planning documents

Table E1 Key legislation, regulations and planning instruments

Statutory reference	Description (from EMM 2022)
State legislation and regulations	
Environmental Planning and Assessment Act 1979	The NSW *Environmental Planning and Assessment Act 1979* (EP&A Act) and EP&A Regulation provide the framework for environmental planning and assessment in NSW. Environmental planning instruments (EPIs) are established under the EP&A Act to regulate land use and development. EPIs determine the relevant part of the EP&A Act under which a development project must be assessed and therefore determine the need or otherwise for development consent. EPIs consist of SEPPs, regional environmental plans (REPs), and local environmental plans (LEPs).
Roads Act 1993	The NSW *Roads Act 1993* (Roads Act) is administered by Transport for NSW (previously Roads and Maritime Services (RMS)), local government or the Minister as delegated under the NSW Crown Land Management Act 2016 (CL Act). Transport for NSW has jurisdiction over major roads, local government over minor roads and the Minister over Crown roads. The Roads Act sets out the rights of the public in regard to access to public roads.
Biodiversity Conservation Act 2016	The NSW *Biodiversity Conservation Act 2016* (BC Act) establishes the regulatory framework for assessing and offsetting biodiversity impacts for proposed developments. The BC Act is also supported by the *Biodiversity Conservation Regulation 2017* (BC Regulation) and the *Biodiversity Conservation (Savings and Transitional) Regulation 2017*, which outline the methods to be used in applying the Biodiversity Assessment Methodology (BAM).
Fisheries Management Act 1994	The NSW *Fisheries Management Act 1994* (FM Act) governs the management of fish and their habitat within NSW and is administered by the Department of Primary Industries (DPI). The FM Act aims to conserve 'key fish habitats' (KFH) which includes aquatic habitats that are important to the maintenance of fish populations, the survival and recovery of threatened aquatic species and the sustainability of the recreational and commercial fishing industries.
Biosecurity Act 2015	The objective of the NSW *Biosecurity Act 2015* (BSA Act) is to provide a framework for the prevention, elimination and minimisation of biosecurity risks within NSW. The BSA Act outlines priority weeds that pose a risk to reducing the diversity of native plant and animal species. Under Schedule 1 of the Act all private landowners, occupiers, public

Statutory reference	Description (from EMM 2022)
	authorities and Councils are required to control weeds on their land. Mid-Western Regional Council is the Local Control Authority responsible for administering the BSA Act in the region that applies to the study area.
National Parks and Wildlife Act 1974	The NSW *National Parks and Wildlife Act 1974* (NP&W Act) governs the management of national parks, historic sites, nature reserves, reserves, Aboriginal areas and state game reserves in NSW. The NP&W Act also provides for the protection of native flora and fauna. The study area is not located within 10 kilometres of any nature reserve or forest protected under the NP&W Act.
Heritage Act 1977	The NSW *Heritage Act 1977* (Heritage Act) aims to protect and conserve the natural and cultural history of NSW, including scheduled heritage items, sites and relics. The Act defines 'environmental heritage' as those places, buildings, works, relics, moveable objects and precincts listed in the Local or State Heritage Significance register. A property is a heritage item if it is listed in the heritage schedule of the local Council's LEP or listed on the State Heritage Register (SHR), a register of places and items of particular importance to the people of NSW.
Water Management Act 2000	The NSW *Water Management Act 2000* (WM Act) regulates the use and interference of surface and groundwater in NSW where a water sharing plan has been implemented. The WM Act is progressively being implemented throughout NSW to manage water resources, superseding the Water Act 1912.
Crown Lands Management Act 2016	The NSW *Crown Lands Management Act 2016* sets out how Crown land is to be managed. In particular, specific use of Crown land generally needs to be authorised by a lease, licence or permit. Under Part 3 of the Act, the Minister for Lands must be satisfied that the land has been assessed in accordance with the principles of Crown land management by (amongst other matters) including an assessment of the capabilities of Crown land and the identification of suitable land uses.
Protection of the Environment Operations Act 1997	The NSW *Protection of the Environment Operations Act 1997* (POEO Act) is the principal NSW environmental protection legislation and is administered by the NSW Environment Protection Authority (EPA). Section 48 of the POEO Act requires an environment protection licence (EPL) to undertake scheduled activities at a premise.
Rural Fires Act 1997	The NSW *Rural Fires Act 1997* (RF Act) aims to prevent, mitigate, and suppress bush and other fires. Section 63(2) of the RF Act requires the owners of land to prevent the ignition and spread of bushfires on their land. Under Section 4.41 of the EP&A Act, a bush fire safety authority under Section 100B of the RF Act is not required for SSD that is authorised by a development consent
Local Land Services Act 2013	The NSW *Local Land Services Act 2013* (LLS Act) provides framework for the management of local land services and includes the requirement to obtain approval under Part 5A of the LLS Act to remove native vegetation in a regulated rural area. Pursuant to Section 60O of the LLS Act, clearing of native vegetation in a regulated rural area is authorised under Part 4 of the EP&A Act and an authorisation for clearing of native vegetation is not required for the project under the LLS Act.

Statutory reference	Description (from EMM 2022)
Conveyancing Act 1919	The development footprint extends over many adjoining properties, each of which require a separate lease from the owners of the affected land. Lease of BESS site is treated as a lease of premises, regardless of whether the lease will be for more or less than 25 years. The plan defining 'premises' (being the development footprint) will not constitute a 'current plan' within the meaning of Section 7A *Conveyancing Act 1919* (Conveyancing Act) and therefore will not require subdivision consent under Section 23G Conveyancing Act.
Mining Act 1992	The main objective of the NSW *Mining Act 1992* (Mining Act) is to encourage and facilitate the discovery and development of mineral resources in NSW, having regard to the need to encourage ecologically sustainable development.
Waste Avoidance and Resource Recovery Act 2001	The NSW *Waste Avoidance and Resource Recovery Act 2001* (WARR Act) includes resource management hierarchy principles to encourage the most efficient use of resources and to reduce environmental harm.
Commonwealth legislation	
Environment Protection and Biodiversity Conservation Act 1999	The Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) is the core piece of legislation protecting Matters of National Environmental Significance (MNES) and Commonwealth land.
Native Title Act 1993	The *Native Title Act 1993* (Native Title Act) was enacted to formally recognise and protect native title rights in Australia. The Native Title Act establishes processes to determine where native title exists, how future activity affecting upon native title may be undertaken, and to provide compensation where native title is impaired or extinguished. Where a native title claimant application is made with the National Native Title Tribunal (NNTT), the Federal Court or High Court of Australia make a determination of whether native title does or does not exist in relation to the claim.
Environmental planning instruments	
State Environmental Planning Policy (State and Regional Development) 2011	The State Environmental Planning Policy (SEPP) (State and Regional Development) 2011 determines that the project is classified as an SSD.
State Environmental Planning Policy (Infrastructure) 2007	The SEPP (Infrastructure) 2007 allows for the development of energy projects with consent even on land prescribed for primary production.
State Environment Planning Policy No. 33 (Hazardous and Offensive Development)	State Environmental Planning Policy No 33 – Hazardous and Offensive Development (SEPP 33) requires that a preliminary hazard assessment (PHA) be prepared in accordance with the current circulars or guidelines for potentially hazardous or offensive development.
State Environmental Planning Policy No 55 – Remediation of Land (SEPP 55)	State Environmental Planning Policy No 55 – Remediation of Land (SEPP 55) provides a State-wide planning approach to the remediation of contaminated land and aims to promote the remediation of contaminated land for the purpose of reducing the risk of harm to human and environmental health. Clause 7 of SEPP 55 requires that a

Statutory reference	Description (from EMM 2022)
	consent authority take into consideration whether the land is contaminated prior to issuing development consent.
State Environmental Planning Policy (Primary Production and Rural Development) 2019	The State Environmental Planning Policy (Primary Production and Rural Development) 2019 (SEPP PP&RD) aims to facilitate the orderly and economic use and development of rural lands for primary production related purposes and reduce land use conflict and sterilisation of rural lands.
State Environmental Planning Policy – Koala Habitat Protection 2019 (now – Koala Habitat Protection 2020 and 2021)	The State Environmental Planning Policy (Koala Habitat Protection) 2019 (SEPP Koala Habitat) aims to encourage the proper conservation and management of areas of natural vegetation that provide habitat for koalas. It applies to land to which an approved koala plan of management applies or land identified on the Koala Development Application Map and with an area of greater than 1 ha (including adjoining land within the same ownership), and in LGAs listed in Schedule 1 of SEPP Koala Habitat.
State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007	The State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007 (SEPP Mining) is designed to provide for the proper management and development of mineral, petroleum and extractive material resources and establish appropriate planning controls to encourage ecologically sustainable development through environmental assessment and management.
Mid-Western Regional Local Environmental Plan 2012	The project is located entirely within the Mid-Western Regional Council LGA and is subject to the Mid-Western Regional Local Environmental Plan 2012 (LEP). The study area is zoned as 'Primary Production (RU1)' under the LEP.
Development control plans	
Mid-Western Regional Development Control Plan 2013	The Mid-Western Regional Development Control Plan 2013 (the DCP) compliments the Mid-Western Regional Local Environmental Plan 2012 (the LEP) and provides detailed requirements to guide development in the Mid-Western Regional Council LGA. The DCP was adopted by Mid-Western Regional Council on 6 February 2013 and commenced operation on 11 February 2013. Amendment 4 to the plan was adopted on the 19 June 2019 and commenced operation on 21June 2019.

Appendix D:
CPHR Consultation

1.1. Initial Correspondence

From:	Calvin Houlison on behalf of OEH ROGHD ROG North West Mailbox
To:	Jane Book
Cc:	Sam Wynn
Subject:	RE: Maryvale Solar Farm and Wellington BESS - BMP request for comment
Date:	Tuesday, 2 July 2024 10:59:25 AM
Attachments:	image001.png image002.png image003.png image004.png

Hi Jane

Yes please refer the BMP directly to BCS in the portal engagement before sending onto DPHI. We recommend that you refer to us for at least 21 days, and then take on board any feedback prior to finalising the BMP for final submission to DPHI. Following our review, you can then submit the finalised BMP to DPHI and indicate how you have addressed our comments.

This should be adequate to demonstrate that you have consulted with BCS in preparing the BMP as required by the condition/s, though ultimately that is a matter for the consent authority (DPHI) to be satisfied with.

regards

Calvin Houlison
Senior Team Leader, Planning
North West Branch

Biodiversity, Conservation & Science | Department of Climate Change, Energy, the Environment and Water

T 02 4224 4179 | **E** calvin.houlison@environment.nsw.gov.au
dcceew.nsw.gov.au



Our Vision: Together, we create thriving environments, communities and economies.

The Department of Planning and Environment acknowledges that it stands on Aboriginal land. We acknowledge the traditional custodians of the land and we show our respect for elders past, present and emerging through thoughtful and collaborative approaches to our work, seeking to demonstrate our ongoing commitment to providing places in which Aboriginal people are included socially, culturally and economically.

My office is on Dharawal country •••

From: Jane Book <Jane@ozarkehm.com.au>
Sent: Tuesday, 2 July 2024 10:27 AM
To: OEH ROGHD ROG North West Mailbox <rog.nw@environment.nsw.gov.au>
Cc: Sam Wynn <Samantha.Wynn@environment.nsw.gov.au>
Subject: RE: Maryvale Solar Farm and Wellington BESS - BMP request for comment

Hi Sam

Thanks for your response.
Can I just clarify a process issue.
Does BCS review the BMP before it gets submitted to DPHI, or is it done at the same time?

Just want to make sure we have the timings right for everyone to undertake their review.

Many thanks
Jane

Jane Book
Senior Environmental Scientist
OzArk

0427661436

From: Sam Wynn <Samantha.Wynn@environment.nsw.gov.au> **On Behalf Of** OEH ROGHD ROG North West Mailbox

Sent: Friday, June 28, 2024 2:05 PM
To: Jane Book <Jane@ozarkehm.com.au>
Cc: OEH ROGHD ROG North West Mailbox <rog.nw@environment.nsw.gov.au>
Subject: RE: Maryvale Solar Farm and Wellington BESS - BMP request for comment

Hi Jane

Thank you for your email. Please allow us a minimum 3 week review period when you submit the draft BMPs for our review in the Major Projects portal. We try to review post consent management plans in a 3 week period, but sometime we will required longer depending on the volume of priority statutory matters that we have on the books at the corresponding time.

In relation to the specific content in the BMPs. Please ensure that the BMPs address each component of the relevant consent condition. Successful management plans include tailored, quantitative performance measures and targets, completion criteria, monitoring and trigger points for corrective action which adhere to the SMART principles (specific,

measurable, achievable, realistic, timely). Management targets must be measurable and expressed in a manner that assists in the evaluation of progress toward the strategic goals that define the completion criteria.

Regards
Sam

Samantha Wynn
Senior Team Leader Planning – North West

Regional Delivery
Biodiversity, Conservation and Science Group
NSW Department of Climate Change, Energy, the Environment and Water
T 02 6883 5365 **M** 0459 888 603 **E** Samantha.wynn@environment.nsw.gov.au
W dcceew.nsw.gov.au

From: Jane Book <Jane@ozarkehm.com.au>
Sent: Friday, 28 June 2024 11:27 AM
To: OEH ROGHD ROG North West Mailbox <rog.nw@environment.nsw.gov.au>
Subject: Maryvale Solar Farm and Wellington BESS - BMP request for comment

Good morning

I am in the process of developing the Biodiversity Management Plan (BMP) for both the Maryvale Solar Farm and BESS, as well as the Wellington BESS.

The conditions of consent require consultation with BCD.

Please let me know if you have any timing requirements you may have to review the documentation.

And if you require any specific information to be included in the BMP.

Many thanks

Jane

Jane Book
Senior Environmental Scientist
& Director

OzArk Environment & Heritage
PO Box 2069 DUBBO 2830
02 6882 0118
jane@ozarkehm.com.au
www.ozarkehm.com.au

OzArk and staff respectfully acknowledge the traditional custodians and Elders of the Country on which we work.

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1.2. CPHR Feedback – May 2025

Department of Climate Change, Energy, the Environment and Water

Our ref: DOC25/359872
Your ref: SSD-27014706

Anthony Yeates
AMPYR Australia
Level 17, 167 Macquarie Street
Sydney NSW 2000

Dear Anthony

Wellington South BESS – Biodiversity Management Plan

Thank you for your request via the NSW Planning Portal dated 11 April 2025 to the Conservation Programs, Heritage and Regulation Group (CPHR) of the NSW Department of Climate Change, Energy, the Environment and Water (NSW DCCEEW) inviting comments on the Biodiversity Management Plan (BMP) for Wellington South Battery and Energy Storage System (BESS).

CPHR understands that Condition B14 of the Wellington South BESS consent requires preparation of a BMP in consultation with CPHR. Our advice aims to assist the proponent to adequately address the requirements of Condition B14 prior to formal submission.

Our recommendations relating to the draft BMP are summarised in Attachment A, with supporting advice provided in Attachment B.

If you have any questions about this advice, please do not hesitate to contact Rebecca Hobbs, Conservation Planning Officer, via Rebecca.hobbs@environment.nsw.gov.au or (02) 4224 4135.

Yours sincerely

Liz Mazzer
A/Senior Team Leader Planning North West
Conservation Programs, Heritage and Regulation Group

6 May 2025

Attachment A

CPHR Summary of Recommendations

Wellington South Battery Energy Storage System – Biodiversity Management Plan

BESS	Battery Energy Storage System
BMP	Biodiversity Management Plan
CPHR	Conservation Programs, Heritage & Regulation Group of the NSW Department of Climate Change, Energy, the Environment and Water
NSW DCCEEW	NSW Department of Climate Change, Energy, the Environment and Water
SMART principles	Specific, measurable, achievable, realistic and time-bound principles
TARP	Trigger Action Response Plan

Recommendations

1.1 Revise the BMP to include targets and triggers for weed and pest management that are quantitative, unambiguous, and relate to performance or completion criteria.

2.1 Do not remove eggs from active nests. Removal of habitat trees must be postponed until birds have hatched, fledged, and left the hollow. Update *Protocol 14 – Superb Parrot Inspection* to be consistent with Section 8.4 of the BMP.

3.1 Conduct a final proofread of the document to correct typographical and other errors.

3.2 Update references to "BCD" to "Conservation Programs, Heritage and Regulation" (CPHR)

CPHR Detailed Recommendations

1. Include quantitative performance measures and targets, completion criteria, monitoring, and trigger points for corrective action related to weed and pest management.

   The approval conditions (B14) state that the BMP must include "*a description of the measures and timeframes that would be implemented for controlling weeds, feral pests and pathogens.*" The BMP does not currently contain specific quantitative completion criteria, performance criteria, or a Trigger Action Response Plan (TARP) for weed or pest management.

   We encourage proponents to ensure that all performance/completion criteria, and indicators conform to the **'SMART' principles (specific, measurable, achievable, realistic, time-bound)**. Monitoring methods should be suitably targeted to the performance indicators and able to measure progress towards the performance criteria, completion criteria, and triggers for corrective action.

   Recommendation

   1.1. Revise the BMP to include targets and triggers for weed and pest management that are quantitative, unambiguous, and relate to performance or completion criteria.

2. Do not remove eggs from active nest sites.

   The inspection protocol for Superb Parrot nesting hollows (protocol 14) states that '*if eggs are present in the hollow, these eggs will be collected and provided to a wildlife carer for raising, prior to release.*'

   CPHR also note that the procedure of egg removal described in "Protocol 14 – Superb Parrot inspection protocol" is inconsistent with section 8.4 "BMP Performance" that states: "*If the Superb Parrot is found to be utilising a hollow, removal of the hollow bearing tree must be postponed until the breeding pair has left the hollow for the breeding season and no eggs or hatchlings remain in the hollow (September to December).*"

   Eggs must not be removed from active nests. Eggs within a nest should be treated as hatchlings and the removal of the habitat tree must be postponed until birds have fledged and left the hollow.

   Recommendation

   2.1. Do not remove eggs from active nests. Removal of habitat trees must be postponed until birds have hatched, fledged, and left the hollow. Update *Protocol 14 – Superb Parrot Inspection* to be consistent with Section 8.4 of the BMP.

3. Typographical and other minor errors are present throughout the document.

   The readability of the BMP would benefit from a final proofread. Typographical errors are apparent in several sections of the document, including Appendix A where the conditions of consent are incorrectly numbered. Cross-referencing between protocols should be checked.

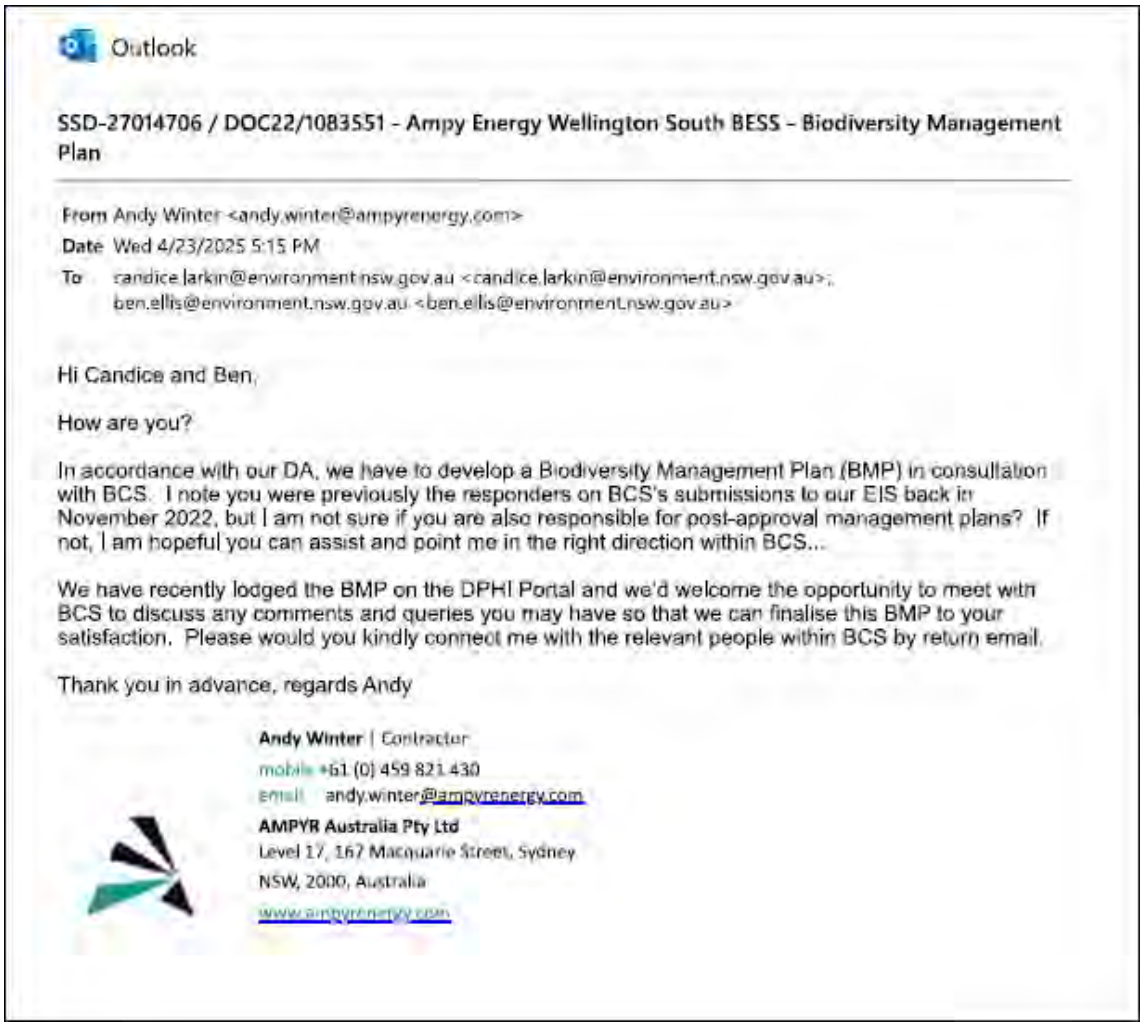
   References to 'BCD' should be updated to 'Conservation Programs, Heritage and Regulation (CPHR).

   Recommendations

   3.1. Conduct a final proofread of the document to correct typographical and other errors.

   3.2. Update references to "BCD" to "Conservation Programs, Heritage and Regulation" (CPHR).

Additional CPHR Consultation by Ampyr



Outlook

SSD-27014706 / DOC22/1083551 - Ampy Energy Wellington South BESS - Biodiversity Management Plan

From Andy Winter <andy.winter@ampyrenergy.com>
Date Wed 4/23/2025 5:15 PM
To candice.larkin@environment.nsw.gov.au <candice.larkin@environment.nsw.gov.au>; ben.ellis@environment.nsw.gov.au <ben.ellis@environment.nsw.gov.au>

Hi Candice and Ben,

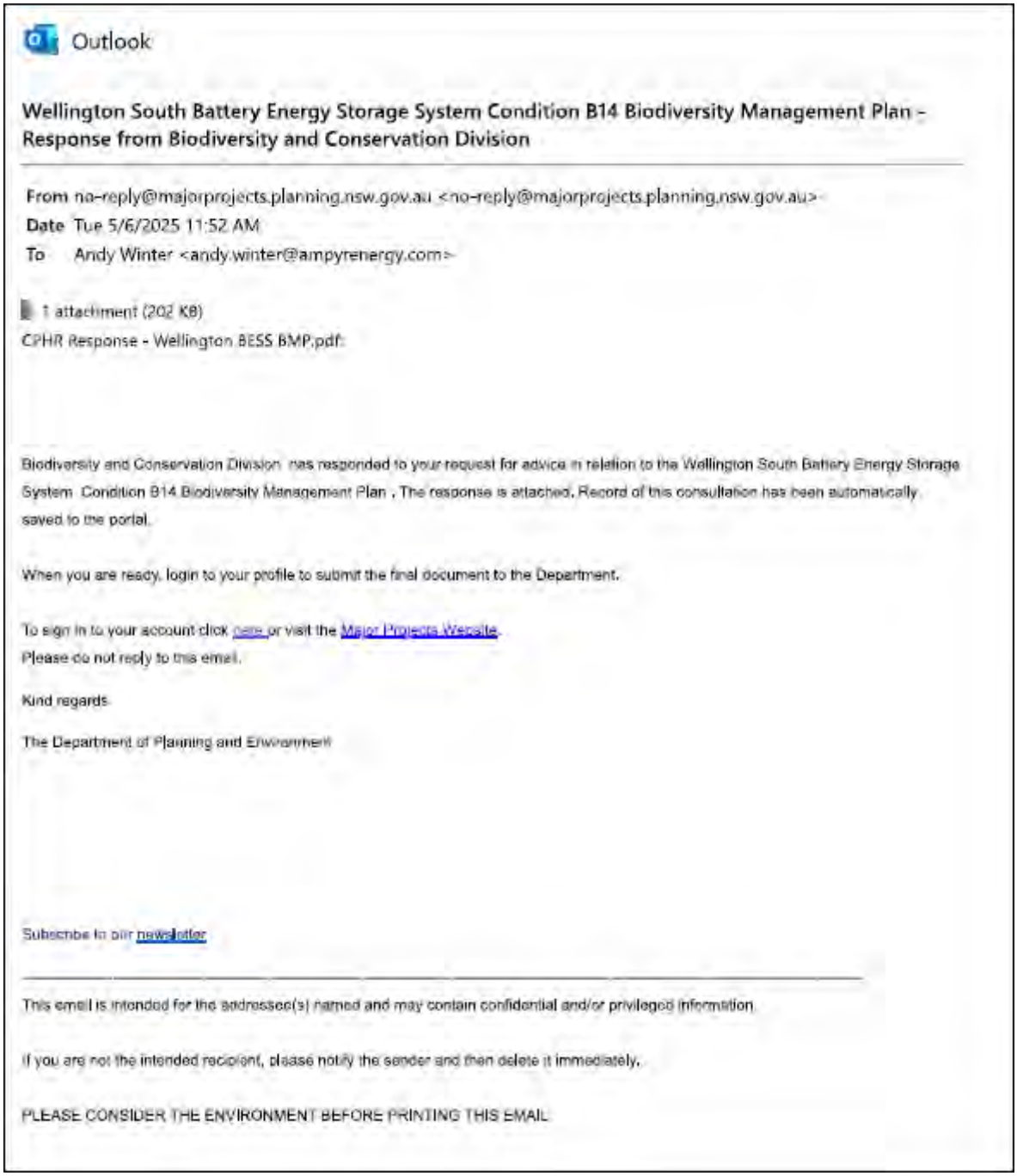
How are you?

In accordance with our DA, we have to develop a Biodiversity Management Plan (BMP) in consultation with BCS. I note you were previously the responders on BCS's submissions to our EIS back in November 2022, but I am not sure if you are also responsible for post-approval management plans? If not, I am hopeful you can assist and point me in the right direction within BCS...

We have recently lodged the BMP on the DPHI Portal and we'd welcome the opportunity to meet with BCS to discuss any comments and queries you may have so that we can finalise this BMP to your satisfaction. Please would you kindly connect me with the relevant people within BCS by return email.

Thank you in advance, regards Andy

Andy Winter | Contractor
mobile +61 (0) 459 821 430
email andy.winter@ampyrenergy.com
AMPYR Australia Pty Ltd
Level 17, 167 Macquarie Street, Sydney
NSW, 2000, Australia
www.ampyrenergy.com



Outlook

Wellington South Battery Energy Storage System Condition B14 Biodiversity Management Plan - Response from Biodiversity and Conservation Division

From no-reply@majorprojects.planning.nsw.gov.au <no-reply@majorprojects.planning.nsw.gov.au>
Date Tue 5/6/2025 11:52 AM
To Andy Winter <andy.winter@ampyrenergy.com>

1 attachment (202 KB)
CPHR Response - Wellington BESS BMP.pdf;

Biodiversity and Conservation Division has responded to your request for advice in relation to the Wellington South Battery Energy Storage System Condition B14 Biodiversity Management Plan . The response is attached. Record of this consultation has been automatically saved to the portal.

When you are ready, login to your profile to submit the final document to the Department.

To sign in to your account click here or visit the Major Projects Website.
Please do not reply to this email.

Kind regards

The Department of Planning and Environment

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Appendix E:
Response to CPHR feedback

CPHR Comment/Recommendation	Proponents Response	Report Reference Updates
1.1 Revise the BMP to include targets and triggers for weed and pest management that are quantitative, unambiguous, and relate to performance or completion criteria	The proponent agrees with this recommendation and has included targets and triggers for weed and pest management in the BMP - Table 8.3 (3. *Changed management practices on site*). Completion criteria also updated to include dot point in Section 8.4 - Operation and inserted last two rows in Table 8.4.	Updated Table 8.3 Updated Section 8.4 Updated Table 8.4
2.1 Do not remove eggs from active nests. Removal of habitat trees must be postponed until birds have hatched, fledged and left the hollow...	The proponent fully agrees with this recommendation and will adopt CPHR's recommendations accordingly. The BMP has been updated to reflect this position. Protocols 1, 2 and 14 updated to ensure consistency Table 2-2 has had a note inserted as EIS Commitment BIO07 recommends removing eggs and providing to a carer to raise.	Section 8.4 (no update required) Sections 10.1 (dot point 1), 10.2 (dot point 4) and 10.14 (dot point 2 – no egg removal) Table 2-2 had note inserted
3.1. Conduct a final proofread of the document to correct typographical and other errors.	The proponent acknowledges this recommendation.	The document was given a final proof read and errors fixed.
3.2 Update references to "BCD" to "CPHR".	The proponent acknowledges this recommendation.	Throughout the Plan, wherever BCD was previously referenced.

Appendix C
Biodiversity Credit Report

EMM
creating opportunities

BAM Credit Summary Report

Proposal Details

Assessment Id
00062379/BAAS24060/25/00062381

Proposal Name
Wellington BESS

BAM data last updated *
05/08/2025

Assessor Name
Eugene Dodd

Report Created
10/03/2026

BAM Data version *
Current classification (live - default) (82)

Assessor Number
BAAS17009

BAM Case Status
Finalised

Date Finalised
10/03/2026

Assessment Revision
0

BOS entry trigger

Assessment Type
Major Projects

* Disclaimer: BAM data last updated may indicate either complete or partial update of the BAM calculator database. BAM calculator database may not be completely aligned with Bionet.

Ecosystem credits for plant communities types (PCT), ecological communities & threatened species habitat

Zone	Vegetation zone name	TEC name	Current Vegetation integrity score	Change in Vegetation integrity (loss / gain)	Area (ha)	Sensitivity to loss (Justification)	Species sensitivity to gain class	BC Act Listing status	EPBC Act listing status	Biodiversity risk weighting	Potential SAII	Ecosystem credits

White Box grassy woodland in the upper slopes sub-region of the NSW South Western Slopes Bioregion												
1	266_DNG_moderate	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 Highla	18.4	18.4	1.2	Population size	High Sensitivity to Gain	Critically Endangered Ecological Community	Not Listed	2.50	True	13

2	266_DNG_low	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 Highla	7.9	7.9	1.5	Population size	High Sensitivity to Gain	Critically Endangered Ecological Community	Not Listed	2.50	True	0
											Subtotal	**13**
											Total	**13**

Species credits for threatened species

Vegetation zone name	Habitat condition (Vegetation Integrity)	Change in habitat condition	Area (ha)/Count (no. individuals)	Sensitivity to loss (Justification)	Sensitivity to gain (Justification)	BC Act Listing status	EPBC Act listing status	Potential SAII	Species credits

Aprasia parapulchella / Pink-tailed Legless Lizard (Fauna)									
266_DNG_moderate	18.4	18.4	0.4	Biodiversity Conservation Act listing status	Species dependent on habitat attributes	Vulnerable	Vulnerable	False	4
266_DNG_low	7.9	7.9	0.19	Biodiversity Conservation Act listing status	Species dependent on habitat attributes	Vulnerable	Vulnerable	False	1
								Subtotal	**5**
Calyptorhynchus lathami lathami / South-eastern Glossy Black-Cockatoo (Fauna)									
266_DNG_moderate	18.4	18.4	1.2	Biodiversity Conservation Act listing status	Species dependent on habitat attributes	Vulnerable	Vulnerable	False	11
266_DNG_low	7.9	7.9	0.7	Biodiversity Conservation Act listing status	Species dependent on habitat attributes	Vulnerable	Vulnerable	False	3
								Subtotal	**14**
Polytelis swainsonii / Superb Parrot (Fauna)									
266_DNG_moderate	18.4	18.4	1.1	Biodiversity Conservation Act listing status	Species dependent on habitat attributes	Vulnerable	Vulnerable	False	10
								Subtotal	**10**

Australia

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Appendix D

Aboriginal cultural heritage assessment addendum

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Bulabul Battery

Aboriginal Cultural Heritage Assessment Addendum

Prepared for AMPYR Australia Pty Ltd

February 2026

Bulabul Battery

Aboriginal Cultural Heritage Assessment Addendum

AMPYR Australia Pty Ltd

E250078 RP1

February 2026

Version	Date	Prepared by	Reviewed by	Comments
V1	18 December 2025	Phillipa O'Brien-Pounde Frances Robson Megan Sheppard Brennand	Alan Williams	Draft for client review
V2	19 December 2025	Megan Sheppard Brennand	David Richards	Draft for RAP review
V3	13 February 2026	Phillipa O'Brien-Pounde	Megan Sheppard Brennand	Final

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13 February 2026

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Executive Summary

ES1 Project overview

The Trustee for AMBESS01 HOLD TRUST (AMPYR) has approval to develop and operate the Bulabul Battery (the project), formerly known as Wellington South Battery Energy Storage System. The project involves the development of a large-scale battery energy storage system (BESS) with a discharge capacity of 500 megawatts (MW) and a storage capacity of 1,000 megawatt hours (MWh). The project also incorporates an on-site substation and connection infrastructure to facilitate transfer of energy to and from the electrical grid, and ancillary infrastructure. The project was approved, subject to conditions, by the Director, Energy Assessments, as delegate of the Minister for Planning and Public Spaces, on 22 December 2023 (SSD 27014706).

The project is located within the Dubbo Regional Council local government area (LGA) at 80 Twelve Mile Road, Wuuluman, approximately 2.2 km north-east of the township of Wellington and within the New South Wales (NSW) Government declared Central-West Orana Renewable Energy Zone (CWO REZ). The development boundary includes Lot 32 DP 622471 and Lot 1 DP 1226751 on Goolma Road and Twelve Mile Road in Wuuluman, NSW. The approved development boundary is shown in Figure 1.1.

Construction of Stage 1 of the project (Bulabul Battery 1) commenced on 1 August 2025 and is now well underway. AMPYR is preparing to commence construction of Stage 2 of the project (Bulabul Battery 2) and is seeking to modify the project due to external factors necessitating minor amendments to the project layout to accommodate Stage 2. AMPYR intends to modify SSD 27014706 to:

- revise the location of the approved construction laydown area
- provide for an additional new bay at Transgrid's Wellington Substation
- widen the transmission easement to facilitate the project's grid connection.

EMM have been engaged to prepare this assessment to support the modification application.

ES2 Purpose of report

AMPYR proposes to modify the development consent under Section 4.55(1A) of the NSW *Environmental Planning and Assessment Act 1979* (EP&A Act). The project as modified will be substantially the same development as the development for which consent was granted. The proposed modification will result in an additional construction laydown area due to conflict between part of the approved construction laydown area and a transmission line easement, and an additional bay and easement into the Wellington Substation to enable the project's grid connection. There is a minor increase of approximately 2.7 ha (12%) in the modified development boundary (compared to the approved development boundary). The assessment of the modification area requires further consultation and assessment to inform the modification application.

EMM initially prepared an Aboriginal cultural heritage assessment (ACHA) report for the approved project. This addendum report has been prepared to address the modification and should be read alongside the ACHA.

ES3 Results and Findings

An archaeological field survey was undertaken by an EMM archaeologist and Aboriginal representatives from the Registered Aboriginal Party (RAP) organisations identified within the ACHA on Tuesday 25 November 2025, targeting the modification area.

Overall, no cultural materials were identified from the archaeological survey, and this ACHA addendum considers the modification area to have low potential to exhibit surface or shallowly buried cultural materials. The lack of remnant vegetation or exposed sandstone geology in the modification area also resulted in an absence of culturally modified trees or grinding grooves, respectively, being identified. No intangible values for the modification area have been identified to date. As such, it is considered that the project will not impact any identified Aboriginal objects, and if unknown objects do occur, they are likely to be present as intermittent, low density stone artefact sites of low archaeological significance.

As such, the report recommends the inclusion of the modification area into the existing Aboriginal Cultural Heritage Management Plan for the project, which provides a framework for ongoing Aboriginal consultation and the management of any unexpected cultural materials if encountered during the construction activities.

TABLE OF CONTENTS

Executive Summary **ES.1**

1 Introduction **1**

1.1 Project background 1

1.2 Purpose of this report 2

1.3 Authorship and acknowledgements 2

1.4 Limitations 2

2 Aboriginal consultation **4**

2.1 Key findings 4

2.2 The process 4

2.3 Registered Aboriginal Parties 5

2.4 Consultation undertaken for this addendum report 5

2.5 Aboriginal stakeholder feedback and outcomes 6

3 Archaeological context **7**

3.1 Key findings 7

3.2 Summary of the ACHA and relevant reports 7

3.3 Aboriginal Heritage Information Management System search results 9

4 Field Investigations **13**

4.1 Key findings 13

4.2 Archaeological survey 13

5 Potential and cumulative Impacts **19**

5.1 Key findings 19

5.2 Summary of the previous findings 19

5.3 Potential impacts 20

6 Conclusion and management **22**

6.1 Key findings 22

6.2 Management strategy 22

6.3 Recommendations 23

References **24**

Glossary **25**

Appendices

Appendix A	Aboriginal consultation	A.1
Appendix B	Additional archaeological information	B.1

Tables

Table 2.1	List of registered Aboriginal parties for the project	5
Table 2.2	Consultation process summary	6
Table 3.1	Summary of AHIMS site types within search area.	10
Table 4.1	Registered Aboriginal Party representatives present during the survey	14
Table 4.2	Field survey undertaken within the modification area and surrounds as part of this addendum	16

Figures

Figure 1.1	Proposed amendments	3
Figure 3.1	AHIMS sites	11
Figure 4.1	Survey results	18
Figure 5.1	Project impact assessment	21

Plates

Plate 4.1	Gentle undulating hills typical of SU2, east facing.	17
Plate 4.2	Plain cleared landscape typical of SU1 with Transgrid substation, north-west facing.	17
Plate 4.3	Introduced soils associated with Orana BESS construction, west facing.	17
Plate 4.4	Observed shallow soils with surface cracking clay, east facing.	17
Plate 4.5	Remnant vegetation and mature eucalypt trees observed in SU & SU2, south facing.	17
Plate 4.6	Cleared cattle paddock with the project's Stage 1 construction visible, east facing.	17

1 Introduction

1.1 Project background

The Trustee for AMBESS01 HOLD TRUST (AMPYR) has approval to develop and operate the Bulabul Battery (the project), formerly known as Wellington South Battery Energy Storage System. The project involves the development of a large-scale battery energy storage system (BESS) with a discharge capacity of 500 megawatts (MW) and a storage capacity of 1,000 megawatt hours (MWh). The project also incorporates an on-site substation and connection infrastructure to facilitate transfer of energy to and from the electrical grid, and ancillary infrastructure. The project was approved, subject to conditions, by the Director, Energy Assessments, as delegate of the Minister for Planning and Public Spaces, on 22 December 2023 (SSD 27014706). The approved development boundary is shown in Figure 1.1.

The project is located within the Dubbo Regional Council local government area (LGA) at 80 Twelve Mile Road, Wuuluman, approximately 2.2 km north-east of the township of Wellington and within the New South Wales (NSW) Government declared Central-West Orana Renewable Energy Zone (CWO REZ). The development boundary includes Lot 32 DP 622471 and Lot 1 DP 1226751 on Goolma Road and Twelve Mile Road in Wuuluman, NSW.

Construction of Stage 1 of the project (Bulabul Battery 1) commenced on 1 August 2025 and is now well underway. AMPYR is preparing to commence construction of Stage 2 of the project (Bulabul Battery 2) and is seeking to modify the project due to external factors necessitating minor amendments to the project layout to accommodate Stage 2. AMPYR intends to modify SSD 27014706 to:

- revise the location of the approved construction laydown area
- provide for an additional new bay at Transgrid's Wellington Substation
- widen the transmission easement to facilitate the project's grid connection.

The modification area is approximately 2.7 ha and is defined on Figure 1.1.

AMPYR proposes to modify the development consent under Section 4.55(1A) of the NSW *Environmental Planning and Assessment Act 1979* (EP&A Act). The project as modified will be substantially the same development as the development for which consent was granted. The proposed modification will result in an additional construction laydown area due to conflict between part of the approved construction laydown area and a transmission line easement, and an additional bay and easement into the Wellington Substation to enable the project's grid connection. There is a minor increase of approximately 2.7 ha (12%) in the modified development boundary (compared to the approved development boundary). The assessment of the modification area requires further consultation and assessment to inform the modification application.

The project was approved, subject to conditions, on 22 December 2023 (SSD-27014706). Since this time, OzArk Environment and Heritage (OzArk) have prepared the following in consultation with the RAPs:

- *Aboriginal Cultural Heritage Chance Finds Protocol* (CFP) (OzArk 2025a)
- *Aboriginal Cultural Heritage Management Plan* (OzArk 2025b).

The CFP was prepared in consultation with Heritage NSW and was approved by the NSW Department of Planning, Housing and Infrastructure (DPHI) in July 2025.

1.2 Purpose of this report

An Aboriginal cultural heritage assessment report (hereafter ACHA) was prepared as part of the EIS and provided an assessment of the potential Aboriginal heritage impacts associated with the project (EMM 2022a). In discussions with Heritage NSW, it was determined that previously established processes under the existing ACHA and ACHMP could be utilised in the consultation process (Appendix A.2). This document included a list of established RAPs who were contacted for this project (OzArk 2025b). This addendum report incorporates additional consultation and investigation of the modification area into the ACHA to support the modification application for the project.

This addendum report provides supplementary information further considering the modified development boundary. Specifically, the addendum:

- provides information on additional field survey undertaken within the modification area
- includes outcomes of further consultation with the RAPs
- assesses the potential for the proposed modification to impact Aboriginal cultural heritage.

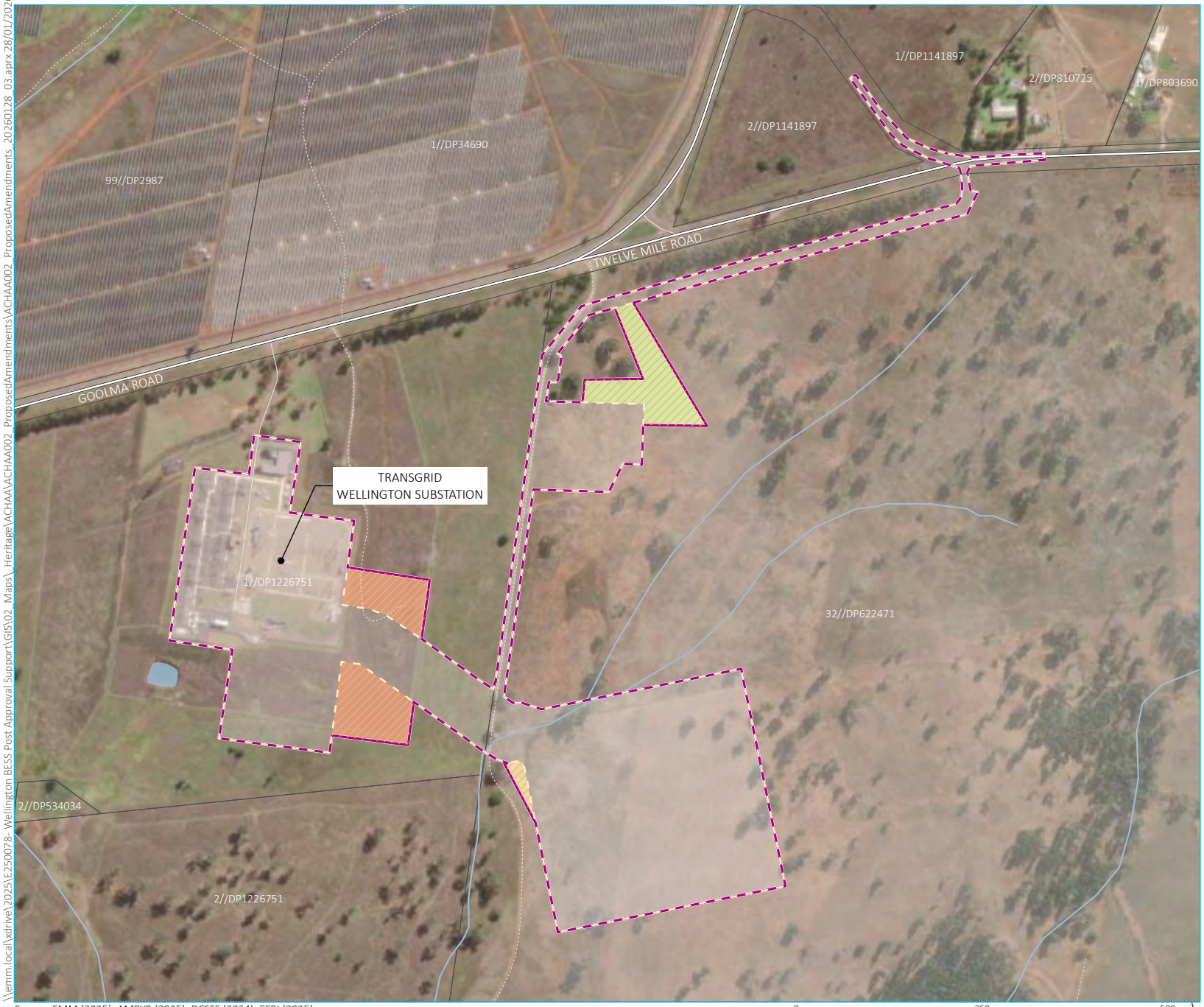
1.3 Authorship and acknowledgements

This report was prepared by EMM Archaeologists Frances Robson, Phillipa O'Brien-Pounde and Megan Sheppard Brennand and reviewed by Dr Alan Williams (Technical Lead, Aboriginal Heritage).

1.4 Limitations

This report is based on existing and publicly available environmental and archaeological information and reports about the modification area.

Part of the modification area, immediately adjacent to Transgrid's Wellington Substation, has been subject to disturbance as part of the construction of the Orana Battery Energy Storage System (SSD-45242780). As a result of active construction activities within this area, EMM could not survey this portion of the modification area (see Section 4.2.2). While this area has already been approved for disturbance as part of SSD-45242780, Transgrid advised AMPYR that the area must be included in the modification application for Bulabul Battery.



KEY

- Modified development boundary
- Approved development boundary
- Modification area

Modification element

- Additional construction laydown
- Additional easement
- Additional substation bay

Existing environment

- Major road
- Minor road
- Vehicular track
- Watercourse/drainage line
- Waterbody
- Cadastral boundary

Source: EMM (2025); AMPYR (2025); DCSSS (2024); ESRI (2025)

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GDA 1994 MGA Zone 55

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Proposed amendments

Bulabul Battery MOD1
ACHA Addendum
Figure 1.1

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2 Aboriginal consultation

2.1 Key findings

- The assessment adopted the processes and methods outlined in DECCW's *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010* (DECCW 2010). In discussion with Heritage NSW, early stages of this process were not implemented, and rather established processes under the previous ACHA and the current ACHMP for the project have been continued.
- For consistency throughout the project life cycle, the list of Registered Aboriginal Parties (RAPs) established during the ACHA (EMM 2022a) have been consulted for this addendum report.
- The consultation process included six Aboriginal individual and/or organisations who have been involved in previous phases of the project life cycle. These included a number of locally based Wiradjuri traditional owners, as well as others interested in cultural heritage management more broadly.
- Field survey was completed on 25 November 2025 and included representatives from Wellington Local Aboriginal Land Council, Wellington Valley Wiradjuri Aboriginal Corporation, Corroboree Aboriginal Corporation and Woka Aboriginal Corporation.

A draft report was provided to Aboriginal stakeholders for review and comment on 19 December 2025, for a period of 28 days. A reminder of the closing of the comment period was sent on 21 January 2026.

2.2 The process

Aboriginal consultation for this project has been undertaken in accordance with procedures set out in the *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010* (DECCW 2010). These guidelines identify a five-stage process:

1. Pre-notification – identification of the Aboriginal individuals and/or communities relevant to the modification area by contacting several state government agencies.
2. Notification – contacting all Aboriginal individuals and/or communities identified in Stage 1 to determine their interest in being consulted during the project. This includes direct communication and the placement of advertisements in local media seeking further expressions of interest from Aboriginal individuals and/or communities that may have been missed through Stage 1. Those Aboriginal individuals and/or communities that wish to be consulted become a 'registered' Aboriginal party (RAP).
3. Presentation of project information/assessment methodology – briefing RAPs about the project and scope of any Aboriginal heritage assessment and investigations. This is usually undertaken through written correspondence, but can include meetings, and may undergo several iterations through the project as the nature of the assessment changes (e.g. surface ground-truthing may lead to a requirement for test excavations).
4. Impacts and mitigation strategies – discussion of potential impacts to cultural materials and mitigation options with the RAPs prior to developing the ACHA. This is often undertaken either onsite at the end of any field program and/or as part of Stage 4.
5. Report review – the RAPs are provided an opportunity to review and comment upon the draft ACHA (in this case the ACHA addendum), to contribute input into the overall findings, significance, and management of cultural heritage.

The consultation process for this project had two aims:

- to comply with the mandated consultation procedures to obtain input on the ACHA process
- to identify cultural places and intangible values that may be affected by the project.

In discussions with Heritage NSW, it was determined that previously established processes under the existing ACHA and ACHMP could be utilised in the consultation process (Appendix A.2). This document included a list of established RAPs who were contacted for this project (OzArk 2025b). As such, for the purposes of this addendum, the project began at (3) above.

Updated National Native Title Tribunal (NNTT) and Officer of the Registrar Aboriginal Land Rights Act 1983 (ORALRA) searches were undertaken on 27 January 2026 to support the ACHA addendum (refer to Appendix A.2). The NNTT search identified that no Native Title determination, claims or land use agreements overlap Lots 1 DP 1226751 and Lot 32 DP 622471. No comments have been received from ORALRA.

2.3 Registered Aboriginal Parties

The RAPs for the project were identified through the guidelines process outlined within the *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010* to notify and determine groups or individuals who may have cultural knowledge of the wider region surrounding the project. This process was undertaken during the ACHA (EMM 2022a) process. Consultation with these groups has continued and is further outlined in the ACHMP prepared for the project in 2025 (OzArk 2025b).

The RAPs consulted throughout the ACHA addendum report process are presented in Table 2.1.

Table 2.1 List of registered Aboriginal parties for the project

Organisation	Contact
Wellington Local Aboriginal Land Council	Marsha Hill
Corroboree Aboriginal Corporation	Marilyn Carroll-Johnson
Woka Aboriginal Corporation	Steve Johnson
Gallanggabang Aboriginal Corporation	Melissa Chown
Wellington Valley Wiradjuri Aboriginal Corporation	Bradley Bliss
Binjang Wellington Wiradjuri Heritage Survey	Jamie Gray

2.4 Consultation undertaken for this addendum report

A complete log of actions and correspondence regarding Aboriginal community consultation is included in Appendix A and summarised in Table 2.2.

Table 2.2 Consultation process summary

Stage	Description	Date started	Date completed	Notes
1	Government Agency Pre-Notification	N/A	N/A	N/A
	Advertisement in the Tweed Valley Weekly	N/A	N/A	N/A
	Notification and registration of potential Aboriginal stakeholders	N/A	N/A	N/A
2/3	Presentation of information about the proposed project; and gathering information about cultural significance	24 October 2025	21 November 2025	Additional details are provided in Appendix A.2.
	Fieldwork – survey	25 November 2025		Additional details are provided in Section 4.
4	Review of draft report	19 December 2025	23 January 2026	Additional details are provided in Appendix A.2.

2.5 Aboriginal stakeholder feedback and outcomes

The proposed assessment method for this ACHA addendum report was provided to the RAPs on 24 October 2025 for review and comment. Wellington Valley Wiradjuri Aboriginal Corporation (WVWAC) agreed with the methodology outlined in the supplied methodology letter and provided confirmation of two sites with documentation from the Uungula Wind Farm survey (13 km north-east from the modification area). WVWAC also provided further clarification of two additional sites located outside the modification area, noting that information regarding these sites is restricted and not for publication. WVWAC also made comments about the Wambal Bila Trust. An apology was provided to WVWAC in relation to confusion on this matter.

No other RAPs responded to the methodology document.

2.5.1 Review of draft report

A copy of the ACHA addendum has been provided to the RAPs (refer to Table 2.1). A draft was provided on 19 December 2026 for a period of 28 days. Any comments from this process are provided in Appendix A.2 and summarised below:

- Bradley Bliss (WVWAC) agreed with the findings and recommendations of the ACHA addendum.
- No further responses were received during this period.

3 Archaeological context

3.1 Key findings

- No environmental or ethnohistorical sections are outlined in this report as they are included in detail in the ACHA (EMM 2022a), please refer to Sections 3 and 4.
- One site (AHIMS #36-4-0203) has been previously identified within the approved development boundary, and one site (AHIMS #36-4-0201) has been recorded in the adjacent lot, but within 5 m of the western boundary of the approved development boundary. Although AHIMS #36-4-0201 is registered as "not a site" on the Aboriginal Heritage Information Management System (AHIMS) database, relocation of the site was attempted as a precaution. The documented location of AHIMS #36-4-0203 is likely in error, and the site was likely recorded outside the approved development boundary, to the west. No Aboriginal places or deposits were identified within the modified development boundary and no intangible values have been identified to date.
- AHIMS database searches were conducted on 2 August 2021 and 16 October 2025 covering an area of ~170 km^2 which returned 55 and 99 previously documented sites, respectively. The October 2025 search did not identify any new sites within 200 m of the modification area (see Figure 3.1).

3.2 Summary of the ACHA and relevant reports

3.2.1 Wellington South Battery Energy Storage System – Aboriginal Cultural Heritage Assessment (EMM 2022)

In 2022, EMM prepared an ACHA on behalf of AMPRY for the project. This included consultation with the Aboriginal community, desktop review of the regional archaeological record, and on-site investigations (field survey) to identify and assess the cultural heritage within the approved development boundary. This ACHA is the precursor to this ACHA addendum report for the same project, now renamed Bulabul BESS.

The desktop assessment identified two previously recorded sites within/within proximity to the approved development boundary : one (AHIMS #36-4-0201) recorded as 'not a site' and AHIMS #36-4-0203 (an isolated find), with inaccurate GPS co-ordinates, and the site was likely incorrectly recorded within the approved development boundary, and is instead located outside the boundary. An investigation of the wider region indicated that, where present, cultural material types commonly consisted of stone artefacts of varying density. Rockshelters, grinding grooves, post-contact habitation sites, ceremonial sites, and culturally modified trees were noted to occur in the region to a lesser extent. Background research highlighted the lack of natural and topological features associated with long term occupation, therefore reducing the likelihood of substantial cultural material being present within the approved development boundary. The assessment determined that, in areas not subject to previous disturbance, there was likelihood for the occurrence of isolated artefacts and/or low-density artefact scatters associated with low order drainage lines. In addition, in areas not subjected to historical land clearing, culturally modified trees may be present.

An archaeological survey was undertaken by EMM archaeologists and representatives of the RAP organisations and native title applicants in December 2021. The field survey undertook a general overview of the approved development boundary, encountering low ground surface visibility (36% when averaged across the study area) with an effective coverage of ~10%, and a targeted investigation of the proposed surface activities for the project, including the power line corridor and access track upgrade. The approved development boundary has been extensively cleared for farming and non-native trees, such as pines and shrubs, had been planted along the access track. Limited exposures were present across the approved development boundary, namely in areas of flooding near the 2nd order waterway and the access track. Where present, these exposures demonstrated a shallow, rocky red brown silty clay loam overlying areas of outcropping limestone.

During the survey, no Aboriginal objects or areas of subsurface potential were identified within the approved development boundary. No intangible values or places within the approved development boundary were identified by the participating RAPs. As a result of the survey, the survey area was considered to have low archaeological potential due to the lack of permanent fresh water or other desirable resources. Shallow soils observed across the project are suggested little subsurface potential. In discussion with RAP site officers, it was agreed that while Aboriginal people would have utilised the whole landscape of the Wellington region, the use of the approved development boundary would have likely been limited to transitory use, not long-term occupation.

The ACHA concluded that no cultural materials have been identified within the approved development boundary and are not expected to occur through further archaeological investigation. Notwithstanding, there is always residual potential for unexpected finds to be uncovered during broad scale earthworks associated with project construction. As such, protocols were outlined in the event that unexpected Aboriginal objects were uncovered in the approved development boundary.

The following key management recommendations were made:

- No impacts to AHIMS #36-4-0203 were proposed and appropriate signage and temporary fencing should be erected around the site to ensure no inadvertent impacts occur to this site.
- An ACHMP must be developed by a heritage specialist in consultation with the Aboriginal stakeholders and consent authority to provide the post-approval framework for managing Aboriginal heritage within the approved development boundary.
- Consultation should be maintained with the RAPs during the finalisation of the assessment process and throughout the construction phase of the project.

Following the completion of the ACHA, an ACHMP and CFP were prepared by OzArk (2025a, 2025b). The ACHMP is an internal document which was prepared to meet the project commitments. The CFP was prepared in consultation with Heritage NSW and was approved by DPHI in July 2025.

3.2.2 Wellington South Battery Energy Storage System – Aboriginal Cultural Heritage Management Plan (OzArk Environment and Heritage 2025)

As presented in Section 3.2.1 above, the ACHA (EMM 2022a) prepared by EMM on behalf of AMPYR outlined recommendations for the preparation of an ACHMP prior to commencement of ground disturbance. OzArk Environment and Heritage prepared an ACHMP (OzArk 2025b) to address the management condition requirement within the ACHA.

An Aboriginal Focus Group Meeting (AFGM) was held on 19 August 2024 to discuss the project and to inform the ACHMP.

The ACHMP drew on the information from the ACHA and summarised that report indicating two previously recorded Aboriginal sites. AHIMS #36-4-0201 is located nearby (~ 5 m) to the approved development boundary. The ACHA emphasised the coordinates for AHIMS site #36-4-0203 were likely in error, with the site likely incorrectly recorded within the approved development boundary, and should instead be located outside the boundary to the west. The ACHMP stated that this site location had not yet been updated. No site-specific intangible or cultural values were identified through research or Aboriginal stakeholder consultation during the ACHA process.

The ACHMP outlined that during ACHA consultation comments from WVWAC indicated that the landforms subject to the project were used ephemerally as a movement corridor between Wuuluuman Creek and the Wambuul-Macquarie River; and retained some aesthetic appeal. Culturally, WVWAC indicated that the broader landscape has moderate cultural value, thereby the ACHA recommended the project to minimise its visual impacts to the locale where feasible.

The ACHMP outlines several management measures and protocols to be implemented and followed during the construction and operation of the project. The management measures are summarised as:

- **Site specific management measures:** All site personnel will be made aware of a registered Aboriginal site in the vicinity of the development boundary and therefore ground disturbance must not be undertaken outside of approved areas. Signage and temporary fencing to be erected around AHIMS #36-4-0203 prior to construction commencing.
- **Aboriginal cultural heritage awareness training:** All employees, contractors, sub-contractors and visitors to the development boundary will be made aware of the obligation to avoid harm to Aboriginal heritage through a general site induction prior to them commencing work on the project.
- **Unanticipated heritage finds procedure:** Outlined processes to manage the unexpected discovery of Aboriginal ancestral remains, Aboriginal objects, and finds both within and outside the approved development boundary.

The ACHMP indicated that if future project planning and/or impacts are to occur outside the approved boundary of the ACHA (EMM 2022a), further assessment will be required.

Following the completion of the ACHMP and CFP, a cultural awareness training package has been recorded to be shown as part of all inductions.

3.3 Aboriginal Heritage Information Management System search results

The AHIMS database is managed by Heritage NSW and includes a location and description of Aboriginal objects and sites recorded through academic research and cultural heritage management.

3.3.1 Updated AHIMS Searches

EMM conducted several searches of the AHIMS database over the course of the ACHA for the EIS and as part of the ACHA addendum.

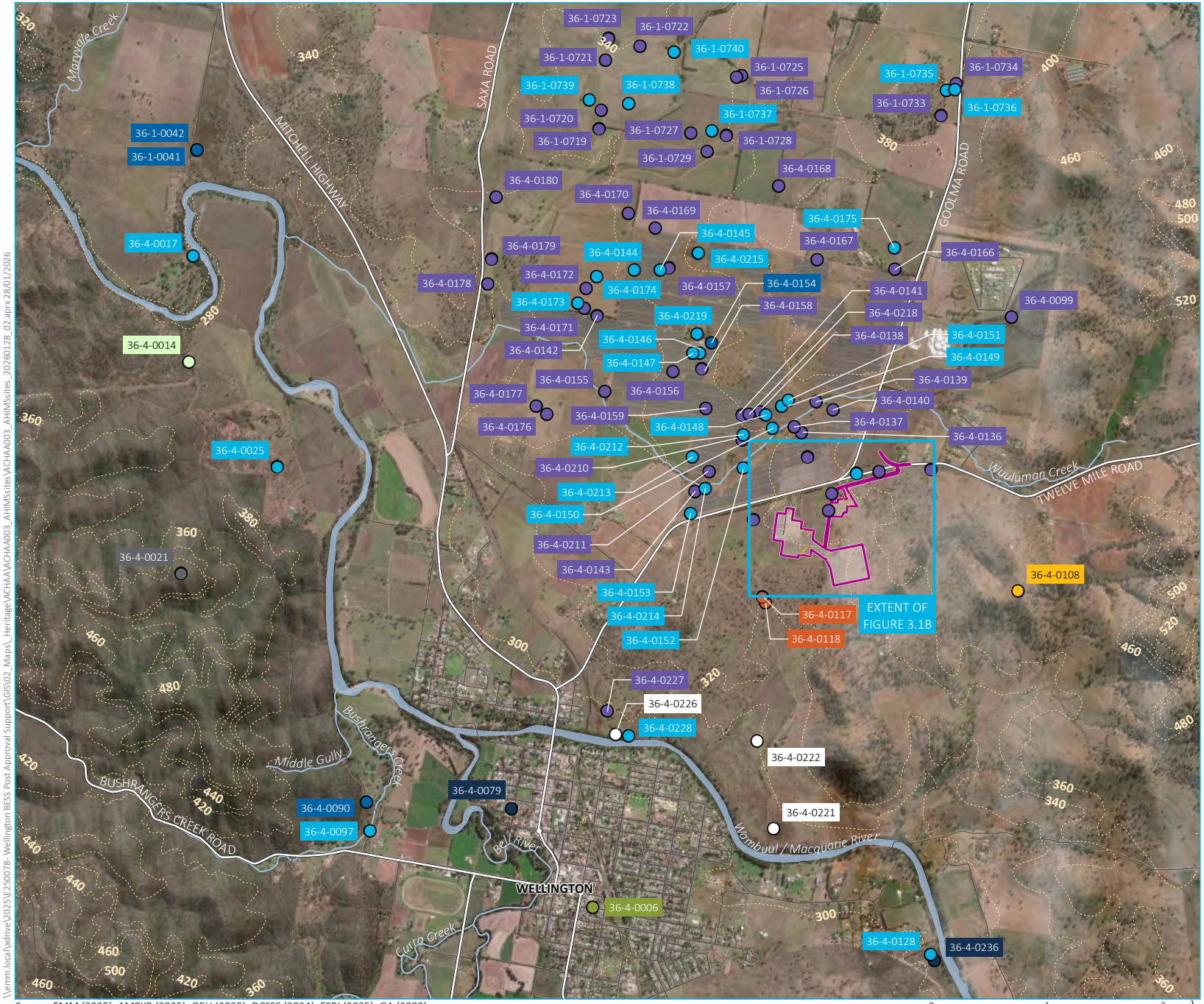
Initial searches of the AHIMS database were conducted on 2 August 2021 (ID: 609448) covering an area of ~170 km^2 which returned 55 previously documented sites. EMM conducted a more recent search of the AHIMS database on 16 October 2025 (ID: 1055710) as part of the ACHA addendum process. The updated search captured the same localities and identified 99 Aboriginal sites and/or objects (see Figure 3.1). The rise in Aboriginal sites and/or objects documented in the landscape between August 2021 and October 2025 is indicative of the numerous archaeological investigations being conducted in the locale.

Of the AHIMS sites, 71 are valid, 24 are destroyed, 3 are partially destroyed, and one is recorded as ‘not a site’. One site (AHIMS #36-4-0203) has been previously identified within the approved development boundary, and one site (AHIMS #36-4-0201) has been recorded in the adjacent lot, but within 5 m of the western boundary of the approved development boundary. The two recorded sites were identified in the original ACHA AHIMS search and discussed in more detail above. The recorded location of AHIMS #36-4-0203 is likely in error, and the site was likely recorded outside the approved development boundary, to the west. Both sites appear to have been recorded as part of the Wellington Solar Farm development, which surveyed the Wellington Substation property (Lot 1 DP1226751) as part of the assessment for a proposed high voltage line.

For regional comparison, NGH reported ten artefact scatters within the Wellington Solar Farm project area; of these, five sites recorded two artefacts, and the other sites reported low or low-to-moderate densities (<12 artefacts). These artefacts were recorded over relatively large exposures, ranging from 30 m to 100 m in length, and which would align with densities of <2 artefacts/m^2 as appears more common for the region. Other site types recorded in the region include six culturally modified trees (n=6, 11%), two potential archaeological deposits (PADs; n=2, 4%), and one bora/ceremonial site with an associated carved tree (n=1, 2%). In addition, one burial site has been recorded ~3 km south-west of the modification area within a nature reserve. No other burial sites are recorded. Two sites (AHIMS #36-4-0074 and #36-4-0219) do not specify a site type. AHIMS #36-4-0219 appears to be an artefact reburial location associated with Wellington Solar Farm.

Table 3.1 Summary of AHIMS site types within search area.

Site type	Number of sites		% of total	
	Category total	Sub-category total	Category total	Sub-category total
Artefactual site	82		83	
Isolated artefact		*48*		*57.95*
Low density artefact scatter		*1*		*1.23*
Artefact site (unspecified density)		*33*		*39.84*
Bora/ceremonial site, modified tree (carved)	1		1	
Bora/ceremonial site, undefined artefact scatter	1		1	
Aboriginal Ceremony and Dreaming, Stone Arrangement	1		1	
Burial	2		2	
Modified tree (carved or scarred)	4		4	
Scarred tree		*2*		*50*
Unspecified modified tree (carved or scarred)		*2*		*50*
Potential archaeological deposit (PAD)	2		2	
Restricted site	6		6	
Total	**99**	**-**	**100**	**-**



Source: EMM (2025); AMPYR (2025); OEH (2025); DCSSS (2024); ESRI (2025); GA (2009)

0 1 2 km

GDA 1994 MGA Zone 55

N

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AHIMS sites

Bulabul Battery MOD1
ACHA Addendum
Figure 3.1a

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KEY

- Modified development boundary
- Modification area

AHIMS (by site type)

- Isolated find
- Undefined artefact scatter

Existing environment

- Topographic contour (20 m interval)
- Major road
- Minor road
- Named watercourse

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Source: EMM (2025); AMPYR (2025); OEH (2025); DCSSS (2024); ESRI (2025); GA (2009)

0 250 500 m

GDA 1994 MGA Zone 55

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AHIMS sites

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Figure 3.1b

EMM creating opportunities

4 Field Investigations

4.1 Key findings

- An archaeological field survey was undertaken by an EMM archaeologist and Aboriginal representatives from the RAP organisations on Tuesday 25 November 2025, targeting the modification area.
- No Aboriginal objects were observed during the field survey, and no areas of subsurface archaeological potential were identified.

4.2 Archaeological survey

4.2.1 Approach and methods

EMM conducted an archaeological field survey of the modification area with the assistance of Aboriginal representatives from the RAPs on Tuesday 25 November 2025. The survey was directed by Phillipa O'Brien-Pounde (EMM Archaeologist) with several RAPs represented during the field program (refer to Section 2.3). A list of individuals and groups present during the survey is presented in Table 4.1. The survey team targeted additional areas, which have subsequently been removed from the modification area. As shown on Figure 4.1, this included larger areas for the transmission easement, substation bay (Transgrid substation 1 and 2) and construction laydown areas (construction laydown area 1 and 2).

The primary aims of the survey were to:

- identify Aboriginal archaeological sites and/or Aboriginal places with the assistance of Aboriginal knowledge holders
- characterise the landscape to aid predictions of archaeological potential
- identify sites or areas that would require further investigation if planned for development as part of the project
- identify sites or areas to be avoided by development
- identify areas with minor or negligible Aboriginal cultural heritage values that are most suitable for development.

The archaeological survey and data collection methods followed section 2.2 of the *Code of Practice for the Archaeological Investigation of Aboriginal Objects in NSW* (DECCW 2010). To ensure the proposed areas of (potential) impact were suitably surveyed, the survey targeted the areas shown on Figure 4.1. Each transect aligned with discrete landforms where feasible. Each survey participant was spaced approximately 10-20 m apart for each transect. Ultimately this allowed for survey of areas ~50-100 m in width. The assessment calculations assume that each participant could identify and inspect exposures within 5 to 10 m either side of them. Notwithstanding, this calculation does not account for more obtrusive site types such as grinding grooves and culturally modified trees which are observable from a much greater distance.

The survey team targeted ground exposures along transects, outcropping bedrock, and other features where cultural material were predicted to occur. It must, however, be noted that archaeological surveys are inherently limited by ground surface visibility conditions and therefore are considered to only *sample* the landscape. The archaeological survey did not aim to cover the entire ground surface within the modification area, but rather to characterise the archaeological landscape through accessible portions of the area.

The effectiveness of the survey is determined through recording and analysing survey coverage data. It is evaluated for its effectiveness in identifying the distribution of Aboriginal objects across the landscape and considering the potential for archaeological deposits. The percentage of the ground surface exposed in each landform and the visible ground surface within exposures (as ground exposures are often obscured by vegetation, gravels, etc.) influences the survey results. For example, an archaeologically sensitive landform surface that is highly exposed by erosion is likely to reveal Aboriginal objects, whereas a similar landform that is thickly grassed will obscure surface artefacts if they are present. Overall, calculation of effective survey coverage is used to estimate not only how much area was physically surveyed, but also how favourable the survey conditions were for the identification of Aboriginal sites.

Survey transects were recorded as tracks on GPS units and detailed information about each transect recorded on a separate Survey123 form created by EMM. The Survey123 form allowed for survey transects starting points, details and representative photographs to be recorded. The course of survey transects were recorded as tracks on hand-held non-differential GPS units which were linked to the Survey123 forms.

Table 4.1 Registered Aboriginal Party representatives present during the survey

Organisation	Representatives
Corroboree Aboriginal Corporation	Ben McConnell
Wellington Local Aboriginal Land Council	Seaun Stanley
Wellington Valley Wiradjuri Aboriginal Corporation	Murray Clynes
Woka Aboriginal Corporation	Angel Booty

4.2.2 Results

The archaeological field survey included the completion of pedestrian survey for a further ~5.5 km across five discrete transects within and adjacent to the modification area (Figure 4.1, Table 4.2 and Plate 4.1 to Plate 4.6). Based on transect data and observations demonstrating consistency in landforms and environmental context, the modification area has been divided into two main survey units:

1. Survey Unit 1 (SU1) encompassing transects 1, 2 and 3
2. Survey Unit 2 (SU2), encompassing transects 4 and 5.

These survey units and transects are presented on Figure 4.1, and summarised in Table 4.2. The transects were on average ~1.1 km in length, ranging between ~60 m up to ~1,506 m, with an average ground exposure of ~31%, average visibility was ~39% and effective coverage ~13%.

In total, the addendum survey encompassed a further ~6.3 ha. The cumulative survey effort, combining the addendum survey and ACHA activities, resulted in coverage of ~8.9 ha.

Topographically, the modification area is dominated by flat to undulating rises, dotted with granite outcrops with local relief increasing to the east (Plate 4.1 -Plate 4.3). The western portion of the modification area flattens out before giving way to Transgrid's Wellington Substation. To the east, gentle rises undulated at drainage lines with the channels eventually emptying into the Macquarie River.

The observed soil profiles were consistent with the ACHA activities, comprising a shallow clay loam topsoil across the modification area, with cracking clays occasionally visible in some locations (Plate 4.4). The construction and operation of Wellington Substation, Orana BESS and the project would have significantly disturbed soils within and adjacent to the approved development boundary (Plate 4.3). Soils generally appeared eroded as a result of vegetation clearance, animal tracks and erosional sheetwash, particularly on slope and spur landforms.

Vegetation across much of the modification area has been cleared, with dense native grasses dominating the ground cover (Plate 4.1-Plate 4.2 and Plate 4.5-Plate 4.6). Several remnant native eucalypt trees were observed; however, are not within the modification area. These eucalypt specimens were inspected for evidence of cultural scarring or carving but no such modifications were observed.

Disturbance was observed in areas where transmission towers have been constructed (Plate 4.2 and Plate 4.3). Subsequent water management and drainage landscaping was observed along the curtilage of the substation. Likewise, the development of tracks and roads across the development boundary were also observed nearby and within the modification area associated with ongoing construction activities related to the project and Orana BESS (Plate 4.3 and Plate 4.6). Other discrete pockets of disturbance were observed, primarily caused by low-intensive farming (Plate 4.6).

No Aboriginal objects were observed during the field survey, and no areas of subsurface archaeological potential were identified. Based on the results of the survey, the modification area is assessed as having low archaeological potential, primarily due to the shallow soils observed across the modification area, which indicate limited potential for intact subsurface deposits.

Table 4.2 Field survey undertaken within the modification area and surrounds as part of this addendum

Unit #	Transect Unit #	Area (m²)	Landform	Exposure (%)	Visibility (%)	Effective coverage		% of survey areas
						Area (m²)	Percentage %	
SU1	Transects 1, 2 and 3	32,910	Undulating plains	20	30	1,975	6	3.1
SU2	Transects 4 and 5	30,488	Undulating plains	20	30	1,829	6	2.9
Total	-	**63,398**	-	-	-	**3,804**	**12**	**6.0**
Average	-	-	-	*20*	*30*	*1,902*	6	0



Plate 4.1 Gentle undulating hills typical of SU2, east facing.



Plate 4.2 Plain cleared landscape typical of SU1 with Transgrid substation, north-west facing.



Plate 4.3 Introduced soils associated with Orana BESS construction, west facing.



Plate 4.4 Observed shallow soils with surface cracking clay, east facing.



Plate 4.5 Remnant vegetation and mature eucalypt trees observed in SU & SU2, south facing.



Plate 4.6 Cleared cattle paddock with the project's Stage 1 construction visible, east facing.



KEY

- Modified development boundary
- Approved development boundary
- Modification area

Survey unit 1

- Transect 1
- Transect 2
- Transect 3

Survey unit 2

- Transect 4
- Transect 5

Survey area

- Additional transmission easement
- Construction laydown area 1
- Construction laydown area 2
- Transgrid substation 1
- Transgrid substation 2

Strahler stream order

- 1st order
- 2nd order
- 3rd order

Existing environment

- Major road
- Minor road
- Vehicular track
- Waterbody
- Cadastral boundary

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Source: EMM (2025); AMPYR (2025); DPI (2013); DCSSS (2024); ESRI (2025)

0 250 500 m

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Survey results

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ACHA Addendum
Figure 4.1

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5 Potential and cumulative Impacts

5.1 Key findings

- The project would involve earthworks and construction activities within the modification area. This would remove the upper portion of the soil profile currently within the modification area.
- No cultural materials have been identified within the modification area and are not expected to occur through further archaeological investigation. No intangible values have been identified within or in association with the modification area to date.
- WVWAC has indicated increasing development in the region was having a cumulative impact on the cultural landscape. WVWAC indicated that the landforms subject to the development were used ephemerally as a movement corridor between Wuuluuman Creek and the Wambuul-Macquarie River; and retained some aesthetic appeal. Culturally, WVWAC indicated that the broader landscape has moderate cultural value. The ACHA recommended the project minimise its visual impacts to the locale where feasible.

5.2 Summary of the previous findings

This section outlines the potential impacts as documented in the ACHA. The report concluded that:

- one site (AHIMS #36-4-0203) has been previously identified within the approved development boundary, and one site (AHIMS #36-4-0201) has been recorded in the adjacent lot, but within 5 m of the western boundary of the approved development boundary. Notably, AHIMS #36-4-0201 has been subsequently identified as “not a site” on AHIMS. Some effort was given to relocating this site (or any possible associated artefacts) within the approved development boundary, with no success. Therefore, this site can be considered non-extant for the purposes of this ACHA addendum. The recorded location of AHIMS #36-4-0203 is likely in error, with the site likely incorrectly recorded within the approved development boundary and should instead be located outside the boundary to the west
- an ACHMP and CFP were prepared by OzArk (2025a, 2025b) which summarise the findings of the ACHA (as above) and included further consultation with the Aboriginal stakeholders and provided recommendations that should be integrated into the management of the project
- the management measures and protocols to be implemented and followed during the construction and operation of the project are outlined in the ACHMP and are summarised as:

    a) **Site specific management measures:** All site personnel will be made aware of a registered Aboriginal site in the vicinity of the development boundary and therefore ground disturbance must not be undertaken outside of approved areas. Signage and temporary fencing to be erected around AHIMS #36-4-0203 prior to construction commencing.

    b) **Aboriginal cultural heritage awareness training:** All employees, contractors, sub-contractors and visitors to the development boundary will be made aware of the obligation to avoid harm to Aboriginal heritage through a general site induction prior to them commencing work on the project.

    c) **Unanticipated heritage finds procedure:** Outlined processes to manage the unexpected discovery of Aboriginal ancestral remains, Aboriginal objects, and finds both within and outside the approved development boundary.

The ACHMP indicated that if future project planning and/or impacts are to occur outside the approved development boundary of the ACHA (EMM 2022a), further assessment will be required.

Following the completion of the ACHMP and CFP a cultural awareness training package has been recorded to be shown as part of all inductions.

5.3 Potential impacts

5.3.1 Overview

Generally, two types of potential impact are considered in relation to cultural materials – direct and indirect. Direct impacts relate to the project removing, truncating and/or disturbing the ground surface. This would include the removal of vegetation, removal or modification of geological outcropping and the removal or disturbance of the upper soil profile, within which cultural materials are normally encountered. Indirect impacts are the result of both construction and operational activities that may result in environmental changes that would affect cultural material within, or near the project. General examples of indirect impact may include vibration-induced structural damage, the changing view-lines to a site where visibility to/from it is part of its values, or an increase in dust being blown into a rock shelter and negatively affecting art motifs should they be present.

Section 9 of the ACHA provides a summary of the proposed development activities of the project, and how they may intersect with Aboriginal heritage. For this modification, the development will involve a construction laydown area, an additional bay at TransGrid's Wellington Substation and additional transmission easement. The modification will involve earthworks and construction activities which would remove the upper portion of the soil profile within the modification area.

As no Aboriginal objects, sites and places were identified within the modification area as part of the ACHA addendum, the modification area is considered to be suitable for development (Figure 5.1).

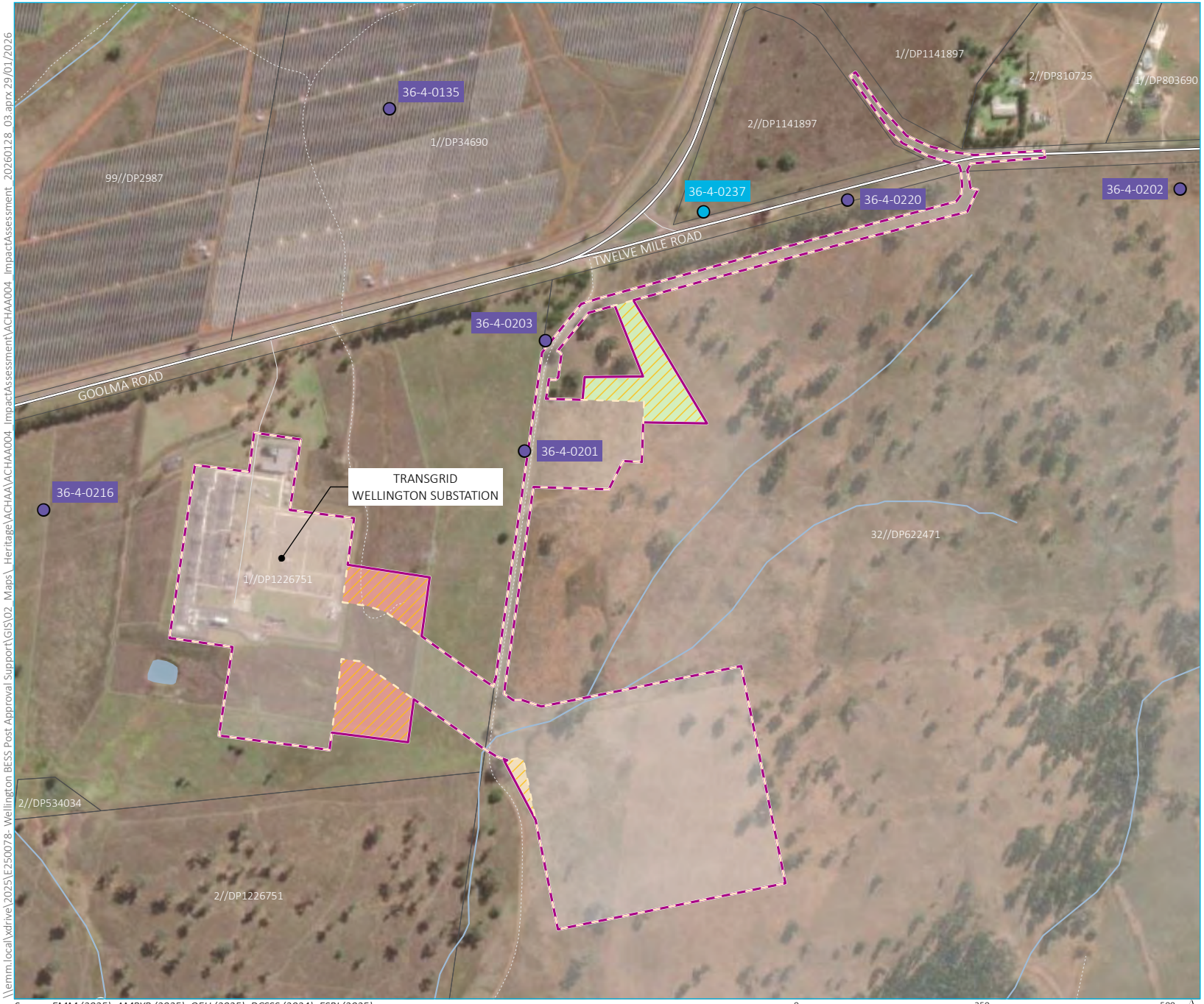
5.3.2 Intergenerational loss/cumulative impacts

Ecologically sustainable development, or intergenerational equity, is the principle whereby the current generation should maintain the health, diversity and longevity of the environment for the benefit of future society. For Aboriginal heritage management, intergenerational equity can be considered primarily in terms of the cumulative impacts to Aboriginal objects, sites and/or places in a region. If few Aboriginal objects and places remain in a region (e.g. due to development impacts), there are fewer opportunities for future generations of Aboriginal people and the broader community to enjoy the cultural benefits. Understanding the integrity, rarity, and significance of Aboriginal objects, sites, and places that might be affected is important. This information helps explain how Aboriginal people used and occupied the land in the past and is essential for considering intergenerational equity and the project's cumulative impacts.

The ACHA concluded the following in relation to cumulative impacts for the project:

> No cultural materials were identified during the ACHA investigation. WVWAC commented, during the ACHA review period, that developmental impacts, as opposed to avoidance, are compounding the continual intergenerational loss of cultural sites, cultural landscape and cultural knowledge in the region. In the case of this project, avoidance of identified cultural materials is proposed to offset this loss wherever feasible.

The information outlined in the ACHA remains accurate, with no additional Aboriginal objects, sites and places identified within the modification area as part of this ACHA addendum.



KEY

- Modified development boundary
- Approved development boundary
- Modification area

Modification element

- Additional construction laydown
- Additional easement
- Additional substation bay

AHIMS (by site type)

- Isolated find
- Potential archaeological deposit
- Undefined artefact scatter

Existing environment

- Major road
- Minor road
- Vehicular track
- Watercourse/drainage line
- Waterbody
- Cadastral boundary

Source: EMM (2025); AMPYR (2025); OEH (2025); DCSSS (2024); ESRI (2025)

0 250 500 m

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Project impact assessment

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Figure 5.1

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6 Conclusion and management

6.1 Key findings

- The ACHA addendum concludes that no cultural materials were observed or documented within the modification area. As such, it is not considered that the project would result in harm to cultural materials.
- Recommendations are provided to guide post-approval requirements for Aboriginal heritage (Section 6.3). These include the need to update existing databases in relation to previously documented sites with corrected locations, and integration of the modification area into the ACHMP.

6.2 Management strategy

6.2.1 Summary of assessment

The modification area and its immediate environs have been subjected to extensive archaeological investigation, and the archaeological and cultural resource of the region is well understood. Regionally, archaeological models stress the importance of flat and elevated terraces, ridge spurs and hills in proximity to the region's major watercourses, where predominantly stone artefact sites of varying densities can be expected.

The modification area conforms well to this regional archaeological model. Previous investigation has resulted in the identification of two AHIMS sites in proximity to the modification area. One site (AHIMS #36-4-0203) has been previously identified within the approved development boundary, and one site (AHIMS #36-4-0201) has been recorded in the adjacent lot, but within 5 m of the western boundary of the approved development boundary. Although AHIMS #36-4-0201 is registered as "not a site" on the AHIMS database, relocation of the site was attempted as a precaution. The recorded location of AHIMS #36-4-0203 is likely in error, with the site likely incorrectly recorded within the approved development boundary, and should instead be located outside the boundary to the west. No Aboriginal places or deposits were identified within the modification area and no intangible values have been identified to date.

Since these databases (and associated documentation) provide legislative protection to cultural material and guide future investigations, both the ACHMP and AHIMS database should be updated to document the findings of this report – resulting in revision to the site location to reflect that AHIMS site #36-4-0203 does not extend into the development area. On-Country investigations within the modification area did not identify any further cultural materials. It is considered that there is low risk for cultural materials to be present, and if encountered would be characterised as isolated and/or disparate stone artefacts. The modification is therefore considered to have a low risk of harm to Aboriginal objects.

6.2.2 Management strategy

The project has an existing ACHMP, which provides guiding principles and a framework for the identification, assessment and management of cultural heritage. It provides a structured approach to managing cultural heritage, including consultation with the Aboriginal community, mitigation approaches and methods, and unexpected discoveries of cultural material, during construction activities and for the life of the project. The CFP was also prepared in consultation with Heritage NSW and was approved by DPHI in July 2025.

The recommendations below include the integration of the modification area into the existing ACHMP to provide the post-approval management framework for all future Aboriginal heritage requirements for the project. For the purposes of this ACHA addendum, the management of unexpected finds and/or ancestral remains within the ACHMP and associated CFP will be most relevant, since no identified cultural materials have been documented in the modification area. In addition, recommendations include updating the information of previously documented site AHIMS #36-4-0203, the recorded location of which is in error.

6.3 Recommendations

The following recommendations should be integrated into the management of the project:

1. Based on consultation with the RAPs and on-Country activities, it is considered that there is low risk of significant cultural materials being adversely affected by the proposed modification.

2. For the purposes of future cultural heritage management, the modification area should be integrated into the ACHMP, which has established processes for Aboriginal consultation, mitigation approaches and methods, and protocols for unexpected finds and ancestral remains. It should ensure suitable updates that include but are not limited to:

    a) updating the site location information for AHIMS #36-4-0203 on AHIMS to the correct location (i.e. on Lot 1 of DP1226751).

    b) any identified Aboriginal sites, objects and/or places outside of the development boundary should be suitably protected. This should include suitable cultural inductions to key project team members, and the installation of suitable active avoidance measures (e.g. fencing, signage, surface protection, etc) where determined at risk of inadvertent harm.

    c) consultation should be maintained with the RAPs.

3. Where the heritage consultant changes through the project, suitable hand over should be undertaken to ensure no loss or mistranslation of the intent of the information, findings and future steps in heritage management occur.

4. A final copy of the ACHA addendum should be provided to the RAP groups for their records.

References

Department of Environment Climate Change and Water. (2010). *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales*. Department of Environment Climate Change and Water.

EMM Consulting Pty Ltd. (2022a). *Wellington South Battery Energy Storage System Aboriginal Cultural Heritage Assessment*. Unpublished report for AMPRY Australia Pty Ltd.

EMM Consulting Pty Ltd. (2022b). *Wellington South Battery Energy Storage System Environmental Impact Statement* (Issue October). Unpublished report for AMPRY Australia Pty Ltd.

EMM Consulting Pty Ltd. (2023). *Wellington Battery Energy Storage System, Wellington NSW Aboriginal consultation notification amendment report*. Unpublished report for AMPRY Australia Pty Ltd.

OzArk Environmental & Heritage Pty Ltd. (2025a). *Aboriginal Cultural Heritage Chance Finds Protocol*. Unpublished report for AMPRY Australia Pty Ltd.

OzArk Environmental & Heritage Pty Ltd. (2025b). *Wellington South Battery Energy Storage System Aboriginal Cultural Heritage Management Plan* (Issue July). Unpublished report for AMPRY Australia Pty Ltd.

Glossary

Many of these definitions have been taken from the *Code of Practice for archaeological investigation of Aboriginal objects in NSW* (DECCW 2010)

Term	Definition
Aboriginal object	A physical manifestation of past Aboriginal activity. The legal term is defined in the National Parks and Wildlife Act 1974 section 5 as: any deposit, object or material evidence (not being a handicraft made for sale) relating to the Aboriginal habitation of the area that comprises New South Wales, being habitation before or concurrent with (or both) the occupation of that area by persons of non-Aboriginal extraction, and includes Aboriginal remains. Typical examples include stone artefacts, grinding grooves, Aboriginal rock shelters which by definition include physical evidence of occupation, midden shell, hearths, stone arrangements and other landscape features which derive from past Aboriginal activity.
Archaeological survey	A method of data collection for Aboriginal heritage assessment. It involved a survey team walking over the land in a systematic way, recording information. Activities are not invasive or destructive.
Aboriginal culturally modified tree	A tree of sufficient age to have been mature at the time of traditional Aboriginal hunter-gatherer life and therefore generally of more than 220 years ago with evidence of bark or cambium wood removal for the purpose of implement manufacture, footholds, bark sheet removal for shelter, or extraction of animals or other food. Care must be taken to distinguish Aboriginal scars from the much more common natural causes of branch tear, insect attack, animal impact, lightning strike and dieback. Culturally modified tree recognition guidelines exist to distinguish these features. Naturally scarred trees are often misidentified as Aboriginal culturally modified trees.
Aboriginal site:	The location where a person in the present day can observe one or more Aboriginal objects. The boundaries of a site are limited to the extent of the observed evidence. In the context of this report a 'site' does not include the assumed extent of unobserved Aboriginal objects (such as archaeological deposit). Different archaeologists can have varying definitions of a 'site' and may use the term to reflect the assumed extent of past Aboriginal activity beyond visible Aboriginal objects. Such use of the term risks defining all of Australia as a single 'site'.
Aboriginal stone artefact	A stone object with morphological features derived from past Aboriginal activity such as intentional fracture, abrasion or impact. Artefacts are distinguished by morphology and context. Typically flaked stone artefacts are distinguished from naturally broken stone by recognition of clear marginal fracture initiation (typically herzian/conchoidal or wedging initiation) on highly siliceous stone types which can often be exotic to the area. Care must be taken to distinguish modern broken stone in machine impacted contexts and therefore context must be carefully considered as well as morphology.
Approved development boundary	The project as approved by development consent SSD-27014706, comprising the BESS and associated infrastructure and upgrades, as assessed in the Wellington BESS Environmental Impact Statement (EIS), Wellington BESS ACHA and Wellington BESS Amendment Report (EMM 2022a, EMM 2022b, EMM 2023)
AHIMS	Aboriginal Heritage Information Management System — a computer software system employed by the Office of Environment and Heritage to manage many aspects of Aboriginal site recording and permitting. AHIMS includes an Aboriginal sites database which can be accessed via an internet portal.
Archaeological deposit	Aboriginal objects occurring in one or more soil strata. The most common form of archaeological deposit relates to the presence of a single conflated layer of Aboriginal stone artefacts worked into the topsoil through bioturbation.
Exposure	estimates the area with a likelihood of revealing buried artefacts or deposits, not just an observation of the amount of bare ground.
Grinding grooves	Grinding grooves typically derive from the sharpening of stone hatchet heads on sandstone rock. Grooves appear as elliptical depressions of around 25 cm length with smooth bases. Although mostly occurring in association with water to wash the abraded stone dust away from the groove, such sites have been recorded away from water. Narrow grooves or broad abraded areas may occur less commonly and may be derived from spear sharpening or other grinding activities

Term	Definition
Holocene	A period of time generally 10,000 years, which marks the end of the last ice age, to the present
Keeping place	A room or facility with the express and exclusive purpose of storing Aboriginal cultural heritage materials with accompanying documentation in a secure and accessible manner which protects their cultural heritage values.
Midden	A collection of shells and associated economic remains resulting from Aboriginal food gathering and processing activity. Middens comprise shellfish remains of consistent size in a rich dark earth matrix commonly associated with stone artefacts, fish bone and animal bone although shells are commonly the most obtrusive element.
Modification area	The components this report is seeking approval for, as outlined in Section 1.1. This includes an additional construction laydown area, additional transmission line easement and additional bay at Wellington Substation.
Open stone artefact site/stone artefact site	An unenclosed area where Aboriginal stone artefacts occur – typically exposed from a topsoil archaeological deposit by erosion. Typically, the term is used to refer to two or more artefacts although this is an arbitrary distinction. A general 'rule of thumb' boundary definition employed by archaeologists is that artefacts or features more than 50 m apart are regarded as separate sites, however there is no theoretical imperative dictating such as rule. (The 50 m separation rule is used for the most part in EMM's work).
Pleistocene	A period of time 2.6 million years ago to 10,000 years ago. Reference to 'Pleistocene sites' generally means reference to sites older than 10,000 years.
Potential Archaeological Deposit (PAD):	An area where there is an inferred presence of Aboriginal objects in the soil based on the environmental context which is typically associated with discovery of Aboriginal objects in analogous areas. This is not strictly a 'site' type, although AHIMS records it as such for the purpose of associating Aboriginal heritage Impact Permits with geographical areas.
Spur	the lateral crests of land that descend from the summit of hills or ridges. Spurs typically extend, with decreasing elevation, closer to streams and valley floors than the main crest of a hill.
Transect	A sample unit which is walking line or corridor across the modification area
Visibility	The amount of bare ground on exposures which might reveal artefacts or other archaeological materials.

Appendix A
Aboriginal consultation

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A.1 Aboriginal consultation log

Aboriginal Consultation Requirements for Proponents (DECCW 2010)*						
ABORIGINAL COMMUNICATIONS LOG						
Project Name: Wellington Battery Energy Storage System					**Project #:** J210534	
DATE	**OUTGOING / INCOMING**	**ORGANISATION**	**CONTACT MADE BY**	**CONTACT TO**	**CONTACT TYPE**	**COMMENTS**
AGENCY REQUESTS						
06-Aug-21	Outgoing	Heritage NSW Dubbo Regional Council NTSCorp Greater Sydney Local Land Services (LLS) National Native Title Tribunal (NNTT) Wellington Local Aboriginal Land Council (WLALC) Office of the Registrar, Aboriginal Land Rights Act	Cameron Neal (EMM)	Various	Email	Requested information on local Aboriginal knowledge holders.
06-Aug-21	Incoming	LLS	Customer Service Team	Cameron Neal (EMM)	Email	Distanced themselves from the consultation process, suggested contacting Heritage NSW.
09-Aug-21	Incoming	NNTT	Geospatial Searches	Cameron Neal (EMM) Georgia Burnett (EMM)	Email	Confirmed no Native Title Determination Applications, Determinations of Native Title, or Indigenous Land Use Agreements over the identified area.
19-Aug-21	Incoming	Heritage NSW	Paul Houston	Georgia Burnett (EMM)	Email	Provided stakeholder list.
NOTIFICATION						
31-Aug-21	Outgoing	Binjang Wellington Wiradjuri Heritage Survey Corroboree Aboriginal Corporation Wiradjuri Council of Elders Dubbo Local Aboriginal Land Council Wellington Local Aboriginal Land Council	Cameron Neal (EMM)	Various	Email	Distributed letter with project information and requested registrations of interest by COB 15 September 2021
31-Aug-21	Outgoing	Brian Draper Central West Catchment Management Authority Dubbo Aboriginal Community Working Party Katrina McKinnon Mooka Natasha Rodgers Paul Brydon Peter Peckham Trevor Robinson Wamarr Cultural Consultants Wellington Valley Wiradjuri Aboriginal Corporation Wiradjuri Interim Working Party Wirrimbah Direct Descendants David Smith Gary Smith Geoffrey Ryan Tubbagah Aboriginal Co-Op Raymond Thomas Smith William Smith	Cameron Neal (EMM)	Various	Post	Distributed letter with project information and requested registrations of interest by COB 15 September 2021
01-Sep-21	Outgoing	-	Victoria Mietchen (EMM)	Daily Liberal	Newspaper ad	Advertisement to register interest in the project appeared in the *Daily Liberal.*
02-Sep-21	Incoming	Corroboree Aboriginal Corporation	Marilyn Carroll-Johnson	Georgia Burnett (EMM)	Email	Registered interest in the project.
02-Sep-21	Incoming	Woka Aboriginal Corporation	Steve Johnson	Georgia Burnett (EMM)	Email	Registered interest in the project.
10-Sep-21	Incoming	Mooka Aboriginal Community Working Party	Neville Williams	Reception (EMM)	Post	Letter was RTS. No reason provided.
15-Sep-21	Outgoing	Binjang Wellington Wiradjuri Heritage Survey	Jamie Grey	Cameron Neal (EMM)	Phone	Rang, no answer. Left a message.
15-Sep-21	Outgoing	Dubbo Aboriginal Community Working Party	Grace Toomey	Cameron Neal (EMM)	Phone	Rang, line disconnected.
15-Sep-21	Outgoing	Natasha Rodgers	Natasha Rodgers	Cameron Neal (EMM)	Phone	Number provided by Heritage NSW is incorrect.
15-Sep-21	Outgoing	Wiradjuri Interim Working Party	Not provided	Cameron Neal (EMM)	Phone	Rang, line disconnected.
15-Sep-21	Outgoing	Geoffrey Ryan	Geoffrey Ryan	Cameron Neal (EMM)	Phone	Spoke at length regarding project location and tribal boundaries. Geoffrey expressed frustration about the wrong people speaking for Country, as well as government attitudes towards Aboriginal people and their rights to land. Geoffrey declined to register interest in the project as it is not within the boundaries of his tribal group. Recommended EMM contact the Wellington Aboriginal Corporation Health Service as they may be able to assist in identifying local Aboriginal stakeholders.
15-Sep-21	Outgoing	Wellington LALC	Not provided	Cameron Neal (EMM)	Phone	Rang, no answer. Left a message.

15-Sep-21	Outgoing	Dubbo LALC	Not provided	Cameron Neal (EMM)	Phone	Rang, no answer. Left a message. Voicemail message indicated LALC staff are not currently in the office but admin/CEO can be reached on a separate mobile number.
15-Sep-21	Outgoing	Dubbo LALC	Admin/CEO	Cameron Neal (EMM)	Phone	Rang mobile number provided by Dubbo LALC voicemail. Number is not connected.
15-Sep-21	Outgoing	Wellington Valley Wiradjuri Aboriginal Corporation	Not provided	Cameron Neal (EMM)	Phone	Number is not connected.
15-Sep-21	Outgoing	Wellington Valley Wiradjuri Aboriginal Corporation	Not provided	Cameron Neal (EMM)	Email	Emailed providing project information with a request for registration of interest.
15-Sep-21	Outgoing	Wellington Aboriginal Corporation Health Service	Reception	Cameron Neal (EMM)	Phone, Email	Rang WACHS to seek information on local Aboriginal stakeholder groups/individuals. Spoke to Pamela who recommended emailing Anita (manager). Sent an email to Anita providing project information and seeking information on local Aboriginal stakeholder groups/individuals.
15-Sep-21	Outgoing	Binjang Wellington Wiradjuri Heritage Survey Corroboree Aboriginal Corporation Wiradjuri Council of Elders Dubbo Local Aboriginal Land Council Wellington Local Aboriginal Land Council	Cameron Neal (EMM)	Various	Email	Reminded RAPs that registration deadline ends today but we have extended it to COB Friday 17 September 2021. Attached letter with project details and relevant contact information.
15-Sep-21	Incoming	Wellington Valley Wiradjuri Aboriginal Corporation	Reception (EMM)	Bradley R Bliss	Phone	Brad phoned EMM reception to follow up on the email from CN. Reception informed Brad CN would call back.
16-Sep-21	Outgoing	Wellington Valley Wiradjuri Aboriginal Corporation	Cameron Neal (EMM)	Bradley R Bliss	Phone	Phoned Brad to follow up on his call. Brad stated both Wellington Valley Wiradjuri Aboriginal Corporation and Galangabang Corporation would like to register interest in the project - as he is on the board for both organisations he will be a single point of contact for EMM. Brad also informed CN that Binjang Wellington Wiradjuri Heritage Survey and Wellington LALC would likely wish to be involved. CN replied that he had been trying to get in touch with both organisations but without success so far. Brad was not aware of any contact details that CN did not already have for either group. Finally, Brad indicated he was aware of the presence of several scarred trees in the vicinity of the study area - these trees have only recently been registered on AHIMS (<1 month ago) and are restricted sites. CN advised Brad that an updated AHIMS search would be completed to capture these sites. Brad said he would be happy to provide the relevant site cards should the scarred trees be returned in the search area.
16-Sep-21	Outgoing	Binjang Wellington Wiradjuri Heritage Survey	Cameron Neal (EMM)	Jamie Grey	Phone	CN followed up on his call to Jamie, who stated he would like to register interest in the project on behalf of Binjang WWHS. Thaked Jamie for his time and informed him that an assessment methodology will be distributed over the coming weeks.
24-Sep-21	Outgoing	Wellington Local Aboriginal Land Council Corroboree Aboriginal Corporation Woka Aboriginal Corporation Gallanggabang Aboriginal Corporation Wellington Valley Wiradjuri Aboriginal Corporation Binjang Wellington Wiradjuri Heritage Survey (hereafter 'All RAPs')	Cameron Neal (EMM)	Various	Email	Distributed letter with proposed assessment methods. Requested feedback by COB 22 October 2021.
06-Oct-21	Incoming	Wellington Valley Wiradjuri Aboriginal Corporation Gallanggabang Aboriginal Corporations	Bradley R Bliss	Georgia Burnett (EMM)	Email	Provided letters in response to the methodology (see Appendix B.5 for full exchange).
22-Nov-21	Outgoing	Wellington Valley Wiradjuri Aboriginal Corporation Gallanggabang Aboriginal Corporation	Megan Sheppard Brennand (EMM)	Bradley R Bliss	Phone	Phoned to determine availability of both Brad's corporations for the survey to be undertaken on 1st December. Left a message
22-Nov-21	Outgoing	Binjang Wellington Wiradjuri Heritage Survey	Megan Sheppard Brennand (EMM)	Jamie Grey	Phone	Phoned to determine availability of Jaime's corporation for the survey to be undertaken on 1st December. Jamie confirmed that he would have someone available for that date
22-Nov-21	Outgoing	Wellington Local Aboriginal Land Council (WLALC)	Megan Sheppard Brennand (EMM)	Reception	Phone	Phoned to determine availability of the WLALC for the survey to be undertaken on 1st December. Reception requested to be contacted via email and that following this email someone would determine availability
22-Nov-21	Outgoing	Binjang Wellington Wiradjuri Heritage Survey	Megan Sheppard Brennand (EMM)	Jamie Grey	Email	Emailed providing survey date (1st December) and requesting a response with availabilty. The contract and covid forms were also attached with a request for the site officer to get a covid test at least a day prior to the site inspection
22-Nov-21	Outgoing	Wellington Local Aboriginal Land Council (WLALC)	Megan Sheppard Brennand (EMM)	WLALC	Email	Emailed providing survey date (1st December) and requesting a response with availabilty. The contract and covid forms were also attached with a request for the site officer to get a covid test at least a day prior to the site inspection
22-Nov-21	Outgoing	Binjang Wellington Wiradjuri Heritage Survey	Megan Sheppard Brennand (EMM)	Jamie Grey	Email	Emailed providing survey date (1st December) and requesting a response with availabilty. The contract and covid forms were also attached with a request for the site officer to get a covid test at least a day prior to the site inspection

24-Nov-21	Outgoing	Wellington Local Aboriginal Land Council (WLALC)	Megan Sheppard Brennand (EMM)	Tara	Phone	Called WLALC and spoke to Tara enquiring if they received the email and their availabilty for the survey. Tara said they were available and would send an email through with the site officers information and would sign the contract and fill in the covid forms and acknowledged that a covid test was required. MSB said would send through more information tomorrow or Monday with meeting details once everything was confirmed.
24-Nov-21	Outgoing	Wellington Valley Wiradjuri Aboriginal Corporation Gallanggabang Aboriginal Corporations	Megan Sheppard Brennand (EMM)	Bradley R Bliss	Phone	Phoned to determine availability of both Brad's corporations for the survey to be undertaken on 1st December. Brad said that he was very busy next week with a number of other jobs but was trying to find two site officers and would have the paperwork to us by Thursday or Friday
25-Nov-21	Outgoing	WLALC, Wellington Valley Wiradjuri Aboriginal Corporation, Gallanggabang Aboriginal Corporations, Binjang Wellington Wiradjuri Heritage Survey	Georgia Burnett (EMM)	Various	Email	Followed up with meeting details regarding site inspection for Wednesday 1 December.
26-Nov-21	Incoming	Wellington Valley Wiradjuri Aboriginal Corporation Gallanggabang Aboriginal Corporations	Megan Sheppard Brennand (EMM)	Bradley R Bliss	Email	Brad sent signed contracts through along with insurances and site officer details for the survey on 1st December. Site officer for WVWAC will be Brenda Waters, Brad has not found a site officer for Gallanggabang yet
29-Nov-21	Outgoing	Binjang Wellington Wiradjuri Heritage Survey	Megan Sheppard Brennand (EMM)	Jamie Grey	Phone	Confirmed with Jamie that he would be attending the survey on 1st December and that he would send through the signed contract and his insurances by afternoon of 30th November. He confirmed that he had done a covid test today (29th November)
29-Nov-21	Outgoing	Wellington Local Aboriginal Land Council (WLALC)	Megan Sheppard Brennand (EMM)	NA	Phone	Called the WLALC to confirm their attendance for the survey and to request they send through the signed contract and insurances. No answer, left a voice message
01-Dec-21	Outgoing	Binjang Wellington Wiradjuri Heritage Survey, Wellington Valley Wiradjuri Aboriginal Corporation Gallanggabang Aboriginal Corporations	Megan Sheppard Brennand and Georgia Burnett (EMM)	Various	Fieldwork	Undertook site inspection. WLALC did not attend and could not be reached via phone or email
09-Feb-22	Outgoing	All RAPs	Georgia Burnett (EMM)	Various	Email	Distributed draft ACHA for review and comment. Requested feedback provided by COB 9 March 2022.
07-Mar-22	Outgoing	All RAPs	Georgia Burnett (EMM)	Various	Email	Reminder for close of comments on ACHA on 9 March 2022.
07-Mar-22	Incoming	Wellington Valley Wiradjuri Aboriginal Corporation Gallanggabang Aboriginal Corporations	Georgia Burnett (EMM)	Bradley R Bliss	Email	Commented on the draft ACHA (see appendix B.6)
31-Mar-22	Outgoing	Wellington Valley Wiradjuri Aboriginal Corporation Gallanggabang Aboriginal Corporations	Megan Sheppard Brennand (EMM)	Bradley R Bliss	Email	Replied to Brad stating that WVWAC's comments and recommendations had been included in the draft ACHA and that a copy would be provided to them shortly
09-Sep-22	Outgoing	All RAPs	Georgia Burnett (EMM)	Various	Email	Provided revised ACHA for comment (includes larger footprint in TransGrid substation). Requested comments by 5 October 2022.
25-Jul-23	Outgoing	All RAPs	Georgia Burnett (EMM)	Various	Email	Provided update on project post public exhibition. Highlighted ammended access road as result of TfNSW comments; committed to further consideration in ACHMP phase.
ACHA Addendum — Methodology						
24-Oct-25	Outgoing	All RAPs	Phillipa O'Brien-Pounde (EMM)	Various	Email	Distributed ACHA addendum methodology letter to all RAPS for 28 day review period which ends on the 21 November 2025
29-Oct-25	Incoming	Wellington Valley Wiradjuri Aboriginal Corporation	Bradley R Bliss	Phillipa O'Brien-Pounde (EMM)	Email	Provide email, agreeing with the methodology outlined in the supplied methodology letter and providing confirmation of two sites with documentation from the Uungula Wind Farm Survey, along with further clarification of two additional sites, noting that these are restricted and not for publication. Also advised that AMPYR representatives met with WVWAC in December 2024, and the newly formed Wambal Bila Trust does not represent all local Aboriginal community members in Wellington, contrary to the supplied documentation.
29-Oct-25	Outgoing	Wellington Valley Wiradjuri Aboriginal Corporation	Alan Williams (EMM)	Bradley R Bliss	Email	Thanked for email response and passed on the later comment in regards to AMPYR to David Richards (EMM Project Manger) to pass on to the client.
29-Oct-25	Outgoing	Wellington Valley Wiradjuri Aboriginal Corporation	David Richards (EMM)	Bradley R Bliss	Email	Provided an apology for the terminology of the methodology letter and advised that this was provided by AMPYR (the client) and have passed on the feedback to the client in recent conversations in which they apologies for this poor choice of wording. AMPYR has since clarified that the Wambal Bila does not formally represent any of the local Aboriginal groups in the area and is not aligned with any individual group, advising that it's AMPYR's intention that Wambal Bila be able to provide benefits to all Aboriginal people in the area.
06-Nov-25	Outgoing	Gallanggabang Aboriginal Corporations	Phillipa O'Brien-Pounde (EMM)	Jamie-lee Thain	Email	Distributed ACHA addendum methodology letter to Gallanggabang Aboriginal Corporations as there was an issue with the initial email sent (incorrect contact details) for 28 day review period which ends on the 21 November 2025. PO sincerely apologised for this error and advised that we are proposing additional survey in the coming weeks and will provide furthe details shortly.

06-Nov-25	Outgoing	All RAPs	Phillipa O'Brien-Pounde (EMM)	Various	Email	Sought upcoming availability of organisation's site officers for a proposed day of survey between the Monday 24 and Friday 28 November 2025.
06-Nov-25	Incoming	Wellington Valley Wiradjuri Aboriginal Corporation	Bradley R Bliss	Phillipa O'Brien-Pounde (EMM)	Email	Confirmed a site officer will be available for fieldwork within the proposed period of dates.
07-Nov-25	Outgoing	Gallanggabang Aboriginal Corporations	Phillipa O'Brien-Pounde (EMM)	Jamie-lee Thain	Phone	Missed call. Left a message.
07-Nov-25	Outgoing	Wellington Local Aboriginal Land Council	Phillipa O'Brien-Pounde (EMM)	Tara Stanley	Phone	Missed call. Left a message.
07-Nov-25	Outgoing	Corroboree Aboriginal Corporation	Phillipa O'Brien-Pounde (EMM)	Marilyn Carroll-Johnson	Phone	Called to follow up draft methodology and reminder that the end of review period end on the 21 November and to provide any comments prior to this date. Also sought availability for a day of survey proposed between 24-28 November 2025. Advised they will have availability within this period. Asked whether the fieldwork will be a full day of pay if only a half day of fieldwork occurs, PO advised she will follow this up with the project manager and provide an update shortly.
07-Nov-25	Outgoing	Woka Aboriginal Corporation	Phillipa O'Brien-Pounde (EMM)	Steve Johnson	Phone	Missed call. Left a message.
07-Nov-25	Outgoing	Binjang Wellington Wiradjuri Heritage Survey	Phillipa O'Brien-Pounde (EMM)	Jamie Grey	Phone	Missed call. Left a message.
07-Nov-25	Incoming	Woka Aboriginal Corporation	Steve Johnson	Phillipa O'Brien-Pounde (EMM)	Phone	Returned call, PO followed up draft methodology and reminder that the end of review period end on the 21 November and to provide any comments prior to this date. Also sought availability for a day of survey proposed between 24-28 November 2025. Advised they will have availability within this period and will provide comments on the methodology by Monday 10 november. Steve noted for for the day of survey with the potenial to be a half day of survey will be charged for a full day, given travel requirements.
07-Nov-25	Incoming	Binjang Wellington Wiradjuri Heritage Survey	Jamie Grey	Phillipa O'Brien-Pounde (EMM)	Phone	Returned call, PO followed up draft methodology and reminder that the end of review period end on the 21 November and to provide any comments prior to this date. Also sought availability for a day of survey proposed between 24-28 November 2025. Advised they will have availability within this period and will provide comments on the methodology by Monday 10 November, and asked for methodology to be sent through again.
10-Nov-25	Outgoing	Gallanggabang Aboriginal Corporations	Amber Morgan (EMM)	Jamie-lee Thain	Phone	Called to ask for availability for one day of survey during the w/c 24th Nov. No answer so left a voicemail
10-Nov-25	Outgoing	Wellington Local Aboriginal Land Council	Amber Morgan (EMM)	Reception	Phone	Called to ask for availability for one day of survey during the w/c 24th Nov. Recpetion said they most likley will but need to check with their site officer Shaun Stanely.
11-Nov-25	Outgoing	Gallanggabang Aboriginal Corporations	Amber Morgan (EMM)	Jamie-lee Thain	Phone	Called to ask for availability for one day of survey during the w/c 24th Nov. No answer so left a voicemail
12-Nov-25	Outgoing	Gallanggabang Aboriginal Corporations	Amber Morgan (EMM)	Jamie-lee Thain	Email	Emailed to ask for availability for one day of survey during the w/c 24th Nov
12-Nov-25	Incoming	Gallanggabang Aboriginal Corporations	Jamie-lee Thain	Amber Morgan (EMM)	Email	Replied stating that they no longer work for the Org and directed EMM to contact the new chair Bren [redacted]
12-Nov-25	Outgoing	Gallanggabang Aboriginal Corporations	Amber Morgan (EMM)	Bren	Email	Emailed to ask for availability for one day of survey during the w/c 24th Nov and asked if their site officer has confirmed a date.
12-Nov-25	Outgoing	Wellington Local Aboriginal Land Council	Amber Morgan (EMM)	Reception	Email	Emailed to ask for availability for one day of survey during the w/c 24th Nov
13-Nov-25	Outgoing	Gallanggabang Aboriginal Corporations	Amber Morgan (EMM)	Bren	Email	Distributed ACHA addendum methodology letter to Gallanggabang Aboriginal Corporations as there was an issue with the initial and subsequent email sent (incorrect contact details) for 28 day review period which ends on the 21 November 2025.
13-Nov-25	Outgoing	All RAPs	Amber Morgan (EMM)	-	Email	Sent fieldwork invite for survey on 25th November.
17-Nov-25	Incoming	Wellington Valley Wiradjuri Aboriginal Corporation	Bradley R Bliss	Amber Morgan (EMM)	Email	Sent through insurances
19-Nov-25	Outgoing	Wellington Local Aboriginal Land Council	Amber Morgan (EMM)	Reception	Phone	Called asking for insurances and for them to send through Register as RAP form. Reception advisds that CEO is out of office but will aim to do it this afternoon.
19-Nov-25	Outgoing	Corroboree Aboriginal Corporation	Amber Morgan (EMM)	Marilyn Carroll-Johnson	Phone	Called asking for insuraces - no answer. Could not leave voicemail.
19-Nov-25	Outgoing	Woka Aboriginal Corporation	Amber Morgan (EMM)	Steve Johnson	Phone	Called asking for insuraces - no answer. Left voicemail.
19-Nov-25	Outgoing	Binjang Wellington Wiradjuri Heritage Survey	Amber Morgan (EMM)	Jamie Grey	Phone	Called asking for insuraces - no answer. Left voicemail.
19-Nov-25	Outgoing	Wellington Local Aboriginal Land Council, Corroboree Aboriginal Corpo	Amber Morgan (EMM)	-	Email	Asking for insurances
19-Nov-25	Incoming	Wellington Local Aboriginal Land Council	Marsha Hill	Phillipa O'Brien-Pounde (EMM)	Email	Sent through register as a RAP form and associated insurances
20-Nov-25	Incoming	Woka Aboriginal Corporation	Steve Johnson	Amber Morgan (EMM)	Phone	Returned call and said they woud send through insurances today
20-Nov-25	Outgoing	Wellington Local Aboriginal Land Council	Amber Morgan (EMM)	Marsha Hill	Email	Thanked for insurances and mentioned that a contract will be sent over in the coming days for their review and signature.
20-Nov-25	Outgoing	Wellington Valley Wiradjuri Aboriginal Corporation	Amber Morgan (EMM)	Bradley R Bliss	Email	Sent contract for their review and signature.

20-Nov-25	Outgoing	Wellington Local Aboriginal Land Council	Amber Morgan (EMM)	Reception	Email	Sent contract for their review and signature.
20-Nov-25	Incoming	Corroboree Aboriginal Corporation	Marilyn Carroll-Johnson	Amber Morgan (EMM)	Email	Sent through insurances
21-Nov-25	Outgoing	Corroboree Aboriginal Corporation	Amber Morgan (EMM)	Marilyn Carroll-Johnson	Email	Sent contract for their review and signature.
21-Nov-25	Incoming	Woka Aboriginal Corporation	Steve Johnson	Phillipa O'Brien-Pounde (EMM)	Email	Sent through insurances
21-Nov-25	Outgoing	Woka Aboriginal Corporation	Phillipa O'Brien-Pounde (EMM)	Steve Johnson	Email	Thanked for insurances and asked for another insurance to be sent as it was missed in the initail email, and mentioned that a contract will be sent over in the coming days for their review and signature.
21-Nov-25		Woka Aboriginal Corporation	Steve Johnson	Phillipa O'Brien-Pounde (EMM)	Email	Confirmed attendance for upcoming fieldwork.
21-Nov-25	Outgoing	-	Phillipa O'Brien-Pounde (EMM)	Melissa Chown	Phone	Sought Gallanggabang current CEO details. Missed call. Could not leave a message as message bank was full.
21-Nov-25	Incoming	-	Melissa Chown	Phillipa O'Brien-Pounde (EMM)	Phone	Returned the call and advised that Gallanggabang is currently in a period of board transition, with no acting directors or workers in place. MC explained that the organisation is in the process of electing new board members and that she may potentially join the board in the new year. She also noted that Bren, the contact previously provided by Jamie, is currently away for personal medical reasons and is out of office. MC clarified that while she remains associated with Gallanggabang, she is not directly employed by the organisation. She advised that she is happy to pass on contact details for individuals still involved with Gallanggabang and will call Megan.
21-Nov-25	Incoming	-	Melissa Chown	Megan Sheppard Brenannd (EMM)	Phone	Missed call.
23-Nov-25	Incoming	Woka Aboriginal Corporation	Steve Johnson	Phillipa O'Brien-Pounde (EMM)	Email	Advised he has a site representative available for fieldwork on behalf of Woka.
24-Nov-25	Outgoing	Wellington LALC	Phillipa O'Brien-Pounde (EMM)	Marsha Hill	Email	Sought signed contract for upcoming fieldwork.
24-Nov-25	Outgoing	Woka Aboriginal Corporation	Phillipa O'Brien-Pounde (EMM)	Steve Johnson	Email	Sought further insurance documentation for fieldwork.
24-Nov-25	Outgoing	Binjang Wellington Wiradjuri Heritage Survey	Phillipa O'Brien-Pounde (EMM)	Jamie Grey	Email	Sought further insurance documentation for fieldwork.
24-Nov-25	Incoming	Corroboree Aboriginal Corporation	Marilyn Carroll-Johnson	Phillipa O'Brien-Pounde (EMM)	Email	Provided signed subcontract agreement.
24-Nov-25	Incoming	Woka Aboriginal Corporation	Steve Johnson	Phillipa O'Brien-Pounde (EMM)	Email	Provided signed subcontract agreement and relevant insurances.
25-Nov-25	-	Corroboree Aboriginal Corporation, Wellington LALC, Wellington Valley Wiradjuri Aboriginal Corporation, Woka Aboriginal Corporation	Ben McConnell, Seaun Stanley, Murray Clynes, Angel Booty	Phillipa O'Brien-Pounde (EMM)	Fieldwork	Field survey of the Project modification areas on Tuesday 25 November 2025.
25-Nov-25	Incoming	Wellington LALC	Marsha Hill	Phillipa O'Brien-Pounde (EMM)	Email	Apologies for the delay with sending through the signed contract and noted that she will send through the contract first thing in the morning and whether the site representative for the LALC would still be able to attend site.
25-Nov-25	Incoming	Wellington LALC	Marsha Hill	Phillipa O'Brien-Pounde (EMM)	Phone	Missed call.
25-Nov-25	Incoming	Wellington LALC	Phillipa O'Brien-Pounde (EMM)	Marsha Hill	Phone	PO returned the missed call. Marsha called to follow up on the email and to apologise again for not sending through the signed contract earlier. PO advised that it was no issue, confirmed that we would still welcome the site representative on-site, and requested that the contract be sent through at her earliest convenience.
25-Nov-25	Incoming	Binjang Wellington Wiradjuri Heritage Survey	Jamie Grey	Phillipa O'Brien-Pounde (EMM)	Email	Sent through signed EMM RAP register form
25-Nov-25	Incoming	Wellington LALC	Marsha Hill	Phillipa O'Brien-Pounde (EMM)	Email	Provided signed subcontract agreement.
DRAFT ACHA Addendum						
19-Dec-25	Outgoing	All RAPs	Phillipa O'Brien-Pounde (EMM)	Various	Email	Sent draft report to all RAPs for review and comment for 28 day review period. Review period ends 23 January 2026
05-Jan-26	Incoming	Wellington Valley Wiradjuri Aboriginal Corporation	Bradley R Bliss	Phillipa O'Brien-Pounde (EMM)	Email	WVWAC raised no objections or additional comments on the draft ACHA addendum following discussion at a meeting. No concerns were raised regarding the findings of the report. WVWAC noted broader concerns regarding the involvement of other Aboriginal organisations in cultural heritage activities within the area.
06-Jan-26	Outgoing	Wellington Valley Wiradjuri Aboriginal Corporation	Phillipa O'Brien-Pounde (EMM)	Bradley R Bliss	Email	Thanked Bradley for the comments and acknowledged they would be incorporated into the report

21-Jan-26	Outgoing	All RAPs	Phillipa O'Brien-Pounde (EMM)	Various	Email	Sent reminder email that review period ends next week on 23 January 2026.

A.2 Further consultation

Megan Sheppard Brennand

From: Alan Williams
Sent: Monday, 13 October 2025 1:49 PM
To: Megan Sheppard Brennand
Subject: FW: Request #61564 has been updated: Bulabul Battery - MOD1 - ACH assessment guidance request

Follow Up Flag: Follow up
Flag Status: Flagged

Dr Alan Williams FSA FRSA FRSN MAACAI MAIATSIS MEIANZ
Technical Lead, Aboriginal Heritage | Associate Director
T 02 9493 9584
M 0438 104 740
www.emmconsulting.com.au

I work flexibly. I'm sending you this message now because it's a good time for me, but do not expect you to read, respond or action it outside your regular hours

---

From: Alison Lamond (Heritage NSW) [redacted]
Sent: Friday, 10 October 2025 10:46 AM
To: Alan Williams <awilliams@emmconsulting.com.au>
Subject: Request #61564 has been updated: Bulabul Battery - MOD1 - ACH assessment guidance request

Your request has been updated. To add additional comments, reply to this email.

Hello Alan
Thank you for reaching out to Heritage NSW regarding your proposed State Significant Development (SSD) modification for the Bulabul Battery (formerly Wellington South Battery Energy Storage System) (SSD-27014706)
We understand that you are preparing to submit the modification report and associated technical assessments. Heritage NSW supports your proposed approach of addressing the modification area and associated impacts through an addendum to the existing ACHA, and continuing consultation with the established RAP group.
Please include this email as part of the supporting documentation for the addendum ACHA.
Kind regards,
Alison

Alison Lamond
Heritage NSW
Department of Climate Change, Energy, the Environment and Water (DCCEEW)
[redacted]
https://www.environment.nsw.gov.au/topics/heritage

[redacted]
Monday to Friday, 09:00am - 05:00pm

Website | Facebook | Instagram | LinkedIn

We acknowledge the traditional custodians of the lands and seas upon which we work, walk and live and pay respects to Elders past present and emerging.
Please consider the environment before printing this email.

This email is a service from Heritage NSW. Delivered by Zendesk

On 3 October 2025 at 6:49:21 am UTC, Dr Alan Williams awilliams@emmconsulting.com.au wrote:

> Dear Alison,
>
> EMM Consulting Pty Limited (EMM) has been assisting AMPYR Australia in the assessment and approval of the proposed Bulabul Battery, formerly Wellington South Battery Energy Storage System (BESS), 6773 Goolma Road, Wuuluman, north-east of the Wellington township (SSD-27014706). An Aboriginal cultural heritage assessment (ACHA) was completed for the project and was part of the EIS submitted to the NSW Department of Planning, Housing and Infrastructure (DPHI) in November 2022. Public exhibition and additional information were subsequently undertaken between November 2022 and July 2023. The ACHA identified no cultural materials, nor expected their likelihood to occur, and no comments from Heritage NSW were raised during the exhibition period; and as such the ACHA remained unchanged. The project was approved in December 2023. The project has been progressing since approval in 2023, including development of a 'Chance Finds protocol' by OzArk Environment and Heritage between mid-2024 and finalised in mid-2025. This included discussing the project following approval with the registered Aboriginal parties and included a focus group meeting. Ongoing engagement with Wellington Local Aboriginal Land Council, Gallanggabang Aboriginal Corporation and other stakeholders has more recently been undertaken as part of the establishment of an equity partnership between AMPYR Australia and the Wellington Aboriginal community.
>
> Most recently, a range of external factors to the project have prompted the need to seek a formal modification to the project approval. Specifically, 1) the establishment of high voltage transmission easements to the nearby Wellington substation intersect with the project boundary, and require the relocation of part of construction laydown area elsewhere; and 2) Transgrid has advised that due to space constraints, an additional area is needed adjacent to the existing substation to allow connection of the project into the substation. These areas – presented in the attached - have not been previously assessed as part of the project in the ACHA nor Chance Finds protocol, but are both in close proximity to areas that were investigated by the field team, including Aboriginal participants. The connection to the substation also appears based on aerial imagery to have been subject to some form of surface ground disturbance.
>
> The two modification areas are identified in the attached figure. The alternative construction laydown area (navy polygon) is expected to be up to 1.8 ha. It is anticipated that up to 1.2 ha will be required for the new substation bay within the area identified in light green on the attached figure. The areas that will be included in the modification application are subject to change as a result of ongoing engagement with Transgrid and biodiversity surveys; however, will be confirmed prior to the on-Country meeting outlined below.
>
> As a modification, we are seeking direction from Heritage NSW on the level of Aboriginal cultural heritage assessment required. Given the proposed additional areas are all extremely close to areas of previous investigation, cultural materials have not previously been identified, and consultation has been ongoing, our

preference is to undertake a short addendum to supplement the ACHA to inform the process. We propose the addendum to include: 1) consultation with existing registered Aboriginal parties from Stage 2 of the Heritage NSW guidelines; 2) an on-Country meeting to allow inspection of the two areas and obtain any feedback promptly; 3) brief summary of assessment activities and of established desktop information; and 4) brief concluding remarks, with any necessary amendments to established management and mitigation measures if required.

Can you please advise if you are satisfied with this approach, or whether you'd prefer some other form of consultation and/or assessment to be undertaken?

Happy to discuss – or organise a meeting to further explain

Thanks

A

Dr Alan Williams FSA FRSA FRSN MAACAI MAIATSIS MEIANZ
Technical Lead, Aboriginal Heritage|Associate Director

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M 0438 104 740
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University of New South Wales,
Sydney, NSW 2052

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Level 10 201 Pacific Highway
St Leonards NSW 2065
ABN: 28 141 736 558

02 9493 9500

www.emmconsulting.com.au

24 October 2025

Re: Bulabul Battery (formerly Wellington South BESS) (SSD 27014706) Modification 1 - Aboriginal cultural heritage assessment - project update and assessment methodology for modification area

Dear Sir/Madam,

1 Introduction

As you may recall EMM Consulting Pty Ltd (EMM) undertook an Aboriginal Cultural Heritage Assessment (ACHA) in 2021 – 2023 for the Wellington South Battery Energy Storage System (BESS) project, now called Bulabul Battery. AMPYR Australia Pty Ltd (AMPYR) (the proponent) propose to develop and operate the project located in Wuuluman, approximately 2.2 km north-east of the township of Wellington in the Dubbo Regional Council local government area (LGA) and within the New South Wales (NSW) Government declared Central West Orana Renewable Energy Zone (CWO REZ). The project was approved, subject to conditions, by the Director, Energy Assessments, as delegate of the Minister for Planning and Public Spaces, on 22 December 2023 (SSD 27014706).

Construction on Stage 1 of the project (Bulabul Battery 1) commenced on 1 August 2025, and is now well underway. Prior to commencing construction, AMPYR initiated a unique equity ownership structure and has granted an option over 5% of the equity in the Bulabul Battery 1 project to the newly formed Wambal Bila trust, which represents the local Aboriginal groups in the region.

AMPYR is preparing to commence construction on Stage 2 of the project (Bulabul Battery 2) and is seeking to modify the project due to external factors necessitating minor amendments to the project layout to accommodate Stage 2 (slightly expanding the development boundary). AMPYR will be offering an equity ownership option to the Wambal Bila trust for Stage 2.

The purpose of this letter is to update you on the proposed modification. The modification area is explained in this letter and shown on Figure 1.1. It is proposed that, upon undertaking additional consultation and investigation of the modification area, they will be incorporated into the Aboriginal cultural heritage assessment (ACHA) for the project as an addendum report to support the modification application.

Given the proposed changes to the project, and in discussion with Heritage NSW, we are distributing additional project information and an updated assessment methodology to Registered Aboriginal Parties (RAPs) to comply with Heritage NSW consultation requirements. This document forms part of the formal Aboriginal consultation requirements for the project, as described in sections 4.2 (Stage 2) and 4.3 (Stage 3) of the *Aboriginal Cultural Heritage Consultation Requirements for Proponents* (DECCW 2010).

The aims of this letter are to:

- provide background on the changes to the project that will be outside of the approved development boundary and describe how areas not previously assessed will be investigated
- seek information about any Aboriginal cultural heritage values and sensitivities associated with the modification area and how they may affect, inform or refine the development boundary and/or assessment methods
- identify any culturally appropriate protocols that RAPs wish to be adopted during the information gathering process (e.g. protocols during field survey, or handling of culturally sensitive information)
- present a draft of the intended assessment methods for your review and comment.

We welcome your feedback at your earliest convenience. We will be consulting with the RAPs for the duration of the addendum ACHA. However, for the purposes of this initial stage of consultation and in accordance with the *Aboriginal Cultural Heritage Consultation Requirements for Proponents* (DECCW 2010), we request any written or verbal response on the information and process included below by **21 November 2025.**

For reference, the applicant contact is:

Anthony Yeates

Projects Director, AMPYR Australia Pty Limited

[redacted]

[redacted]

EMM is working on behalf of AMPYR, and all queries and responses to this letter should be directed through EMM. Feedback can be provided to:

Phillipa O'Brien-Pounde

Archaeologist, Aboriginal Heritage, EMM

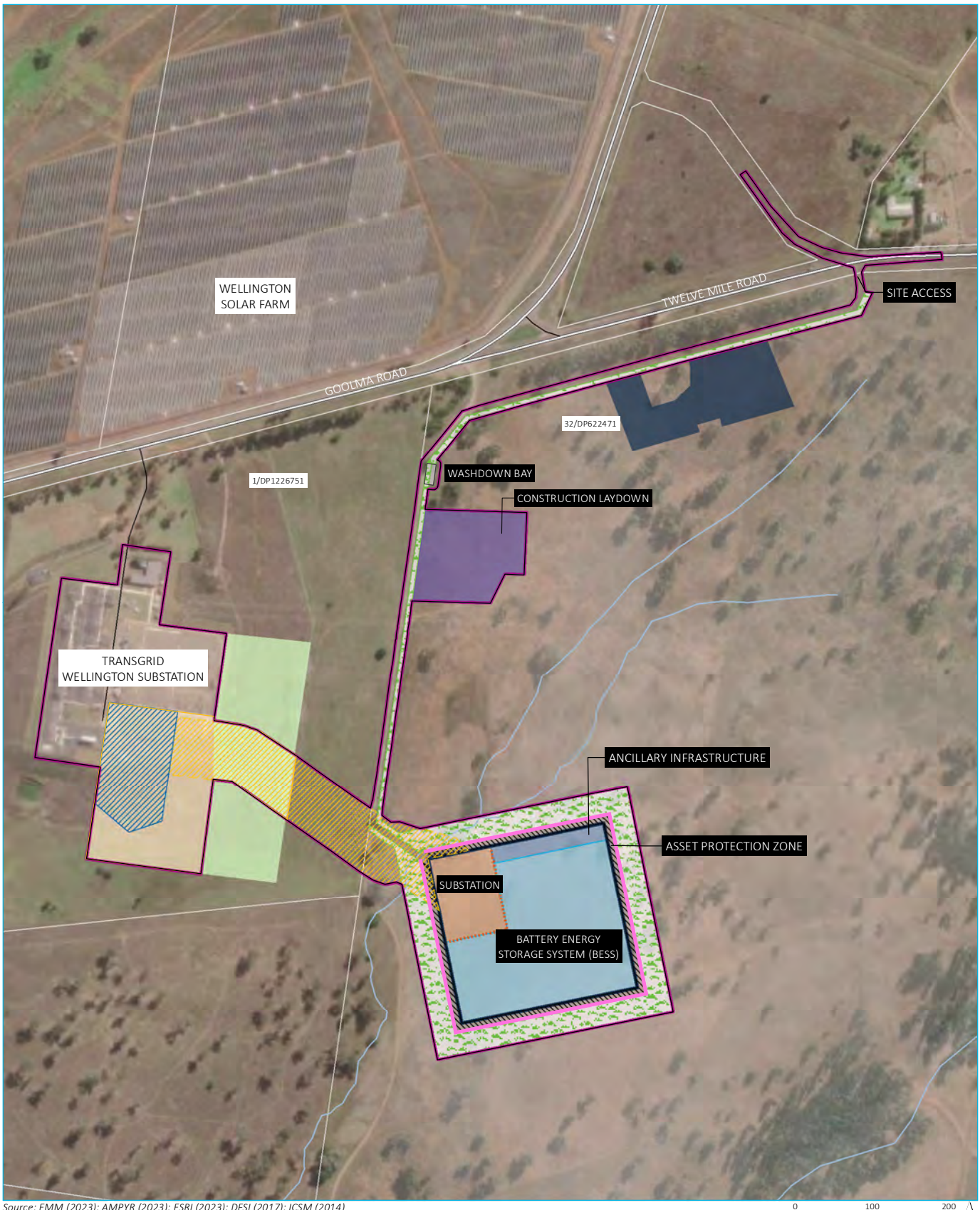
T:0434 441 477

E: pobrienpounde@emmconsulting.com.au

If you are interested in discussing the Wambal Bila trust and the equity ownership outcomes that have been implemented for Stage 1, and are proposed for Stage 2, please reach out to one of the directors of the trust:

Gavin Brown

[redacted]



Source: EMM (2023); AMPYR (2023); ESRI (2023); DFSI (2017); ICSM (2014)

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GDA 1994 MGA Zone 55

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KEY

- Development boundary
- BESS units
- Substation
- Ancillary infrastructure (carpark, office, control room)
- Indicative asset protection zone (10 m)
- Transmission corridor
- Indicative landscaping (post construction)
- Indicative location of noise bund
- Indicative TransGrid substation upgrade core infrastructure area
- Indicative TransGrid substation upgrade disturbance area
- Washdown bay
- Construction laydown

Modification area

- Proposed substation bay
- Proposed construction laydown

Existing environment

- Major road
- Minor road
- Watercourse/drainage line
- Cadastral boundary

Project overview

Bulabul Battery Mod 1
ACHA Methodology
Figure 1.1

EMM creating opportunities

2 Project information

2.1 Overview

EMM Consulting (EMM) was engaged by AMPYR to prepare the Environmental Impact Statement (EIS) for the project. The development boundary is located on Lot 32 DP622471 and Lot 1 DP1226751 on Goolma Road and Twelve Mile Road in Wuuluman, NSW.

The EIS was prepared based on design and information provided by AMPYR including confirmation of several design assumptions forming the basis of technical study modelling and assessments. This combination of design and technical assumptions, finalised in mid-2021, formed the 'EIS design'. It is this design that formed the basis of the ACHA provided to the RAPs in early 2022.

Following EIS submission, Transport for NSW provided comments in relation to the proposed access road alignment, which resulted in a revision to the access road and development boundary and an Amendment Report (EMM 2023). An additional site inspection was not undertaken and the ACHA was not updated. However, an update letter was sent to the RAPs (EMM 2023), which stated that this change would be subject to investigation and management in consultation with the RAPs prior to any development activities. The Amendment Report stated that the access road alignment would be subject to further consideration where required as part of the preparation of the Aboriginal Cultural Heritage Management Plan (ACHMP).

The project was approved, subject to conditions, on 22 December 2023 (SSD-27014706). Since this time, OzArk Environment and Heritage (OzArk) have prepared the following in consultation with the RAPs:

- *Aboriginal Cultural Heritage Chance Finds Protocol* (OzArk 2025a)
- *Aboriginal Cultural Heritage Management Plan* (OzArk 2025b).

A range of external factors have prompted the need to modify the development boundary. The establishment of high voltage transmission easements to the nearby Wellington Substation intersect with the development boundary and require the relocation of part of the construction laydown area elsewhere. Transgrid has also advised that due to space constraints, an additional area is needed adjacent to the Wellington Substation to allow connection of the project into the substation. The modification area is shown on Figure 1.1 and includes land required for the additional substation bay and the additional construction laydown area.

AMPYR proposes to modify the development consent under Section 4.55(1A) of the NSW *Environmental Planning and Assessment Act 1979* (EP&A Act). The project as modified will be substantially the same development as the development for which consent was granted. The proposed modification will result in an additional construction laydown area due to conflict between part of the approved construction laydown area and a transmission line easement, and an additional bay at the Wellington Substation to enable the project's grid connection.

The assessment of the modification area requires further consultation and assessment to inform the modification application. The consultation and assessment outcomes will be included in an addendum ACHA that will be appended to the modification report.

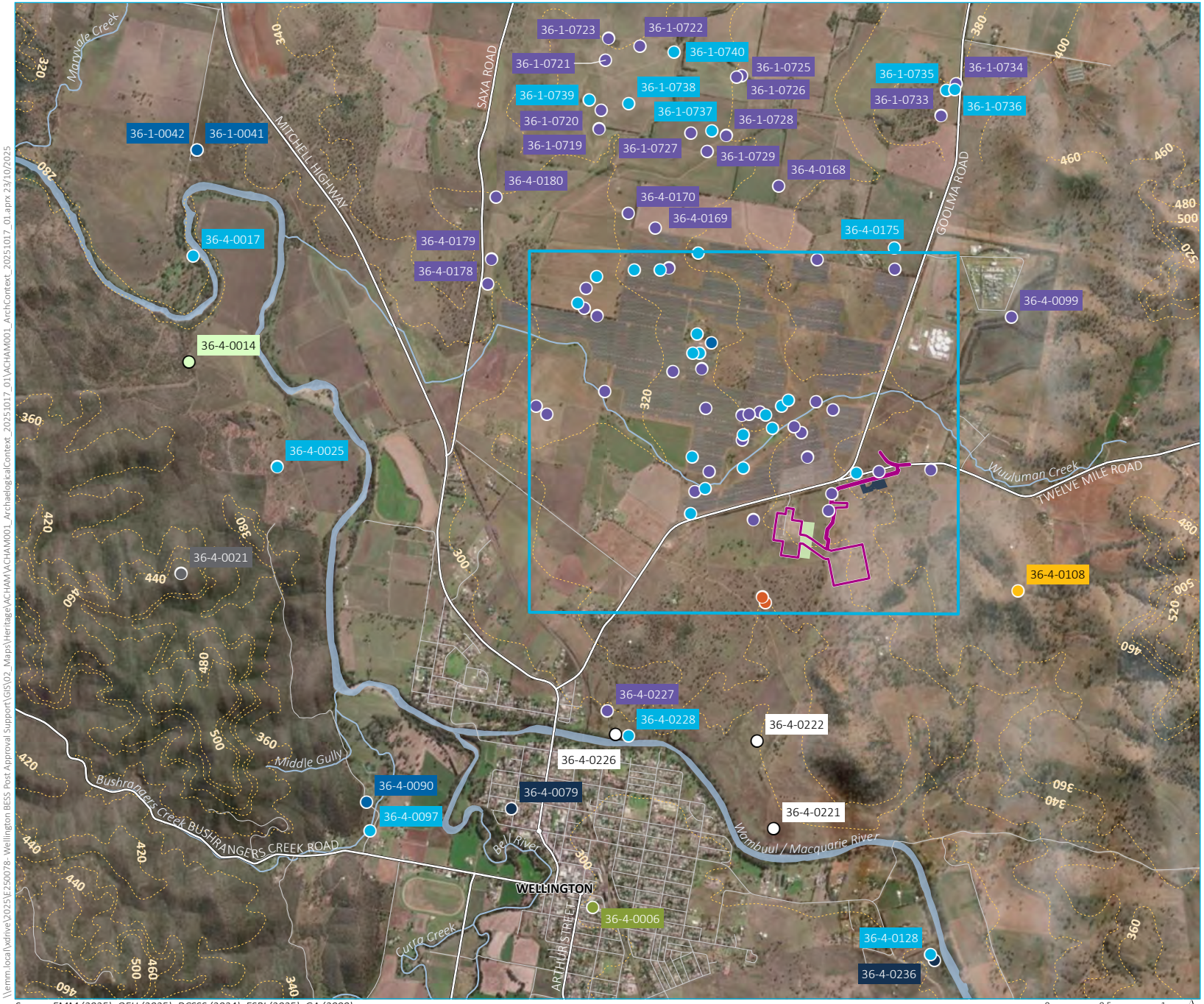
Further detail on the approved development boundary and project elements is provided in the methodology letter sent to RAPs on 24 September 2021 (which has been provided as part of the documentation package), as well as the EIS ACHA.

2.2 Investigations within the development boundary

EMM completed an ACHA to support an EIS for the project in 2022. The assessment included archaeological field survey to explore and document the Aboriginal objects, sites and places within the development boundary. Overall, the findings revealed that the development boundary has been subject to disturbance that has likely eroded or displaced the shallow soils within the development boundary. The soil profile observed during the survey was a highly erosional shallow, rocky red brown silty clay loam overlying areas of outcropping limestone. Discussions with RAP site officers summarised in Section 2.4 of the ACHA indicated that nearby, this soil had not demonstrated potential for subsurface deposits to be retained as it was highly erosional.

Two Aboriginal sites are registered within or adjacent to the development boundary (AHIMS site #36-4-0201 and #36-4-0203, see Figure 2.1), neither site was able to be relocated during the survey. Although AHIMS site #36-4-0201 is registered as “not a site” on the AHIMS database, relocation of the site was attempted as a precaution. The location of AHIMS site #36-4-0203 is likely in error and the site’s actual location is instead in Lot 1 DP1226751 given it was identified as part of the Wellington Solar Farm.

No Aboriginal objects were observed during the survey of the development boundary, and no areas of subsurface potential warranting further investigation were identified. As such, it is considered that the project is unlikely to have an impact upon tangible cultural material to a traceable level due to the lack of permanent fresh water or other desirable resources. No site-specific intangible or cultural values were identified through research or Aboriginal stakeholder consultation during the ACHA process, and the project was considered unlikely to impact such places based on known evidence at the time of the EIS ACHA.



KEY

- Study area
- Extent of Figure 2.1b

Modification area

- Proposed construction laydown
- Proposed substation bay

AHIMS (by site type)

- Aboriginal Ceremony and Dreaming, Stone Arrangement
- Burial
- Ceremonial Ring, Culturally modified tree
- Ceremonial Ring, Undefined artefact scatter
- Culturally modified tree
- Isolated find
- Low density artefact scatter
- Potential Archaeological Deposit (PAD)
- Undefined artefact scatter
- Undefined artefact scatter, PAD

Existing environment

- Topographic contour (20 m)
- Major road
- Minor road
- Named watercourse
- Named waterbody

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Source: EMM (2025); OEH (2025); DCSSS (2024); ESRI (2025); GA (2009)

0 0.5 1 km

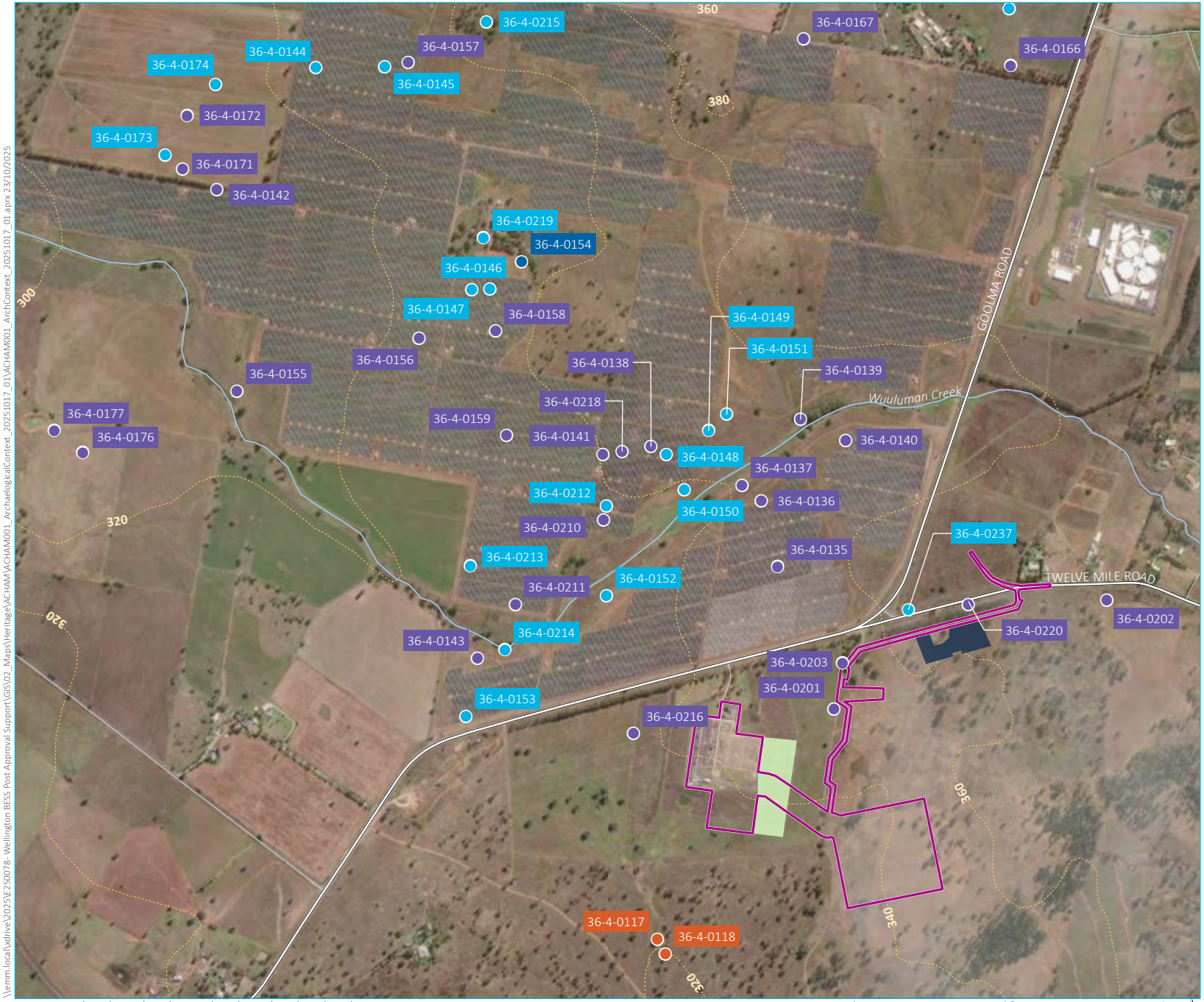
GDA 1994 MGA Zone 55

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Archaeological context

Bulabul Battery Mod 1
ACHA Methodology
Figure 2.1a

EMM
creating opportunities



KEY

- Study area

Modification area

- Proposed construction laydown
- Proposed substation bay

AHIMS (by site type)

- Culturally modified tree
- Isolated find
- Potential Archaeological Deposit (PAD)
- Undefined artefact scatter

Existing environment

- Topographic contour (20 m)
- Major road
- Minor road
- Named watercourse

Source: EMM (2025); OEH (2025); DCSSS (2024); ESRI (2025); GA (2009)

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Archaeological context

Bulabul Battery Mod 1
ACHA Methodology
Figure 2.1b

EMM creating opportunities

3 Aboriginal stakeholder engagement

In accordance with the consultation process, EMM contacted a number of State and Commonwealth government organisations to provide information on Aboriginal individuals and organisations known to participate in cultural heritage management in the relevant LGAs. This was undertaken in early August 2021. Once this information was obtained, a process of notifying these individuals and organisations was undertaken. This included distribution of letters advising them of the project in late August 2021, and publication of the project in the *Daily Liberal.*

A number of Aboriginal individuals and organisations registered through this notification process. All Aboriginal individuals and/or organisations interested in the project have been registered regardless of the timing of their identification or communication with the project.

A list of RAPs include:

- Binjang Wellington Wiradjuri Aboriginal Corporation
- Corroboree Aboriginal Corporation
- Gallangabang Aboriginal Corporation
- Wellington Valley Wiradjuri Aboriginal Corporation
- Woka Corporation
- Wellington Local Aboriginal Land Council (WLALC) – registered *in absentia*.

Contact could not be established with Wellington Local Aboriginal Land Council (WLALC) to date, despite multiple attempts, but given the jurisdiction, WLALC have been registered *in absentia*. Attempts at communication with WLALC will continue to be made as part of the preparation of the addendum ACHA.

Consultation with these organisations has been ongoing since late 2021. It is proposed that consultation will continue as part of the preparation of the addendum ACHA.

4 Assessment methodology

4.1 Overview

An addendum ACHA will be prepared with reference to relevant guidelines, policies and industry requirements, and following consultation with stakeholders, including relevant government agencies and the community. Aboriginal heritage will be assessed and managed in accordance with the following guidelines:

- *Code of Practice for Archaeological Investigations of Aboriginal Objects in NSW* (the Code) (DECCW 2010a)
- *Guide to investigating, assessing and reporting on Aboriginal cultural heritage in NSW* (DECCW 2010b)
- *Aboriginal Consultation Requirements for Proponents* (DECCW 2010c).

The purpose of the addendum ACHA is to identify and manage the Aboriginal cultural heritage sites and values within the modification area. In summary, the addendum ACHA will involve:

- consultation with the Aboriginal stakeholders to identify socio-cultural values of the modification area and places of special significance that should be considered
- a search of the AHIMS register for records of previously registered Aboriginal sites focusing on the modification area
- a review of past Aboriginal heritage reports covering the modification area
- environmental landscape analysis to identify past Aboriginal resources and suitable occupation areas within the modification area
- synthesis of background research to develop a predictive model of Aboriginal site location within the modification area
- field investigation to validate the findings of the desktop assessment and identify any previously undocumented cultural material within the modification area. This would include surface inspection and may extend to test excavations of areas of archaeological interest if required
- an assessment of significance for Aboriginal cultural heritage values in the modification area (with input from the registered Aboriginal parties)
- where required, an impact assessment of how the project will affect Aboriginal cultural heritage values in the modification area
- development of management recommendations based on the results of the assessment and input from registered Aboriginal parties during the consultation process and particularly from the draft ACHA addendum report review period (28 days).

4.2 Modification area

The modification area in Figure 1.1 will form the focus of additional investigations outlined in this document. These include an alternative construction laydown area and an alternative substation bay.

4.3 Archaeological survey

Archaeological survey of the modification area will be undertaken to identify any extant Aboriginal objects or sites. Surface investigation will consist of the survey team evenly spaced (10-20 m apart) walking transects across accessible parts of the modification area, with a key focus on targeting areas of low disturbance. The focus of the team will be to both investigate soil exposures for extant Aboriginal objects and identify landforms that have potential for cultural material to be present (either in surface or subsurface deposits). All Aboriginal objects and/or landforms of interest would be mapped and documented using hand-held GPS, photographs, sketches and/or written description. Where possible, a significant focus of the survey will be to discuss intangible values associated with the modification area, such as connection to other cultural places, stories, view-lines, contemporary values, etc. The survey will be undertaken in accordance with Requirements 5 to 10 of the Code of Practice. In summary, the Code of Practice requires the following general methodology:

- pedestrian survey
- survey and recording according to survey unit and/or transect
- recording of beginning and end points of transects or the boundaries of survey units, and the spacing between survey personnel
- recording of landform, soil information, land surface, vegetation conditions, visibility and exposure, and survey coverage
- recording of any identified Aboriginal sites identified according to Requirements 6-8, and recording of any identified Aboriginal objects in accordance with Requirements 18-24 of the Code of Practice
- if any Aboriginal objects and/or sites are identified in the course of the survey, site cards will be completed and submitted to the AHIMS registrar
- in the event of Aboriginal heritage being identified within the modification area, undertake discussions on-site as to the potential further investigation and/or management of these finds.

4.4 Test excavations

Test excavations are not expected given that the locations are comparable to those previously investigated for the ACHA, demonstrating shallow eroded soils. However, should they be required, they would adopt the Heritage NSW Code of Practice methods. In summary:

- all test excavations would be established as a grid across areas of archaeological interest. These would either represent linear transects of evenly spaced test pits (generally 20-40 m apart) across landforms of interest, such as alluvial terraces, floodplains, etc; and/or a more systematic grid of test pits (e.g. 20 x 20 or 40 x 40 m spacing) focussed on areas of archaeological sensitivity
- all test excavation pits would be spatially located using a differential GPS device, which would also provide elevation data
- manual excavation of 0.25m² (50 x 50 cm) test pits, with potential to expand up to 3 m^2 where substantive cultural materials or features are encountered
- excavation would use hand tools. Excavation of the first unit would be in 5 cm spits, with subsequent excavation allowed in 10 cm spits or according to stratigraphy (whichever is smallest) depending on the results of the first unit. Manual excavation would continue to either:

i) the base of the cultural deposits;

ii) to the depth of the underlying geology; or

iii) to the maximum depth possible via hand excavation (likely ~50 cm).

- sieving of all manually excavated material through a 5 mm sieve
- reduced levels of the top and bottom of the test pit would be documented using a dumpy level against a known elevation. Other levels may be taken as required
- soil profiles would be recorded in accordance with the Code of Practice, including scaled drawings, photographs, and written descriptions
- soil samples may be collected for description, sedimentological and chronological analysis where such analysis is considered likely to contribute significant information; and excavation procedures and protocols may be modified at the discretion of the Excavation Director, in consultation with the Aboriginal stakeholders and the proponent as the conditions in the field and nature of the excavations develop. This includes the movement of test pits to avoid existing built structures, buried services and disturbances not identified during the desktop phase.

Following the field survey, EMM will consult with AMPYR about the survey results and whether archaeological test excavations are required. If test excavation is to be implemented, RAPs will be provided with at least two weeks' notice about the indicative location(s) and scope of the proposed excavation program. RAPs will be welcome to comment on the indicative program prior to the commencement of the program, and amendments may be made to the program where reasonable and feasible.

4.4.1 Artefact curation

Should test excavations be required and cultural materials recovered, they would *temporarily* be stored by EMM at our Sydney office for specialist non-invasive analysis and be available for viewing by RAPs at any time. As soon as feasible (proposed to be <6 months), the cultural materials would be relocated to Wiradjuri Country.

A final and long-term repository would be developed in discussion with the RAPs through the EIS submission and determination of the project.

4.5 Timeframes

The following indicative timeframes would apply:

- Distribution of this document to RAPs: **mid-October 2025**
- Field survey of the additional areas: **mid-November 2025**
- Distribution of the draft addendum ACHA for RAP review and comment: **late November – early December 2025**
- Input into recommendations and review of updated draft report by RAPs: **January 2025 - subject to the outcomes of the field survey, a shorter review timeframe may be requested in consultation with the RAPs.**
- Report finalisation: **January 2025**.

5 What we need from you

In addition to the archaeological evidence described above, Aboriginal heritage incorporates a wide range of values such as stories, traditions and cultural practices. EMM welcomes advice from the Aboriginal community about cultural values (which might include archaeological sites or other types of values) relevant to the modification area and its surrounds. EMM is relying on the Aboriginal community for advice on non-archaeological and intangible Aboriginal values for the modification area. We are happy to discuss any information which you are willing to share and will respect confidentiality where requested.

EMM would appreciate your feedback on the above methodology proposed for the investigation and assessment of the modification area. In responding, please also consider the following questions:

- Are there any protocols in relation to community interaction and/or cultural heritage that you would like adopted?
- Are you aware of any Aboriginal objects, places, sites or stories of cultural significance and/or importance within the modification area? If so, please advise us how you wish them to be dealt with?
- Are you aware of any past or current hunting activities within the modification area? Do you have any views on how these should be managed into the future?
- Is the information you are providing sensitive, gender specific, etc? If so, how would you like the information you provide to EMM to be managed? Noting that some documentation for the ACHA process will be required.
- Do you require any further information prior to EMM proceeding with the additional investigations?
- In your response, can you please also clearly identify who you would like EMM to talk to within your organisation, and provide contact details for these individuals. Please also ensure your preferred method of communication (eg telephone call, e-mail, letter etc) is highlighted.

6 Closing

We look forward to receiving any response your organisation wishes to make about the proposed method by **21 November 2025**. Your response will be documented and considered in the assessment.

Please feel free to contact me with any questions.

Yours sincerely



Phillipa O'Brien-Pounde
Archaeologist
pobrienpounde@emmconsulting.com.au

Phillipa O'Brien-Pounde

From: Phillipa O'Brien-Pounde
Sent: Friday, 24 October 2025 11:45 AM
Cc: Megan Sheppard Brennand; Alan Williams; David Richards
Subject: Wellington BESS Project - ACHA addendum - Methodology letter
Attachments: E250078_BulabulBatteryMOD1_Methods_V2.pdf

Bcc: [redacted]

Dear All,

As you may recall, EMM Consulting Pty Ltd (EMM) undertook an Aboriginal Cultural Heritage Assessment (ACHA) between 2021 and 2023 for the Wellington South Battery Energy Storage System (BESS), now called Bulabul Battery. Two AHIMS sites were registered nearby, with one listed as 'invalid' on AHIMS and the other likely recorded in the wrong location. Neither site was able to be relocated during the field survey, and no additional Aboriginal sites or areas of archaeological potential were identified within the development boundary during the assessment.

We understand that there has been ongoing consultation with AMPYR and OzArk in which you have been involved, including the preparation of an ACHMP and a Chance Finds Protocol. EMM is now undertaking an ACHA addendum as part of a proposed modification to the development boundary, which includes an alternative laydown area and substation bay. Please find attached to this email a letter, providing an overview of the proposed modification and our proposed methods for undertaking archaeological investigations for the modification area.

In accordance with the Heritage NSW guidelines, can we please ask if you have any comments, concerns, or inputs to the methodology to respond to myself and Alan by **21 November 2025**.

Happy to discuss,

Kind Regards,

Phillipa

Phillipa O'Brien-Pounde
Archaeologist – Aboriginal Heritage
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15 YEAR ANNIVERSARY
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CLIENTCHOICE Awards 2025 winner

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Outlook

Re: Wellington BESS Project - ACHA addendum - Methodology letter

From WVWAC Contact Officer [redacted]
Date Wed 2025-10-29 1:32 PM
To Phillipa O'Brien Pounde <pobrienpounde@emmconsulting.com.au>
Cc Alan Williams <awilliams@emmconsulting.com.au>; Megan Sheppard Brennand <msheppardbrennand@emmconsulting.com.au>; David Richards <drichards@emmconsulting.com.au>

Wellington Valley Wiradjuri Aboriginal Corporation Elders, Field Officers, Knowledge Holders and Members have discussed the Wellington South Battery Energy Storage System (BESS), now called Bulabul Battery proposed assessment methodology for the modification area. Wellington Valley Wiradjuri Aboriginal Corporation agree to the methodology for the pedestrian survey and in the unlikely event that test excavation is required.

Response to the following questions:

• Are there any protocols in relation to community interaction and/or cultural heritage that you would like adopted? - No

• Are you aware of any Aboriginal objects, places, sites or stories of cultural significance and/or importance within the modification area? If so, please advise us how you wish them to be dealt with? No

• Are you aware of any past or current hunting activities within the modification area? Do you have any views on how these should be managed into the future? - The area of this project and surrounding landscape would have been used for hunting of Kangaroo and Emu and occasionally possum.

• Is the information you are providing sensitive, gender specific, etc? - No
If so, how would you like the information you provide to EMM to be managed? - N/A
Noting that some documentation for the ACHA process will be required.

• Do you require any further information prior to EMM proceeding with the additional investigations? - No

• In your response, can you please also clearly identify who you would like EMM to talk to within your organisation, and provide contact details for these individuals. Please also ensure your preferred method of communication (eg telephone call, e-mail, letter etc) is highlighted.

All documentation etc via Email to [redacted]
Bradley R Bliss J.P.
WVWAC CEO and Contact Officer
[redacted]

Please also note the following:

Site 36-4-0237 is across Twelve Mile Road near gas and sewer services in near corner of the paddock. I have images of File from the Uungula Wind Farm Survey where it was identified.

Site 36-4-0220 is poorly flaked core on fence line of Twelve Mile Road. I have images of File from the Uungula Wind Farm Survey where it was identified.

[redacted]

AMPYR Representatives met with WVWAC CEO at their Orange office on Lords Place in December 2024, after this positive meeting WVWAC where we shared details and other information were not notified of further discussions and are not represented by the newly formed Wambal Bila trust, who does not represent All Local Aboriginal Community in Wellington as stated in the supplied documentation.

Regards

Bradley R Bliss J.P.
WVWAC CEO and Contact Officer
[redacted]

From: Phillipa O'Brien-Pounde <pobrienpounde@emmconsulting.com.au>
Sent: Friday, October 24, 2025 11:45:41 am
Cc: Megan Sheppard Brennand <msheppardbrennand@emmconsulting.com.au>; Alan Williams <awilliams@emmconsulting.com.au>; David Richards <drichards@emmconsulting.com.au>
Subject: Wellington BESS Project - ACHA addendum - Methodology letter

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In accordance with the Heritage NSW guidelines, can we please ask if you have any comments, concerns, or inputs to the methodology to respond to myself and Alan by **21 November 2025**.

Happy to discuss,

Kind Regards,

Phillipa

Phillipa O'Brien-Pounde
Archaeologist – Aboriginal Heritage

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SYDNEY | Gamaraigal Country, The Forum, Level 10, 201 Pacific Highway, St Leonards NSW 2065

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Outlook

RE: Wellington BESS Project - ACHA addendum - Methodology letter

From Alan Williams <awilliams@emmconsulting.com.au>
Date Wed 2025-10-29 2:16 PM
To WVWAC Contact Officer [redacted] Phillipa O'Brien Pounde <pobrienpounde@emmconsulting.com.au>; David Richards <drichards@emmconsulting.com.au>
Cc Megan Sheppard Brennand <msheppardbrennand@emmconsulting.com.au>

Thanks Brad,

Much appreciated, we'll take these on board (as needed) as we progress; and very much hope to visit 36-4-0117 and 36-4-0118 with you in the coming months!

@David, please note the last paragraph and pass onto AMPYR for future communications.

A

Dr Alan Williams FSA FRSA FRSN MAACAI MAIATSIS MEIANZ
Technical Lead, Aboriginal Heritage | Associate Director
T 02 9493 9584
M 0438 104 740
www.emmconsulting.com.au

I work flexibly. I'm sending you this message now because it's a good time for me, but do not expect you to read, respond or action it outside your regular hours

From: WVWAC Contact Officer [redacted]
Sent: Wednesday, 29 October 2025 1:33 PM
To: Phillipa O'Brien-Pounde <pobrienpounde@emmconsulting.com.au>
Cc: Alan Williams <awilliams@emmconsulting.com.au>; Megan Sheppard Brennand <msheppardbrennand@emmconsulting.com.au>; David Richards <drichards@emmconsulting.com.au>
Subject: Re: Wellington BESS Project - ACHA addendum - Methodology letter

Wellington Valley Wiradjuri Aboriginal Corporation Elders, Field Officers, Knowledge Holders and Members have discussed the Wellington South Battery Energy Storage System (BESS), now called Bulabul Battery proposed assessment methodology for the modification area. Wellington Valley Wiradjuri Aboriginal Corporation agree to the methodology for the pedestrian survey and in the unlikely event that test excavation is required.

Response to the following questions:

• Are there any protocols in relation to community interaction and/or cultural heritage that you would like adopted? - No

• Are you aware of any Aboriginal objects, places, sites or stories of cultural significance and/or importance within the modification area? If so, please advise us how you wish them to be dealt with? No

• Are you aware of any past or current hunting activities within the modification area? Do you have any views on how these should be managed into the future? - The area of this project and surrounding landscape would have been used for hunting of Kangaroo and Emu and occasionally possum.

• Is the information you are providing sensitive, gender specific, etc? - No
If so, how would you like the information you provide to EMM to be managed? - N/A
Noting that some documentation for the ACHA process will be required.

• Do you require any further information prior to EMM proceeding with the additional investigations? - No

• In your response, can you please also clearly identify who you would like EMM to talk to within your organisation, and provide contact details for these individuals. Please also ensure your preferred method of communication (eg telephone call, e-mail, letter etc) is highlighted.

All documentation etc via Email to [redacted]
Bradley R Bliss J.P.
WVWAC CEO and Contact Officer
[redacted]

Please also note the following:

Site 36-4-0237 is across Twelve Mile Road near gas and sewer services in near corner of the paddock. I have images of File from the Uungula Wind Farm Survey where it was identified.

Site 36-4-0220 is poorly flaked core on fence line of Twelve Mile Road. I have images of File from the Uungula Wind Farm Survey where it was identified.

[redacted]

AMPYR Representatives met with WVWAC CEO at their Orange office on Lords Place in December 2024, after this positive meeting WVWAC where we shared details and other information were not notified of further discussions and are not represented by the newly formed Wambal Bila trust, who does not represent All Local Aboriginal Community in Wellington as stated in the supplied documentation.

Regards

Bradley R Bliss J.P.
WVWAC CEO and Contact Officer
[redacted]

From: Phillipa O'Brien-Pounde <pobrienpounde@emmconsulting.com.au>
Sent: Friday, October 24, 2025 11:45:41 am
Cc: Megan Sheppard Brennand <msheppardbrennand@emmconsulting.com.au>; Alan Williams <awilliams@emmconsulting.com.au>; David Richards <drichards@emmconsulting.com.au>
Subject: Wellington BESS Project - ACHA addendum - Methodology letter

Dear All,

As you may recall, EMM Consulting Pty Ltd (EMM) undertook an Aboriginal Cultural Heritage Assessment (ACHA) between 2021 and 2023 for the Wellington South Battery Energy Storage System (BESS), now called Bulabul Battery. Two AHIMS sites were registered nearby, with one listed as 'invalid' on AHIMS and the other likely recorded in the wrong location. Neither site was able to be relocated during the field survey, and no additional Aboriginal sites or areas of archaeological potential were identified within the development boundary during the assessment.

We understand that there has been ongoing consultation with AMPYR and OzArk in which you have been involved, including the preparation of an ACHMP and a Chance Finds Protocol. EMM is now undertaking an ACHA addendum as part of a proposed modification to the development boundary, which includes an alternative laydown area and substation bay. Please find attached to this email a letter, providing an overview of the proposed modification and our proposed methods for undertaking archaeological investigations for the modification area.

In accordance with the Heritage NSW guidelines, can we please ask if you have any comments, concerns, or inputs to the methodology to respond to myself and Alan by **21 November 2025**.

Happy to discuss,

Kind Regards,

Phillipa

Phillipa O'Brien-Pounde
Archaeologist – Aboriginal Heritage

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Outlook

Re: Wellington BESS Project - ACHA addendum - Methodology letter

From David Richards <drichards@emmconsulting.com.au>
Date Wed 2025-10-29 9:08 PM
To WVWAC Contact Officer [redacted]
Cc Megan Sheppard Brennand <msheppardbrennand@emmconsulting.com.au>; Alan Williams <awilliams@emmconsulting.com.au>; Phillipa O'Brien Pounde <pobrienpounde@emmconsulting.com.au>

Hi Brad,

We apologise for the reference in our letter to Wambal Bila "representing" the local Aboriginal groups in the region. The text was supplied by Ampyr attempting to summarise a complex arrangement into a short introduction. I've spoken with them about your feedback and they apologise for this poor choice of wording.

Ampyr has clarified that Wambal Bila does not formally represent any of the local Aboriginal groups in the area and is not aligned with any individual group. It is Ampyr's intention that Wambal Bila be able to provide benefits to all Aboriginal people in the area.

Thanks,

David

David Richards
Senior Associate Environmental Scientist – Major Projects & Approvals
M 0405 593 675
www.emmconsulting.com.au

From: Alan Williams <awilliams@emmconsulting.com.au>
Sent: Wednesday, 29 October 2025 14:16
To: WVWAC Contact Officer [redacted] Phillipa O'Brien-Pounde <pobrienpounde@emmconsulting.com.au>; David Richards <drichards@emmconsulting.com.au>
Cc: Megan Sheppard Brennand <msheppardbrennand@emmconsulting.com.au>
Subject: RE: Wellington BESS Project - ACHA addendum - Methodology letter

Thanks Brad,

Much appreciated, we'll take these on board (as needed) as we progress; and very much hope to visit 36-4-0117 and 36-4-0118 with you in the coming months!

@David, please note the last paragraph and pass onto AMPYR for future communications.

A

Dr Alan Williams FSA FRSA FRSN MAACAI MAIATSIS MEIANZ
Technical Lead, Aboriginal Heritage | Associate Director
T 02 9493 9584
M 0438 104 740
www.emmconsulting.com.au

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From: WVWAC Contact Officer [redacted]
Sent: Wednesday, 29 October 2025 1:33 PM
To: Phillipa O'Brien-Pounde <pobrienpounde@emmconsulting.com.au>
Cc: Alan Williams <awilliams@emmconsulting.com.au>; Megan Sheppard Brennand <msheppardbrennand@emmconsulting.com.au>; David Richards <drichards@emmconsulting.com.au>
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• In your response, can you please also clearly identify who you would like EMM to talk to within your organisation, and provide contact details for these individuals. Please also ensure your preferred method of communication (eg telephone call, e-mail, letter etc) is highlighted.

All documentation etc [redacted]
Bradley R Bliss J.P.
WVWAC CEO and Contact Officer
[redacted]

Please also note the following:

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Site 36-4-0220 is poorly flaked core on fence line of Twelve Mile Road. I have images of File from the Uungula Wind Farm Survey where it was identified.

[redacted]

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Regards

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WVWAC CEO and Contact Officer
[redacted]

From: Phillipa O'Brien-Pounde <pobrienpounde@emmconsulting.com.au>
Sent: Friday, October 24, 2025 11:45:41 am
Cc: Megan Sheppard Brennand <msheppardbrennand@emmconsulting.com.au>; Alan Williams <awilliams@emmconsulting.com.au>; David Richards <drichards@emmconsulting.com.au>
Subject: Wellington BESS Project - ACHA addendum - Methodology letter

Dear All,

As you may recall, EMM Consulting Pty Ltd (EMM) undertook an Aboriginal Cultural Heritage Assessment (ACHA) between 2021 and 2023 for the Wellington South Battery Energy Storage System (BESS), now called Bulabul Battery. Two AHIMS sites were registered nearby, with one listed as 'invalid' on AHIMS and the other likely recorded in the wrong location. Neither site was able to be relocated during the field survey, and no additional Aboriginal sites or areas of archaeological potential were identified within the development boundary during the assessment.

We understand that there has been ongoing consultation with AMPYR and OzArk in which you have been involved, including the preparation of an ACHMP and a Chance Finds Protocol. EMM is now undertaking an ACHA addendum as part of a proposed modification to the development boundary, which includes an alternative laydown area and substation bay. Please find attached to this email a letter, providing an overview of the proposed modification and our proposed methods for undertaking archaeological investigations for the modification area.

In accordance with the Heritage NSW guidelines, can we please ask if you have any comments, concerns, or inputs to the methodology to respond to myself and Alan by **21 November 2025**.

Happy to discuss,

Kind Regards,

Phillipa

Phillipa O'Brien-Pounde
Archaeologist – Aboriginal Heritage

T 02 9493 9500
M 0434 441 477
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emmconsulting.com.au

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Outlook

Re: Wellington BESS Project - ACHA addendum - Methodology letter

From Phillipa O'Brien-Pounde <pobrienpounde@emmconsulting.com.au>
Date Fri 2025-11-07 5:02 PM
Cc Megan Sheppard Brennand <msheppardbrennand@emmconsulting.com.au>; Alan Williams <awilliams@emmconsulting.com.au>; David Richards <drichards@emmconsulting.com.au>
Bcc [redacted]

2 attachments (5 MB)
E250078_BulabulBatteryMOD1_Methods_V2.pdf; Register as an EMM RAP.docx;

Afternoon Jamie,

Thank you for our chat earlier.

As discussed, please find attached the methodology letter for the Wellington South Battery Energy Storage System (BESS), now called Bulabul Battery. Following completion of the ACHA and ACHMP, EMM is now undertaking an ACHA addendum as part of a proposed modification to the development boundary, which includes an alternative laydown area and substation bay. The attached letter provides an overview of the proposed modification and our proposed methods for undertaking archaeological investigations within the modification area.

In accordance with the Heritage NSW guidelines, could you please provide any comments, concerns, or input on the methodology to myself and Alan by **21 November 2025**.

Many thanks also for providing your organisation's availability for the proposed field survey between **24 and 28 November 2025**. Once the date is confirmed and further clarification is received from the client regarding the works, I will circulate a formal invitation with additional details.

In the meantime, EMM has recently introduced a new RAP onboarding process and form to help streamline engagement across our current and future projects. This process ensures that any relevant documents you provide are properly recorded and not lost within our system. Could you please complete the attached form and return it to me at your earliest convenience?

Please don't hesitate to reach out if you have any questions or concerns.

Best regards,
Phillipa

Phillipa O'Brien-Pounde
Archaeologist – Aboriginal Heritage

T 02 4907 4881
M 0434 441 477
www.emmconsulting.com.au

From: Phillipa O'Brien-Pounde
Sent: Friday, October 24, 2025 11:45 AM
Cc: Megan Sheppard Brennand <msheppardbrennand@emmconsulting.com.au>; Alan Williams <awilliams@emmconsulting.com.au>; David Richards <drichards@emmconsulting.com.au>
Subject: Wellington BESS Project - ACHA addendum - Methodology letter

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In accordance with the Heritage NSW guidelines, can we please ask if you have any comments, concerns, or inputs to the methodology to respond to myself and Alan by **21 November 2025**.

Happy to discuss,

Kind Regards,

Phillipa

Phillipa O'Brien-Pounde
Archaeologist – Aboriginal Heritage

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Phillipa O'Brien-Pounde

From: Phillipa O'Brien-Pounde
Sent: Thursday, 6 November 2025 12:52 PM
Cc: Alan Williams; David Richards; Megan Sheppard Brennand
Subject: Wellington BESS Project - ACHA addendum - Methodology letter
Attachments: E250078_BulabulBatteryMOD1_Methods_V2.pdf

Bcc: [redacted]

Good afternoon Jamie-lee Thain ,

I'm writing with regards to the Wellington South Battery Energy Storage System (BESS) project, for which I understand you and your organisation have been key stakeholders in the Aboriginal cultural heritage assessment and management for the project.

To provide a bit of history to the project, EMM Consulting Pty Ltd (EMM) prepared an Aboriginal Cultural Heritage Assessment (ACHA) between 2021 and 2023 for the Wellington South Battery Energy Storage System (BESS), now referred to as Bulabul Battery. Two AHIMS sites were previously registered nearby, with one listed as "not a site" on AHIMS and the other likely recorded in the wrong location. Neither site was able to be relocated during the field survey, and no additional Aboriginal sites or areas of archaeological potential were identified within the development boundary during the assessment.

After that, we understand that you've been continuing to chat about the project with AMPYR and another archaeological company called OzArk, where they developed an ACHMP and a Chance Finds Protocol for the project. Since then, the client has had to make changes to the development boundary, which includes an alternative laydown area and substation bay, and this will require a modification to the project approval. Because of that, we are now preparing an addendum ACHA to inform the project and complete the necessary heritage assessment. I am therefore proposing additional survey, for a half day occurring somewhere in the week of the Monday 24 – Friday 28 November 2025.

All of the details are included in the attached methodology letter, and I invite you to please review the document, and to gauge your availability and interest in participating in the survey (though, I will send through more details about the survey at a later date). The letter was originally distributed to RAPs on 24 October 2025; however I believe we had incorrect contact details, and I've just realised this methodology didn't reach you on the date it was originally sent, my sincerest apologies for the delay.

In accordance with the Heritage NSW guidelines, could you please provide any comments, concerns, or input regarding the methodology to myself and Alan by **21 November 2025**.

Happy to discuss further if needed.

Kind regards,

Phillipa O'Brien-Pounde
Archaeologist – Aboriginal Heritage

T 02 9493 9500
M 0434 441 477
LI Connect on LinkedIn
emmconsulting.com.au

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Outlook

Fw: Wellington BESS Project - ACHA addendum - Methodology letter

From Amber Morgan <amorgan@emmconsulting.com.au>
Date Thu 2025-11-13 10:35 AM
To [redacted]
Cc Megan Sheppard Brennand <msheppardbrennand@emmconsulting.com.au>; Phillipa O'Brien-Pounde <pobrienpounde@emmconsulting.com.au>; Alan Williams <awilliams@emmconsulting.com.au>

1 attachment (5 MB)
E250078_BulabulBatteryMOD1_Methods_V2.pdf;

Hi Bren,

I hope you have been well.

I'm writing with regards to the Wellington South Battery Energy Storage System (BESS) project, for which I understand you and your organisation have been key stakeholders in the Aboriginal cultural heritage assessment and management for the project.

To provide a bit of history to the project, EMM Consulting Pty Ltd (EMM) prepared an Aboriginal Cultural Heritage Assessment (ACHA) between 2021 and 2023 for the Wellington South Battery Energy Storage System (BESS), now referred to as Bulabul Battery. Two AHIMS sites were previously registered nearby, with one listed as "not a site" on AHIMS and the other likely recorded in the wrong location. Neither site was able to be relocated during the field survey, and no additional Aboriginal sites or areas of archaeological potential were identified within the development boundary during the assessment.

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In accordance with the Heritage NSW guidelines, could you please provide any comments, concerns, or input regarding the methodology to myself and Alan by **21 November 2025**.

Happy to discuss further if needed.

Kind regards,

Amber Morgan
Archaeologist - Aboriginal Heritage

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Outlook

Re: Wellington BESS Project - ACHA addendum - Methodology letter

---

From Phillipa O'Brien-Pounde <pobrienpounde@emmconsulting.com.au>
Date Fri 2025-11-14 8:39 AM
Cc Megan Sheppard Brennand <msheppardbrennand@emmconsulting.com.au>; Alan Williams <awilliams@emmconsulting.com.au>; David Richards <drichards@emmconsulting.com.au>
Bcc [redacted]

Hi all,

This is just a friendly reminder that the Wellington BESS Project ACHA addendum methodology letter review period ends next week on **Friday 21 November 2025**. If you haven't already, any feedback prior to this date would be greatly appreciated.

If you have any comments or questions please don't hesitate to reach out to Alan Williams (cc'd) or myself.

Kind regards,

Phillipa O'Brien-Pounde
Archaeologist – Aboriginal Heritage

T 02 4907 4881
M 0434 441 477
www.emmconsulting.com.au

From: Phillipa O'Brien-Pounde
Sent: Friday, October 24, 2025 11:45 AM
Cc: Megan Sheppard Brennand <msheppardbrennand@emmconsulting.com.au>; Alan Williams <awilliams@emmconsulting.com.au>; David Richards <drichards@emmconsulting.com.au>
Subject: Wellington BESS Project - ACHA addendum - Methodology letter

Dear All,

As you may recall, EMM Consulting Pty Ltd (EMM) undertook an Aboriginal Cultural Heritage Assessment (ACHA) between 2021 and 2023 for the Wellington South Battery Energy Storage System (BESS), now called Bulabul Battery. Two AHIMS sites were registered nearby, with one listed as 'invalid' on AHIMS and the other likely recorded in the wrong location. Neither site was able to be relocated during the field survey, and no additional Aboriginal sites or areas of archaeological potential were identified within the development boundary during the assessment.

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Phillipa

Phillipa O'Brien-Pounde
Archaeologist – Aboriginal Heritage

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Phillipa O'Brien-Pounde

From: Phillipa O'Brien-Pounde <pobrienpounde@emmconsulting.com.au>
Sent: Friday, 19 December 2025 5:05 PM
Cc: David Richards; Megan Sheppard Brennand; Alan Williams
Subject: Bulabul BESS - Draft ACHA addendum for final review

Bcc: [redacted]

Dear All,

Thank you again for your ongoing engagement regarding the proposed modification at Wellington South Battery Energy Storage System (BESS), now called Bulabul Battery, and the associated Aboriginal cultural assessment currently being undertaken. We are pleased to advise that the draft report has been completed, and we are now in a position to be able to provide this document to you and your organisation for review and input.

As you will be aware, AMPYR Australia Pty Ltd is seeking approval to modify the Bulabul BESS development boundary, which includes an alternative laydown area and substation bay. EMM Consulting Pty Ltd (EMM) previously undertook an Aboriginal Cultural Heritage Assessment (ACHA) for the project between 2021 and 2023. Two AHIMS sites were registered nearby, with one listed as 'invalid' on AHIMS and the other likely recorded in the wrong location. Neither site was able to be relocated during the field survey, and no additional Aboriginal sites or areas of archaeological potential were identified within the development boundary during the assessment. We understand that there has been ongoing consultation with AMPYR and OzArk in which you have been involved, including the preparation of an Aboriginal Cultural Heritage Management Plan (ACHMP) and a Chance Finds Protocol. The Chance Finds Protocol was undertaken in consultation with Heritage NSW and has been approved by the Department of Planning, Housing and Infrastructure (DPHI).

Recent field investigations involving an archaeological field survey of the proposed modification areas, did not identify any new surface or subsurface cultural materials. As such, the modification area is assessed as posing a low risk to Aboriginal heritage. Key recommendations of the assessment include updating the existing ACHMP, which provides a framework for ongoing Aboriginal consultation and the management of any unexpected cultural materials if encountered during the construction activities.

The report can be downloaded here for your review: 
E250078_BulabulBattery_ACHAaddendum_V2_DRAFT_Redacted.pdf

We would greatly appreciate your review and any feedback you or your organisation may wish to provide have in relation to the report, especially the findings, significance and recommendations. We request that any comments be provided by **Friday 23 January 2026**.

If you experience any difficulties downloading or accessing the report, or if you would like to discuss the report further, please feel free to email or call to discuss using the contact details below. Also, if you

require a printed copy posted to you, please let myself or Al know (and provide postal information) and we can arrange this for you.

Kind regards,

Phillipa

Phillipa O'Brien-Pounde
Archaeologist – Ecology and Heritage



T 02 9493 9500
M 0434 441 477
LI Connect on LinkedIn
emmconsulting.com.au

SYDNEY | Gamaraigal Country, The Forum, Level 10, 201 Pacific Highway, St Leonards NSW 2065

Our offices will be closed from Friday 19 December 2025 and will reopen on Monday 5 January 2026.

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Outlook

Re: Bulabul BESS - Draft ACHA addendum for final review

From WVWAC Contact Officer [redacted]
Date Mon 2026-01-05 10:07 AM
To Phillipa O'Brien-Pounde <pobrienpounde@emmconsulting.com.au>
Cc Alan Williams <awilliams@emmconsulting.com.au>; David Richards <drichards@emmconsulting.com.au>; Megan Sheppard Brennand <msheppardbrennand@emmconsulting.com.au>

Hi Pip,

Wellington Valley Wiradjuri Aboriginal Corporation (WVWAC) would like to thank you for your invitation to provide a response for This Aboriginal Cultural Heritage issue relevant to obligations to protect our Heritage within our Traditional Lands. Wellington Valley Wiradjuri represent traditional families with identified apical ancestry pre European occupation with our known Traditional Lands. We know our culture, country and continue with our association with our traditional lands (Ngurangbang).

Wellington Valley Wiradjuri Aboriginal Corporation held a Meeting in Wellington on Saturday 3rd January 2025 where the Bulabul BESS - Draft ACHA addendum report was discussed. Those present WVWAC have through consultation with other Traditional Elders and Traditional Community with cultural knowledge have the following comments and or recommendations:

- WVWAC object to any other non-traditional aboriginal organizations or people taking part in site surveys, consultation and assessments within our defined Traditional Lands. These non-traditional people and groups are outsiders under Traditional Lore and have no right to advise on or to be present during consultation or site visits as they do not possess the specific traditional knowledge in relation to these lands or sites. These participants may be indigenous and however, this still does not give them the right to disregard Traditional Lore and values. WVWAC Elders specifically named Corroboree Aboriginal Corporation and Woka Aboriginal Corporation in this instance and found it offensive that these outsiders with no known connection to Wellington and district are conducting cultural heritage works and consultation within our central Traditional area.

- WVWAC agrees with the findings of the Bulabul BESS - Draft ACHA addendum report.

Regards,

Bradley R. Bliss J.P.
WVWAC CEO and Contact Officer
[redacted]

From: Phillipa O'Brien-Pounde <pobrienpounde@emmconsulting.com.au>
Sent: Friday, December 19, 2025 5:05 PM

Cc: David Richards <drichards@emmconsulting.com.au>; Megan Sheppard Brennand <msheppardbrennand@emmconsulting.com.au>; Alan Williams <awilliams@emmconsulting.com.au>
Subject: Bulabul BESS - Draft ACHA addendum for final review

Dear All,

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As you will be aware, AMPYR Australia Pty Ltd is seeking approval to modify the Bulabul BESS development boundary, which includes an alternative laydown area and substation bay. EMM Consulting Pty Ltd (EMM) previously undertook an Aboriginal Cultural Heritage Assessment (ACHA) for the project between 2021 and 2023. Two AHIMS sites were registered nearby, with one listed as 'invalid' on AHIMS and the other likely recorded in the wrong location. Neither site was able to be relocated during the field survey, and no additional Aboriginal sites or areas of archaeological potential were identified within the development boundary during the assessment. We understand that there has been ongoing consultation with AMPYR and OzArk in which you have been involved, including the preparation of an Aboriginal Cultural Heritage Management Plan (ACHMP) and a Chance Finds Protocol. The Chance Finds Protocol was undertaken in consultation with Heritage NSW and has been approved by the Department of Planning, Housing and Infrastructure (DPHI).

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We would greatly appreciate your review and any feedback you or your organisation may wish to provide have in relation to the report, especially the findings, significance and recommendations. We request that any comments be provided by **Friday 23 January 2026**.

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Kind regards,

Phillipa

Phillipa O'Brien-Pounde
Archaeologist – Ecology and Heritage

T 02 9493 9500
M 0434 441 477
LI Connect on LinkedIn
emmconsulting.com.au

SYDNEY | Gamaraigal Country, The Forum, Level 10, 201 Pacific Highway, St Leonards NSW 2065

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Please consider the environment before printing my email.

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Outlook

Re: Bulabul BESS - Draft ACHA addendum for final review

From Phillipa O'Brien-Pounde <pobrienpounde@emmconsulting.com.au>
Date Tue 2026-01-06 10:07 AM
To WVWAC Contact Officer [redacted]
Cc Alan Williams <awilliams@emmconsulting.com.au>; David Richards <drichards@emmconsulting.com.au>; Megan Sheppard Brennand <msheppardbrennand@emmconsulting.com.au>

Morning [redacted],

Thank you for your feedback and comments, we will incorporate them into the ACHA and pass them on to the client.

Many thanks,
Pip

Phillipa O'Brien-Pounde
Archaeologist – Aboriginal Heritage

T 02 4907 4881
M 0434 441 477
www.emmconsulting.com.au

From: WVWAC Contact Officer [redacted]
Sent: Monday, January 5, 2026 10:07 AM
To: Phillipa O'Brien-Pounde <pobrienpounde@emmconsulting.com.au>
Cc: Alan Williams <awilliams@emmconsulting.com.au>; David Richards <drichards@emmconsulting.com.au>; Megan Sheppard Brennand <msheppardbrennand@emmconsulting.com.au>
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[redacted]

From: Phillipa O'Brien-Pounde <pobrienpounde@emmconsulting.com.au>
Sent: Friday, December 19, 2025 5:05 PM
Cc: David Richards <drichards@emmconsulting.com.au>; Megan Sheppard Brennand <msheppardbrennand@emmconsulting.com.au>; Alan Williams <awilliams@emmconsulting.com.au>
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Phillipa

Phillipa O'Brien-Pounde
Archaeologist – Ecology and Heritage



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Outlook

Re: Bulabul BESS - Draft ACHA addendum for final review

From Phillipa O'Brien-Pounde <pobrienpounde@emmconsulting.com.au>
Date Wed 2026-01-21 5:46 PM
Cc David Richards <drichards@emmconsulting.com.au>; Megan Sheppard Brennand <msheppardbrennand@emmconsulting.com.au>; Alan Williams <awilliams@emmconsulting.com.au>
Bcc [redacted]

Hi all,

This is just a friendly reminder that the Wellington South Battery Energy Storage System (BESS), now called Bulabul Battery ACHA review period ends this week on **Friday 23 January 2026**. If you haven't already, any feedback prior to this date would be greatly appreciated.

If you have any comments or questions please don't hesitate to reach out to Alan Williams (cc'd) or myself.

Kind regards,
Phillipa

Phillipa O'Brien-Pounde
Archaeologist – Aboriginal Heritage

T 02 4907 4881
M 0434 441 477
www.emmconsulting.com.au

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REQUEST FOR SEARCH OF LAND CLAIM REGISTER

OFFICE OF THE REGISTRAR
ABORIGINAL LAND RIGHTS ACT 1983 (NSW)

Level 3, 2-10 Wentworth Street
Parramatta NSW 2124
02 8633 1266
PO Box 5068
Parramatta NSW 2124

Please print all details clearly using block letters

1. Contact details

Full name:	Phillipa O'Brien-Pounde
Name of company:	EMM Consulting Pty Ltd
Postal address:	The Forum, Level 10, 201 Pacific Highway, St Leonards NSW 2068
Email address:	pobrienpounde@emmconsulting.com.au
Telephone number:	02 9493 9500

2. Real Property Details (if more than one parcel please attach separate table)

Lot / Section / Deposited Plan:	Lot 32 DP 622471 Lot 1 DP 1226751
Parish:	Wuuluman
County:	Bligh

Attached is a copy of the current title search(es), please tick (✓): ☐

3. To assist our office in assigning priorities please provide:

a. The purpose for which information is required:

Aboriginal cultural heritage assessment

b. The reason for urgency (when urgent consideration is required):

Please note:

i. Searches will only be performed on Crown Land.
ii. In order to process a search we require a copy of a current title search for the relevant land.
iii. Subject to demand, searches are normally completed within 10 working days. Complex searches may take longer.
iv. If your search is urgent, please indicate why at point 3b above.
v. Please send the completed form together with current relevant title search(es) via email to: **ALC@oralra.nsw.gov.au**

4 Signature and date: Pobrienpounde

Outlook

Bulabul Battery - ACHA addendum - updated land claimant search

From Phillipa O'Brien-Pounde <pobrienpounde@emmconsulting.com.au>
Date Tue 2026-01-27 4:18 PM
To [redacted]
Cc Megan Sheppard Brennand <msheppardbrennand@emmconsulting.com.au>; Alan Williams <awilliams@emmconsulting.com.au>

1 attachment (401 KB)
E250078 Updated ORALA seach form.pdf;

Dear Sir/Madam,

EMM Consulting Pty Ltd (EMM) undertook an Aboriginal Cultural Heritage Assessment (ACHA) between 2021 and 2023 for the Wellington South Battery Energy Storage System (BESS), now called Bulabul Battery at 6773 Goolma Road, Wuuluman NSW 2820 (Lot 32 DP622471 and Lot 1 DP1226751). EMM is now undertaking an ACHA addendum as part of a proposed modification to the development boundary, which includes an alternative laydown area and substation bay.

I acknowledge your terms and conditions relating to cultural heritage in NSW and note that a search of the National Native Title Tribunal is required under the NSW Government's *Aboriginal cultural heritage consultation requirements for proponents (2010)*. Accordingly, I am writing to request an updated search for Aboriginal land claimants for the subject area to support the ACHA addendum, noting that a search was undertaken as part of the original ACHA.

Please contact myself or Megan Sheppard Brennand (cc'd here) with any questions.

Kind regards,
Phillipa

Phillipa O'Brien-Pounde
Archaeologist – Aboriginal Heritage

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T 02 9493 9500
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Request for Spatial Search of Tribunal Registers

National Native Title Tribunal

Your assistance in providing information in the correct format will ensure that your search request is dealt with as efficiently as possible. **The completed form must accompany your emailed request.**

It may take up to three working days to provide you with your search results when you submit conventional search criteria (tenement or land parcel identifiers). It may take up to five working days for more complex or larger searches. The Tribunal will contact you if a result cannot be provided within this timeframe.

Parcel Identifiers

The NNTT uses the terminology and formatting of unique identifiers used in each state to uniquely identify a land parcel. Please identify land parcels using the formats below:

1. **Western Australia and Queensland** – use Lot on plan details (e.g. WA - 124/P098764 or QLD - 124DP98764).
2. **New South Wales** – use Lot/Section/Plan details (e.g. 124/7/DP258456 or 124//DP568954).
3. **Northern Territory** - use LAISKEY details (e.g. 695 1256 or 000 2568). The laiskey is a unique identifier for each parcel comprised of the location code, LTO code (derived from the survey plan) where applicable and the parcel number
4. **South Australia –** use Plan/Parcel ID (e.g. H529687AL125). Concatenation of Plan Type, Plan, Parcel Type and Parcel.
5. **Victoria -** use SPI (Standard Parcel Identifier) details (e.g. 1\PP2870 or 9E~\PP3306).

The Search Form

1. Specify only **one jurisdiction** (e.g. Queensland) and **one type of tenure** (e.g. mining tenement) per form.
2. You can add up to 20 separate tenements or parcels per search request. Enter one parcel identifier per form field. Do not use ranges such as lots 5 to 15 on Plan DP1486.
3. **For more than 20 parcels or tenements, please submit additional search requests or alternatively attach an Excel spreadsheet along with your completed search form**. List the parcel identifiers in the correct unique format (see above).
4. If your area of interest cannot be clearly identified from the search form, or is not held in NNTT datasets, we may instead provide search results for a surrounding local government area, or other suitable regional area

Disclaimers and additional notes in relation to timeframes, freehold land and cultural heritage in NSW are addressed on the Geospatial Searches homepage and these should be referred to prior to lodging your request.

If you have any further queries please contact GeospatialSearch@NNTT.gov.au to discuss.

Request for Spatial Search of Tribunal Registers

National Native Title Tribunal

1: Your details

Your name:	*Phillipa O'Brien-Pounde*		
Your company:	*EMM Consulting Pty Ltd*		
E-mail address:	*pobrienpounde@emmconsulting.com.au*	Phone:	*02 9493 9500*
Your reference:	*E250078*	*Your state:*	*New South Wales*
☐	*I have read and acknowledge the terms and conditions on the previous page.*		

2: Areas to be searched

Jurisdiction to be searched:	*New South Wales*	Tenure to be searched:	*Land Parcel*

Parcel or tenement identifiers (add up to 20 separate identifiers). ***Please see previous page for parcel identifiers.***

Parcel 1:	*Lot 32 DP 622471*	Parcel 2:	*Lot 1 DP 1226751*
Parcel 3:	*Click or tap here to enter text.*	Parcel 4:	*Click or tap here to enter text.*
Parcel 5:	*Click or tap here to enter text.*	Parcel 6:	*Click or tap here to enter text.*
Parcel 7:	*Click or tap here to enter text.*	Parcel 8:	*Click or tap here to enter text.*
Parcel 9:	*Click or tap here to enter text.*	Parcel 10:	*Click or tap here to enter text.*
Parcel 11:	*Click or tap here to enter text.*	Parcel 12:	*Click or tap here to enter text.*
Parcel 13:	*Click or tap here to enter text.*	Parcel 14:	*Click or tap here to enter text.*
Parcel 15:	*Click or tap here to enter text.*	Parcel 16:	*Click or tap here to enter text.*
Parcel 17:	*Click or tap here to enter text.*	Parcel 18:	*Click or tap here to enter text.*
Parcel 19:	*Click or tap here to enter text.*	Parcel 20:	*Click or tap here to enter text.*

If your search area is not a parcel or mining or petroleum tenement, you can enter other tenure or administrative regions here (e.g. local government area, townsite or county). Please provide as much detail as you can.

This site is located at 6773 Goolma Road, Wuuluman NSW 2820

E-mail the completed form to GeospatialSearch@NNTT.gov.au

Outlook

Bulabul Battery - ACHA addendum - updated Native Title Geospatial search

From Phillipa O'Brien-Pounde <pobrienpounde@emmconsulting.com.au>
Date Tue 2026-01-27 4:16 PM
To [redacted]
Cc Megan Sheppard Brennand <msheppardbrennand@emmconsulting.com.au>; Alan Williams <awilliams@emmconsulting.com.au>

1 attachment (3 MB)
E250078_NNTT Geospatial search request.docx;

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Outlook

RE: SR26/113 - Bulabul Battery - ACHA addendum - updated Native Title Geospatial search

From Geospatial Search Requests [redacted]
Date Tue 2026-01-27 5:53 PM
To Phillipa O'Brien-Pounde <pobrienpounde@emmconsulting.com.au>
Cc Geospatial Search Requests [redacted]

You don't often get email from geospatialsearch@nntt.gov.au. Learn why this is important

OFFICIAL

Your ref: *E250078* **Our ref: SR26/113**

Dear Phillipa O'Brien-Pounde,

Thank you for your search request, please find your results below.

Search Results
The results provided are based on the information you supplied and are derived from a search of the following Tribunal databases:

- Schedule of Native Title Determination Applications
- Register of Native Title Claims
- Native Title Determinations
- Indigenous Land Use Agreements (Registered and notified)

Results for overlapping native title matters in NSW:

Feature ID	Tenure	Cadastre Data As At	Feature Area SqKm	Overlapping Native Title Feature			
1//DP1226751	FREEHOLD	25/01/2026	0.5688	**NNTT File Number**	**Name**	**Category**	**Overlap Area SqKm**
				No overlap			-
32//DP622471	FREEHOLD	25/01/2026	4.5721	**NNTT File Number**	**Name**	**Category**	**Overlap Area SqKm**
				No overlap			-

For more information about the Tribunal's registers or to search the registers yourself and obtain copies of relevant register extracts, please visit our website.

Information on native title claims and freehold land can also be found on the Tribunal's website here: Native title claims and freehold land .

Please note: There may be a delay between a native title determination application being lodged in the Federal Court and its transfer to the Tribunal. As a result, some native title determination applications recently filed with the Federal Court may not appear on the Tribunal's databases.

The search results are based on analysis against external boundaries of applications only. Native title applications commonly contain exclusions clauses which remove areas from within the external boundary. To determine whether the areas described are in fact subject to claim, you need to refer to the "Area covered by claim" section of the relevant Register Extract or Schedule Extract and any maps attached.

Search results and the existence of native title
Please note that the enclosed information from the Register of Native Title Claims and/or the Schedule of Applications is **not** confirmation of the existence of native title in this area. This cannot be confirmed until the Federal Court makes a determination that native title does or does not exist in relation to the area. Such determinations are registered on the National Native Title Register.

The Tribunal accepts no liability for reliance placed on enclosed information
The enclosed information has been provided in good faith. Use of this information is at your sole risk. The National Native Title Tribunal makes no representation, either express or implied, as to the accuracy or suitability of the information enclosed for any particular purpose and accepts no liability for use of the information or reliance placed on it.

If you have any further queries, please do not hesitate to contact us via GeospatialSearch@NNTT.gov.au

Regards,

Geospatial Searches
National Native Title Tribunal | Perth
[redacted]



From: Phillipa O'Brien-Pounde <pobrienpounde@emmconsulting.com.au>
Sent: Tuesday, 27 January 2026 1:16 PM
To: Geospatial Search Requests <GeospatialSearch@NNTT.gov.au>
Cc: Megan Sheppard Brennand <msheppardbrennand@emmconsulting.com.au>; Alan Williams <awilliams@emmconsulting.com.au>
Subject: SR26/113 - Bulabul Battery - ACHA addendum - updated Native Title Geospatial search

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Archaeologist – Aboriginal Heritage

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SYDNEY | Gamaraigal Country, The Forum, Level 10, 201 Pacific Highway, St Leonards NSW 2065

CLIENTCHOICE Awards 2025 winner

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Appendix B
Additional archaeological information

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creating opportunities

B.1 AHIMS search

AHIMS Web Services (AWS)
Search Result

Your Ref/PO Number : J210534 Wellington

Client Service ID : 609448

EMM Consulting - St Leonards - Individual users

Ground Level, Suite 01 20 Chandos Street
St Leonards New South Wales 2065

Attention: Taylar Reid

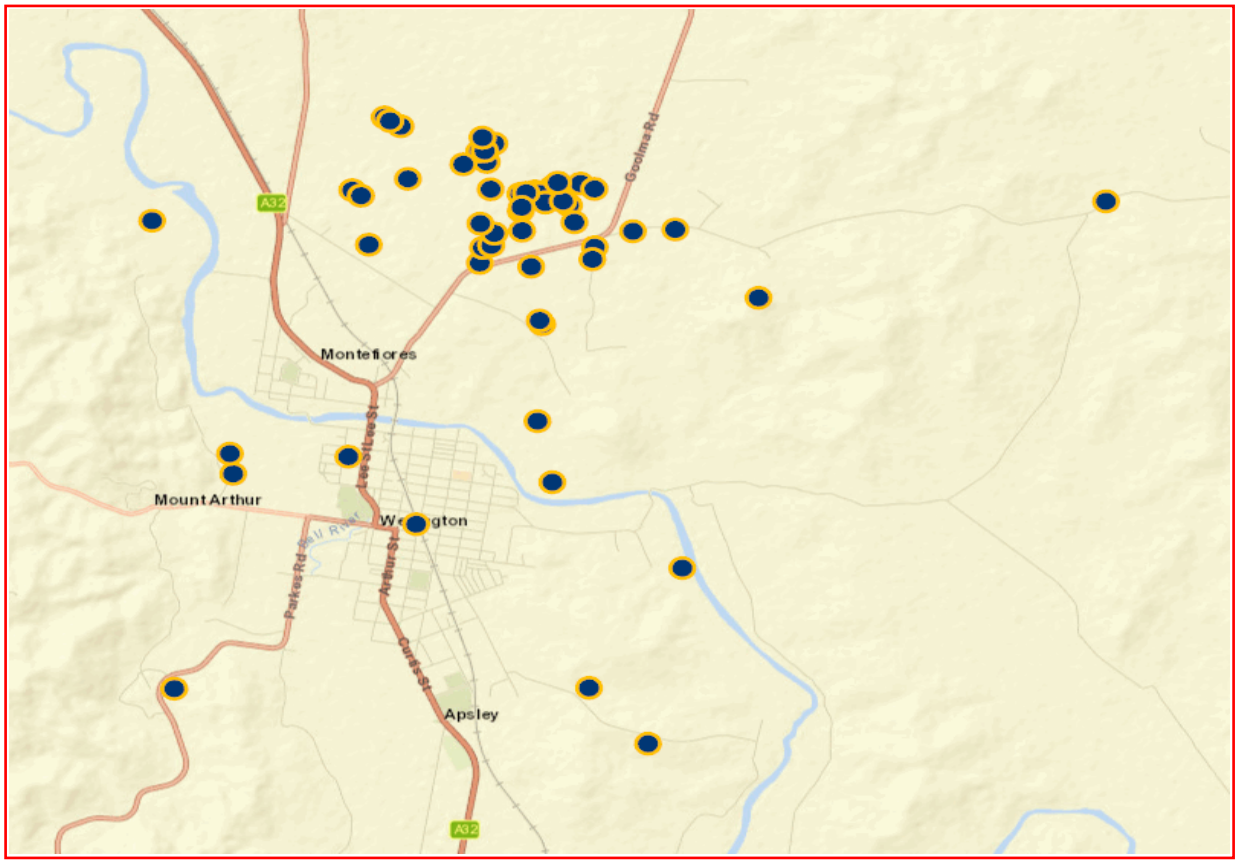
Email: treid@emmconsulting.com.au

Date: 02 August 2021

Dear Sir or Madam:

AHIMS Web Service search for the following area at Lat, Long From : -32.58, 148.91 - Lat, Long To : -32.51, 149.03, conducted by Taylar Reid on 02 August 2021.

The context area of your search is shown in the map below. Please note that the map does not accurately display the exact boundaries of the search as defined in the paragraph above. The map is to be used for general reference purposes only.



A search of Heritage NSW AHIMS Web Services (Aboriginal Heritage Information Management System) has shown that:

55	Aboriginal sites are recorded in or near the above location.
0	Aboriginal places have been declared in or near the above location. *

If your search shows Aboriginal sites or places what should you do?

- You must do an extensive search if AHIMS has shown that there are Aboriginal sites or places recorded in the search area.
- If you are checking AHIMS as a part of your due diligence, refer to the next steps of the Due Diligence Code of practice.
- You can get further information about Aboriginal places by looking at the gazettal notice that declared it. Aboriginal places gazetted after 2001 are available on the NSW Government Gazette (https://www.legislation.nsw.gov.au/gazette) website. Gazettal notices published prior to 2001 can be obtained from Heritage NSW upon request

Important information about your AHIMS search

- The information derived from the AHIMS search is only to be used for the purpose for which it was requested. It is not be made available to the public.
- AHIMS records information about Aboriginal sites that have been provided to Heritage NSW and Aboriginal places that have been declared by the Minister;
- Information recorded on AHIMS may vary in its accuracy and may not be up to date. Location details are recorded as grid references and it is important to note that there may be errors or omissions in these recordings,
- Some parts of New South Wales have not been investigated in detail and there may be fewer records of Aboriginal sites in those areas. These areas may contain Aboriginal sites which are not recorded on AHIMS.
- Aboriginal objects are protected under the National Parks and Wildlife Act 1974 even if they are not recorded as a site on AHIMS.
- This search can form part of your due diligence and remains valid for 12 months.

Level 6, 10 Valentine Ave, Parramatta 2150
Locked Bag 5020 Parramatta NSW 2124
Tel: (02) 9585 6345

ABN 34 945 244 274
Email: ahims@environment.nsw.gov.au
Web: www.heritage.nsw.gov.au

AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : J210534 Wellington

Client Service ID : 609448

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
36-4-0138	Wellington Solar Farm IF8	GDA	55	684144	6400422	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Mr.Matthew Barber,Mr.Matthew Barber,Mr.Matthew Barber,NGH Heritage - Fyshw					**Permits**		
36-4-0118	Power Station CMT 2	GDA	55	684191	6398780	Open site	Valid	Potential Archaeological Deposit (PAD) : 1		
	Contact Gallanggabang Aboriginal Corp	**Recorders**	Doctor.Colin Pardoe					**Permits**		
36-4-0149	Wellington Solar Farm AS6	GDA	55	684331	6400473	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Mr.Matthew Barber,Mr.Matthew Barber,Mr.Matthew Barber,NGH Heritage - Fyshw					**Permits**		
36-1-0126	Curra Creek;	AGD	55	680110	6394170	Open site	Valid	Modified Tree (Carved or Scarred) : -	Scarred Tree	1333
	Contact	**Recorders**	Warren Bluff					**Permits**		
36-4-0177	Wellington Nth IF2	GDA	55	682214	6400473	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Mr.Matthew Barber,NGH Heritage - Fyshwick					**Permits**		
36-4-0154	Wellington Solar Farm ST1	GDA	55	683726	6401020	Open site	Valid	Modified Tree (Carved or Scarred) : -		
	Contact	**Recorders**	Mr.Matthew Barber,NGH Heritage - Fyshwick					**Permits**		
36-4-0222	Mount Nanima IF1	GDA	55	684119	6397585	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Eco Logical Australia Pty Ltd - Sydney - Individual users,Mr.Declan Coman					**Permits**		
36-4-0136	Wellington Solar Farm IF12	GDA	55	684501	6400245	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Mr.Matthew Barber,Mr.Matthew Barber,Mr.Matthew Barber,NGH Heritage - Fyshw					**Permits**		
36-4-0135	Wellington Solar Farm IF13	GDA	55	684554	6400033	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Mr.Matthew Barber,Mr.Matthew Barber,Mr.Matthew Barber,NGH Heritage - Fyshw					**Permits**		
36-4-0203	Wellington Nth SF Additional Area IF1	GDA	55	684764	6399721	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Mr.Matthew Barber,Mr.Matthew Barber,NGH Heritage - Fyshwick,NGH Heritage - F					**Permits**		
36-4-0006	Macquarie River 2	AGD	55	682701	6396153	Open site	Valid	Modified Tree (Carved or Scarred) : 28, Ceremonial Ring (Stone or Earth) : -	Bora/Ceremonial,Carved Tree	65,102779
	Contact	**Recorders**	David Bell,R Etheridge					**Permits**		
36-4-0158	Wellington Solar Farm IF4	GDA	55	683642	6400795	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Mr.Matthew Barber,Mr.Matthew Barber,Mr.Matthew Barber,NGH Heritage - Fyshw					**Permits**		
36-4-0210	Wellington Solar IF 17	GDA	55	683991	6400184	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Mr.Matthew Barber,Mr.Matthew Barber,NGH Heritage - Fyshwick,NGH Heritage - F					**Permits**		
36-4-0216	WE-IF-001 (Goolma Road)	GDA	55	684088	6399493	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Kayandel Archaeological Services,Ms.Natalie Stiles					**Permits**		

Report generated by AHIMS Web Service on 02/08/2021 for Taylar Reid for the following area at Lat, Long From : -32.58, 148.91 - Lat, Long To : -32.51, 149.03. Number of Aboriginal sites and Aboriginal objects found is 55

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SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
36-4-0117	Power Station CMT 1	GDA	55	684165	6398827	Open site	Valid	Potential Archaeological Deposit (PAD) : 1		
	Contact Gallanggabang Aboriginal Corp	**Recorders**	Doctor.Colin Pardoe						**Permits**	
36-4-0079	Wellington	AGD	55	682000	6397000	Open site	Valid	Burial : -	Burial/s	2641,102779
	Contact	**Recorders**	Ms.Adrienne Howe-Piening						**Permits**	
36-4-0173	Wellington Nth AFT1	GDA	55	682573	6401365	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Mr.Matthew Barber,NGH Heritage - Fyshwick						**Permits**	
36-4-0142	Wellington Solar Farm IF1	GDA	55	682740	6401252	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Mr.Matthew Barber,NGH Heritage - Fyshwick						**Permits**	
36-4-0147	Wellington Solar Farm AS3	GDA	55	683565	6400929	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Mr.Matthew Barber,Mr.Matthew Barber,NGH Heritage - Fyshwick,NGH Heritage - F						**Permits**	
36-4-0153	Wellington Solar Farm AS10	GDA	55	683546	6399549	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Mr.Matthew Barber,Mr.Matthew Barber,Mr.Matthew Barber,NGH Heritage - Fyshw						**Permits**	
36-4-0146	Wellington Solar Farm AS4	GDA	55	683623	6400932	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Mr.Matthew Barber,Mr.Matthew Barber,Mr.Matthew Barber,NGH Heritage - Fyshw						**Permits**	
36-4-0159	Wellington Solar Farm IF5	GDA	55	683677	6400457	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Mr.Matthew Barber,Mr.Matthew Barber,Mr.Matthew Barber,NGH Heritage - Fyshw						**Permits**	
36-4-0148	Wellington Solar Farm AS5	GDA	55	684194	6400396	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Mr.Matthew Barber,Mr.Matthew Barber,Mr.Matthew Barber,NGH Heritage - Fyshw						**Permits**	
36-4-0221	Mount Namina AS1	GDA	55	684262	6396829	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Eco Logical Australia Pty Ltd - Sydney - Individual users,Mr.Declan Coman						**Permits**	
36-4-0220	UWFTMR_IF1	GDA	55	685171	6399910	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Austral Archaeology - Wollongong,Mr.Ricardo Servin						**Permits**	
36-4-0025	Wellington;WF 1;Baalbek;	AGD	55	679980	6399950	Open site	Valid	Artefact : -	Open Camp Site	975,102779
	Contact	**Recorders**	Mr.Allan Lance						**Permits**	
36-4-0176	Wellington Nth IF1	GDA	55	682306	6400402	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Mr.Matthew Barber,NGH Heritage - Fyshwick						**Permits**	
36-4-0156	Wellington Solar Farm IF3	GDA	55	683394	6400771	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Mr.Matthew Barber,Mr.Matthew Barber,Mr.Matthew Barber,NGH Heritage - Fyshw						**Permits**	
36-4-0150	Wellington Solar Farm AS7	GDA	55	684252	6400282	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Mr.Matthew Barber,Mr.Matthew Barber,Mr.Matthew Barber,NGH Heritage - Fyshw						**Permits**	
36-4-0137	Wellington Solar Farm IF11	GDA	55	684439	6400296	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Mr.Matthew Barber,NGH Heritage - Fyshwick						**Permits**	
36-4-0128	Blacks Camp Wellington	GDA	55	685616	6395743	Open site	Valid	Artefact : -		103476
	Contact	**Recorders**	Phil Purcell						**Permits**	

Report generated by AHIMS Web Service on 02/08/2021 for Taylar Reid for the following area at Lat, Long From : -32.58, 148.91 - Lat, Long To : -32.51, 149.03. Number of Aboriginal sites and Aboriginal objects found is 55

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AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : J210534 Wellington

Client Service ID : 609448

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
36-4-0108	Yarrahapani 1	AGD	55	686370	6398880	Open site	Valid	Artefact : 2		101380,102779
	Contact	**Recorders**	Mr.Neville Baker,Doctor.Jodie Benton,Gallanggabang Aboriginal Corporation						**Permits**	
36-5-0222	Restriction applied. Please contact ahims@environment.nsw.gov.au.					Open site	Valid			
	Contact	**Recorders**	Austral Archaeology - Wollongong,Mr.Ricardo Servin						**Permits**	
36-4-0092	PR-ST-01 same as 36-1-0126	AGD	55	680110	6394170	Open site	Valid	Modified Tree (Carved or Scarred) : -		
	Contact	**Recorders**	L Nolan						**Permits**	
36-4-0141	Wellington Solar Farm IF7	GDA	55	683989	6400395	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Mr.Matthew Barber,Mr.Matthew Barber,Mr.Matthew Barber,NGH Heritage - Fyshw						**Permits**	
36-4-0218	Wellington Solar IF 18	GDA	55	684051	6400406	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Mr.Matthew Barber,NGH Heritage - Fyshwick						**Permits**	
36-4-0139	Wellington Solar Farm IF9	GDA	55	684628	6400510	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Mr.Matthew Barber,NGH Heritage - Fyshwick						**Permits**	
36-4-0077	Nanima Rd 1;	AGD	55	684490	6394100	Open site	Valid	Modified Tree (Carved or Scarred) : 1	Scarred Tree	3701,102779
	Contact	**Recorders**	Mr.Matthew Barber						**Permits**	
36-4-0097	STP-1F-1	AGD	55	680780	6396810	Open site	Valid	Artefact : -		102779
	Contact	**Recorders**	Central West Archaeological and Heritage Services Pty Ltd						**Permits**	
36-4-0081	Restriction applied. Please contact ahims@environment.nsw.gov.au.					Open site	Valid			102211,102779
	Contact	**Recorders**	Lloyd Nolan,Mr.Bradley Bliss,Wellington Valley Wiradjuri Aboriginal Corporation						**Permits**	
36-4-0171	Wellington Nth IF6	GDA	55	682629	6401320	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Mr.Matthew Barber,NGH Heritage - Fyshwick						**Permits**	
36-4-0143	Wellington Solar Farm IF15	GDA	55	683583	6399737	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Mr.Matthew Barber,Mr.Matthew Barber,Mr.Matthew Barber,NGH Heritage - Fyshw						**Permits**	
36-4-0214	Wellington Solar AS 13	GDA	55	683672	6399764	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Mr.Matthew Barber,Mr.Matthew Barber,NGH Heritage - Fyshwick,NGH Heritage - F						**Permits**	
36-4-0211	Wellington Solar IF 16	GDA	55	683706	6399911	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Mr.Matthew Barber,Mr.Matthew Barber,NGH Heritage - Fyshwick,NGH Heritage - F						**Permits**	
36-4-0212	Wellington Solar AS 11	GDA	55	684000	6400229	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Mr.Matthew Barber,Mr.Matthew Barber,NGH Heritage - Fyshwick,NGH Heritage - F						**Permits**	
36-4-0152	Wellington Solar Farm AS9	GDA	55	684000	6399939	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Mr.Matthew Barber,NGH Heritage - Fyshwick						**Permits**	
36-4-0140	Wellington Solar Farm IF10	GDA	55	684774	6400441	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Mr.Matthew Barber,Mr.Matthew Barber,Mr.Matthew Barber,NGH Heritage - Fyshw						**Permits**	

Report generated by AHIMS Web Service on 02/08/2021 for Taylar Reid for the following area at Lat, Long From : -32.58, 148.91 - Lat, Long To : -32.51, 149.03. Number of Aboriginal sites and Aboriginal objects found is 55

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AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : J210534 Wellington

Client Service ID : 609448

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
36-4-0202	Wellington Nth SF Additional Area IF2	GDA	55	685619	6399925	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Mr.Matthew Barber,Mr.Matthew Barber,NGH Heritage - Fyshwick,NGH Heritage - F					**Permits**		
36-4-0090	W/STP-ST-1	AGD	55	680750	6397060	Open site	Valid	Modified Tree (Carved or Scarred) : 1		97979,102779
	Contact	**Recorders**	Jim Kelton					**Permits**		
36-4-0155	Wellington Solar Farm IF2	GDA	55	682805	6400601	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Mr.Matthew Barber,NGH Heritage - Fyshwick					**Permits**		
36-4-0213	Wellington Solar AS 12	GDA	55	683560	6400035	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Mr.Matthew Barber,Mr.Matthew Barber,NGH Heritage - Fyshwick,NGH Heritage - F					**Permits**		
36-4-0151	Wellington Solar Farm AS8	GDA	55	684389	6400526	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Mr.Matthew Barber,NGH Heritage - Fyshwick					**Permits**		
36-4-0201	Wellington Nth SF Additional Area IF3	GDA	55	684736	6399572	Open site	Not a Site	Artefact : -		
	Contact	**Recorders**	Mr.Matthew Barber,Mr.Matthew Barber,NGH Heritage - Fyshwick,NGH Heritage - F					**Permits**		
36-4-0074	TC 3	AGD	55	685100	6393400	Open site	Valid	Modified Tree (Carved or Scarred) : -	Scarred Tree	102779
	Contact	**Recorders**	Doctor.Jillian Comber,D Ingray					**Permits**		
36-4-0219	Wellington Solar Unexpected Find Reburial 1	GDA	55	683602	6401097	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Mr.Matthew Barber,NGH Heritage - Fyshwick					**Permits**		

**** Site Status**

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

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

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

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

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Phillipa O'Brien-Pounde

From: David Gordon [redacted]
Sent: Wednesday, 4 August 2021 11:06 AM
To: Georgia Burnett
Cc: Taylar Reid
Subject: RE: Wellington BESS - Restricted sites

CAUTION: This email originated outside of the Organisation.

Hi Georgia,

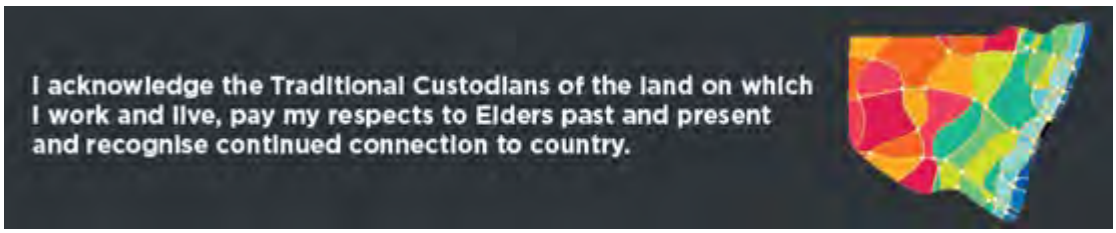
I can confirm that Restricted Aboriginal Sites:

- 36-5-0222
- 36-4-0081

WILL NOT BE IMPACTED BY ANY WORKS IN LOT 32 AND DP 622471.

Thanks
David Gordon | Senior Heritage Information Officer (Aboriginal)
Heritage NSW, Community Engagement, Department of Premier and Cabinet
Level 6, 10 Valentine Avenue, Parramatta | Locked Bag 5020, Parramatta, 2124

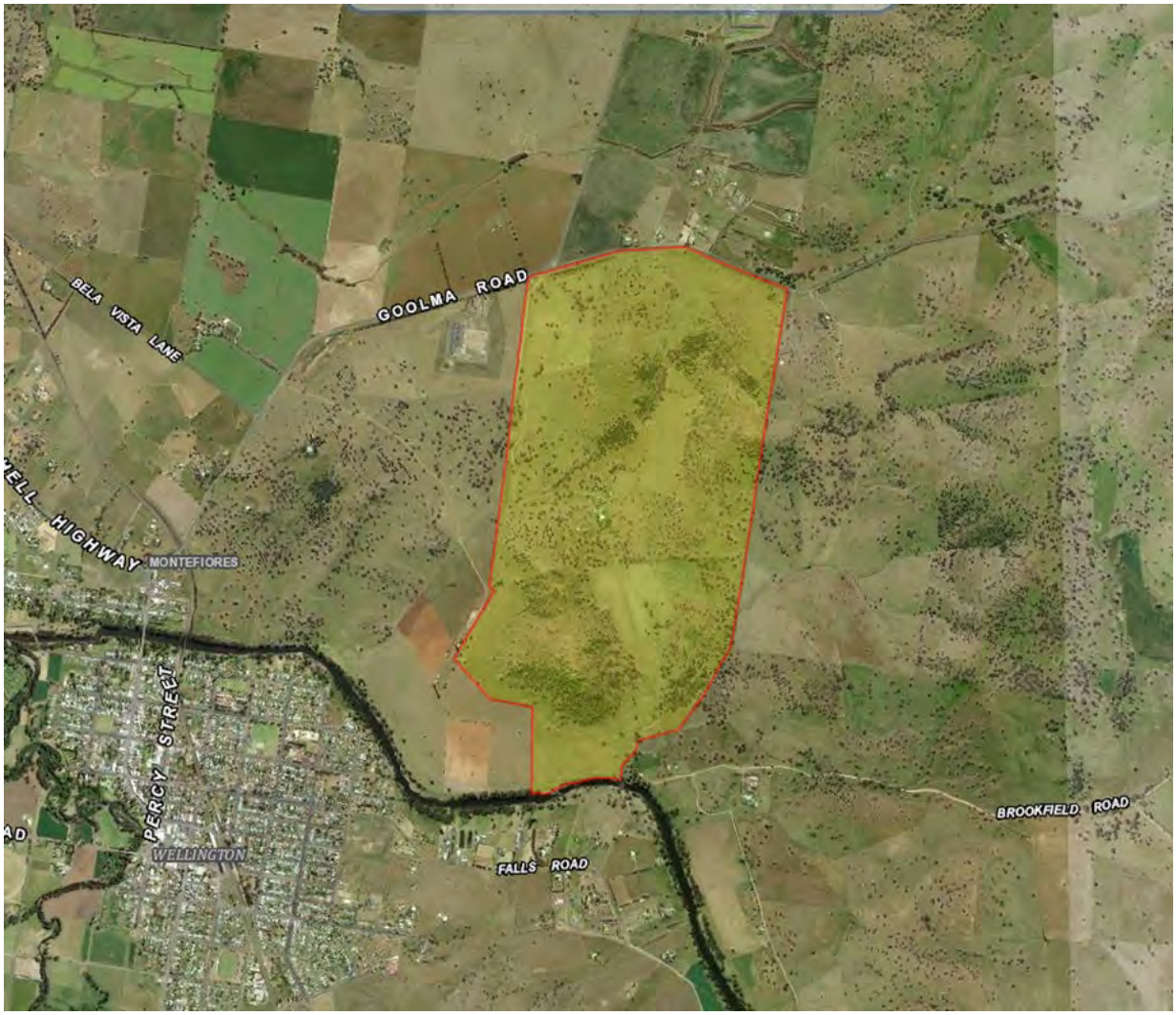
[redacted]



From: Georgia Burnett <gburnett@emmconsulting.com.au>
Sent: Monday, 2 August 2021 4:24 PM
To: CCHD Information Systems & Assessment Mailbox[redacted]
Cc: Taylar Reid <treid@emmconsulting.com.au>
Subject: Wellington BESS - Restricted sites

Hi,

A colleague undertook the attached search this morning, which came up with two restricted sites listed; I have attached a screenshot of our study area below (Lot 32 DP 622471). Could you please confirm the restricted sites do not fall in our study area please?



Thank you!
Georgia

Georgia Burnett
Archaeologist
Bushfire, Ecology, Heritage and Spatial Solutions

EMM
creating opportunities

T 02 9493 9500
M 0459 295 806
Connect with us

SYDNEY | Ground floor, 20 Chandos Street, St Leonards NSW 2065

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AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : J210534 Wellington

Client Service ID : 609448

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
36-4-0138	Wellington Solar Farm IF8	GDA	55	684144	6400422	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Mr.Matthew Barber,Mr.Matthew Barber,Mr.Matthew Barber,NGH Heritage - Fyshw					**Permits**		
36-4-0118	Power Station CMT 2	GDA	55	684191	6398780	Open site	Valid	Potential Archaeological Deposit (PAD) : 1		
	Contact Gallanggabang Aboriginal Corp	**Recorders**	Doctor.Colin Pardoe					**Permits**		
36-4-0149	Wellington Solar Farm AS6	GDA	55	684331	6400473	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Mr.Matthew Barber,Mr.Matthew Barber,Mr.Matthew Barber,NGH Heritage - Fyshw					**Permits**		
36-1-0126	Curra Creek;	AGD	55	680110	6394170	Open site	Valid	Modified Tree (Carved or Scarred) : -	Scarred Tree	1333
	Contact	**Recorders**	Warren Bluff					**Permits**		
36-4-0177	Wellington Nth IF2	GDA	55	682214	6400473	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Mr.Matthew Barber,NGH Heritage - Fyshwick					**Permits**		
36-4-0154	Wellington Solar Farm ST1	GDA	55	683726	6401020	Open site	Valid	Modified Tree (Carved or Scarred) : -		
	Contact	**Recorders**	Mr.Matthew Barber,NGH Heritage - Fyshwick					**Permits**		
36-4-0222	Mount Nanima IF1	GDA	55	684119	6397585	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Eco Logical Australia Pty Ltd - Sydney - Individual users,Mr.Declan Coman					**Permits**		
36-4-0136	Wellington Solar Farm IF12	GDA	55	684501	6400245	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Mr.Matthew Barber,Mr.Matthew Barber,Mr.Matthew Barber,NGH Heritage - Fyshw					**Permits**		
36-4-0135	Wellington Solar Farm IF13	GDA	55	684554	6400033	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Mr.Matthew Barber,Mr.Matthew Barber,Mr.Matthew Barber,NGH Heritage - Fyshw					**Permits**		
36-4-0203	Wellington Nth SF Additional Area IF1	GDA	55	684764	6399721	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Mr.Matthew Barber,Mr.Matthew Barber,NGH Heritage - Fyshwick,NGH Heritage - F					**Permits**		
36-4-0006	Macquarie River 2	AGD	55	682701	6396153	Open site	Valid	Modified Tree (Carved or Scarred) : 28, Ceremonial Ring (Stone or Earth) : -	Bora/Ceremonial,Carved Tree	65,102779
	Contact	**Recorders**	David Bell,R Etheridge					**Permits**		
36-4-0158	Wellington Solar Farm IF4	GDA	55	683642	6400795	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Mr.Matthew Barber,Mr.Matthew Barber,Mr.Matthew Barber,NGH Heritage - Fyshw					**Permits**		
36-4-0210	Wellington Solar IF 17	GDA	55	683991	6400184	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Mr.Matthew Barber,Mr.Matthew Barber,NGH Heritage - Fyshwick,NGH Heritage - F					**Permits**		
36-4-0216	WE-IF-001 (Goolma Road)	GDA	55	684088	6399493	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Kayandel Archaeological Services,Ms.Natalie Stiles					**Permits**		

Report generated by AHIMS Web Service on 02/08/2021 for Taylar Reid for the following area at Lat, Long From : -32.58, 148.91 - Lat, Long To : -32.51, 149.03. Number of Aboriginal sites and Aboriginal objects found is 55

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SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
36-4-0117	Power Station CMT 1	GDA	55	684165	6398827	Open site	Valid	Potential Archaeological Deposit (PAD) : 1		
	Contact Gallanggabang Aboriginal Corp	**Recorders**	Doctor.Colin Pardoe						**Permits**	
36-4-0079	Wellington	AGD	55	682000	6397000	Open site	Valid	Burial : -	Burial/s	2641,102779
	Contact	**Recorders**	Ms.Adrienne Howe-Piening						**Permits**	
36-4-0173	Wellington Nth AFT1	GDA	55	682573	6401365	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Mr.Matthew Barber,NGH Heritage - Fyshwick						**Permits**	
36-4-0142	Wellington Solar Farm IF1	GDA	55	682740	6401252	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Mr.Matthew Barber,NGH Heritage - Fyshwick						**Permits**	
36-4-0147	Wellington Solar Farm AS3	GDA	55	683565	6400929	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Mr.Matthew Barber,Mr.Matthew Barber,NGH Heritage - Fyshwick,NGH Heritage - F						**Permits**	
36-4-0153	Wellington Solar Farm AS10	GDA	55	683546	6399549	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Mr.Matthew Barber,Mr.Matthew Barber,Mr.Matthew Barber,NGH Heritage - Fyshw						**Permits**	
36-4-0146	Wellington Solar Farm AS4	GDA	55	683623	6400932	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Mr.Matthew Barber,Mr.Matthew Barber,Mr.Matthew Barber,NGH Heritage - Fyshw						**Permits**	
36-4-0159	Wellington Solar Farm IF5	GDA	55	683677	6400457	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Mr.Matthew Barber,Mr.Matthew Barber,Mr.Matthew Barber,NGH Heritage - Fyshw						**Permits**	
36-4-0148	Wellington Solar Farm AS5	GDA	55	684194	6400396	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Mr.Matthew Barber,Mr.Matthew Barber,Mr.Matthew Barber,NGH Heritage - Fyshw						**Permits**	
36-4-0221	Mount Namina AS1	GDA	55	684262	6396829	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Eco Logical Australia Pty Ltd - Sydney - Individual users,Mr.Declan Coman						**Permits**	
36-4-0220	UWFTMR_IF1	GDA	55	685171	6399910	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Austral Archaeology - Wollongong,Mr.Ricardo Servin						**Permits**	
36-4-0025	Wellington;WF 1;Baalbek;	AGD	55	679980	6399950	Open site	Valid	Artefact : -	Open Camp Site	975,102779
	Contact	**Recorders**	Mr.Allan Lance						**Permits**	
36-4-0176	Wellington Nth IF1	GDA	55	682306	6400402	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Mr.Matthew Barber,NGH Heritage - Fyshwick						**Permits**	
36-4-0156	Wellington Solar Farm IF3	GDA	55	683394	6400771	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Mr.Matthew Barber,Mr.Matthew Barber,Mr.Matthew Barber,NGH Heritage - Fyshw						**Permits**	
36-4-0150	Wellington Solar Farm AS7	GDA	55	684252	6400282	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Mr.Matthew Barber,Mr.Matthew Barber,Mr.Matthew Barber,NGH Heritage - Fyshw						**Permits**	
36-4-0137	Wellington Solar Farm IF11	GDA	55	684439	6400296	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Mr.Matthew Barber,NGH Heritage - Fyshwick						**Permits**	
36-4-0128	Blacks Camp Wellington	GDA	55	685616	6395743	Open site	Valid	Artefact : -		103476
	Contact	**Recorders**	Phil Purcell						**Permits**	

Report generated by AHIMS Web Service on 02/08/2021 for Taylar Reid for the following area at Lat, Long From : -32.58, 148.91 - Lat, Long To : -32.51, 149.03. Number of Aboriginal sites and Aboriginal objects found is 55

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AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : J210534 Wellington

Client Service ID : 609448

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
36-4-0108	Yarrahapani 1	AGD	55	686370	6398880	Open site	Valid	Artefact : 2		101380,102779
	Contact	**Recorders**	Mr.Neville Baker,Doctor.Jodie Benton,Gallanggabang Aboriginal Corporation						**Permits**	
36-5-0222	Restriction applied. Please contact ahims@environment.nsw.gov.au.					Open site	Valid			
	Contact	**Recorders**	Austral Archaeology - Wollongong,Mr.Ricardo Servin						**Permits**	
36-4-0092	PR-ST-01 same as 36-1-0126	AGD	55	680110	6394170	Open site	Valid	Modified Tree (Carved or Scarred) : -		
	Contact	**Recorders**	L Nolan						**Permits**	
36-4-0141	Wellington Solar Farm IF7	GDA	55	683989	6400395	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Mr.Matthew Barber,Mr.Matthew Barber,Mr.Matthew Barber,NGH Heritage - Fyshw						**Permits**	
36-4-0218	Wellington Solar IF 18	GDA	55	684051	6400406	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Mr.Matthew Barber,NGH Heritage - Fyshwick						**Permits**	
36-4-0139	Wellington Solar Farm IF9	GDA	55	684628	6400510	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Mr.Matthew Barber,NGH Heritage - Fyshwick						**Permits**	
36-4-0077	Nanima Rd 1;	AGD	55	684490	6394100	Open site	Valid	Modified Tree (Carved or Scarred) : 1	Scarred Tree	3701,102779
	Contact	**Recorders**	Mr.Matthew Barber						**Permits**	
36-4-0097	STP-1F-1	AGD	55	680780	6396810	Open site	Valid	Artefact : -		102779
	Contact	**Recorders**	Central West Archaeological and Heritage Services Pty Ltd						**Permits**	
36-4-0081	Restriction applied. Please contact ahims@environment.nsw.gov.au.					Open site	Valid			102211,102779
	Contact	**Recorders**	Lloyd Nolan,Mr.Bradley Bliss,Wellington Valley Wiradjuri Aboriginal Corporation						**Permits**	
36-4-0171	Wellington Nth IF6	GDA	55	682629	6401320	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Mr.Matthew Barber,NGH Heritage - Fyshwick						**Permits**	
36-4-0143	Wellington Solar Farm IF15	GDA	55	683583	6399737	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Mr.Matthew Barber,Mr.Matthew Barber,Mr.Matthew Barber,NGH Heritage - Fyshw						**Permits**	
36-4-0214	Wellington Solar AS 13	GDA	55	683672	6399764	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Mr.Matthew Barber,Mr.Matthew Barber,NGH Heritage - Fyshwick,NGH Heritage - F						**Permits**	
36-4-0211	Wellington Solar IF 16	GDA	55	683706	6399911	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Mr.Matthew Barber,Mr.Matthew Barber,NGH Heritage - Fyshwick,NGH Heritage - F						**Permits**	
36-4-0212	Wellington Solar AS 11	GDA	55	684000	6400229	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Mr.Matthew Barber,Mr.Matthew Barber,NGH Heritage - Fyshwick,NGH Heritage - F						**Permits**	
36-4-0152	Wellington Solar Farm AS9	GDA	55	684000	6399939	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Mr.Matthew Barber,NGH Heritage - Fyshwick						**Permits**	
36-4-0140	Wellington Solar Farm IF10	GDA	55	684774	6400441	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Mr.Matthew Barber,Mr.Matthew Barber,Mr.Matthew Barber,NGH Heritage - Fyshw						**Permits**	

Report generated by AHIMS Web Service on 02/08/2021 for Taylar Reid for the following area at Lat, Long From : -32.58, 148.91 - Lat, Long To : -32.51, 149.03. Number of Aboriginal sites and Aboriginal objects found is 55

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AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : J210534 Wellington

Client Service ID : 609448

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
36-4-0202	Wellington Nth SF Additional Area IF2	GDA	55	685619	6399925	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Mr.Matthew Barber,Mr.Matthew Barber,NGH Heritage - Fyshwick,NGH Heritage - F					**Permits**		
36-4-0090	W/STP-ST-1	AGD	55	680750	6397060	Open site	Valid	Modified Tree (Carved or Scarred) : 1		97979,102779
	Contact	**Recorders**	Jim Kelton					**Permits**		
36-4-0155	Wellington Solar Farm IF2	GDA	55	682805	6400601	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Mr.Matthew Barber,NGH Heritage - Fyshwick					**Permits**		
36-4-0213	Wellington Solar AS 12	GDA	55	683560	6400035	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Mr.Matthew Barber,Mr.Matthew Barber,NGH Heritage - Fyshwick,NGH Heritage - F					**Permits**		
36-4-0151	Wellington Solar Farm AS8	GDA	55	684389	6400526	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Mr.Matthew Barber,NGH Heritage - Fyshwick					**Permits**		
36-4-0201	Wellington Nth SF Additional Area IF3	GDA	55	684736	6399572	Open site	Not a Site	Artefact : -		
	Contact	**Recorders**	Mr.Matthew Barber,Mr.Matthew Barber,NGH Heritage - Fyshwick,NGH Heritage - F					**Permits**		
36-4-0074	TC 3	AGD	55	685100	6393400	Open site	Valid	Modified Tree (Carved or Scarred) : -	Scarred Tree	102779
	Contact	**Recorders**	Doctor.Jillian Comber,D Ingray					**Permits**		
36-4-0219	Wellington Solar Unexpected Find Reburial 1	GDA	55	683602	6401097	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Mr.Matthew Barber,NGH Heritage - Fyshwick					**Permits**		

**** Site Status**

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

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

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

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

Report generated by AHIMS Web Service on 02/08/2021 for Taylar Reid for the following area at Lat, Long From : -32.58, 148.91 - Lat, Long To : -32.51, 149.03. Number of Aboriginal sites and Aboriginal objects found is 55

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AHIMS Web Services (AWS)
Search Result

Your Ref/PO Number : E250078 - Wellington BESS

Client Service ID : 1055710

EMM Consulting - Individual users

Ground Level, Suite 01 20 Chandos Street
St Leonards New South Wales 2065

Attention: Amber Morgan

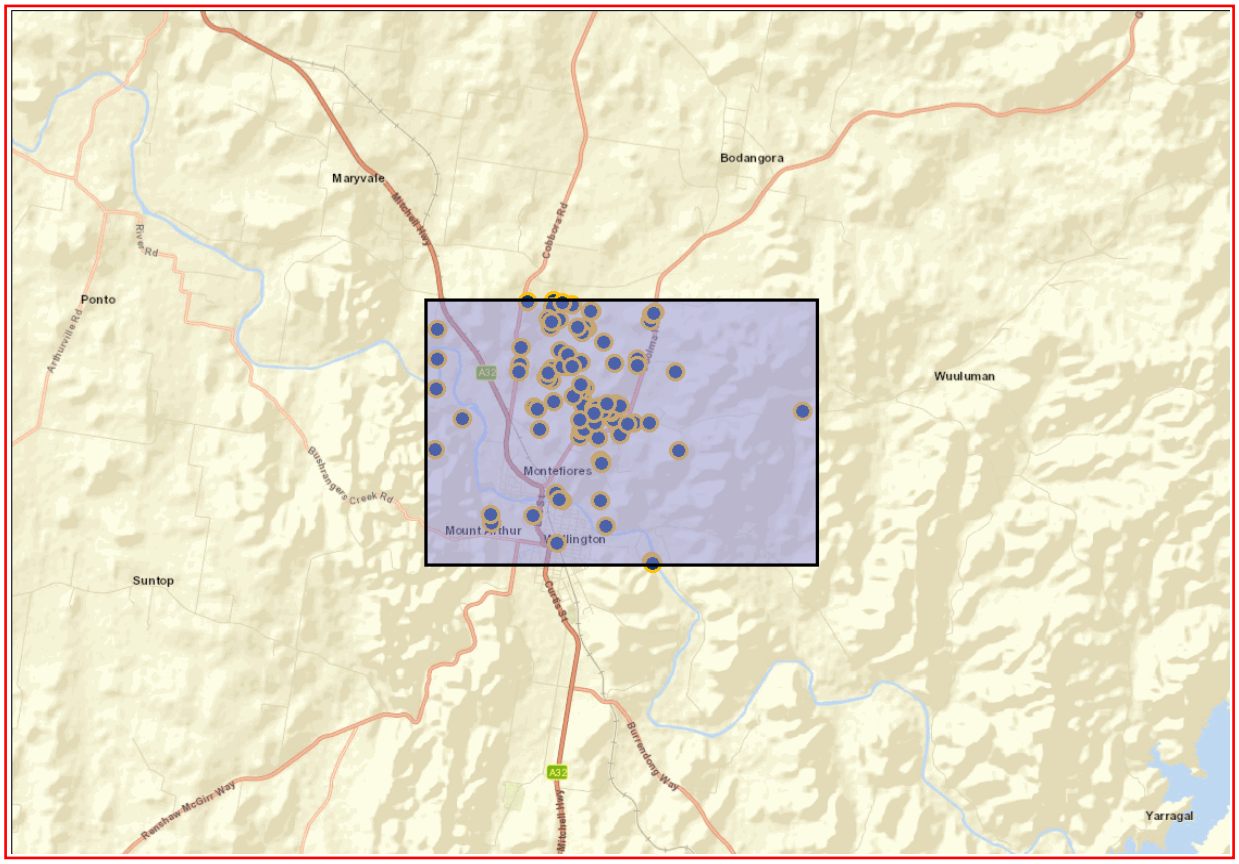
Email: amorgan@emmconsulting.com.au

Date: 16 October 2025

Dear Sir or Madam:

AHIMS Web Service search for the following area at Lat, Long From : -32.5612, 148.9056 - Lat, Long To : -32.4889, 149.0292, conducted by Amber Morgan on 16 October 2025.

The context area of your search is shown in the map below. Please note that the map does not accurately display the exact boundaries of the search as defined in the paragraph above. The map is to be used for general reference purposes only.



A search of Heritage NSW AHIMS Web Services (Aboriginal Heritage Information Management System) has shown that:

99	Aboriginal sites are recorded in or near the above location.
0	Aboriginal places have been declared in or near the above location. *

If your search shows Aboriginal sites or places what should you do?

- You must do an extensive search if AHIMS has shown that there are Aboriginal sites or places recorded in the search area.
- If you are checking AHIMS as a part of your due diligence, refer to the next steps of the Due Diligence Code of practice.
- You can get further information about Aboriginal places by looking at the gazettal notice that declared it. Aboriginal places gazetted after 2001 are available on the NSW Government Gazette (https://www.legislation.nsw.gov.au/gazette) website. Gazettal notices published prior to 2001 can be obtained from Heritage NSW upon request

Important information about your AHIMS search

- The information derived from the AHIMS search is only to be used for the purpose for which it was requested. It is not be made available to the public.
- AHIMS records information about Aboriginal sites that have been provided to Heritage NSW and Aboriginal places that have been declared by the Minister;
- Information recorded on AHIMS may vary in its accuracy and may not be up to date. Location details are recorded as grid references and it is important to note that there may be errors or omissions in these recordings,
- Some parts of New South Wales have not been investigated in detail and there may be fewer records of Aboriginal sites in those areas. These areas may contain Aboriginal sites which are not recorded on AHIMS.
- Aboriginal objects are protected under the National Parks and Wildlife Act 1974 even if they are not recorded as a site on AHIMS.
- This search can form part of your due diligence and remains valid for 12 months.

Level 6, 10 Valentine Ave, Parramatta 2150
Locked Bag 5020 Parramatta NSW 2124
Tel: (02) 9585 6345

ABN 34 945 244 274
Email: ahims@environment.nsw.gov.au
Web: www.heritage.nsw.gov.au

AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : E250078 - Wellington BESS

Client Service ID : 1055710

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
36-1-0723	Wellington Nth IF24	GDA	55	682838	6403645	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Mr.Matthew Barber,NGH Heritage - Fyshwick					**Permits**		
36-1-0728	Wellington Nth IF19	GDA	55	683854	6402807	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Mr.Matthew Barber,NGH Heritage - Fyshwick					**Permits**		
36-4-0174	Wellington Nth AFT2	GDA	55	682736	6401593	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Mr.Matthew Barber,NGH Heritage - Fyshwick					**Permits**		
36-4-0177	Wellington Nth IF2	GDA	55	682214	6400473	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Mr.Matthew Barber,NGH Heritage - Fyshwick					**Permits**		
36-4-0180	Wellington Nth IF5	GDA	55	681868	6402277	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Mr.Matthew Barber,NGH Heritage - Fyshwick					**Permits**		
36-4-0138	Wellington Solar Farm IF8	GDA	55	684144	6400422	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Mr.Matthew Barber,Mr.Matthew Barber,Mr.Matthew Barber,NGH Heritage - Fyshw					**Permits**		
36-4-0145	Wellington Solar Farm AS2	GDA	55	683283	6401650	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Mr.Matthew Barber,Mr.Matthew Barber,Mr.Matthew Barber,NGH Heritage - Fyshw					**Permits**		
36-4-0149	Wellington Solar Farm AS6	GDA	55	684331	6400473	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Mr.Matthew Barber,Mr.Matthew Barber,Mr.Matthew Barber,NGH Heritage - Fyshw					**Permits**		
36-4-0154	Wellington Solar Farm ST1	GDA	55	683726	6401020	Open site	Valid	Modified Tree (Carved or Scarred) : -		
	Contact	**Recorders**	Mr.Matthew Barber,NGH Heritage - Fyshwick					**Permits**		
36-4-0118	Power Station CMT 2	GDA	55	684191	6398780	Open site	Valid	Potential Archaeological Deposit (PAD) : 1		
	Contact Gallanggabang Aboriginal Corp	**Recorders**	Doctor.Colin Pardoe					**Permits**		
36-4-0170	Wellington Nth IF8	GDA	55	683009	6402137	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Mr.Matthew Barber,NGH Heritage - Fyshwick					**Permits**		
36-1-0737	Wellington Nth AFT6	GDA	55	683729	6402849	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Mr.Matthew Barber,NGH Heritage - Fyshwick					**Permits**		
36-4-0179	Wellington Nth IF4	GDA	55	681829	6401741	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Mr.Matthew Barber,NGH Heritage - Fyshwick					**Permits**		
36-1-0041	Maryvale Creek 2	AGD	55	679288	6402684	Open site	Valid	Modified Tree (Carved or Scarred) : -	Scarred Tree	102211
	Contact	**Recorders**	Michael Pearson					**Permits**		
36-4-0006	Macquarie River 2	AGD	55	682701	6396153	Open site	Valid	Modified Tree (Carved or Scarred) : 28, Ceremonial Ring (Stone or Earth) : -	Bora/Ceremonial,Carved Tree	65,102779
	Contact	**Recorders**	David Bell,R Etheridge					**Permits**		

Report generated by AHIMS Web Service on 16/10/2025 for Amber Morgan for the following area at Lat, Long From : -32.5612, 148.9056 - Lat, Long To : -32.4889, 149.0292. Number of Aboriginal sites and Aboriginal objects found is 99

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SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
36-4-0017	Maryvale Creek;Micketymulga Hill;	AGD	55	679254	6401770	Open site	Valid	Artefact : -	Open Camp Site	102211
	Contact	**Recorders**	Mr.Warwick Pearson					**Permits**		
36-4-0203	Wellington Nth SF Additional Area IF1	GDA	55	684764	6399721	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Mr.Matthew Barber,Mr.Matthew Barber,NGH Heritage - Fyshwick,NGH Heritage - F					**Permits**		
36-4-0135	Wellington Solar Farm IF13	GDA	55	684554	6400033	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Mr.Matthew Barber,Mr.Matthew Barber,Mr.Matthew Barber,NGH Heritage - Fyshw					**Permits**		
36-4-0136	Wellington Solar Farm IF12	GDA	55	684501	6400245	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Mr.Matthew Barber,Mr.Matthew Barber,Mr.Matthew Barber,NGH Heritage - Fyshw					**Permits**		
36-4-0158	Wellington Solar Farm IF4	GDA	55	683642	6400795	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Mr.Matthew Barber,Mr.Matthew Barber,Mr.Matthew Barber,NGH Heritage - Fyshw					**Permits**		
36-4-0222	Mount Nanima AS2	GDA	55	684119	6397585	Open site	Partially Destroyed	Artefact : -, Potential Archaeological Deposit (PAD) : -		
	Contact	**Recorders**	OzArk Environmental and Heritage Management - Dubbo,OzArk Environmental an					**Permits**	4879	
36-4-0079	Wellington	AGD	55	682000	6397000	Open site	Valid	Burial : -	Burial/s	2641,102779
	Contact	**Recorders**	Ms.Adrienne Howe-Piening					**Permits**		
36-1-0729	Wellington Nth IF18	GDA	55	683689	6402672	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Mr.Matthew Barber,NGH Heritage - Fyshwick					**Permits**		
36-4-0173	Wellington Nth AFT1	GDA	55	682573	6401365	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Mr.Matthew Barber,NGH Heritage - Fyshwick					**Permits**		
36-4-0175	Wellington Nth AFT3	GDA	55	685303	6401839	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Mr.Matthew Barber,NGH Heritage - Fyshwick					**Permits**		
36-4-0216	WE-IF-001 (Goolma Road)	GDA	55	684088	6399493	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Kayandel Archaeological Services,Ms.Natalie Stiles					**Permits**		
36-4-0142	Wellington Solar Farm IF1	GDA	55	682740	6401252	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Mr.Matthew Barber,NGH Heritage - Fyshwick					**Permits**		
36-4-0146	Wellington Solar Farm AS4	GDA	55	683623	6400932	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Mr.Matthew Barber,Mr.Matthew Barber,Mr.Matthew Barber,NGH Heritage - Fyshw					**Permits**		
36-4-0147	Wellington Solar Farm AS3	GDA	55	683565	6400929	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Mr.Matthew Barber,Mr.Matthew Barber,NGH Heritage - Fyshwick,NGH Heritage - F					**Permits**		
36-4-0153	Wellington Solar Farm AS10	GDA	55	683546	6399549	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Mr.Matthew Barber,Mr.Matthew Barber,Mr.Matthew Barber,NGH Heritage - Fyshw					**Permits**		
36-4-0159	Wellington Solar Farm IF5	GDA	55	683677	6400457	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Mr.Matthew Barber,Mr.Matthew Barber,Mr.Matthew Barber,NGH Heritage - Fyshw					**Permits**		
36-4-0210	Wellington Solar IF 17	GDA	55	683991	6400184	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Mr.Matthew Barber,Mr.Matthew Barber,NGH Heritage - Fyshwick,NGH Heritage - F					**Permits**		
36-4-0227	Mount Nanima IF1	GDA	55	682827	6397844	Open site	Destroyed	Artefact : -		

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SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
	Contact	**Recorders**	OzArk Environmental and Heritage Management - Dubbo,OzArk Environmental an					**Permits**	4879	
36-4-0117	Power Station CMT 1	GDA	55	684165	6398827	Open site	Valid	Potential Archaeological Deposit (PAD) : 1		
	Contact Gallanggabang Aboriginal Corp	**Recorders**	Doctor.Colin Pardoe					**Permits**		
36-1-0721	Wellington Nth IF26	GDA	55	682812	6403457	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Mr.Matthew Barber,NGH Heritage - Fyshwick					**Permits**		
36-1-0725	Wellington Nth IF22	GDA	55	683986	6403324	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Mr.Matthew Barber,NGH Heritage - Fyshwick					**Permits**		
36-4-0176	Wellington Nth IF1	GDA	55	682306	6400402	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Mr.Matthew Barber,NGH Heritage - Fyshwick					**Permits**		
36-4-0021	Baalveck;	AGD	55	679151	6399030	Open site	Valid	Stone Arrangement : -, Aboriginal Ceremony and Dreaming : -	Stone Arrangement	102779
	Contact	**Recorders**	G.W. Althofer,Michael Pearson					**Permits**		
36-4-0148	Wellington Solar Farm AS5	GDA	55	684194	6400396	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Mr.Matthew Barber,Mr.Matthew Barber,Mr.Matthew Barber,NGH Heritage - Fyshw					**Permits**		
36-4-0156	Wellington Solar Farm IF3	GDA	55	683394	6400771	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Mr.Matthew Barber,Mr.Matthew Barber,Mr.Matthew Barber,NGH Heritage - Fyshw					**Permits**		
36-4-0025	Wellington;WF 1;Baalbek;	AGD	55	679980	6399950	Open site	Valid	Artefact : -	Open Camp Site	975,102779
	Contact	**Recorders**	Mr.Allan Lance					**Permits**		
36-4-0221	Mount Nanima AS1	GDA	55	684262	6396829	Open site	Partially Destroyed	Artefact : -, Potential Archaeological Deposit (PAD) : -		
	Contact	**Recorders**	OzArk Environmental and Heritage Management - Dubbo,OzArk Environmental an					**Permits**	4879	
36-4-0220	UWFTMR_IF1	GDA	55	685171	6399910	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Austral Archaeology,Mr.Ricardo Servin					**Permits**		
36-1-0733	Wellington Nth IF13	GDA	55	685707	6402979	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Mr.Matthew Barber,NGH Heritage - Fyshwick					**Permits**		
36-1-0734	Wellington Nth IF14	GDA	55	685837	6403256	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Mr.Matthew Barber,NGH Heritage - Fyshwick					**Permits**		
36-4-0108	Yarrahapani 1	AGD	55	686370	6398880	Open site	Valid	Artefact : 2		101380,102779
	Contact	**Recorders**	Mr.Neville Baker,Doctor.Jodie Benton,Gallanggabang Aboriginal Corporation					**Permits**		
36-4-0137	Wellington Solar Farm IF11	GDA	55	684439	6400296	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Mr.Matthew Barber,NGH Heritage - Fyshwick					**Permits**		
36-4-0150	Wellington Solar Farm AS7	GDA	55	684252	6400282	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Mr.Matthew Barber,Mr.Matthew Barber,Mr.Matthew Barber,NGH Heritage - Fyshw					**Permits**		

Report generated by AHIMS Web Service on 16/10/2025 for Amber Morgan for the following area at Lat, Long From : -32.5612, 148.9056 - Lat, Long To : -32.4889, 149.0292. Number of Aboriginal sites and Aboriginal objects found is 99

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SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
36-4-0128	Blacks Camp Wellington	GDA	55	685616	6395743	Open site	Valid	Artefact : -		103476,104686
	Contact	**Recorders**	Phil Purcell						**Permits**	
36-5-0222	Restriction applied. Please contact ahims@environment.nsw.gov.au.					Open site	Valid			
	Contact	**Recorders**	Mr.Bradley Bliss,Wellington Valley Wiradjuri Aboriginal Corporation,Austral Archa						**Permits**	
36-1-0719	Wellington Nth IF28	GDA	55	682756	6402864	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Mr.Matthew Barber,NGH Heritage - Fyshwick						**Permits**	
36-4-0168	Wellington Nth IF10	GDA	55	684306	6402371	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Mr.Matthew Barber,NGH Heritage - Fyshwick						**Permits**	
36-4-0171	Wellington Nth IF6	GDA	55	682629	6401320	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Mr.Matthew Barber,NGH Heritage - Fyshwick						**Permits**	
36-4-0172	Wellington Nth IF7	GDA	55	682644	6401492	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Mr.Matthew Barber,NGH Heritage - Fyshwick						**Permits**	
36-1-0739	Wellington Nth AFT8	GDA	55	682672	6403117	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Mr.Matthew Barber,NGH Heritage - Fyshwick						**Permits**	
36-4-0178	Wellington Nth IF3	GDA	55	681796	6401528	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Mr.Matthew Barber,NGH Heritage - Fyshwick						**Permits**	
36-4-0081	Restriction applied. Please contact ahims@environment.nsw.gov.au.					Open site	Valid			102211,102779
	Contact	**Recorders**	Lloyd Nolan,Mr.Bradley Bliss,Wellington Valley Wiradjuri Aboriginal Corporation						**Permits**	
36-1-0042	Maryvale Creek 1	AGD	55	679288	6402684	Open site	Valid	Modified Tree (Carved or Scarred) : 1	Scarred Tree	102211
	Contact	**Recorders**	Michael Pearson						**Permits**	
36-4-0097	STP-1F-1	AGD	55	680780	6396810	Open site	Valid	Artefact : -		102779
	Contact	**Recorders**	Central West Archaeological and Heritage Services Pty Ltd						**Permits**	
36-4-0099	Isolated Artefact CC-IF-01	AGD	55	686314	6401244	Open site	Valid	Artefact : 1		102779
	Contact T Russell	**Recorders**	Lloyd Nolan						**Permits**	
36-4-0139	Wellington Solar Farm IF9	GDA	55	684628	6400510	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Mr.Matthew Barber,NGH Heritage - Fyshwick						**Permits**	
36-4-0141	Wellington Solar Farm IF7	GDA	55	683989	6400395	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Mr.Matthew Barber,Mr.Matthew Barber,Mr.Matthew Barber,NGH Heritage - Fyshw						**Permits**	
36-4-0143	Wellington Solar Farm IF15	GDA	55	683583	6399737	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Mr.Matthew Barber,Mr.Matthew Barber,Mr.Matthew Barber,NGH Heritage - Fyshw						**Permits**	
36-4-0218	Wellington Solar IF 18	GDA	55	684051	6400406	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Mr.Matthew Barber,NGH Heritage - Fyshwick						**Permits**	
36-4-0211	Wellington Solar IF 16	GDA	55	683706	6399911	Open site	Destroyed	Artefact : -		

Report generated by AHIMS Web Service on 16/10/2025 for Amber Morgan for the following area at Lat, Long From : -32.5612, 148.9056 - Lat, Long To : -32.4889, 149.0292. Number of Aboriginal sites and Aboriginal objects found is 99

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AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : E250078 - Wellington BESS

Client Service ID : 1055710

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
	Contact	**Recorders**	Mr.Matthew Barber,Mr.Matthew Barber,NGH Heritage - Fyshwick,NGH Heritage - F					**Permits**		
36-4-0214	Wellington Solar AS 13	GDA	55	683672	6399764	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Mr.Matthew Barber,Mr.Matthew Barber,NGH Heritage - Fyshwick,NGH Heritage - F					**Permits**		
36-4-0224	Restriction applied. Please contact ahims@environment.nsw.gov.au.					Open site	Valid			
	Contact	**Recorders**	Mr.Bradley Bliss,Wellington Valley Wiradjuri Aboriginal Corporation					**Permits**		
36-4-0225	Restriction applied. Please contact ahims@environment.nsw.gov.au.					Open site	Valid			
	Contact	**Recorders**	Mr.Bradley Bliss,Wellington Valley Wiradjuri Aboriginal Corporation					**Permits**		
36-4-0236	Blacks Camp Repatriation	GDA	55	685650	6395693	Open site	Valid	Burial : 3		
	Contact wellington local aboriginal lan	**Recorders**	Mr.John Duggan					**Permits**		
36-4-0090	W/STP-ST-1	AGD	55	680750	6397060	Open site	Valid	Modified Tree (Carved or Scarred) : 1		97979,102779
	Contact	**Recorders**	Jim Kelton					**Permits**		
36-1-0726	Wellington Nth IF21	GDA	55	683943	6403314	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Mr.Matthew Barber,NGH Heritage - Fyshwick					**Permits**		
36-4-0166	Wellington Nth IF12	GDA	55	685308	6401654	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Mr.Matthew Barber,NGH Heritage - Fyshwick					**Permits**		
36-4-0167	Wellington Nth IF11	GDA	55	684638	6401740	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Mr.Matthew Barber,NGH Heritage - Fyshwick					**Permits**		
36-1-0735	Wellington Nth AFT4	GDA	55	685752	6403199	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Mr.Matthew Barber,NGH Heritage - Fyshwick					**Permits**		
36-1-0736	Wellington Nth AFT5	GDA	55	685825	6403203	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Mr.Matthew Barber,NGH Heritage - Fyshwick					**Permits**		
36-1-0738	Wellington Nth AFT7	GDA	55	683012	6403083	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Mr.Matthew Barber,NGH Heritage - Fyshwick					**Permits**		
36-1-0740	Wellington Nth AFT9	GDA	55	683403	6403528	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Mr.Matthew Barber,NGH Heritage - Fyshwick					**Permits**		
36-4-0014	Baalveck;Micketymulga Hill;	AGD	55	679219	6400857	Open site	Valid	Artefact : -, Ceremonial Ring (Stone or Earth) : -	Bora/Ceremonial,Open Camp Site	102211
	Contact	**Recorders**	Michael Pearson					**Permits**		
36-1-0744	Restriction applied. Please contact ahims@environment.nsw.gov.au.					Open site	Valid			
	Contact	**Recorders**	Mr.Bradley Bliss,Wellington Valley Wiradjuri Aboriginal Corporation					**Permits**		
36-4-0202	Wellington Nth SF Additional Area IF2	GDA	55	685619	6399925	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Mr.Matthew Barber,Mr.Matthew Barber,NGH Heritage - Fyshwick,NGH Heritage - F					**Permits**		
36-4-0140	Wellington Solar Farm IF10	GDA	55	684774	6400441	Open site	Destroyed	Artefact : -		

Report generated by AHIMS Web Service on 16/10/2025 for Amber Morgan for the following area at Lat, Long From : -32.5612, 148.9056 - Lat, Long To : -32.4889, 149.0292. Number of Aboriginal sites and Aboriginal objects found is 99

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SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
	Contact	Recorders	Mr.Matthew Barber,Mr.Matthew Barber,Mr.Matthew Barber,NGH Heritage - Fyshw					Permits		
36-4-0144	Wellington Solar Farm AS1	GDA	55	683060	6401648	Open site	Destroyed	Artefact : -		
	Contact	Recorders	Mr.Matthew Barber,Mr.Matthew Barber,Mr.Matthew Barber,NGH Heritage - Fyshw					Permits		
36-4-0152	Wellington Solar Farm AS9	GDA	55	684000	6399939	Open site	Valid	Artefact : -		
	Contact	Recorders	Mr.Matthew Barber,NGH Heritage - Fyshwick					Permits		
36-4-0155	Wellington Solar Farm IF2	GDA	55	682805	6400601	Open site	Valid	Artefact : -		
	Contact	Recorders	Mr.Matthew Barber,NGH Heritage - Fyshwick					Permits		
36-4-0212	Wellington Solar AS 11	GDA	55	684000	6400229	Open site	Destroyed	Artefact : -		
	Contact	Recorders	Mr.Matthew Barber,Mr.Matthew Barber,NGH Heritage - Fyshwick,NGH Heritage - F					Permits		
36-4-0213	Wellington Solar AS 12	GDA	55	683560	6400035	Open site	Destroyed	Artefact : -		
	Contact	Recorders	Mr.Matthew Barber,Mr.Matthew Barber,NGH Heritage - Fyshwick,NGH Heritage - F					Permits		
36-4-0223	Restriction applied. Please contact ahims@environment.nsw.gov.au.					Open site	Valid			
	Contact	Recorders	Wellington Valley Wiradjuri Aboriginal Corporation,Day Bukh Architects					Permits		
36-1-0720	Wellington Nth IF27	GDA	55	682775	6403027	Open site	Valid	Artefact : -		
	Contact	Recorders	Mr.Matthew Barber,NGH Heritage - Fyshwick					Permits		
36-1-0722	Wellington Nth IF25	GDA	55	683109	6403576	Open site	Valid	Artefact : -		
	Contact	Recorders	Mr.Matthew Barber,NGH Heritage - Fyshwick					Permits		
36-1-0727	Wellington Nth IF20	GDA	55	683548	6402828	Open site	Valid	Artefact : -		
	Contact	Recorders	Mr.Matthew Barber,NGH Heritage - Fyshwick					Permits		
36-4-0169	Wellington Nth IF9	GDA	55	683241	6402013	Open site	Valid	Artefact : -		
	Contact	Recorders	Mr.Matthew Barber,NGH Heritage - Fyshwick					Permits		
36-4-0215	Wellington Solar Farm Artefact Burial Site	GDA	55	683612	6401795	Open site	Valid	Artefact : -		
	Contact	Recorders	Mr.Matthew Barber,NGH Heritage - Fyshwick					Permits		
36-4-0201	Wellington Nth SF Additional Area IF3	GDA	55	684736	6399572	Open site	Not a Site	Artefact : -		
	Contact	Recorders	Mr.Matthew Barber,Mr.Matthew Barber,NGH Heritage - Fyshwick,NGH Heritage - F					Permits		
36-4-0151	Wellington Solar Farm AS8	GDA	55	684389	6400526	Open site	Valid	Artefact : -		
	Contact	Recorders	Mr.Matthew Barber,NGH Heritage - Fyshwick					Permits		
36-4-0157	Wellington Solar Farm IF6	GDA	55	683359	6401664	Open site	Destroyed	Artefact : -		
	Contact	Recorders	Mr.Matthew Barber,Mr.Matthew Barber,Mr.Matthew Barber,NGH Heritage - Fyshw					Permits		
36-4-0219	Wellington Solar Unexpected Find Reburial 1	GDA	55	683602	6401097	Open site	Valid	Artefact : -		
	Contact	Recorders	Mr.Matthew Barber,NGH Heritage - Fyshwick					Permits		
36-4-0228	Wellington Bore Pipeline Artefact Reburial	GDA	55	683010	6397632	Closed site	Valid	Artefact : -		
	Contact	Recorders	OzArk Environmental and Heritage Management - Dubbo,Mr.Harrison Rochford					Permits		
36-4-0226	Mount Nanima AS3	GDA	55	682899	6397643	Open site	Partially Destroyed	Artefact : -, Potential Archaeological Deposit (PAD) : -		

Report generated by AHIMS Web Service on 16/10/2025 for Amber Morgan for the following area at Lat, Long From : -32.5612, 148.9056 - Lat, Long To : -32.4889, 149.0292. Number of Aboriginal sites and Aboriginal objects found is 99

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AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : E250078 - Wellington BESS

Client Service ID : 1055710

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
	Contact	**Recorders**	OzArk Environmental and Heritage Management - Dubbo,OzArk Environmental an					**Permits**	4879	
36-4-0237	12 Mile / Goolma Road	GDA	55	684977	6399894	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Ms.Sophia Grubnic					**Permits**		

**** Site Status**

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

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

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

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

Report generated by AHIMS Web Service on 16/10/2025 for Amber Morgan for the following area at Lat, Long From : -32.5612, 148.9056 - Lat, Long To : -32.4889, 149.0292. Number of Aboriginal sites and Aboriginal objects found is 99

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Outlook

Request #62267 has been updated: Restricted AHIMS Sites

From David Gordon (Heritage NSW) [redacted]
Date Fri 17/10/2025 10:12 AM
To Amber Morgan <amorgan@emmconsulting.com.au>

Your request has been updated. To add additional comments, reply to this email.
Hey Amber,

I can confirm that restricted Aboriginal sites:

- 36-5-0222
- 36-4-0081
- 36-4-0224
- 36-4-0225
- 36-1-0744
- 36-4-0223

WILL NOT BE IMPACTED BY ANY WORKS CONDUCTED IN YOUR STUDY AREA.

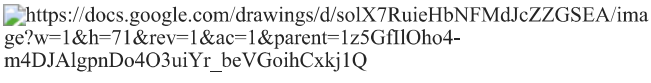
David Gordon
David Gordon
Heritage NSW
Department of Climate Change, Energy, the Environment and Water (DCCEEW)
[redacted]
https://www.environment.nsw.gov.au/topics/heritage
[redacted]
Monday to Friday, 09:00am - 05:00pm

Website | Facebook | Instagram | LinkedIn

We acknowledge the traditional custodians of the lands and seas upon which we work, walk and live and pay respects to Elders past present and emerging.
Please consider the environment before printing this email.

This email is a service from Heritage NSW. Delivered by Zendesk

On 16 October 2025 at 9:34:06 pm UTC, Amber Morgan amorgan@emmconsulting.com.au wrote:

> Hi David,
>
> We recently undertook an AHIMS search and it has come back with six restricted sites:
> - 36-5-0222
> - 36-4-0081
> - 36-4-0224
> - 36-4-0225
> - 36-1-0744
> - 36-4-0223
>
> Could you please let us know if these sites are in or within 50 m of our study area?
>
> Please see the snip below showing the study area including the green and grey polygons. Our study area located jut north-east of Wellington, NSW.
>
> Please let me know if you need anything further.
>
> Kind regards,
> **Amber Morgan**
> Archaeologist - Aboriginal Heritage
>
> 
> 
>
>
> T 02 9493 9500
> M 0417 876 189
> LI Connect on LinkedIn
> emmconsulting.cc

SYDNEY | Gamaraigal Country, Level 10, The Forum, 201 Pacific Highway, St Leonards NSW 2065

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[22N194-E9DX4]

Outlook

Restricted AHIMS Sites

From Amber Morgan <amorgan@emmconsulting.com.au>
Date Fri 17/10/2025 8:33 AM
To David Gordon [redacted];[redacted]
Cc Megan Sheppard Brennand <msheppardbrennand@emmconsulting.com.au>

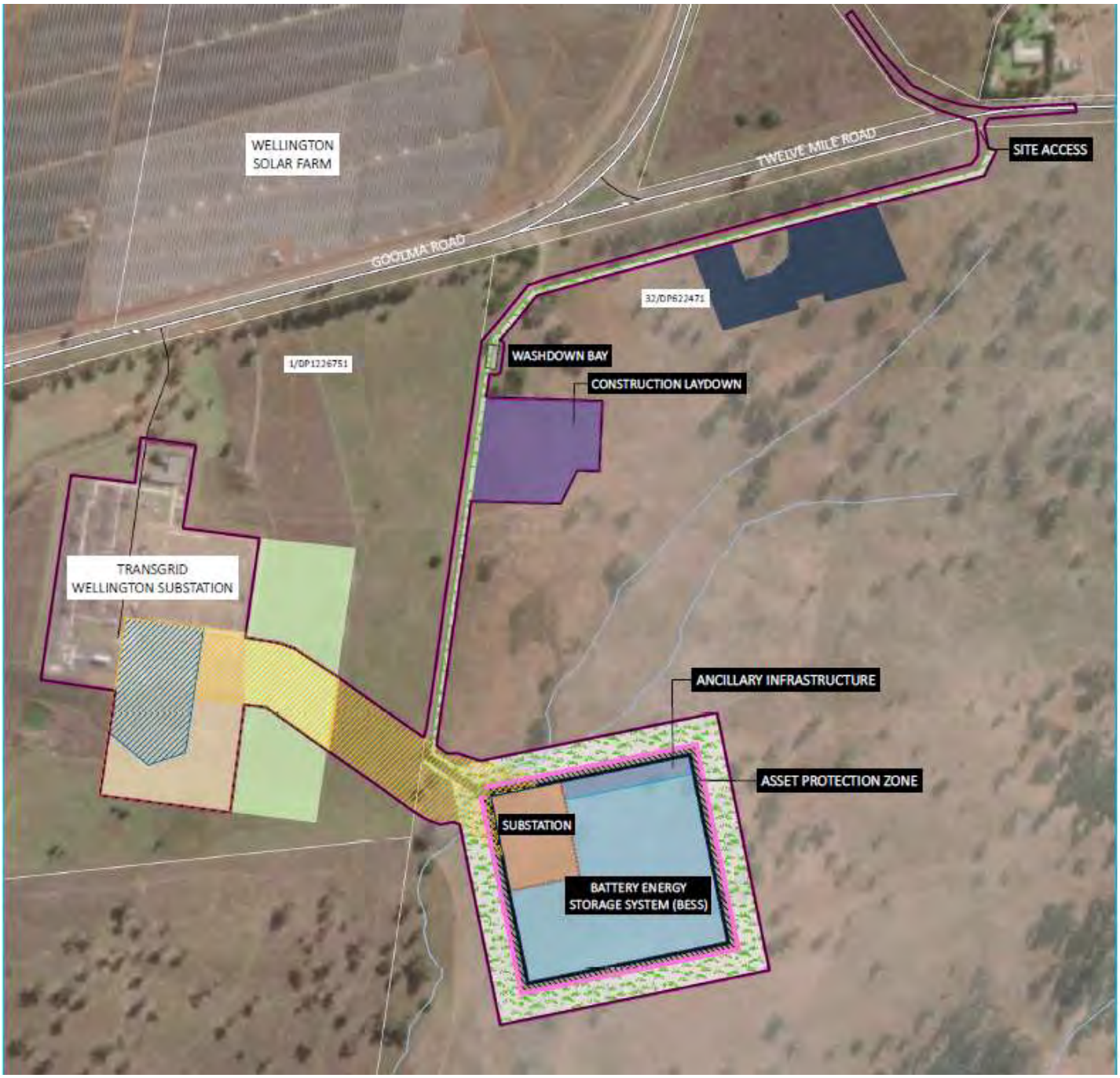
Hi David,

We recently undertook an AHIMS search and it has come back with six restricted sites:

- 36-5-0222
- 36-4-0081
- 36-4-0224
- 36-4-0225
- 36-1-0744
- 36-4-0223

Could you please let us know if these sites are in or within 50 m of our study area?

Please see the snip below showing the study area including the green and grey polygons. Our study area located jut north-east of Wellington, NSW.



Please let me know if you need anything further.

Kind regards,

Amber Morgan
Archaeologist - Aboriginal Heritage

EMM creating opportunities
15 YEAR ANNIVERSARY

T 02 9493 9500
M 0417 876 189
LI Connect on LinkedIn
emmconsulting.com.au

SYDNEY | Gamaraigal Country, Level 10, The Forum, 201 Pacific Highway, St Leonards NSW 2065

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B.2 Site cards

Aboriginal Site Recording Form

AHIMS Registrar
PO Box 1967, Hurstville 2220 NSW

AHIMS site ID: 36-4-0201 **Date recorded:** 22-01-2019

Site Location Information

Site name: Wellington Nth SF Additional Area IF3

Easting: 684736 **Northing:** 6399572 **Coordinates must be in GDA (MGA)**

Horizontal Accuracy (m): 5

Zone: 55 **Location method:** Phone GPS

Recorder Information

(The person responsible for the completion and submission of this form)

Title	Surname	First name
Mr.	Barber	Matthew

Organisation: 75

Address: [redacted]

Phone: [redacted] **E-mail:** [redacted]

Site Context Information

Land Form Pattern: Undulating Plain **Land Use:** Farming Intensive

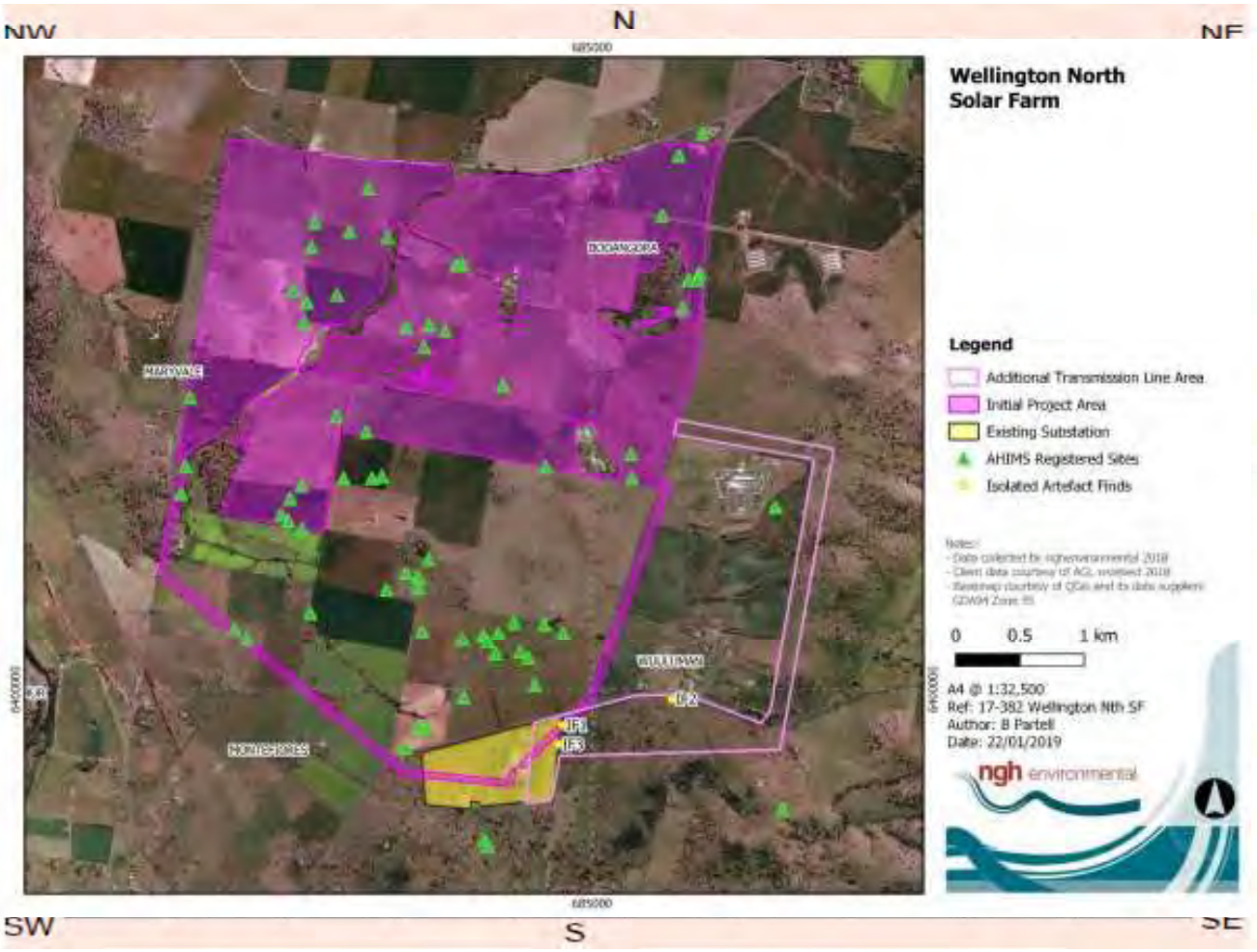
Land Form Unit: Flat **Vegetation:** Cleared

Distance to Water (m): 244 **Primary Report:**

How to get to the site: Follow Goolma Road heading north-east from Wellington town for 3.16km.
The Isolated Find is 212m south of the road.

Other site information:

Site location map



Site contents information

open/closed site: Open

Site condition: Disturbed

Features:

		Number of features	Length of feature(s) extent (m)	Width of feature (s) extent (m)	Scarred Trees: Scar Depth (cm)	Scarred Trees: Regrowth (cm)	Scarred Trees: Scar shape	Scarred Trees: Tree Species
1.	Artefact	1	0.1	0.1				

Description:

One isolated find.

Features:

		Number of features	Length of feature(s) extent (m)	Width of feature (s) extent (m)	Scarred Trees: Scar Depth (cm)	Scarred Trees: Regrowth (cm)	Scarred Trees: Scar shape	Scarred Trees: Tree Species
2.								

Description:

Features:	Number of features	Length of feature(s) extent (m)	Width of feature (s) extent (m)	Scarred Trees: Scar Depth (cm)	Regrowth (cm)	Scar shape	Tree Species
3.							

Description:

Features:	Number of features	Length of feature(s) extent (m)	Width of feature (s) extent (m)	Scarred Trees: Scar Depth (cm)	Regrowth (cm)	Scar shape	Tree Species
4.							

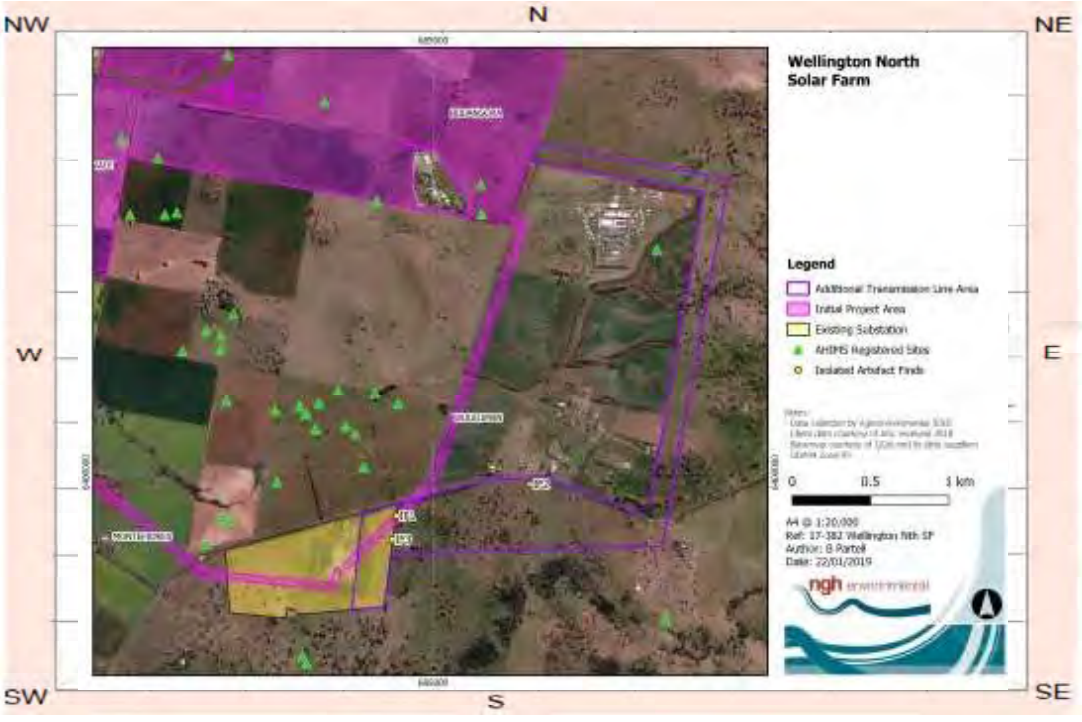
Description:

Features:	Number of features	Length of feature(s) extent (m)	Width of feature (s) extent (m)	Scarred Trees: Scar Depth (cm)	Regrowth (cm)	Scar shape	Tree Species
5.							

Description:

Other Site Info:

Site plan



Site photographs



Description: Study area location

Description:

Description:

Description:

Site restrictions

Do you want to Restrict this site?:

Restriction type: Gender General Location

Why is this site restricted?:

Further information contact

Title **Surname** **First name**

Organisation:

Address:

Phone: **E-mail:**

Aboriginal Site Recording Form

AHIMS Registrar
PO Box 1967, Hurstville 2220 NSW

AHIMS site ID: 36-4-0201 **Date recorded:** 29-01-2019

Site Location Information

Site name: Wellington North SF IF31

Easting: 684736 **Northing:** 6399572 **Coordinates must be in GDA (MGA)**

Horizontal Accuracy (m): 5

Zone: 55 **Location method:** Phone GPS

Recorder Information

(The person responsible for the completion and submission of this form)

Title	Surname	First name
Mr.	Barber	Matthew

Organisation: 75

Address: [redacted]

Phone: [redacted] **E-mail:** [redacted]

Site Context Information

Land Form Pattern: **Land Use:**

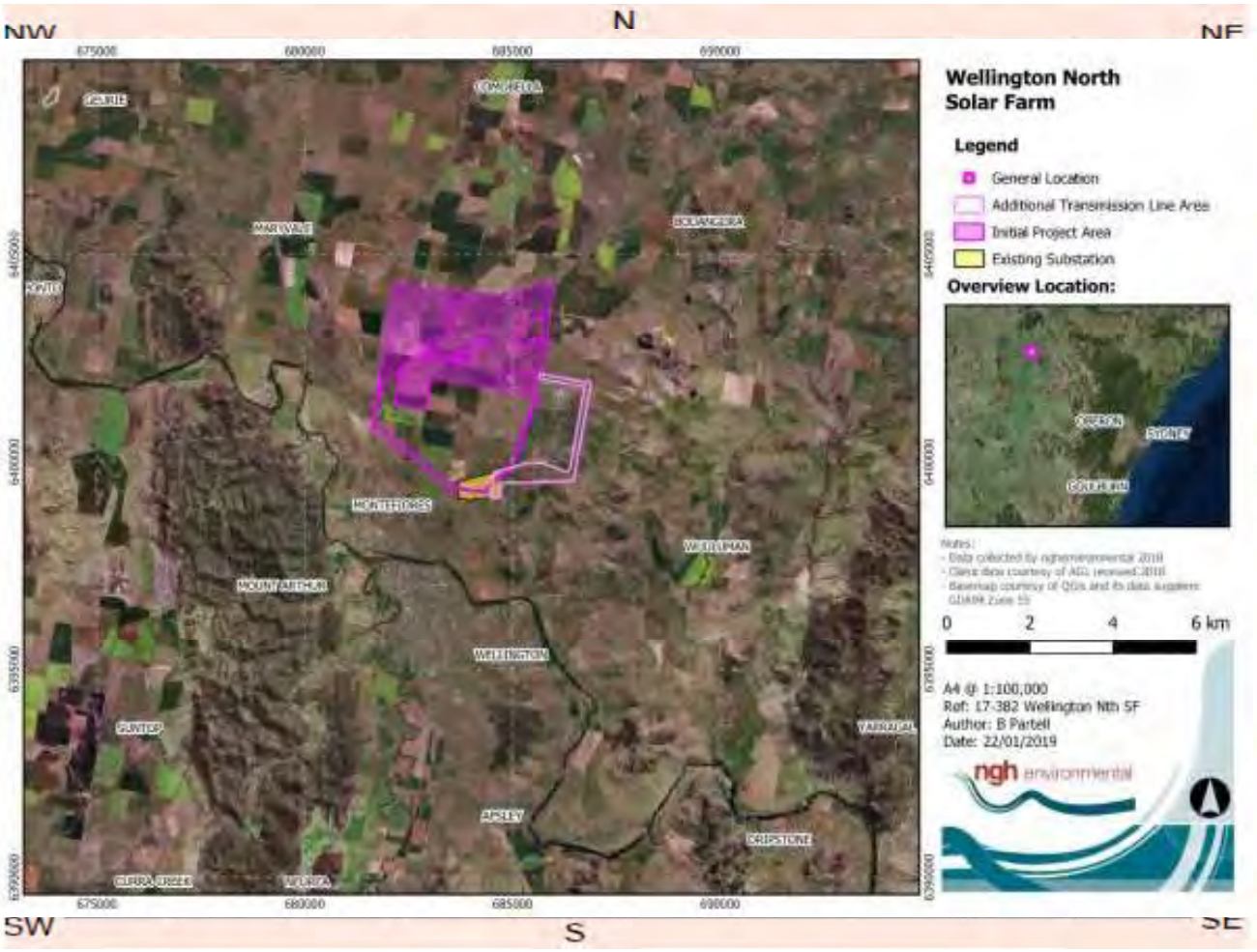
Land Form Unit: **Vegetation:**

Distance to Water (m): **Primary Report:**

How to get to the site:

Other site information: The flake was located just to the side of a row of planted exotic shrubs. The area contained red-brown soil and was located on an area of approximately 40% visibility.

Site location map



Site contents information

open/closed site: Open

Site condition: Exposed Archaeo

Features:

		Number of features	Length of feature(s) extent (m)	Width of feature (s) extent (m)	Scarred Trees: Scar Depth (cm)	Scarred Trees: Regrowth (cm)	Scarred Trees: Scar shape	Scarred Trees: Tree Species
1.	Artefact	1	0.1	0.1				

Description:

The site consists of a red-brown tuff flake measuring 68mm in length, 45mm in width, and 17mm thickness.

Features:

		Number of features	Length of feature(s) extent (m)	Width of feature (s) extent (m)	Scarred Trees: Scar Depth (cm)	Scarred Trees: Regrowth (cm)	Scarred Trees: Scar shape	Scarred Trees: Tree Species
2.								

Description:

Features:	Number of features	Length of feature(s) extent (m)	Width of feature (s) extent (m)	Scarred Trees: Scar Depth (cm)	Regrowth (cm)	Scar shape	Tree Species
3.							

Description:

Features:	Number of features	Length of feature(s) extent (m)	Width of feature (s) extent (m)	Scarred Trees: Scar Depth (cm)	Regrowth (cm)	Scar shape	Tree Species
4.							

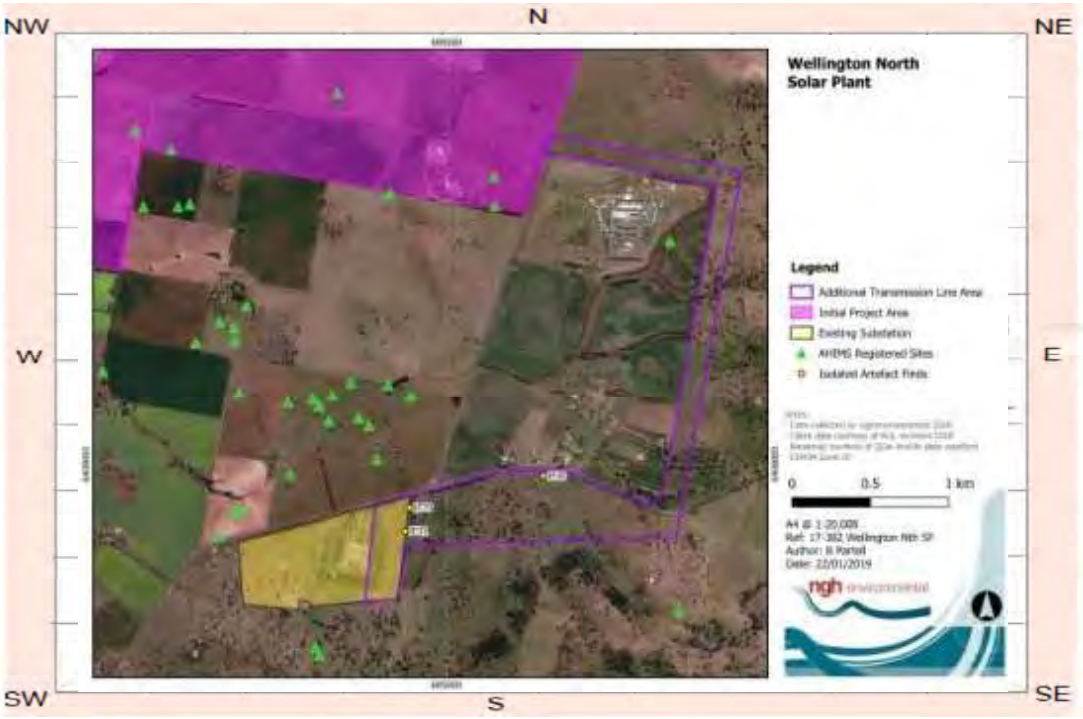
Description:

Features:	Number of features	Length of feature(s) extent (m)	Width of feature (s) extent (m)	Scarred Trees: Scar Depth (cm)	Regrowth (cm)	Scar shape	Tree Species
5.							

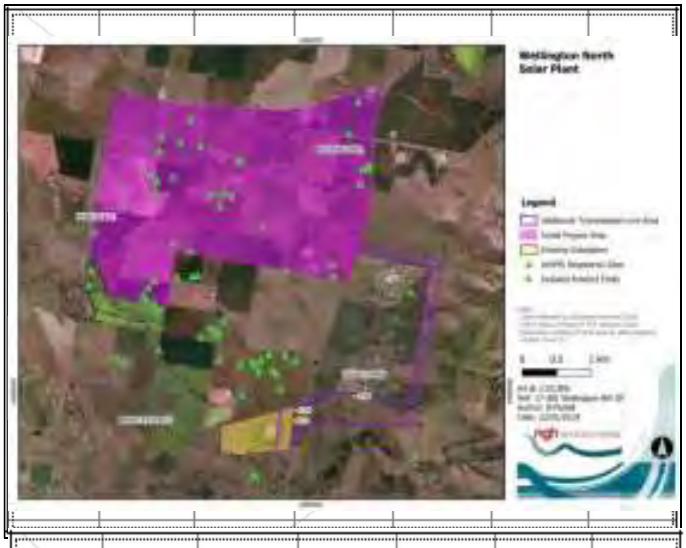
Description:

Other Site Info: The flake was located just to the side of a row of planted exotic shrubs. The area contained red-brown soil and was located on an area of approximately 40% visibility.

Site plan



Site photographs



Description: site location

Description:

Description:

Description:

Site restrictions

Do you want to Restrict this site?:

Restriction type: Gender General Location

Why is this site restricted?:

Further information contact

Title **Surname** **First name**

Organisation:

Address:

Phone: **E-mail:**

Aboriginal Site Recording Form

AHIMS Registrar
PO Box 1967, Hurstville 2220 NSW

AHIMS site ID: 36-4-0203 **Date recorded:** 22-01-2019

Site Location Information

Site name: Wellington Nth SF Additional Area IF1

Easting: 684764 **Northing:** 6399721 **Coordinates must be in GDA (MGA)**

Horizontal Accuracy (m): 5

Zone: 55 **Location method:** Non-Differential GPS

Recorder Information

(The person responsible for the completion and submission of this form)

Title	Surname	First name
Mr.	Barber	Matthew

Organisation: 75

Address: [redacted]

Phone: [redacted] **E-mail:** [redacted]

Site Context Information

Land Form Pattern: Undulating Plain **Land Use:** Farming Intensive

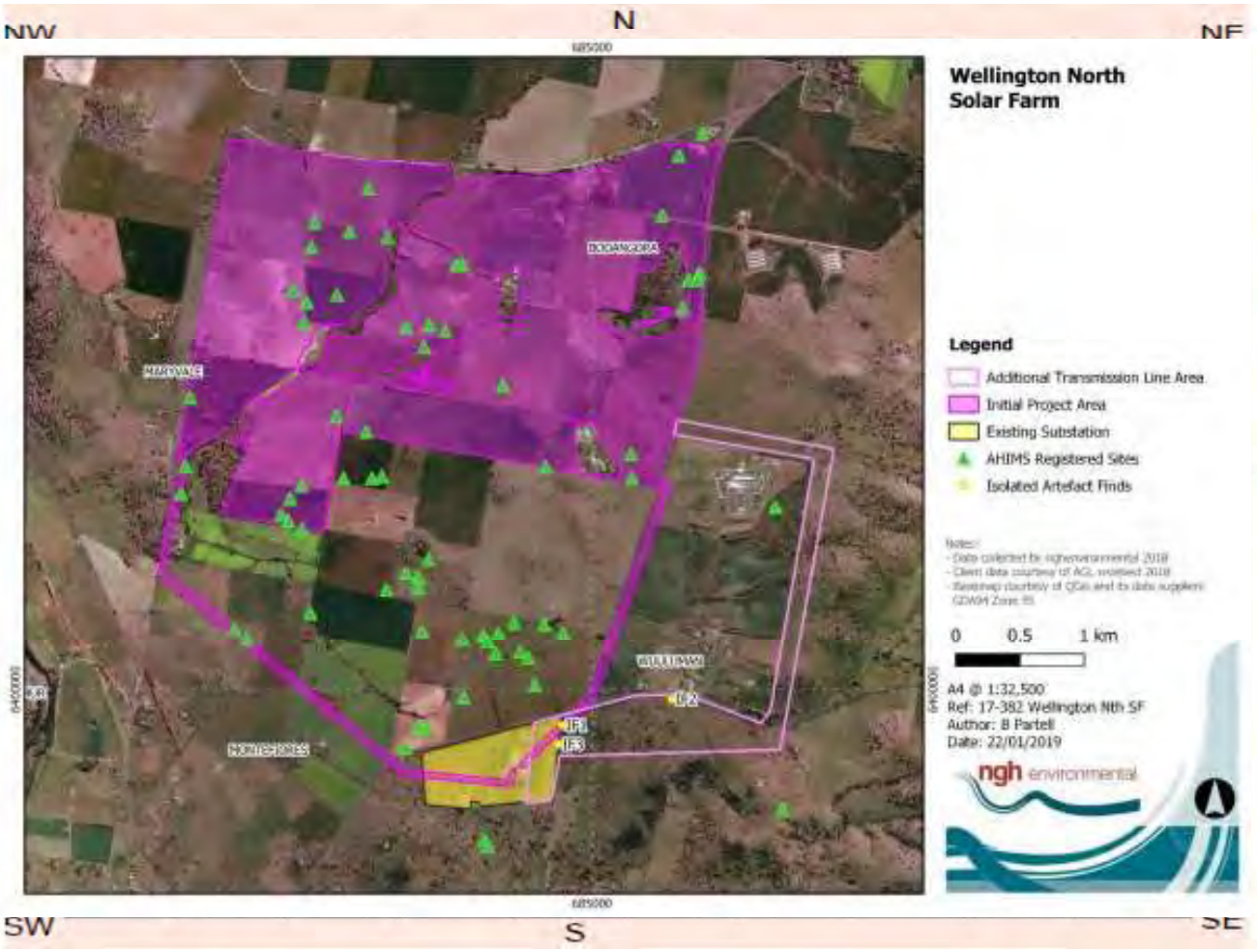
Land Form Unit: Flat **Vegetation:** Cleared

Distance to Water (m): 306 **Primary Report:**

How to get to the site: Follow Goolma Road heading north-east from Wellington town for 3.16km.
The Isolated Find is 72m south of the road.

Other site information:

Site location map



Site contents information

open/closed site: Open

Site condition: Disturbed

Features:

	Number of features	Length of feature(s) extent (m)	Width of feature (s) extent (m)	Scarred Trees: Scar Depth (cm)	Scarred Trees: Regrowth (cm)	Scarred Trees: Scar shape	Scarred Trees: Tree Species
1. Artefact	1	0.1	0.1				

Description:

One isolated yellow-orange chert rotated core, measures 106mm(L)x94mm(W)x81mm(T).

Features:

	Number of features	Length of feature(s) extent (m)	Width of feature (s) extent (m)	Scarred Trees: Scar Depth (cm)	Scarred Trees: Regrowth (cm)	Scarred Trees: Scar shape	Scarred Trees: Tree Species
2.							

Description:

Features:	Number of features	Length of feature(s) extent (m)	Width of feature (s) extent (m)	Scarred Trees: Scar Depth (cm)	Regrowth (cm)	Scar shape	Tree Species
3.							

Description:

Features:	Number of features	Length of feature(s) extent (m)	Width of feature (s) extent (m)	Scarred Trees: Scar Depth (cm)	Regrowth (cm)	Scar shape	Tree Species
4.							

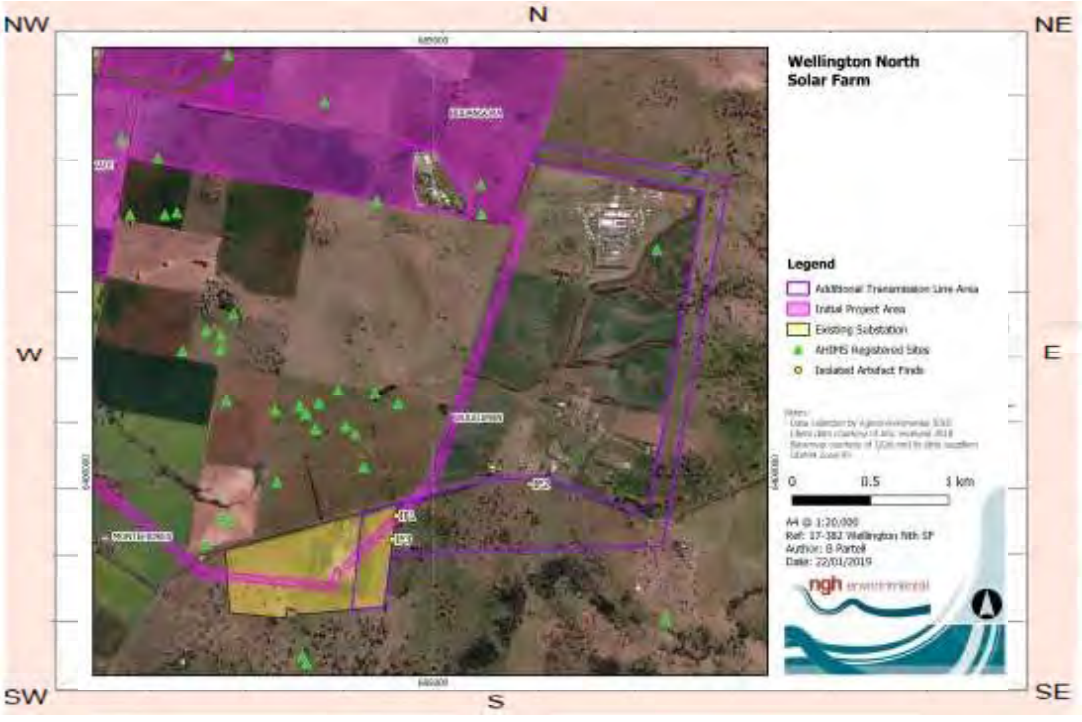
Description:

Features:	Number of features	Length of feature(s) extent (m)	Width of feature (s) extent (m)	Scarred Trees: Scar Depth (cm)	Regrowth (cm)	Scar shape	Tree Species
5.							

Description:

Other Site Info:

Site plan



Site photographs



Description: Study area location

Description:

Description:

Description:

Site restrictions

Do you want to Restrict this site?:

Restriction type: Gender General Location

Why is this site restricted?:

Further information contact

Title **Surname** **First name**

Organisation:

Address:

Phone: **E-mail:**

Aboriginal Site Recording Form

AHIMS Registrar
PO Box 1967, Hurstville 2220 NSW

AHIMS site ID: 36-4-0203 **Date recorded:** 29-01-2019

Site Location Information

Site name: Wellington Nth IF 29

Easting: 684764 **Northing:** 6399721 **Coordinates must be in GDA (MGA)**

Horizontal Accuracy (m): 5

Zone: 55 **Location method:** Non-Differential GPS

Recorder Information

(The person responsible for the completion and submission of this form)

Title	Surname	First name
Mr.	Barber	Matthew

Organisation: 75

Address: [redacted]

Phone: [redacted] **E-mail:** [redacted]

Site Context Information

Land Form Pattern: **Land Use:**

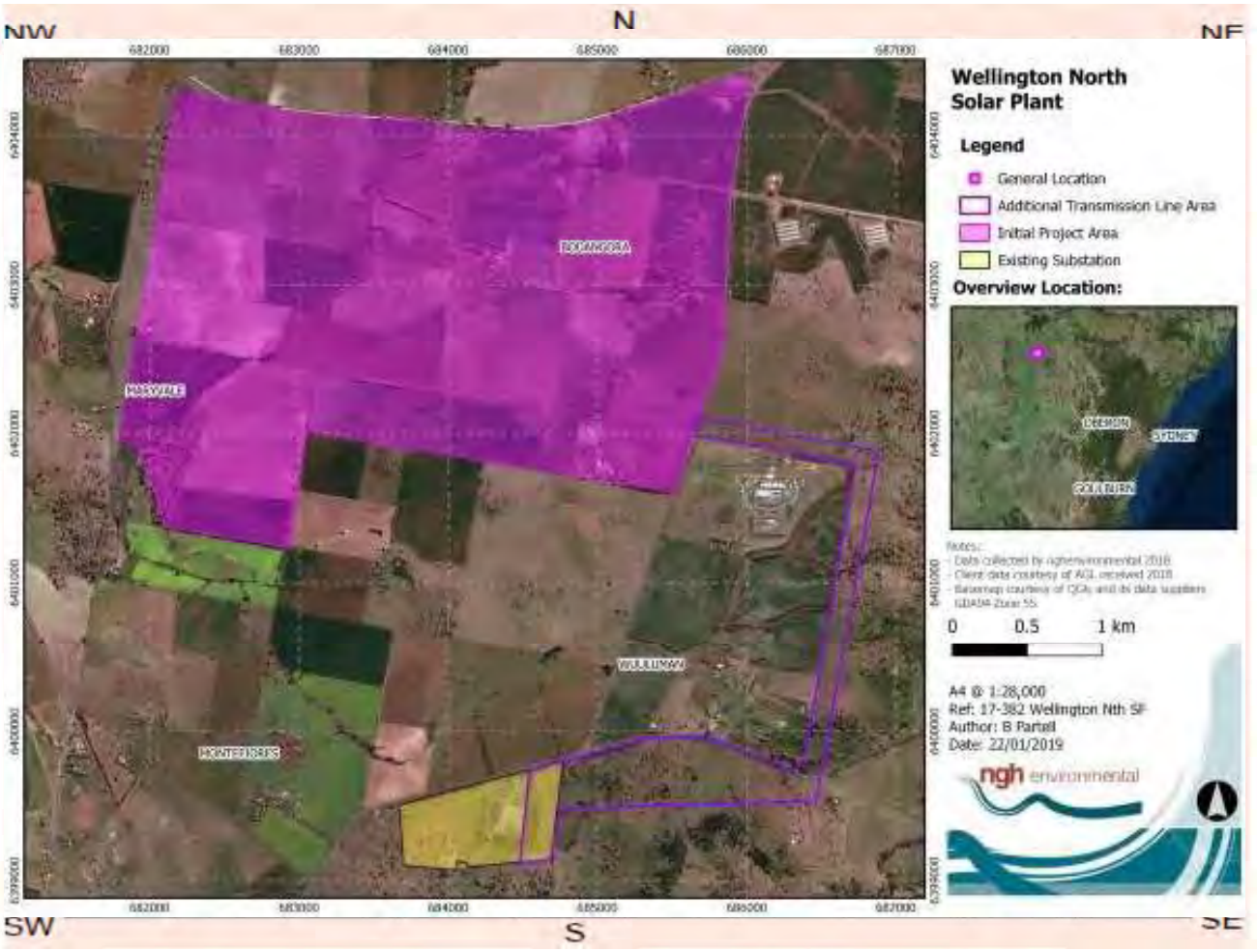
Land Form Unit: **Vegetation:**

Distance to Water (m): **Primary Report:**

How to get to the site:

Other site information: The artefact was located close to the fence line in an area of low grass cover and red-brown silty soil with approximately 40-50% visibility.

Site location map



Site contents information

open/closed site: Open

Site condition: Exposed Archaeo

Features:

		Number of features	Length of feature(s) extent (m)	Width of feature (s) extent (m)	Scarred Trees: Scar Depth (cm)	Scarred Trees: Regrowth (cm)	Scarred Trees: Scar shape	Scarred Trees: Tree Species
1.	Artefact	1	0.15	0.1				

Description:

The site consists of a single chert core measuring 106mm length, 94mm in width and 81mm in thickness.

Features:

		Number of features	Length of feature(s) extent (m)	Width of feature (s) extent (m)	Scarred Trees: Scar Depth (cm)	Scarred Trees: Regrowth (cm)	Scarred Trees: Scar shape	Scarred Trees: Tree Species
2.								

Description:

Features:

	Number of features	Length of feature(s) extent (m)	Width of feature (s) extent (m)	Scarred Trees: Scar Depth (cm)	Scarred Trees: Regrowth (cm)	Scarred Trees: Scar shape	Scarred Trees: Tree Species
3.							

Description:

Features:

	Number of features	Length of feature(s) extent (m)	Width of feature (s) extent (m)	Scarred Trees: Scar Depth (cm)	Scarred Trees: Regrowth (cm)	Scarred Trees: Scar shape	Scarred Trees: Tree Species
4.							

Description:

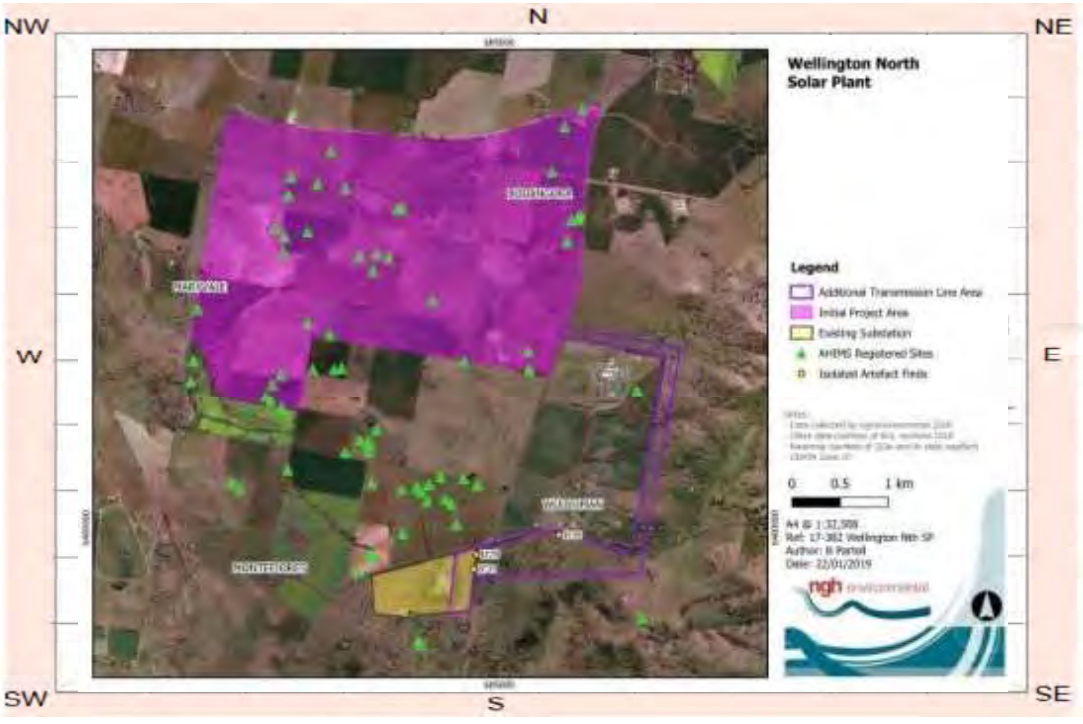
Features:

	Number of features	Length of feature(s) extent (m)	Width of feature (s) extent (m)	Scarred Trees: Scar Depth (cm)	Scarred Trees: Regrowth (cm)	Scarred Trees: Scar shape	Scarred Trees: Tree Species
5.							

Description:

Other Site Info: The artefact was located close to the fence line in an area of low grass cover and red-brown silty soil with approximately 40-50% visibility.

Site plan



Site photographs



Description: location



Description: artefact

Description:

Description:

Site restrictions

Do you want to Restrict this site?: ☐

Restriction type: Gender ☐ General ☐ Location ☐

Why is this site restricted?:

Further information contact

Title	Surname	First name

Organisation:

Address:

Phone: **E-mail:**

B.3 Field survey photo catalogue

Photo Point ID: 1 - E250078

Photo 1: S	Photo 2: W	Photo 3: N
		
Photo 4: E	**Photo 5: SE**	**Location:**
		

Photo Point ID: 2 - E250078

Photo 1: S	Photo 2: W	Photo 3: N
		
Photo 4: E	**Photo 5: None**	**Location:**
		

Photo Point ID: 3 - E250078

Photo 1: N	Photo 2: E	Photo 3: S
		
Photo 4: SW	**Photo 5: W**	**Location:**
		

Photo Point ID: 4 - E250078

Photo 1: N	Photo 2: E	Photo 3: S
		
Photo 4: W	**Photo 5: None**	**Location:**
		

Photo Point ID: 5 - E250078

Photo 1: S	Photo 2: W	Photo 3: N
		
Photo 4: E	**Photo 5: None**	**Location:**
		

Photo Point ID: 6 - E250078

Photo 1: S	Photo 2: SW	Photo 3: NW
		
Photo 4: N	**Photo 5: SE**	**Location:**
		

Photo Point ID: 7 - E250078

Photo 1: S	Photo 2: SW	Photo 3: NW
		
Photo 4: N	**Photo 5: SW**	**Location:**
		

Photo Point ID: 8 - E250078

Photo 1: W	Photo 2: NW	Photo 3: N
		
Photo 4: SE	**Photo 5: None**	**Location:**
		

Photo Point ID: 9 - E250078

Photo 1: N	Photo 2: E	Photo 3: S
		
Photo 4: W	**Photo 5: None**	**Location:**
		

Photo Point ID: 10 - E250078

Photo 1: N	Photo 2: W	Photo 3: S
		
Photo 4: E	**Photo 5: None**	**Location:**
		

Photo Point ID: 11 - E250078

Photo 1: S	Photo 2: SW	Photo 3: W
		
Photo 4: N	**Photo 5: None**	**Location:**
		

Photo Point ID: 12 - E250078

Photo 1: W	Photo 2: SW	Photo 3: None
		
Photo 4: None	**Photo 5: None**	**Location:**
		

Photo Point ID: 13 - E250078

Photo 1: N	Photo 2: NE	Photo 3: E
		
Photo 4: SE	**Photo 5: None**	**Location:**
		

Photo Point ID: 14 - E250078

Photo 1: E	Photo 2: S	Photo 3: W
		
Photo 4: N	**Photo 5: NW**	**Location:**
		

Photo Point ID: 15 - E250078

Photo 1: W	Photo 2: NW	Photo 3: N
		
Photo 4: E	**Photo 5: SE**	**Location:**
		

Photo Point ID: 16 - E250078

Photo 1: W	Photo 2: N	Photo 3: E
		
Photo 4: S	**Photo 5: None**	**Location:**
		

Photo Point ID: 17 - E250078

Photo 1: W	Photo 2: N	Photo 3: E
		
Photo 4: S	**Photo 5: SE**	**Location:**
		

Photo Point ID: 18 - E250078

Photo 1: E	Photo 2: S	Photo 3: W
		
Photo 4: N	**Photo 5: None**	**Location:**
		

Photo Point ID: 19 - E250078

Photo 1: SE	Photo 2: S	Photo 3: W
		
Photo 4: N	**Photo 5: E**	**Location:**
		

Photo Point ID: 20 - E250078

Photo 1: SW	Photo 2: W	Photo 3: N
		
Photo 4: E	**Photo 5: S**	**Location:**
		

Photo Point ID: 21 - E250078

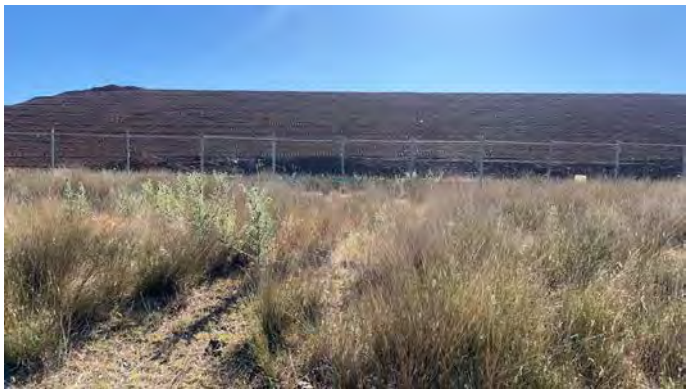
Photo 1: S	Photo 2: SW	Photo 3: NW
		
Photo 4: N	**Photo 5: E**	**Location:**
		

Photo Point ID: 22 - E250078

Photo 1: W	Photo 2: N	Photo 3: E
		
Photo 4: S	**Photo 5: None**	**Location:**
		

Photo Point ID: 23 - E250078

Photo 1: N	Photo 2: E	Photo 3: S
		
Photo 4: W	**Photo 5: None**	**Location:**
		

Photo Point ID: 24 - E250078

Photo 1: N	Photo 2: E	Photo 3: S
		
Photo 4: W	**Photo 5: None**	**Location:**
		

Photo Point ID: 25 - E250078

Photo 1: S	Photo 2: W	Photo 3: NW
		
Photo 4: NW	**Photo 5: E**	**Location:**
		

Photo Point ID: 26 - E250078

Photo 1: S	Photo 2: W	Photo 3: N
		
Photo 4: E	**Photo 5: None**	**Location:**
		

Photo Point ID: 27 - E250078

Photo 1: N	Photo 2: W	Photo 3: S
		
Photo 4: E	**Photo 5: None**	**Location:**
		

Photo Point ID: 28 - E250078

Photo 1: S	Photo 2: W	Photo 3: N
		
Photo 4: E	**Photo 5: None**	**Location:**
		

Photo Point ID: 29 - E250078

Photo 1: S	Photo 2: W	Photo 3: N
		
Photo 4: E	**Photo 5: None**	**Location:**
		

Photo Point ID: 30 - E250078

Photo 1: W	Photo 2: N	Photo 3: E
		
Photo 4: S	**Photo 5: None**	**Location:**
		

Photo Point ID: 31 - E250078

Photo 1: N	Photo 2: E	Photo 3: S
		
Photo 4: W	**Photo 5: None**	**Location:**
		

Photo Point ID: 32 - E250078

Photo 1: S	Photo 2: SW	Photo 3: N
		
Photo 4: NE	**Photo 5: SE**	**Location:**
		

Photo Point ID: 33 - E250078

Photo 1: E	Photo 2: N	Photo 3: W
		
Photo 4: S	**Photo 5: None**	**Location:**
		

Photo Point ID: 34 - E250078

Photo 1: E	Photo 2: S	Photo 3: W
		
Photo 4: N	**Photo 5: None**	**Location:**
		

Photo Point ID: 35 - E250078

Photo 1: E	Photo 2: S	Photo 3: W
		
Photo 4: N	**Photo 5: None**	**Location:**
		

Photo Point ID: 36 - E250078

Photo 1: E	Photo 2: S	Photo 3: W
		
Photo 4: N	**Photo 5: None**	**Location:**
		

Photo Point ID: 37 - E250078

Photo 1: W	Photo 2: N	Photo 3: E
		
Photo 4: S	**Photo 5: None**	**Location:**
		

Photo Point ID: 38 - E250078

Photo 1: W	Photo 2: N	Photo 3: E
		
Photo 4: S	**Photo 5: None**	**Location:**
		

Photo Point ID: 39 - E250078

Photo 1: E	Photo 2: S	Photo 3: W
		
Photo 4: N	**Photo 5: None**	**Location:**
		

Photo Point ID: 40 - E250078

Photo 1: N	Photo 2: E	Photo 3: S
		
Photo 4: W	**Photo 5: None**	**Location:**
		

Photo Point ID: 41 - E250078

Photo 1: N	Photo 2: E	Photo 3: S
		
Photo 4: W	**Photo 5: None**	**Location:**
		

Photo Point ID: 42 - E250078

Photo 1: S	Photo 2: E	Photo 3: N
		
Photo 4: W	**Photo 5: None**	**Location:**
		

Photo Point ID: 43 - E250078

Photo 1: S	Photo 2: W	Photo 3: N
		
Photo 4: E	**Photo 5: None**	**Location:**
		

Photo Point ID: 44 - E250078

Photo 1: S	Photo 2: W	Photo 3: N
		
Photo 4: E	**Photo 5: None**	**Location:**
		

Photo Point ID: 45 - E250078

Photo 1: S	Photo 2: W	Photo 3: N
		
Photo 4: E	**Photo 5: None**	**Location:**
		

Photo Point ID: 46 - E250078

Photo 1: S	Photo 2: W	Photo 3: N
		
Photo 4: E	**Photo 5: None**	**Location:**
		

Photo Point ID: 47 - E250078

Photo 1: None	Photo 2: E	Photo 3: None
		
Photo 4: None	**Photo 5: None**	**Location:**
		

Photo Point ID: 48 - E250078

Photo 1: W	Photo 2: N	Photo 3: E
		
Photo 4: S	**Photo 5: None**	**Location:**
		

Photo Point ID: 49 - E250078

Photo 1: W	Photo 2: N	Photo 3: E
		
Photo 4: S	**Photo 5: None**	**Location:**
		

Photo Point ID: 50 - E250078

Photo 1: W	Photo 2: N	Photo 3: E
		
Photo 4: S	**Photo 5: None**	**Location:**
		

Photo Point ID: 51 - E250078

Photo 1: W	Photo 2: N	Photo 3: E
		
Photo 4: S	**Photo 5: None**	**Location:**
		

Photo Point ID: 52 - E250078

Photo 1: W	Photo 2: N	Photo 3: E
		
Photo 4: S	**Photo 5: None**	**Location:**
		

Photo Point ID: 53 - E250078

Photo 1: W	Photo 2: N	Photo 3: E
		
Photo 4: S	**Photo 5: None**	**Location:**
		

Photo Point ID: 54 - E250078

Photo 1: E	Photo 2: N	Photo 3: W
		
Photo 4: S	**Photo 5: None**	**Location:**
		

Photo Point ID: 55 - E250078

Photo 1: W	Photo 2: N	Photo 3: E
		
Photo 4: S	**Photo 5: None**	**Location:**
		

Australia

SYDNEY
Level 10 201 Pacific Highway
St Leonards NSW 2065
T 02 9493 9500

NEWCASTLE
Level 3 175 Scott Street
Newcastle NSW 2300
T 02 4907 4800

BRISBANE
Level 2 95 North Quay
Brisbane QLD 4000
T 07 3648 1200

CANBERRA
Suite 2.04 Level 2
15 London Circuit
Canberra City ACT 2601

ADELAIDE
Level 4 74 Pirie Street
Adelaide SA 5000
T 08 8232 2253

MELBOURNE
Suite 9.01 Level 9
454 Collins Street
Melbourne VIC 3000
T 03 9993 1900

PERTH
Suite 3.03
111 St Georges Terrace
Perth WA 6000
T 08 6430 4800

Canada

TORONTO
2345 Yonge Street Suite 300
Toronto ON M4P 2E5
T 647 467 1605

VANCOUVER
2015 Main Street
Vancouver BC V5T 3C2
T 604 999 8297

CALGARY
700 2nd Street SW Floor 19
Calgary AB T2P 2W2

linkedin.com/company/emm-consulting-pty-limited

emmconsulting.com.au

Appendix E

Noise impact assessment addendum

EMM
creating opportunities

Level 10 201 Pacific Highway
St Leonards NSW 2065
ABN: 28 141 736 558
02 9493 9500
www.emmconsulting.com.au

13 February 2026

Anthony Yeates
Projects Director
AMPYR
Level 17
167 Macquarie Street
Sydney NSW 2000

Re: Bulabul Battery - Modification 1 - Addendum Noise Impact Assessment

Dear Anthony,

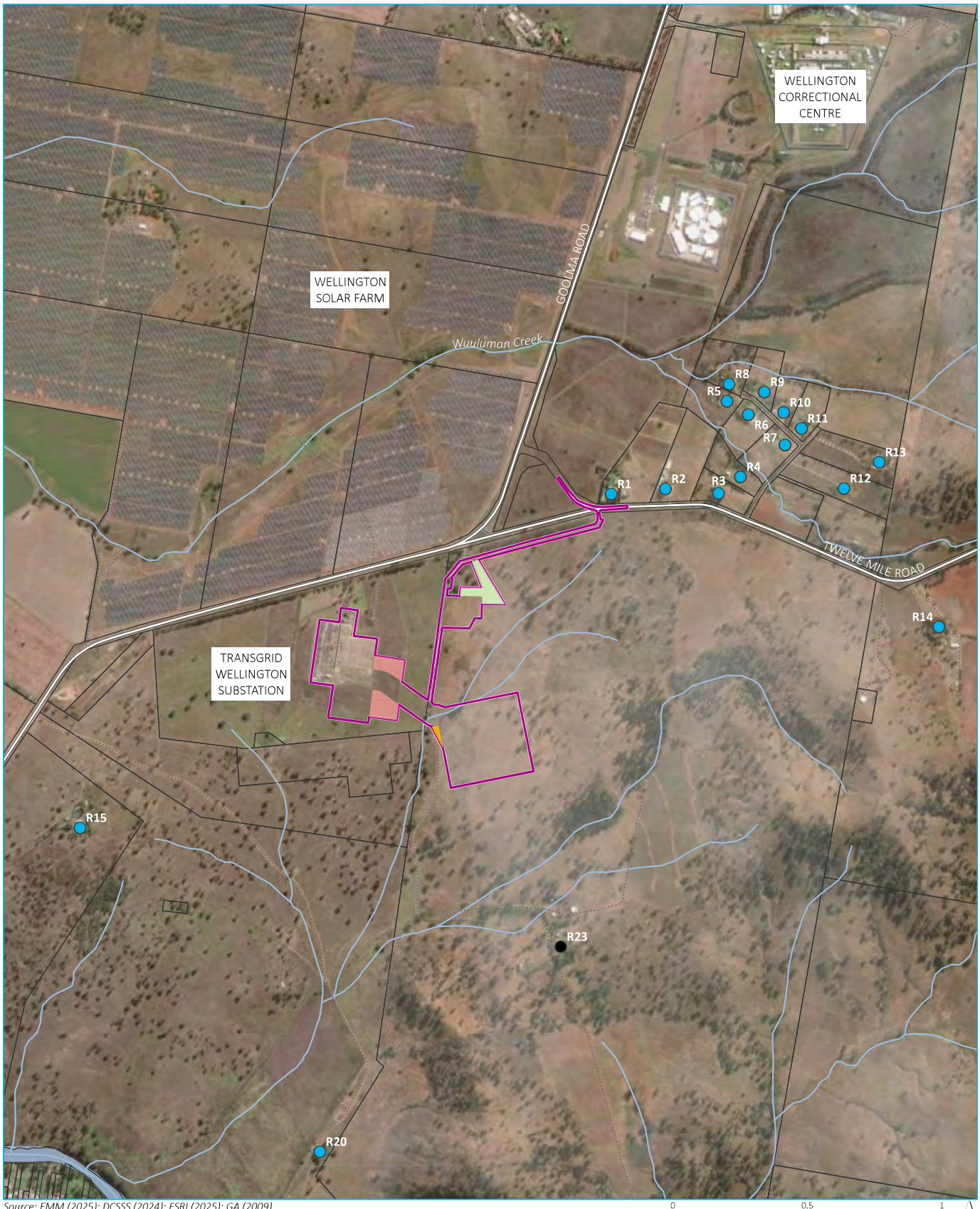
1 Introduction

The Trustee for AMBESS01 HOLD TRUST (AMPYR) has approval to develop the Wellington South Battery Energy Storage System (BESS), now called Bulabul Battery, a large-scale BESS, on-site substation and associated infrastructure. The project is located in Wuuluman, approximately 2.2 km north-east of the township of Wellington in the Dubbo Regional Council local government area (LGA) and the Central West Orana Renewable Energy Zone (CWO REZ). The project is adjacent to Transgrid's Wellington Substation. The project was approved, subject to conditions, by the Director, Energy Assessments, as delegate of the Minister for Planning and Public Spaces, on 22 December 2023 (SSD 27014706).

AMPYR intends to modify SSD 27014706 to:

- revise the location of the approved construction laydown area
- provide for an additional new bay at Transgrid's Wellington Substation
- widen the transmission easement to facilitate the project's grid connection.

These elements require changes to the approved development boundary. The approved and modified development boundaries are shown on Figure 1.1.



Source: EMM (2025); DCSSS (2024); ESRI (2025); GA (2009)

0 0.5 1 km

GDA 1994 MGA Zone 55

N

\\emm.local\xdrive\2025\E250078 - Wellington BESS Post Approval Support\GIS\02_Maps_NIA\NIA001_LocalContext\NIA001_LocalContext_20260129_02.aprx 29/01/2026

KEY

Modified development boundary

Modification element

- Additional construction laydown
- Additional easement
- Additional substation bay

Receiver

- Non-project residential receiver
- Project participating landowner

Existing environment

- Major road
- Minor road
- Vehicular track
- Watercourse/drainage line
- Named waterbody
- Cadastral boundary

Local context

Bulabul Battery MOD1
Addendum Noise Impact Assessment
Figure 1.1

EMM creating opportunities

This Addendum Noise Impact Assessment (ANIA) has been prepared to address the potential construction noise impacts from the proposed modification. The assessment compares potential construction noise impacts from the proposed modification to approved construction noise impacts that were assessed in the *Wellington South Battery Energy Storage System Noise and Vibration Impact Assessment* (EIS NVIA) [1] (EMM 2022) and *Wellington South Battery Energy Storage System Addendum Noise Impact Assessment* (EIS ANIA) [2] (EMM 2023).

Access for construction, operation and demobilisation via Twelve Mile Road is not proposed to change as part of the proposed modification. No changes are proposed to vehicle generation and road traffic noise.

No changes to project operations are proposed as part of the modification, hence operational noise is not expected to change and has not been considered further.

2 Construction noise modelling

2.1 Overview

Construction noise levels during the EIS phase were predicted using a computer-generated model using Bruel & Kjaer Predictor proprietary modelling software with the ENM link algorithm. The ENM algorithm is no longer supported by the software developer which gave the project an opportunity to update the prediction methodology to current best practice.

Construction noise levels were predicted using the ISO 9613-2 algorithm as implemented with noise modelling software SoundPlan 9.1. Features which affect the predicted noise level in the noise modelling include:

- equipment sound power levels
- screening from structures
- receiver locations
- ground topography
- noise attenuation due to geometric spreading
- ground absorption
- atmospheric absorption.

The model was populated with 3-D topography of the project and surrounding area, extending past the nearest assessment locations, with topography sourced from NSW Spatial Service.

Construction noise levels were assessed against:

- the assessment locations identified in Section 3.1 of the EIS NVIA
- noise management levels (NMLs) documented in Section 4.2 of the EIS NVIA
- source noise levels documented in Section 5.2 of the EIS NVIA.

[1] EMM Consulting 2022 – Wellington South Battery Energy Storage System. Noise and Vibration Impact Assessment v4 October 2022

[2] EMM Consulting 2023 – Addendum Noise Impact Assessment – Alternate access arrangement RP7_L1 v1 July 2023

Considering the change in the algorithm and modelling software, this assessment remodelled the original construction scenarios assessed in the EIS NVIA and EIS ANIA to provide a consistent and direct comparison of construction noise levels for the proposed modification.

2.2 Timing and activities

Construction would be during standard daytime hours only (i.e. 7:00 am to 6:00 pm Monday to Friday, and 8:00 am to 1:00 pm Saturday). Key stages in construction include:

- bulk earthworks, filling, compaction and drainage
- trenching and boring of foundations for battery modules, inverters, transformers and transmission line towers or trenching, subject to design
- modular battery, inverter, transformer and transmission line installation and commissioning
- control building, switch room, operations and maintenance building and substation construction.

2.3 Noise predictions

The EIS NVIA and EIS ANIA predicted construction noise levels are provided in Table 2.1 and updated predictions for the proposed modification are provided in Table 2.2 for standard day periods under noise enhancing 3 m/s wind conditions for the potential worst impact Phase 1 construction works. Noise levels have been assessed against the baseline standard daytime hours construction noise management level (NML) of $L_{Aeq,15min}$ 45 dB in accordance with the *Interim Construction Noise Guideline* (ICNG) (DECC 2009).

The construction noise level presented for each assessment location represents the energy-average noise level over a 15 minute period and assumes all plant operating concurrently.

AMPYR will continue to manage construction noise levels in accordance with Section 4.2 of the *Wellington 300 MW BESS Project Environmental Management Plan* (RJE Global 2025).

Table 2.1 Predicted construction noise levels – EIS NVIA and EIS ANIA

Assessment location	Classification	Period	Predicted construction noise level, dB $L_{Aeq,15min}$	Compliance[1]
R1	Residential	Standard hours	48	+3
R2	Residential	Standard hours	42	Yes
R3	Residential	Standard hours	40	Yes
R4	Residential	Standard hours	39	Yes
R5	Residential	Standard hours	38	Yes
R6	Residential	Standard hours	38	Yes
R7	Residential	Standard hours	38	Yes
R8	Industrial	Standard hours	38	Yes
R9	Residential	Standard hours	37	Yes
R10	Residential	Standard hours	37	Yes

Assessment location	Classification	Period	Predicted construction noise level, dB $L_{Aeq,15min}$	Compliance[1]
R11	Residential	Standard hours	37	Yes
R12	Residential	Standard hours	37	Yes
R13	Residential	Standard hours	38	Yes
R14	Residential	Standard hours	35	Yes
R15	Residential	Standard hours	43	Yes
R16	Residential	Standard hours	40	Yes
R17	Industrial	Standard hours	40	Yes
R18	Residential	Standard hours	36	Yes
R19	Residential	Standard hours	35	Yes
R20	Residential	Standard hours	38	Yes
R21	Residential	Standard hours	32	Yes
R22	Residential	Standard hours	31	Yes
R23	Residential	Standard hours	45	N/A – associated residence

Note: 1. Assessed against baseline standard daytime hours construction noise management level of $L_{Aeq,15min}$ 45 dB in accordance with ICNG.

Table 2.2 Predicted construction noise levels – Proposed modification

Assessment location	Classification	Period	Predicted construction noise level, dB $L_{Aeq,15min}$	Compliance[1]
R1	Residential	Standard hours	49	+4
R2	Residential	Standard hours	42	Yes
R3	Residential	Standard hours	40	Yes
R4	Residential	Standard hours	40	Yes
R5	Residential	Standard hours	38	Yes
R6	Residential	Standard hours	38	Yes
R7	Residential	Standard hours	38	Yes
R8	Industrial	Standard hours	38	Yes
R9	Residential	Standard hours	38	Yes
R10	Residential	Standard hours	38	Yes
R11	Residential	Standard hours	37	Yes
R12	Residential	Standard hours	37	Yes
R13	Residential	Standard hours	38	Yes

Assessment location	Classification	Period	Predicted construction noise level, dB $L_{Aeq,15min}$	Compliance[1]
R14	Residential	Standard hours	36	Yes
R15	Residential	Standard hours	43	Yes
R16	Residential	Standard hours	39	Yes
R17	Industrial	Standard hours	39	Yes
R18	Residential	Standard hours	37	Yes
R19	Residential	Standard hours	35	Yes
R20	Residential	Standard hours	38	Yes
R21	Residential	Standard hours	33	Yes
R22	Residential	Standard hours	31	Yes
R23	*Residential*	*Standard hours*	45	N/A – associated residence

Note: 1. Assessed against baseline standard daytime hours construction noise management level of $L_{Aeq,15min}$ 45 dB in accordance with ICNG.

The results of the modelling demonstrate that construction noise is predicted to be compliant at most assessment locations, with the exception of a marginal (3-4 dB) exceedance for R1 under both the approved and proposed modification scenarios. R1 (59 Twelve Mile Road, Wuuluman) has an executed noise agreement with AMPYR that considers construction and operation noise impacts. R2 (79 Twelve Mile Road, Wuuluman) also has an executed noise agreement with AMPYR that considers construction and operation noise impacts.

It is noted that the predicted construction noise levels represent a potential worst-case scenario, and actual construction noise levels will likely be less than predicted levels most of the time.

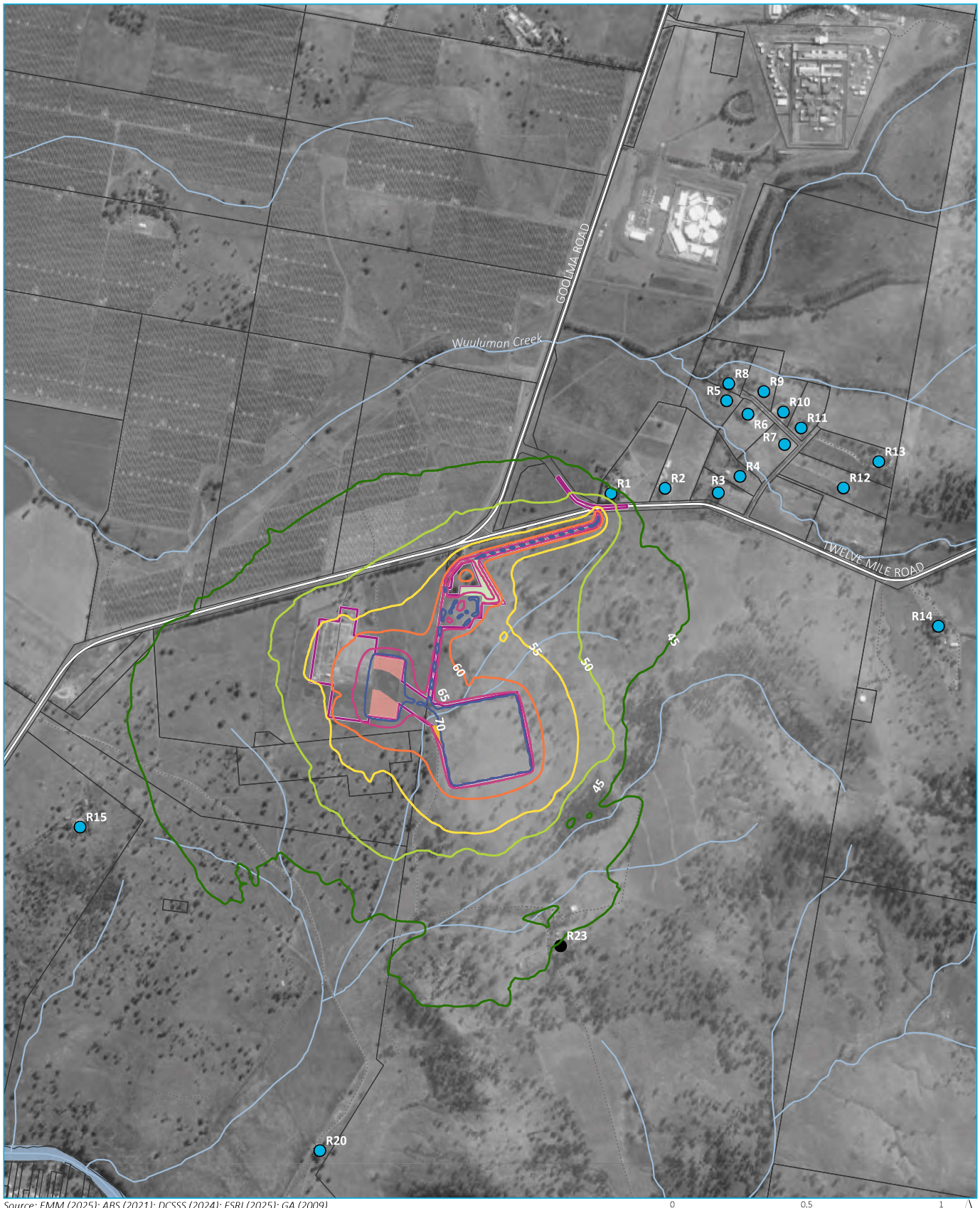
Where works outside of standard hours are unavoidable, noise should be managed in accordance with the noise management levels of the ICNG. Works outside of standard hours would typically require approval from the relevant regulatory authority and be justified with specialist acoustic assessment of the proposed works to be undertaken.

2.3.1 Noise contours

Predicted $L_{Aeq,15min}$ noise contours representing the worst-case noise level from construction is provided in Figure 2.1 (EIS NVIA [3] and EIS ANIA [4]) and Figure 2.2 (proposed modification). The figures represent the predicted construction noise levels under noise enhancing conditions. The contours indicate a limited increase in exposure of construction noise of less than 1 dB for the proposed modification.

[3] EMM Consulting 2022 – Wellington South Battery Energy Storage System. Noise and Vibration Impact Assessment v4 October 2022

[4] EMM Consulting 2023 – Addendum Noise Impact Assessment – Alternate access arrangement RP7_L1 v1 July 2023



Source: EMM (2025); ABS (2021); DCSSS (2024); ESRI (2025); GA (2009)

0 0.5 1 km

GDA 1994 MGA Zone 55

N

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KEY

Modified development boundary

Modification element
- Additional construction laydown
- Additional easement
- Additional substation bay

Receiver
- Non-project residential receiver
- Project participating landowner

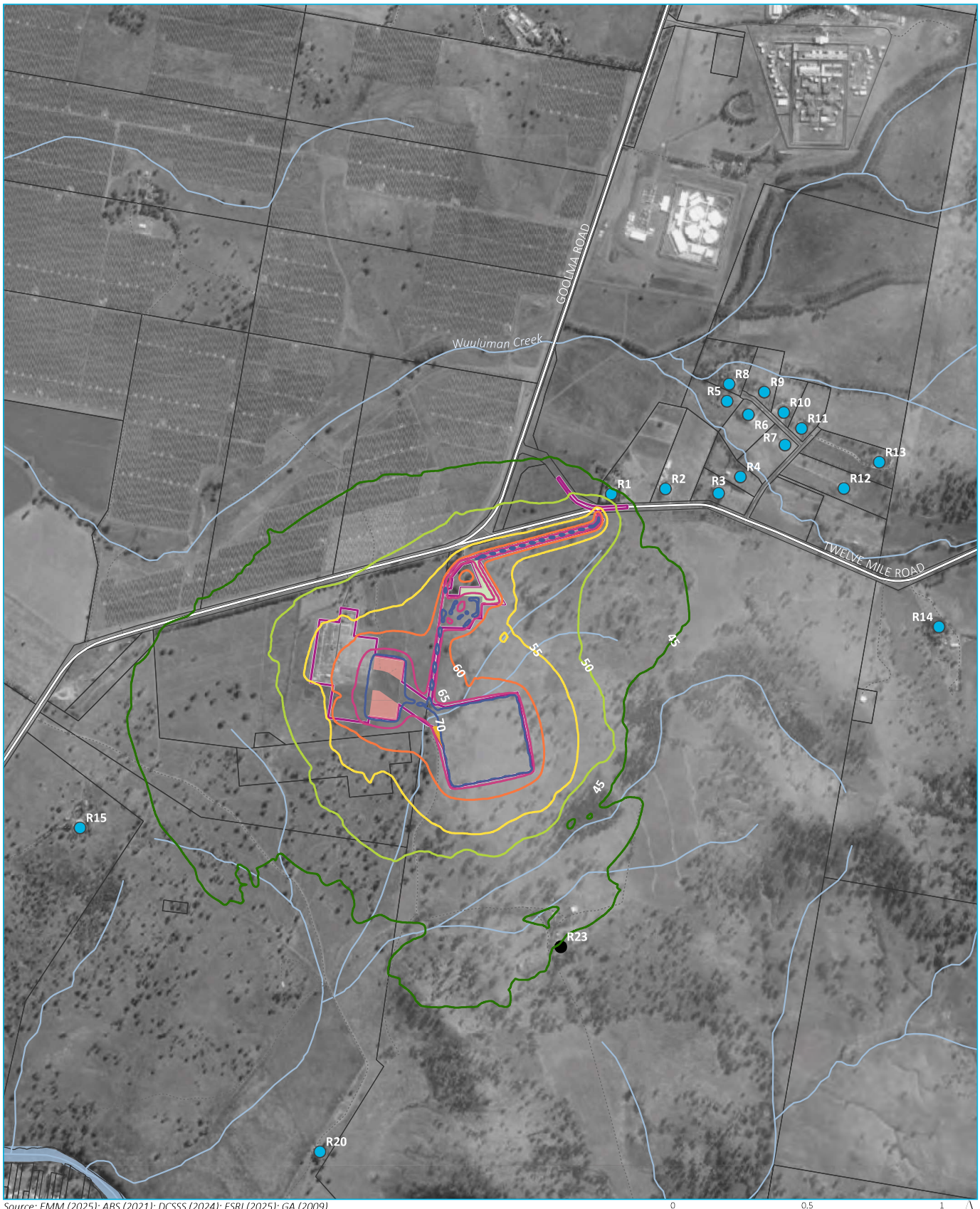
Noise contour
- 45 dB
- 50 dB
- 55 dB
- 60 dB
- 65 dB
- 70 dB

Existing environment
- Major road
- Minor road
- Vehicular track
- Watercourse/drainage line
- Named waterbody
- Cadastral boundary

Construction noise contours, day, 3m/s wind – approved project

Bulabul Battery MOD 1
Addendum Noise Impact Assessment
Figure 2.1

EMM creating opportunities



Source: EMM (2025); ABS (2021); DCSSS (2024); ESRI (2025); GA (2009)

0 0.5 1 km

GDA 1994 MGA Zone 55

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KEY

Modified development boundary

Modification element

- Additional construction laydown
- Additional easement
- Additional substation bay

Receiver

- Non-project residential receiver
- Project participating landowner

Noise Contour

- 45 dB
- 50 dB
- 55 dB
- 60 dB
- 65 dB
- 70 dB

Existing environment

- Major road
- Minor road
- Vehicular track
- Watercourse/drainage line
- Named waterbody
- Cadastral boundary

Construction noise contours, day, 3m/s wind – proposed modification

Bulabul Battery MOD 1
Addendum Noise Impact Assessment
Figure 2.2

EMM creating opportunities

3 Conclusion

This ANIA has considered the potential noise impacts associated with the proposed modification. The assessment compared approved construction noise impacts with those proposed as part of the modification. The results of the assessment have confirmed that there is a potential negligible increase (<1 dB) in construction noise at R1, with a total noise exceedance of the construction NML of up to 4 dB, which would be considered marginal. R1 is the only location that exceeds the construction NML for standard daytime hours. R1 has an executed noise agreement with AMPYR that considers construction and operation noise impacts.

No additional mitigation measures are required. AMPYR will continue to manage construction noise levels in accordance with Section 4.2 of the *Wellington 300 MW BESS Project Environmental Management Plan* (RJE Global 2025).

Yours sincerely



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