

# **Review of Environmental Factors**

South Jerrabomberra Zone Substation

Project No. 499313



| <b>Revision History</b> |   |
|-------------------------|---|
| <b>Version</b>          | <b>Nature of Revision</b>   |
| Draft01                 | Draft prepared for Essential Energy's Environmental Services peer review.           |
| Draft02                 | Draft prepared for Essential Energy's Environmental Services Manager review.        |
| Draft03                 | Draft prepared for Essential Energy's South Jerrabomberra project team review.      |
| Draft04                 | Draft updates following Essential Energy's South Jerrabomberra project team review. |
| Final01                 | Final prepared for Essential Energy's determination.                                |
|                         |   |
|                         |   |

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# Acronyms and Abbreviations

|                             |   |
|-----------------------------|---|
| <b>AHD</b>                  | Australian Height Datum   |
| <b>AHIMS</b>                | Aboriginal Heritage Information Management System   |
| <b>AHIP</b>                 | Aboriginal Heritage Impact Permit   |
| <b>ADSS</b>                 | All-dielectric self-supporting. A type of fibre optic cable which is nonconductive, self-supporting and is capable of being erected under tension between supports. |
| <b>ARPANSA</b>              | Australian Radiation Protection and Nuclear Safety Agency   |
| <b>ASS</b>                  | Acid Sulfate Soils  |
| <b>AASS</b>                 | Actual Acid Sulfate Soils   |
| <b>AEMO</b>                 | Australian Energy Market Operator   |
| <b>BDAR</b>                 | Biodiversity Development Assessment Report  |
| <b>CEMP</b>                 | Construction Environmental Management Plan  |
| <b>Consequence</b>          | The outcome of an event expressed qualitatively or quantitatively, being a loss, injury, disadvantage or gain.  |
| <b>dB(A)</b>                | Decibels (A) weighted   |
| <b>DCCEEW</b>               | Department of Climate Change, Energy, the Environment and Water (Commonwealth)  |
| <b>DPE</b>                  | Department of Planning and Environment  |
| <b>DP</b>                   | Deposited Plan  |
| <b>EMF</b>                  | Electric and Magnetic Fields  |
| <b>Environmental Aspect</b> | Any element of an organisation's activities, products or services that can interact with the environment.   |
| <b>Environmental Impact</b> | Any change in the environment whether adverse or beneficial, wholly or partially resulting from organisation activities, products or services.                      |
| <b>EPA</b>                  | Environment Protection Authority  |
| <b>EP&amp;A Act</b>         | <i>Environmental Planning and Assessment Act 1979</i>   |
| <b>EP&amp;A Reg</b>         | <i>Environmental Planning and Assessment Regulation 2021</i>  |
| <b>EPBC Act</b>             | <i>Environment Protection and Biodiversity Conservation Act 1999</i>  |
| <b>EPIs</b>                 | Environmental Planning Instruments  |
| <b>ES Act</b>               | <i>Electricity Supply Act 1995</i>  |
| <b>ESD</b>                  | Ecologically Sustainable Development  |
| <b>EWP</b>                  | Elevated Work Platforms   |
| <b>FSC</b>                  | Field Service Centre (Essential Energy)   |
| <b>FM Act</b>               | <i>Fisheries Management Act 1994</i>  |
| <b>GHG</b>                  | Greenhouse Gas  |

|                       |  |
|-----------------------|--|
| <b>Ha</b>             | Hectare  |
| <b>IPC</b>            | Independent Planning Commission  |
| <b>kV</b>             | Kilovolts  |
| <b>LALC</b>           | Local Aboriginal Land Council  |
| <b>Likelihood</b>     | A qualitative description of probability or frequency  |
| <b>LEP</b>            | Local Environmental Plan   |
| <b>LG Act</b>         | <i>Local Government Act 1993</i>   |
| <b>LGA</b>            | Local Government Area  |
| <b>mG</b>             | Milligauss   |
| <b>MVA</b>            | Mega Volt Amps   |
| <b>NES</b>            | National Environmental Significance  |
| <b>NO<sub>x</sub></b> | Oxides of Nitrogen   |
| <b>NPW Act</b>        | <i>National Parks and Wildlife Act 1974</i>  |
| <b>PASS</b>           | Potential Acid Sulfate Soils   |
| <b>POEO Act</b>       | <i>Protection of the Environment Operations Act 1997</i>   |
| <b>REF</b>            | Review of Environmental Factors  |
| <b>RF Act</b>         | <i>Rural Fires Act 1997</i>  |
| <b>Roads Act</b>      | <i>Roads Act 1993</i>  |
| <b>RMS</b>            | Roads and Maritime Service   |
| <b>SCADA</b>          | Supervisory control and data acquisition. A computer-based system for gathering and analysing real-time data to monitor and control equipment that deals with critical and time-sensitive materials or events. |
| <b>SEE</b>            | Statement of Environmental Effects   |
| <b>SEPP</b>           | State Environmental Planning Policy  |
| <b>SHI</b>            | State Heritage Inventory   |
| <b>SHR</b>            | State Heritage Register  |
| <b>SIS</b>            | Species Impact Statement   |
| <b>SWMP</b>           | Soil and Water Management Plan   |
| <b>T&amp;I SEPP</b>   | <i>State Environmental Planning Policy (Transport and Infrastructure) 2021</i>   |
| <b>WM Act</b>         | <i>Water Management Act 2000</i>   |

# Review of Environmental Factors Approval Form

|                   |  |
|-------------------|--|
| REF name          | South Jerrabomberra Zone Substation<br>Project No. 499313        |
| REF prepared by   | Nathan Hegerty   |
| Title             | Senior Environmental Engineer                                    |
| Qualifications    | Bachelor of Environmental Science<br>Master of Environmental Law |
| Proponent Name    | Essential Energy   |
| Proponent Address | 8 Buller St Port Macquarie NSW 2444                              |

This Review of Environmental Factors (REF) assesses the potential impacts that may result from the proposed and associated activities as outlined in “Description of the Proposal” section of this report.

Essential Energy is a state-owned corporation and is a determining authority as defined in the *Environmental Planning and Assessment Act 1979* (EP&A Act). The proposal satisfies the definition of an ‘activity’ under the EP&A Act, and as such Essential Energy must assess and consider the environmental impacts of the proposal before determining whether to proceed. This REF has been prepared in accordance with section 5.5 of the EP&A Act and clause 171 of the *Environmental Planning and Assessment Regulation 2021* (EP&A Reg). The EP&A Act requires Essential Energy to examine and take into account to the fullest extent possible all matters affecting or likely to affect the environment by reason of that activity. The EP&A Reg sets out environmental factors to be considered in making that assessment. If the activity is considered likely to significantly affect the environment, additional assessment requirements under the EP&A Act would be required.

Section 5.7 of the EP&A Act states that a determining authority shall not carry out an activity, or grant an approval in relation to an activity, that is likely to significantly affect the environment (including critical habitat) or threatened species, populations or ecological communities, or their habitats, unless the determining authority has examined and considered an Environmental Impact Statement or Species Impact Statement in respect of the activity.

The REF has addressed the matters that are required to be considered by Part 5 of the EP&A Act, with the conclusion that if the activity is carried out as described, it is not likely to have a significant effect on the environment (including critical habitat) or threatened species, populations, ecological communities or their habitats, and accordingly an Environmental Impact Statement is not required. The mitigation strategies forming part of the activity are fully considered and discussed in the REF.

The activity was also assessed against the requirements of the *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (EPBC Act). As the proposed activity will not have, and is not likely to have a significant impact on matters of national environmental significance, a referral to the Commonwealth Department of Climate Change, Energy, the Environment and Water (DCCEEW) is not required.

The proposed activity is permissible under all relevant state and federal legislation, including the EPBC Act and the *Biodiversity Conservation Act 2016* (NSW).

Under *State Environmental Planning Policy (Transport and Infrastructure) 2021* (T&I SEPP) the activity is classified as development for the purpose of an electricity transmission or distribution network undertaken by or on behalf of a public authority, and is hence permitted on the land without the requirement for development consent.



## Declaration

The Review of Environmental Factors for the proposed activity has been assessed by Essential Energy.

Considering the assessment of the impacts, including sections 1.7 and 5.5 of the *Environmental Planning and Assessment Act 1979* and clause 171 of the *Environmental Planning and Assessment Regulations 2021*, it is concluded that:

- there is not likely to be a significant environmental effect as a result of the construction, operation and maintenance of the activity and an Environmental Impact Statement is not required; and
- a Species Impact Statement (SIS), or Biodiversity Development Assessment Report (BDAR) is not required.

Site and Assessment Review – I affirm that the information provided within this assessment is accurate to the best of my knowledge, belief and information.

Nathan Hegerty  
Senior Environmental Engineer  
(Author)  
Date:

Chris Dunn  
Environmental Engineer  
(Peer Review)  
Date:

The assessment has been reviewed and it is recommended that the Activity may now proceed subject to the implementation of the recommendations and mitigation measures contained in the REF documentation.

Peter van Niekerk  
Project Manager  
Date:

1. Considering the assessment of the impacts, including sections 1.7 and 5.5 of the *Environmental Planning and Assessment Act 1979* and clause 171 of the *Environmental Planning and Assessment Regulation 2021*, it is determined that there is not likely to be a significant environmental effect as a result of the construction, operation and maintenance of the South Jerrabomberra 132/11kV Zone Substation. Neither an Environmental Impact Statement (EIS), nor SIS, nor BDAR is required.
2. The Activity may now proceed subject to obtaining and complying with the relevant approvals as identified in the REF and subject to the implementation of the recommendations and mitigation measures contained in the REF documentation.

Amalie Smith  
Chief Human Resources Officer  
Date:

# Executive Summary

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## Background / Justification

Essential Energy is proposing to design, construct, operate and maintain a new section of electricity network, known as the South Jerrabomberra High Voltage Supply Project (SJHVSP). The SJHVSP will deliver electricity supply to the new South Jerrabomberra Development Project (SJDP). When complete, the SJDP will deliver 1,500 residential lots, a business park, industrial estate, Innovation Precinct, Regional Sports Complex and a new High School to the Jerrabomberra area. It will also house NSW's third Regional Job Precinct, creating regional economic opportunities and job growth in the area.

The SJHVSP involves the construction of approximately 6 kilometres (km) of new dual circuit 132 kilovolt (kV) powerline from TransGrid's Queanbeyan Bulk Supply point, located in the Australian Capital Territory (ACT) (Oakes Estate), south through a non-operational rail corridor, and connecting to a new 132/11kV Zone Substation (ZS) located within the Poplars Innovation Precinct (PIP), which forms part of the broader SJDP. The proposed new 132/11kV ZS is the subject of this Review of Environmental Factors (REF) report, with the proposed new 132kV dual circuit powerline being assessed under a separate REF.

Construction and operation of the new SJHVSP will ensure the local electricity infrastructure meets the current and future needs of the new SJDP. The new SJHVSP will also strengthen Essential Energy's existing electricity network in the broader area, as well as increase its capacity, which will help support future electricity connections. The South Jerrabomberra development will allow thousands of new customers to connect to Essential Energy's network, which will ultimately contribute to reducing the cost of electricity prices for all customers and increase network reliability.

## The Proposal

The proposal comprises the construction, operation and maintenance of the South Jerrabomberra 132/11kV ZS. Together with a proposed new 132kV dual circuit powerline (subject to a separate REF), the proposal will support the SJDP and strengthen Essential Energy's electricity network in the broader area.

The proposal involves the construction of a new 132/11kV ZS, within a separately approved six lot subdivision of the PIP, and would include the following elements:

- two transformer bays, with the provision for a third if required in the future
- high voltage switchgear operating at 11kV and 132kV
- masonry tilt panel building with amenities
- control equipment
- underground cabling and associated conduits
- auxiliary equipment and structures including lightning masts, fencing, driveways.

## Project Alternatives

One option would be to refrain from undertaking any further development of the network in the area. The consequences of Essential Energy doing nothing would render the SJDP unviable due to supply constraints associated with the existing electrical infrastructure. Due to Essential Energy's network licence obligations, the 'do nothing' option is not a viable alternative to the proposed new SJHVSP, of which the proposed new 132/11kV ZS is a vital component.

Planning for the electricity supply to the SJDP area began in 2007 in response to an invitation to Essential Energy to comment on the Tralee Local Environmental Plan. Several options to supply the development were canvassed including supply from the TransGrid and ACT (Actew AGL) networks. Over several years, multiple route options were investigated leveraging Essential Energy's existing network configuration. In 2021, the final preferred route of the powerline that had the least societal and environmental impacts was identified as the inactive rail corridor along the ACT and NSW border. The location of the ZS site has been selected to facilitate a connection to the preferred powerline route, be in close proximity to high demand customers, and minimise environmental impacts.

## Statutory Planning and Legislation

Clause 2.44 of *State Environmental Planning Policy (Transport and Infrastructure) 2021* (T&I SEPP) applies to electricity transmission and distribution activities undertaken by an energy supply authority. Clause 2.44 states that development for the purpose of a transmission or distribution network may be carried out by or on behalf of an electricity supply authority or public authority without consent on any land, with additional requirements for land reserved under the *National Parks and Wildlife Act 1974*.

As the activity does not require development consent, Essential Energy is the designated determining authority. Additionally, whilst Essential Energy does not require development consent to undertake the proposed activity, it has an obligation under Part 5 of the *Environmental Planning and Assessment Act 1979* (EP&A Act) to consider the environmental impacts of the activity.

Specifically, Essential Energy has a statutory obligation to examine and take into account, to the fullest extent possible, all matters affecting or likely to affect the environment by reason of this activity. This REF has been prepared to facilitate the determination through consideration of the relevant factors specified in section 5.5 of the EP&A Act and clause 171 of the *Environmental Planning and Assessment Regulation 2021* (EP&A Reg).

The proposed ZS site is located within a six lot subdivision forming part of the PIP, for which an approval under sections 130(1) and 133(1) of the EPBC Act has been granted (EPBC 2020/8801). The proposed new 132/11kV substation will be undertaken within the footprint of this approval at the completion of bulk earthworks relating to the subdivision. Given that the proposal would not significantly impact on matters of national environmental significance in addition to impacts approved for the subdivision, and would not be carried out on Commonwealth land, the EPBC Act is not triggered and approval from the Commonwealth Minister for the Environment and Water is not required.

## Environmental Impact Assessment

This REF has been prepared in accordance with Part 5, Division 5.1 of the EP&A Act to assess the environmental impacts associated with the construction, operation and maintenance of the proposed activity. The REF has examined and taken into account to the fullest extent possible all matters affecting or likely to affect the environment by reason of the project.

A number of potential environmental impacts associated with the project have been avoided or reduced to acceptable levels during the design development and assessment stages. However, the project may still result in some impacts including air quality (dust), noise, vegetation, traffic, waste generation, and visual amenity during construction and operation, as outlined in **Section 6**. Management and mitigation measures to alleviate these impacts have been developed as part of this REF and would be implemented during construction and operation of the proposal.

Considering the assessment of the impacts detailed in this REF, it is concluded that the proposed activity is not likely to have a significant impact on the environment. On balance, the project is justified on the basis of supporting the SJDP and strengthening Essential Energy's electricity network in the broader area, whilst minimising potential environmental impacts.

# 1. Introduction

---

## 1.1 The Proposal

This Review of Environmental Factors (REF) assesses the potential environmental impacts associated with the construction, operation and maintenance of the proposed South Jerrabomberra 132/11 kilovolt (kV) Zone Substation (ZS). The significance of impact has been determined and appropriate mitigation measures recommended.

## 1.2 Context and Justification of the Proposal

Essential Energy is proposing to design, construct, operate and maintain a new section of electricity network, known as the South Jerrabomberra High Voltage Supply Project (SJHVSP). The SJHVSP will deliver electricity supply to the new South Jerrabomberra Development Project (SJDP). When complete, the SJDP will deliver 1,500 residential lots, a business park, industrial estate, Innovation Precinct, Regional Sports Complex, Intermodal Transport Hub and new High School to the Jerrabomberra area. It will also house NSW's third Regional Job Precinct, creating regional economic opportunities and job growth in the area.

The SJHVSP involves the construction of approximately 6 kilometres (km) of new dual circuit 132kV powerline from TransGrid's Queanbeyan Bulk Supply point, south through a non-operational rail corridor, and connecting to a new 132/11kV ZS, located within the Poplars Innovation Precinct (PIP), which forms part of the broader SJDP. The proposed new 132/11kV ZS is the subject of this REF report, with the proposed new 132kV dual circuit powerline being assessed under a separate REF.

Construction and operation of the new SJHVSP will ensure the local electricity infrastructure meets the current and future needs for the new SJDP. The new SJHVSP will also strengthen Essential Energy's existing electricity network in the broader area, as well as increase its capacity, which will help support future electricity connections. The South Jerrabomberra development will allow thousands of new customers to connect to Essential Energy's network, which will ultimately contribute to reducing electricity prices for all customers and increase reliability.

## 1.3 Network Investment Criteria

Network asset investment by Essential Energy is generally required to:

- Meet Essential Energy's duty of care;
- Connect customers to the supply network; and
- Provide a satisfactory standard of supply to customers.

The overall performance of the network is driven by the reliability of individual network components and the redundancy provided by the network to enable maintenance of supply at times when critical parts of the network are out of service (due to maintenance or repair requirements). To maintain acceptable standards of customer service it is necessary to ensure:

- Infrastructure performance (reliability) is maintained at acceptable levels; and
- The network design provides adequate security (redundancy).

The reliability performance of equipment and infrastructure is managed through maintenance and replacement of that infrastructure and construction of new infrastructure. For Essential Energy, the decision to replace or construct new infrastructure is based on an assessment of equipment condition and consideration of the strategic needs of the network.

## 1.4 Proposal Objectives

The primary objective of the project is to design, construct, operate and maintain a 132/11kV ZS, which will form part of the SJHVSP to service the SJDP, while also strengthening Essential Energy's existing electricity network in the broader area. Secondary objectives associated with the project are to:

- Maximise social and economic benefits; and
- Minimise the environmental and social impacts.

## 1.5 Proposal Site

The proposed new 132/11kV South Jerrabomberra ZS will be located within a recently developed innovation precinct that formally comprised rural land near the NSW / ACT border in South Jerrabomberra, NSW (refer **Figures 1-1** and **1-2**). The new ZS site will form part of an approved six lot Torrens title subdivision of Lot 2 DP1281781. The new subdivision forms part of Stage 1 of the Poplars Innovation Precinct (PIP), which itself forms part of the much broader SJDP. The new ZS site is recognised as Lot 5, DP1288362 located at the end of Wolseley Place, and encompasses approximately 8,061 square metre (m<sup>2</sup>) ("the proposal site"). **Figure 1-3** shows the location of the proposal site in the context of the new six lot subdivision.

The proposal site is located within the Queanbeyan-Palerang Regional Council (QPRC) Local Government Area (LGA) and is currently zoned B7 Business Park, according to the *Queanbeyan-Palerang Regional Local Environmental Plan 2022* (QPR LEP).

The immediate surrounding landscape consists of predominately cleared land used for grazing, intersected by roads, with urban development of greater Jerrabomberra commencing approximately 650 metres (m) east. Small patches of remnant vegetation are scattered within the predominately cleared landscape that surrounds the proposal site. Review of the NSW Department of Planning and Environment (DPE) State Vegetation Type Mapping indicates the proposal site is located on land mapped as non-native vegetation, with a patch of vegetation skirting the southern boundary of the site mapped as Plant Community Type (PCT) 3375: Monaro-Queanbeyan Rolling Hills Grassy Forest, and a small patch of PCT 3376: Southern Tableland Grassy Box Woodland. However, flora surveys conducted in connection with the broader PIP development (Capital Ecology, 2020) indicated the vegetation on the proposal site represented PCT1334: Yellow Box grassy woodland of the northern Monaro and Upper Shoalhaven area, South Eastern Highlands Bioregion.

More recently the proposal site has undergone a degree of disturbance, through vegetation clearing and preliminary earthworks, including benching, associated with the six lot subdivision forming the PIP (refer **Plates 1-1** and **1-2**). The proposal site will be accessed via the newly constructed Wolseley Place and Environa Drive to the east, and Tomsitt Drive to the north (refer **Figure 1-3**). No new access roads, aside from those required as part of the broader subdivision, will need to be constructed to access the proposal site. The closest existing sensitive receivers are residential properties located approximately 650m east, within an existing residential subdivision associated with Franklin Court, north of the Jerrabomberra Parkway roundabout. Once the new six lot subdivision forming part of the PIP is constructed there will be several commercial premises in the near vicinity of the proposal site.

The closest waterways are two unnamed Strahler First Order drainage lines commencing approximately 150m north and 250m west of the proposal site, respectively. The closest named waterway is Jerrabomberra Creek, located approximately 670m south at its closest point (refer **Figure 1-2** and **6-2**). Current site drainage would be expected to follow overland flow, towards the aforementioned drainage lines, and eventually south towards Jerrabomberra Creek. Once the subdivision is constructed, surface flows would be directed into roadside stormwater drains in Wolseley Place or around the subdivision through diversion drains. Once constructed, the proposal site would have its own internal drainage.

## 1.6 Study Area

The broader study area includes the surrounding predominately cleared rural areas, and the urban areas of Jerrabomberra to the east. Sensitive environmental areas within the broader region include waterways, wetlands, biodiversity, Aboriginal and non-Aboriginal heritage, and other environmental values, that form part of the immediate surrounding landscape.

## 1.7 Purpose of REF

The purpose of this REF is to document the assessment of potential environmental impacts of the proposal, and identify if there are likely to be any significant environmental impacts. It informs Essential Energy's determination of the proposal under Part 5 of the *Environmental Planning and Assessment Act 1979* (EP&A Act).

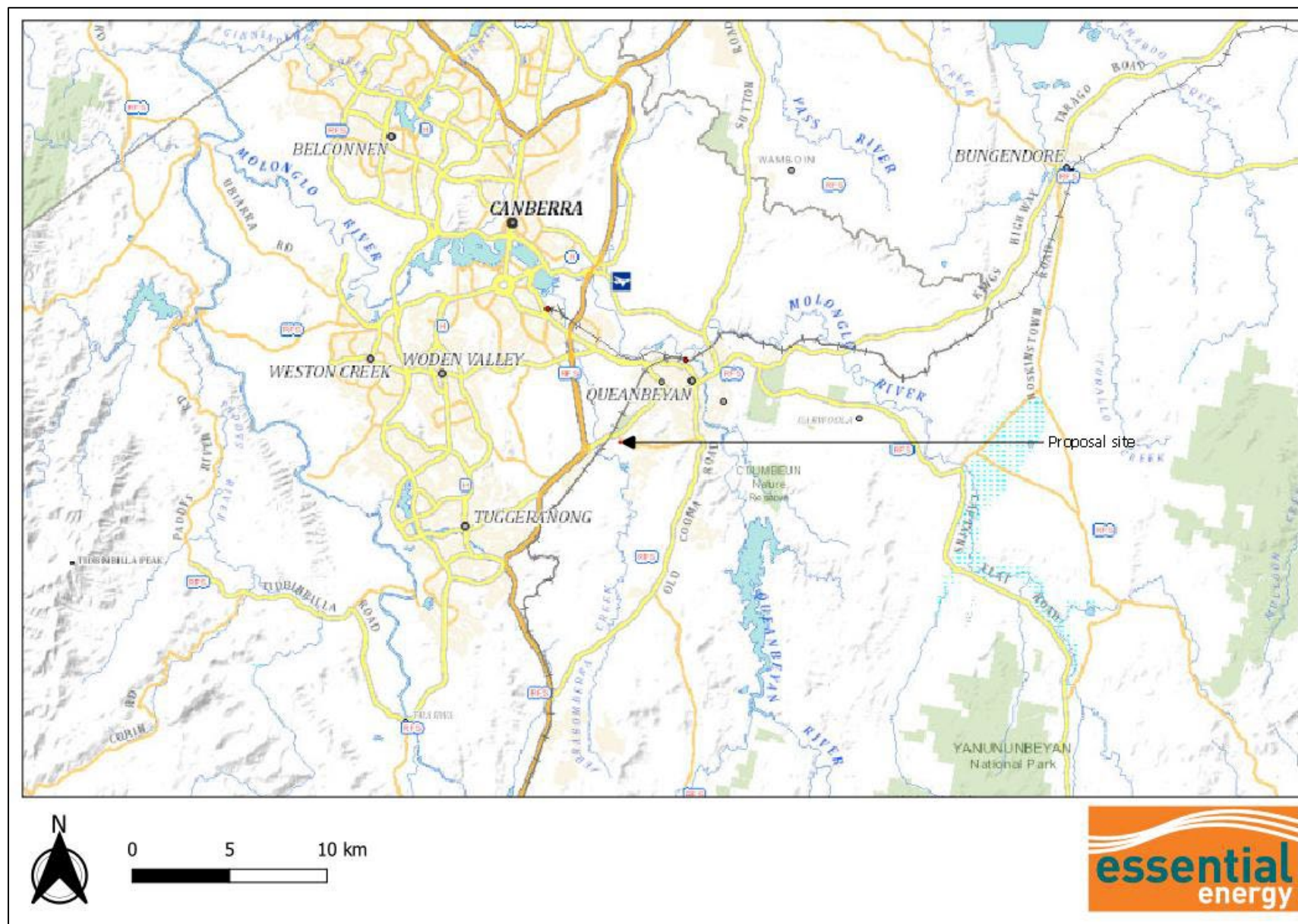


Figure 1-1: Proposal location in the regional context



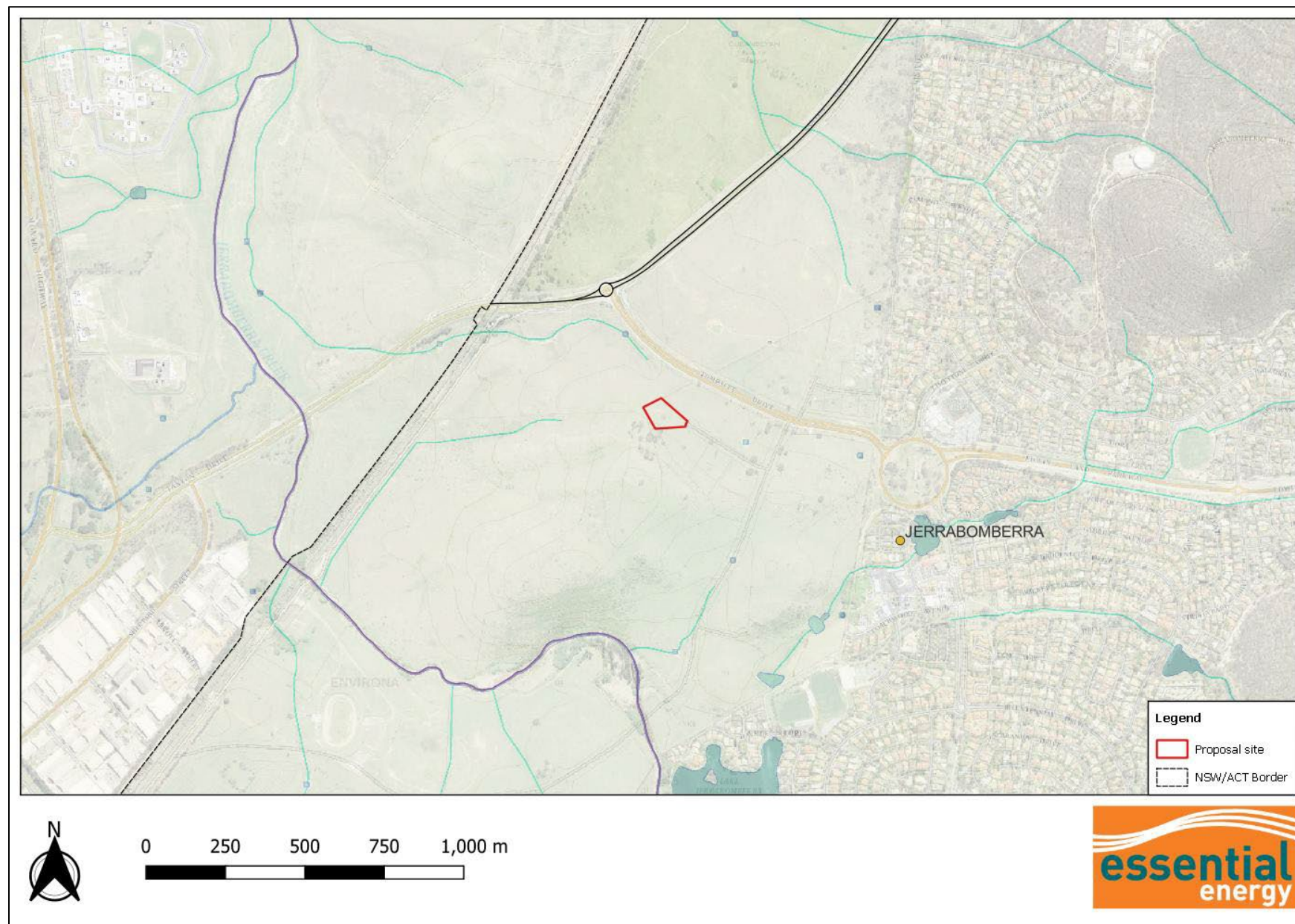


Figure 1-2: Proposal in the local context



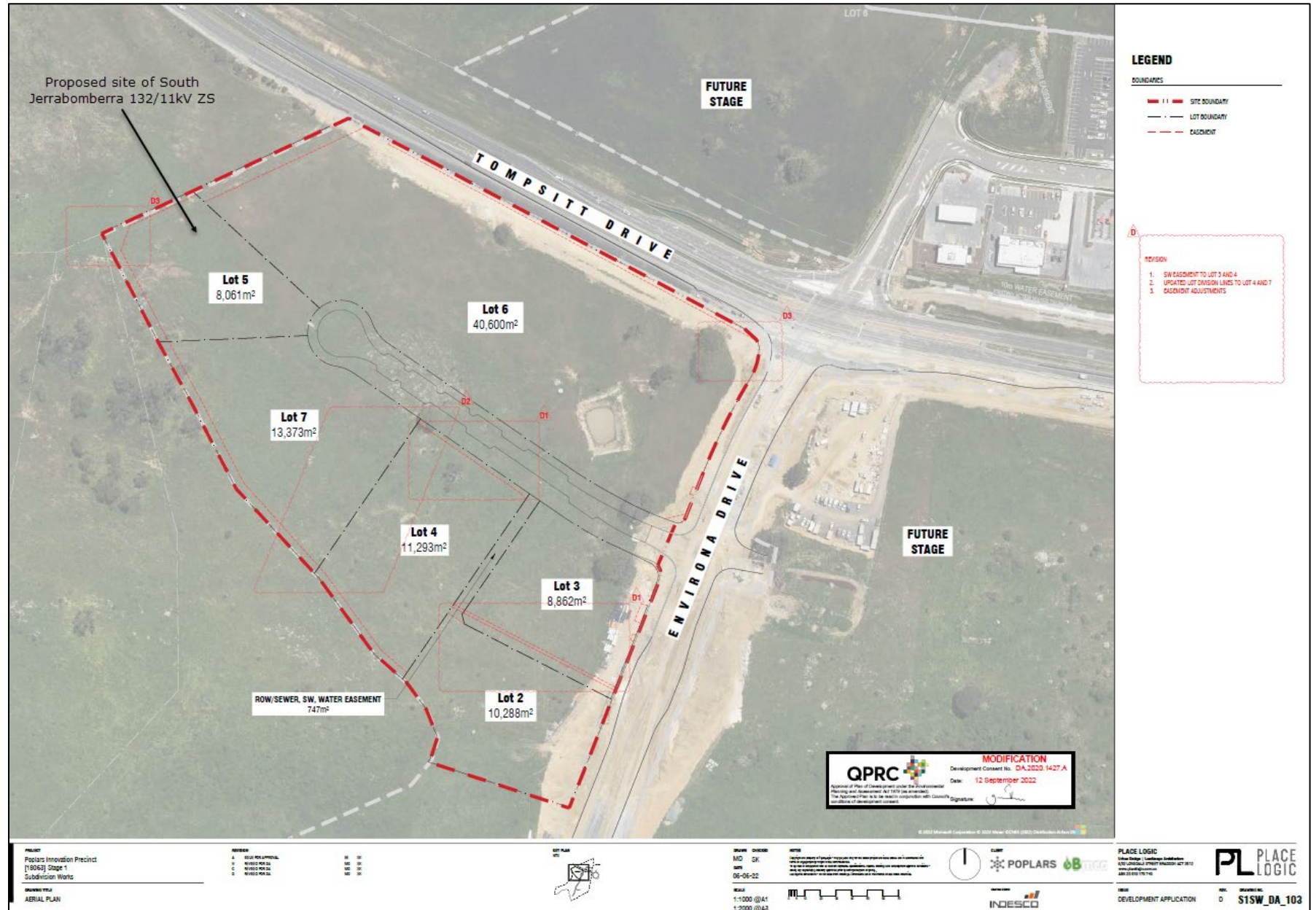


Figure 1-3: Proposal site in the context of the new six lot subdivision making up part of the Poplars Innovation Precinct





**Plate 1-1 – View of proposal site from end of Wolseley Place, showing level of existing disturbance associated with subdivision work**



**Plate 1-2 – View from the rear of proposed site, looking back towards Wolseley Place**

## 2. Description of the Proposal

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### 2.1 Scope of Works

The proposal involves the construction of a new 132/11kV ZS, within a separately approved six lot subdivision forming part of the PIP.

The following works are proposed to be carried out:

- Construction of a new 132/11kV ZS including
  - Benching works
  - Two transformer bays, with provision for a third in the future
  - High voltage switchgear operating at 11kV and 132kV
  - Masonry tilt panel building with amenities
  - Control equipment
  - Underground cabling and associated conduits
- Auxiliary equipment and structures including lightning masts, fencing, driveways, water and sewerage connections.

Although the current preliminary design includes three transformer bays, only two bays will contain operational 132/11kV transformers. The third bay will be a designated spare, should the need for an additional transformer be required in the future. Preliminary site arrangement and civil design is shown in **Figures 2-1** and **2-2**, respectively.

#### 2.1.1 Staging areas

The designated Lot 5 will house all the construction equipment required for the activity. Civil work will be completed by a suitably qualified contractor.

### 2.2 Design Criteria

The proposed new 132/11kV ZS will be primarily constructed to form a component of the SJHVSP, and increase electricity reliability in the broader region.

Siting of the ZS has been designed in careful consideration with the developers to ensure the ZS is located within a commercial/industrial precinct, away from future residential precincts. The design has also been sympathetic to the future surrounding building infrastructure and minimising direct views of certain pieces of electrical infrastructure from vehicle and pedestrian traffic along Tomsitt Drive. The design also avoids other sensitive and critical infrastructure within the immediate vicinity through consultation with important nearby stakeholders.

The design has been developed to meet the following criteria:

- Meet the design life requirements
- Be cost effective when assessed on a life cycle cost basis
- Be capable of being constructed cost-efficiently and within time constraints
- Provide durability and reliability of the intended function
- Minimise potential environmental impacts.



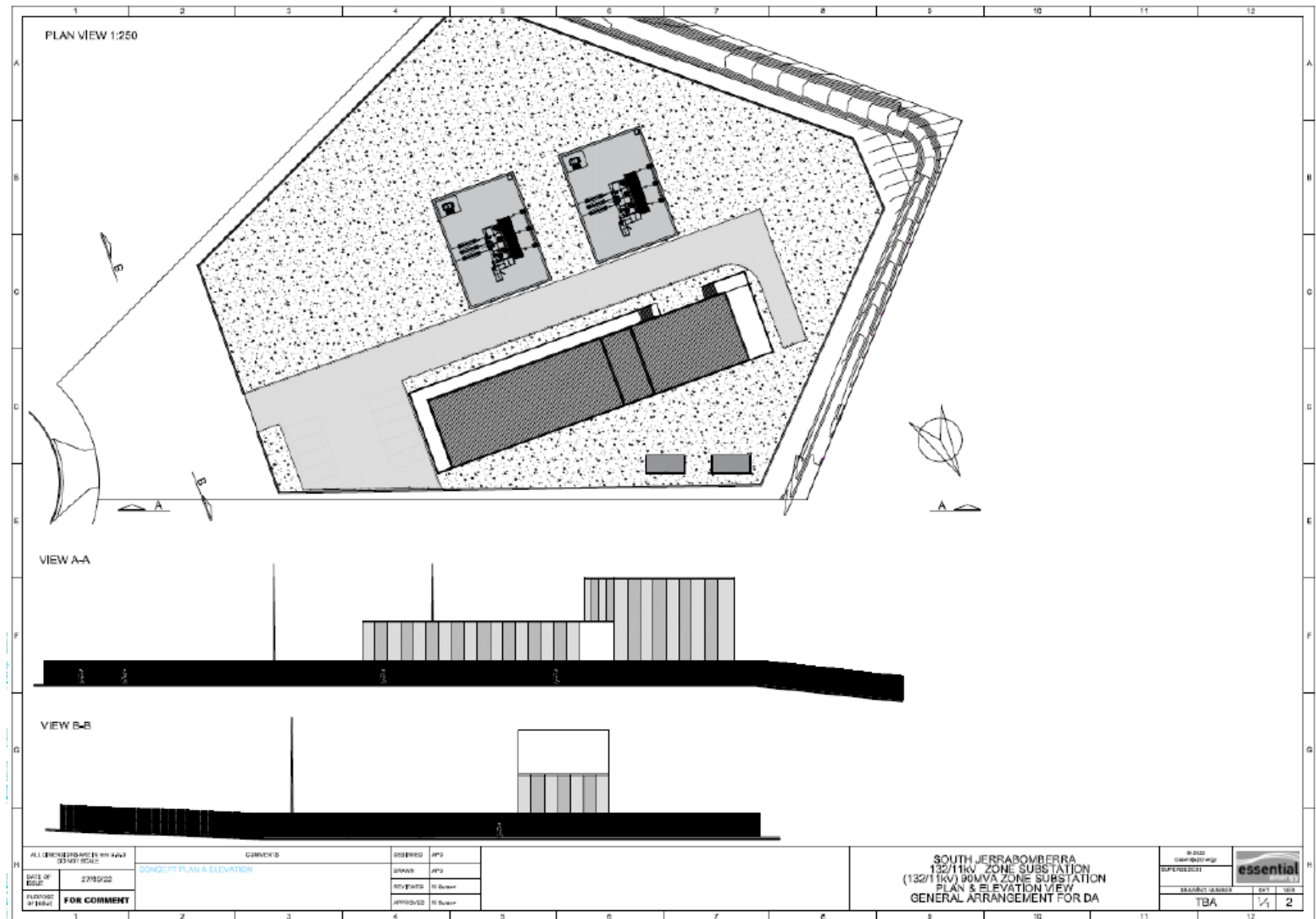


Figure 2-1: Preliminary Site Arrangement

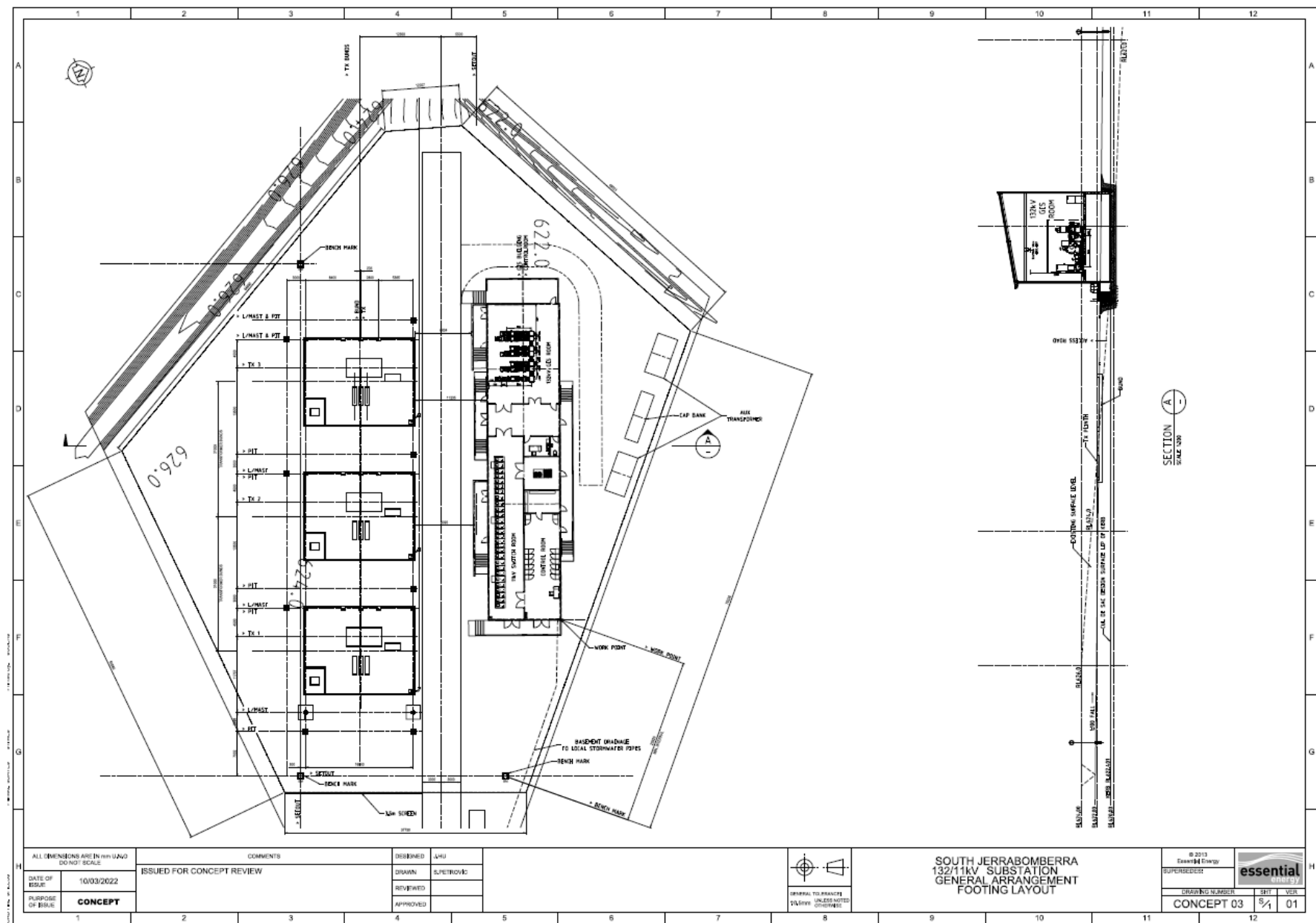


Figure 2-2: Preliminary Civil Design Plan

## 2.3 Building Code of Australia

Development by the Crown under section 6.28 of the EP&A Act is required to comply with the technical provisions of the State's building laws and in particular, the BCA.

Essential Energy's design standards for buildings and substations meet the requirements of the BCA where appropriate; and the relevant Australian standards (such as AS2067 2008 Substations and high voltage installations exceeding 1kV a.c.).

### 2.3.1 Utilities

Utilities and services (i.e., water, sewer) to service the six lot subdivision will be constructed as part of civil works for the subdivision. The new 132/11kV ZS will require connection to these services.

### 2.3.2 Fencing and signage

Security of a substation is of paramount importance due to the extreme dangers which energised electrical equipment can pose to untrained individuals. Adequate security fencing will be provided. The fence will be designed in accordance with Essential Energy's zone substation security fencing requirements.

### 2.3.3 Access and parking

Car parking will be provided within the substation yard. Given that the substation will be an unmanned facility, this will provide for more than adequate off-street parking.

## 2.4 Construction Activities

### 2.4.1 Timing and work hours

Construction work is expected to commence in February 2023, and take approximately 12 months to complete, weather dependant.

In considering the remote nature of the proposed substation site location, being at least 650m away from the nearest sensitive residential receiver, work hours will be between 7am and 6pm Monday to Saturday. On occasions, works outside these hours may be undertaken where the following requirements are met:

- Neighbours (and other sensitive receivers) adjacent to the works or the local council or the Environment Protection Authority (EPA) have been notified; and
- The works are justified on the basis that they are emergency works, or, because of supply security network outages or construction limitations, it is deemed that the works can only be achieved outside these hours.

### 2.4.2 Resources and equipment

The following equipment is likely to be used on site to complete the work:

- |                                 |                       |
|---------------------------------|-----------------------|
| • Excavator                     | • Concrete pump truck |
| • Backhoe                       | • Forklift            |
| • Elevated work platforms (EWP) | • Under borers        |
| • Trucks                        | • Bobcat              |
| • Concrete trucks               | • Water truck         |
| • Cranes                        | • Trencher            |
| • Grader                        | • Cable trucks        |
| • Roller                        | • Light vehicles.     |
| • Bulldozer                     |                       |

### 2.4.3 Impact mitigation

The mitigation measures as detailed in **Section 6** form part of the proposed activity and will be implemented, as required, as part of the construction and operational phases.

## **2.5 Operation and Maintenance Requirements**

Once the project is constructed, periodic maintenance will be required. Regular inspections of the infrastructure will be undertaken to help identify defects and hazards such as damaged components and vandalism. The site will not accommodate staff or contractors on a permanent basis. Periodic collection of waste may be required.

Likely maintenance activities include:

- Vegetation maintenance around perimeter of new ZS
- General landscape maintenance within the new ZS site
- Regular inspection and maintenance of ZS equipment.

## 3. Consultation

### 3.1 Overview

Community consultation defines the processes we use to seek views or provide information about projects. The term consultation can describe processes ranging from simply delivering information to residents, community information displays, or holding meetings with community representatives designed to actively seek feedback from local communities into a particular project.

The population as a whole is more aware than ever of their social, environmental and economic needs. They want to know about what is planned for their area and how it would impact on them.

Incorporating community consultation as a key business practice is both a necessary and a desirable path for Essential Energy to take. It must be undertaken in good faith and be transparent in all activities.

Essential Energy has in place a policy for community consultation on all major projects. The policy ensures that the community is informed about proposed development, and that concerns and issues are taken into consideration.

The engagement approach for the broader SJHVSP, of which the proposed 132/11kV ZS forms and integral part, is based on Essential Energy's Stakeholder Engagement Framework, prescribing to the IAP2 public participation spectrum. As part of the broader project consultation strategy, residents in NSW and ACT were consulted with regarding the project. Key elements of the consultation approach are summarised below:

- Letter box drop of project information newsletter to 2250 residences in the ACT and NSW
- Project information made available on Essential Energy's website
- Establishment of a free call line and email address.

Matters raised during the broader consultation process related to the powerline component of the SJHVSP, include the use of overhead powerlines and safety of the powerline to people (bushfire) and the environment.

### 3.2 Engaging the Community

In addition to letter box drops and providing information to respondents, Essential Energy has also directly engaged with a number of community based organisations.

**Table 3-1** details approaches to targeted consultation.

**Table 3-1: Essential Energy's engagement with relevant stakeholders**

| Title  | Organiser | Occurrence                                | Objective   | Attendees  |
|--|-----------|---|---|--|
| South Jerrabomberra Development Coordination Meeting | Council   | Monthly                                   | To identify, review, consider and resolve matters associated with the development of the South Jerrabomberra Innovation Precinct  | QPRC<br>VBC<br>Poplars Development<br>Essential Energy   |
| Jerrabomberra Residents Association (JRA)            | JRA       | Monthly (3 <sup>rd</sup> Wed every month) | Represents the interests of the Jerrabomberra community at the local, state and federal level in relation to issues directly affecting the Jerrabomberra community within the postcode of 2619. | Volunteers with periodic attendance by some of the key stakeholders and local community groups such as the police, conservation groups, sporting groups, and schools.<br><br>Essential Energy has attended a number of meetings both virtually and in-person to provide information and respond to questions |

### 3.2.1 Other Customer and Stakeholder Engagement

In addition to attendance at the meetings described in **Table 3-1**, Essential Energy has used various forms of engagement to reach out to community members potentially impacted by the project, including:

- Community briefings
- Ministerial and Member of Parliament (MP) briefings
- One on one meetings with the NSW Government, including the Biodiversity Conversation Trust, Department of Planning and Environment, Transport for NSW, and Department of Regional NSW
- E-mails and other direct correspondence with impacted landholders.

Ongoing engagement and project progression has also been created via the Essential Energy Engagement website (<https://engage.essentialenergy.com.au/>).

## 3.3 Consultation and its Requirements under the T&I SEPP 2021

Under the EP&A Act, Essential Energy is the determining authority for certain developments defined under the T&I SEPP as being permissible without consent. While the nature of work being undertaken does not require council consent, Division 1 of the T&I SEPP does provide consultation requirements with the local council where works are anticipated to impact upon council infrastructure, local heritage items, flood liable land and certain land within the coastal zone. In addition, consultation may be required with the State Emergency Service (flood liable land) and other specified public authorities in certain circumstances.

The proposed construction and operation of the new 132/11kV ZS will be limited to the designated lot for ZS site. The proposal site will include its own site drainage, and will likely require connection to the local stormwater system installed as part of the broader subdivision, however, this is unlikely to have a substantial impact on the stormwater system. The proposal site will also require connection to water supply and sewage systems, however given it is an unmanned site, it will not result in any substantial impact to either. While some disruption to local roads may occur during the delivery of large plant and equipment, the works are considered to be minor and inconsequential and will not involve significant disruption of pedestrian or vehicle traffic. Consultation with the local council is therefore not triggered under clause 2.10 of the T&I SEPP.

The proposal site is not located within a mapped area of local heritage, according to QPR LEP. Consultation with the local council is therefore not triggered under clause 2.11 of the T&I SEPP.

The proposal is not located on flood liable land, or located within the coastal zone. Consultation with the local council is therefore not triggered under clause 2.12 or 2.14, and consultation with State Emergency Services (SES) is not triggered under clause 2.13, of the T&I SEPP.

The proposal is not located on land, or adjacent to land, that would trigger consultation with other specified public authorities under clause 2.15 of the T&I SEPP.

In addition to consultation requirements, additional notification and approval requirements are outlined in **Table 5-2**.



## 4. Project Alternatives

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### 4.1 Do Nothing (Maintain Current Supply Infrastructure)

One option would be to refrain from undertaking any further development of the network in the area. The consequences of Essential Energy doing nothing would be that, as years passed, supply interruptions would occur more frequently and affect more people, and there is insufficient capacity within the existing electricity supply network to meet the demand anticipated to be required by the SJDP.

The proposed 132kV ZS is an integral component of the SJHVSP and without the augmentation of high voltage supplies, additional electricity supplies at the distribution level are not possible.

Due to Essential Energy's network licence obligations, the 'do nothing' option is not a viable alternative to the proposed new SJHVSP, of which the proposed new 132/11kV ZS is a vital component.

### 4.2 Project Planning Options

Planning for the electricity supply to the SJDP area began in 2007 in response to an invitation to Essential Energy to comment on the Tralee Local Environmental Plan. Several options to supply the development were canvassed including supply from the TransGrid and ACT (Actew AGL) networks.

Over several years, multiple route options were investigated from Essential Energy's existing network configuration. In 2021, the final preferred route of the powerline that had the least societal and environmental impacts was identified as the inactive rail corridor along the ACT and NSW boarder. The location of the ZS site has been selected for ease of connection into new powerline, is in close proximity to large loads, and minimise environmental impact

## 5. Environmental Legislation

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The following section addresses the regulatory and statutory context of the proposed activity including its definition, land use permissibility, and compliance with the relevant environmental planning instruments (EPIs).

### 5.1 Environmental Planning and Assessment Act, 1979 (EP&A Act)

The EP&A Act is the primary piece of legislation regulating land use planning in NSW. It provides the framework for the development of state and local planning instruments which, through their hierarchy, determine the statutory process for environmental impact assessment. Under the EP&A Act there are two distinct processes, which are:

- Part 4 - 'development' proposals which require consent, including state significant development; and
- Part 5, which regulates 'activities' and requires an approval by a determining authority (e.g. Essential Energy). Part 5 also includes an assessment pathway for state significant infrastructure.

The proposal satisfies the definition of an activity under Part 5 of the EP&A Act given the proposal:

- May be carried out without development consent;
- Is not exempt development; and
- Would be carried out by a determining authority or requires the approval of a determining authority.

A determining authority, for the purposes of this activity, is defined in Part 5 of the EP&A Act to include, but not be limited to, a state-owned corporation within the meaning of the *State Owned Corporations Act 1989*. Essential Energy is listed as a state-owned corporation, and would therefore be the determining authority for the activity covered by this REF.

In accordance with state and local EPIs (described below), this REF has been prepared under Part 5, Division 5.1 of the EP&A Act to assess the possible environmental outcomes of the proposed activity. In determining the proposal and degree of impact, Essential Energy is required to consider section 5.5 of the EP&A Act and clause 171 of the EP&A Reg which are summarised in **Section 9**.

In accordance with clause 171(4) of the EP&A Reg, Essential Energy is required to publish this REF on the NSW planning portal, as the capital value of the substation will exceed \$5 million, prior to the activity commencing.

### 5.2 Environmental Planning Instruments

EPIs regulate the permissibility to undertake an activity and the type of assessment process that is required. EPI is the generic term used to describe state environmental planning policies, regional environmental plans<sup>1</sup> and local environmental plans (LEPs). EPIs that apply to this development are outlined below.

#### 5.2.1 State Environmental Planning Policies

##### 5.2.1.1 State Environmental Planning Policy (Transport and Infrastructure) 2021

*State Environmental Planning Policy (Transport and Infrastructure) 2021* (T&I SEPP) consolidates and updates the planning process for new infrastructure. Subject to certain exemptions the T&I SEPP allows development for the purpose of an electricity transmission or distribution network to be carried out by or on behalf of an electricity supply authority or public authority without consent on any land.

Exemptions to this broad (on any land) application include developments which require Part 4 approval under *State Environmental Planning Policy (Planning Systems) 2021* (Planning Systems SEPP) or activities triggering designated development under *State Environmental Planning Policy*

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<sup>1</sup> The *Environmental Planning and Assessment Amendment Act 2008 No 36* repealed the power to make regional environmental plans. Regional environmental plans still in force are now considered to be state environmental planning policies.

(*Resilience and Hazards*) 2021.

The proposed activity falls within the scope of the T&I SEPP as being permissible without development consent.

Consultation requirements under the Infrastructure SEPP are addressed in **Section 3.3**, whilst notification provisions are detailed in **Table 5-2**.

### 5.2.2 Local Environmental Plans (LEP)

LEPs are developed by councils (they become law only after Ministerial approval) and guide planning decisions for local government areas. According to the Department of Planning and Environment (DPE), LEPs, through zoning and development controls, allow councils to regulate the ways in which land is used. Council LEPs also list heritage items that are of local heritage significance.

The application of the T&I SEPP overrides the need to consider zoning controls, as developments covered by the T&I SEPP are permissible on *any land* without consent. However, the T&I SEPP provides consultation and notification provisions where activities are likely to substantially impact upon council-related infrastructure, or items of local heritage significance.

## 5.3 Key Legislation

### 5.3.1 Environment Protection and Biodiversity Conservation Act 1999 (Commonwealth) (EPBC Act)

The Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (EPBC Act) requires the approval of the Commonwealth Minister for the Environment for actions that may have a significant impact on matters of national environmental significance (NES). Approval from the Commonwealth is in addition to any approvals under NSW legislation.

The EPBC Act lists nine matters of NES which must be addressed when assessing the impacts of a project. An assessment of how the project may impact on matters of NES is provided in **Table 5-1**.

**Table 5-1: Matters of national environmental significance**

| Matter of national environmental significance  | Impact  |
|--|---|
| World heritage properties  | There are no world heritage properties proximate to the proposed development, or that would potentially be affected by the proposal.  |
| National heritage places   | There are no national heritage places proximate to the proposed development, or that would potentially be affected by the proposal.   |
| Wetlands of international importance   | There are no Ramsar wetlands proximate to the proposed development, and the proposal is not likely to have a significant impact on the ecological character of a Ramsar wetland.                        |
| Commonwealth listed threatened species and ecological communities                          | The proposal is not expected to have any significant impact on threatened species, populations or ecological communities listed within Commonwealth (or State) legislation (refer <b>Section 6.5</b> ). |
| Great Barrier Reef Marine Park   | The proposal would not result in any impacts to the Great Barrier Reef Marine Park.   |
| Commonwealth listed migratory species  | The proposal is not expected to have an impact on listed migratory species (refer <b>Section 6.5</b> ).   |
| Nuclear action   | The proposal would not result in any nuclear action, nor would the activity require any nuclear action to be undertaken.  |
| Commonwealth marine areas  | There are no Commonwealth marine areas proximate to the proposed development, or that would potentially be affected by the proposal.  |
| Impacts on water resources resulting from large coal mining and coal seam gas developments | The proposal is not related to any large coal mining or coal seam gas developments. The project would not impact on water resources.  |

The proposal site is part of the six lot subdivision forming part of the PIP, for which an approval under sections 130(1) and 133(1) of the EPBC Act has been granted (EPBC 2020/8801). The

proposed new 132/11kV substation will be undertaken within the footprint of this approval at the completion of bulk earthworks relating to the subdivision. Given that the proposal would not significantly impact on matters of NES in addition to impacts approved for the subdivision, and would not be carried out on Commonwealth land, the EPBC Act is not triggered and approval from the Commonwealth Minister for the Environment and Water is not required.

### 5.3.2 Biodiversity Conservation Act 2016

The *Biodiversity Conservation Act 2016* (BC Act) provides the process for listing threatened species, threatened ecological communities, and areas of outstanding biodiversity value, and details the process for assessing impacts on those matters.

Section 1.7 of the EP&A Act requires that assessment of an activity must consider its impact on threatened species, threatened populations, and threatened ecological communities or their habitats in accordance with Part 7 of the BC Act. The assessment for determining whether a proposed development or activity is likely to significantly affect threatened species or ecological communities, or their habitats, referred to in section 7.3 of the BC Act, determines whether the proposed works are likely to have a significant impact. If a significant impact is determined, a species impact statement (SIS) is required, or if the proponent so elects, a Biodiversity Development Assessment Report (BDAR) can be prepared.

The proposed ZS site is not located within a declared area of outstanding biodiversity value. The proposed activity, being construction of the ZS, will be carried out on highly disturbed land associated with the PIP, which has been subject to a separate BDAR, prepared to support a development application (DA) for the subdivision under Part 4 of the EP&A Act. A significant impact on threatened species, populations or ecological communities as a result of the proposal is considered unlikely (refer to **Section 6.5**).

### 5.3.3 Biosecurity Act 2015

The *Biosecurity Act 2015* (Biosecurity Act) provides for the prevention, elimination, minimisation and management 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. Section 22 of the Biosecurity Act requires that any person who deals with biosecurity matter, or a carrier, and who knows, or ought reasonably to know, the biosecurity risk posed or likely to be posed by the biosecurity matter, carrier or dealing, has a biosecurity duty to ensure that, so far as is reasonably practicable, the biosecurity risk is prevented, eliminated or minimised. This obligation is referred to elsewhere within the Biosecurity Act as the “general biosecurity duty”.

Given the excavation and disturbance of surface soils associated with the proposed activity, Essential Energy has a general biosecurity duty to ensure the biosecurity risks posed by the potential for the introduction of weed species are prevented, eliminated or minimised.

### 5.3.4 Electricity Supply Act, 1995 (ES Act)

The *Electricity Supply Act 1995* (ES Act) establishes a comprehensive wholesale and retail market in electricity and regulates the network operations, wholesale trading, and electricity supply in the retail market. The ES Act confers special powers on Essential Energy in respect of development and maintenance of electricity infrastructure and sets out the licencing regime. In particular, it allows Essential Energy to trim and remove trees, carry out works on public roads, and acquire land.

The ES Act also requires that no works (other than routine repairs or maintenance works) may be carried out unless 40 days’ notice has been given to the local council to make a submission in relation to the proposal. Any submission must be considered by Essential Energy.

### 5.3.5 Heritage Act, 1977 (Heritage Act)

The *Heritage Act 1977* (Heritage Act) provides for the protection of heritage items of local and state significance. Such items may include places, buildings, works, relics, moveable objects, or precincts with historical, scientific, cultural or aesthetic value to the state. Where works are likely to impact upon an item listed on the State Heritage Inventory (SHI), approval may be required under two sections of the Heritage Act:

- Section 60 approval relating to impacts on items listed on the SHI; and
- Section 140 approval requiring an excavation permit for activities with potential to excavate or disturb a relic.

As described in **Section 6.7.2** there is no foreseeable likelihood that an item listed on the SHI would be impacted by the proposal, therefore further assessment and a permit from the Department is not required. Further discussion of potential impacts and measures to minimise impacts to items of local heritage significance is provided in **Section 6.7**.

### **5.3.6 Local Government Act 1993 (LG Act)**

The Local Government Act 1993 (LG Act) implements a commitment made under section 51 of the NSW Constitution Act 1902 that requires the continuance of local government. The LG Act provides the legislative framework in which local councils operate, and encourages local participation in the affairs of local government.

Whilst the central focus of the LG Act is about the governance of local councils and the participation of the local community in its affairs, the LG Act also includes provisions for approval of certain works. In areas outside of the operation of the Sydney and Hunter Water Boards, local councils have the responsibility for the regulation of water supply, sewerage and stormwater drainage work.

According to section 68 of the LG Act, approval from local council is required for water supply work, sewerage work, and stormwater drainage work. Water supply work includes the extension of any pipes or fittings of any water services communicating or intended to communicate, directly or indirectly, with any water main of a council. Sewerage work includes not only works related to the sewer system, but also septic tank disposal systems.

As the proposal will require construction and extension of sewerage and water supply service pipes or fittings or fixtures communicating or intended to communicate, directly or indirectly, with a sewer and water supply of a council, it is likely a section 68 approval will be required from the local council.

### **5.3.7 Local Land Services Act, 2013 (LLS Act)**

The *Local Land Services Act 2013* (LLS Act), established Local Land Services, a government agency with the responsibility for providing advice on biosecurity, natural resources and agricultural advisory services in NSW. The LLS Act includes provisions for the regulation of native vegetation including the approval of certain activities.

Under the LLS Act, approval is required from the Minister for the Environment or delegate to clear native vegetation (exemptions apply). Exemptions include, but are not limited to, urban areas, electricity line maintenance and Part 5 activities under the EP&A Act.

The LLS Act is administered by the various local land services under delegated authority by the Minister for the Environment.

Given that the proposal will be assessed under Part 5 of the EP&A Act, the provisions relating to the LLS Act are not applicable.

### **5.3.8 National Parks and Wildlife Act, 1974 (NPW Act)**

The *National Parks and Wildlife Act 1974* (NPW Act) provides for the management of all national parks, historic sites, nature reserves, reserves, Aboriginal areas and state game reserves. It also provides for the protection and care of native flora and fauna, and Aboriginal places and objects throughout NSW. Under the NPW Act it is an offence, without authorisation, to:

- Harm an Aboriginal object or place without consent;
- Pick or harm any plant or animal that is protected or is a threatened species, population or ecological community; or
- Damage any critical habitat, or habitat of a threatened species, an endangered population or an endangered ecological community or reserved land.

When an activity is likely to harm an Aboriginal object or place, approval under section 90 is required.

The NPW Act also serves to direct the management and protection of reserved land<sup>2</sup>. In relation to utility installations, the Minister for the Environment may grant easements or rights of way through reserved land for the conveyance or transmission of electricity.

<sup>2</sup> Land being a national park, historic site, state conservation area, regional park, karst conservation reserve, nature reserve or an Aboriginal area.

The proposal site is not located on reserved land. Approval under the NPW Act is not required in respect of the proposed activity.

As described in **Section 6.6**, based on the design, and mitigation measures, the proposal is not likely to impact upon Aboriginal objects.

### **5.3.9 Protection of the Environment Operations Act, 1997 (POEO Act)**

The *Protection of the Environment Operations Act 1997* (POEO Act) provides a framework for the licencing of activities that have potential to result in pollution of the environment. The POEO Act is administered by OEH. An environment protection licence is not required for the proposed activities as they do not fall within Schedule 1 of the POEO Act; however, the following restrictions apply:

- The proposal must not pollute waters;
- Waste from the works must not be wilfully or negligently disposed of in a manner that harms or is likely to harm the environment;
- Waste must not be transported to a place that cannot lawfully be used as a waste facility for that waste;
- There must be no litter in or on a public place or an open private place caused by workers; and
- Any environmental incident that involves actual or potential harm to the health or safety of human beings or to ecosystems must be reported to the Environment Protection Authority (EPA).

During construction, there is the potential for discharge to surface waters from excavation, and trenching activities. A number of management strategies are available to Essential Energy for the discharge to surface waters, including discharging water over grassed or well vegetated areas away from waterways, or the use of filter bags in urban environments.

### **5.3.10 Roads Act 1993 (Roads Act)**

The *Roads Act 1993* (Roads Act) provides for the ownership and management of public roads, and also requires the consent of the appropriate roads authority for various works in respect of certain public roads.

Section 138 of the Roads Act requires the consent of the appropriate roads authority for various works in respect of public roads and classified roads. Under Schedule 2 (5) (1) of the Roads Act Essential Energy is exempt from obtaining approval for works on or over an unclassified road other than a Crown road. However, works that require a connection to or crossing of a classified<sup>3</sup> road must be approved by Transport for NSW (TfNSW).

The proposed activity will be limited to private property. No work within, on, or over a classified road is required, therefore there is no requirement for a Section 138 approval from TfNSW.

### **5.3.11 Water Act, 1912 (Water Act)**

Under the *Water Act 1912*, for any temporary or permanent works not defined in a gazetted water sharing plan under the *Water Management Act 2000* (WM Act), a licence or permit is required to:

- Extract water from a stream, river or water course via a pump or other work; or
- Extract groundwater via any type of bore, well, spear point or groundwater interception scheme (including dewatering).

It is unlikely that the shallow excavation and trenching works (to a maximum of approximately 1.2m depth) will require dewatering during construction of the proposal.

### **5.3.12 Water Management Act, 2000 (WM Act)**

The *Water Management Act 2000* (WM Act) governs the issue of new water licences and the trade of water licences and allocations for those water sources (rivers, lakes and groundwater) in NSW where water sharing plans have commenced. Under the WM Act, should water need to be extracted from a surface water source, defined in gazetted water sharing plan, then three licence/approvals must be obtained including:

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<sup>3</sup> Classified Roads include main roads, highways, freeways, a controlled access road, a secondary road, a tourist road, a tollway, a transitway and State work.

- An Access Licence to obtain access to a share of the water source;
- A Works Approval to obtain permission to install and use the works for water supply, drainage or flood mitigation work. For groundwater extraction or dewatering, an Aquifer Interference Approval may be required. A Controlled Activity Approval may be required for a works location in, on, or under waterfront land; and
- A Water Use Approval to obtain permission for how the water would be used.

Under the WM Act, a controlled activity means:

- a) the erection of a building or the carrying out of a work (within the meaning of the *Environmental Planning and Assessment Act 1979*), or
- b) the removal of material (whether or not extractive material) or vegetation from land, whether by way of excavation or otherwise, or
- c) the deposition of material (whether or not extractive material) on land, whether by way of landfill operations or otherwise, or
- d) the carrying out of any other activity that affects the quantity or flow of water in a water source.

The WM Act defines an aquifer interference activity as involving any of the following:

- a) the penetration of an aquifer,
- b) the interference with water in an aquifer,
- c) the obstruction of the flow of water in an aquifer,
- d) the taking of water from an aquifer in the course of carrying out mining, or any other activity prescribed by the regulations,
- e) the disposal of water taken from an aquifer as referred to in paragraph.

The proposal would not include works in locations that would trigger the above licences/approvals (including wetlands). In addition, Essential Energy, a public authority, is exempt from section 91E (1) of the WM Act in relation to all controlled activities that it carries out in, on, or under waterfront land.

## 5.4 Summary of Licences, Permits, Approvals and Notifications

Specific approvals required for the construction, maintenance and operation of the proposal are outlined in **Table 5-2**.

**Table 5-2: Summary of licences, permits, approvals and notifications**

| Legislation  | Authority                                  | Requirement   |
|--|--|---|
| <i>State Environmental Planning Policy (Transport and Infrastructure) 2021</i> | Local Council and occupiers adjoining land | 21 days notification required for works involving new or existing substations. Essential Energy's Design Services will be responsible for this notification.<br>These notifications have been sent.   |
| <i>Electricity Supply Act 1995</i>   | Local Council                              | 40 days notice of the proposed works must be given. Essential Energy's Design Services will be responsible for this notification.<br>This notification has been sent.   |
| <i>Local Government Act 1993</i>   |  | Section 68 approval may be required for construction and extension of water supply and any sewerage service pipes or fittings or fixtures communicating or intended to communicate, directly or indirectly, with any water supply and sewer of a council. |

## 6. Environmental Assessment

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### 6.1 Air Quality and Greenhouse Gases

#### 6.1.1 Existing environment

The proposal site is situated on predominately cleared land, historically used for grazing. More recently the proposal site has undergone a degree of disturbance through vegetation clearing, and bulk earthworks, including benching, associated with the six lot subdivision forming the PIP. The main air quality influences on the existing environment would therefore be agricultural, as well as that associated with the construction of the subdivision, including the generation of dust. Transport exhaust emissions from vehicles and machinery used for construction of the subdivision, as well as vehicles utilising Tomsitt Drive to the north of the proposal site, would also contribute to local air quality in the vicinity of the proposal site.

The closest existing sensitive receivers are residential properties located approximately 650m east, within an existing residential subdivision associated with Franklin Court, north of the Jerrabomberra Parkway roundabout. Once the subdivision is constructed there will be several commercial premises in the near vicinity of the proposal site.

#### 6.1.2 Assessment of impact

##### 6.1.2.1 Air quality during construction

It is expected that during excavation and backfilling works there would be minor amounts of dust generated from the disturbance of soil, and wind erosion of any exposed stockpiles.

There will be minimal exhaust emissions from vehicles. Exhaust emissions from construction equipment are likely to include nitrogen oxides (NO<sub>x</sub>), carbon monoxide (CO), sulphur oxides (SO<sub>2</sub>), hydrocarbons, and total suspended particulates. All vehicles will be fitted with approved exhaust systems to maintain vehicle exhaust emissions within accepted standards.

Works will be limited to the proposal site itself. Impacts to air quality will be small in intensity, over twelve months, and will be small in scope. It is unlikely that there will be an odour impact. Any impacts on air quality will be short-term and localised.

##### 6.1.2.2 Air quality during operation

Once operational, the ZS will have negligible impacts on air quality. All Essential Energy's assets are subject to regular maintenance and monitoring to ensure all equipment is operating effectively. Capped surfaces, gardening and landscaping will ensure no dust is generated during the lifetime of the substation.

#### 6.1.3 Environmental mitigation measures

Appropriate dust minimisation measures will be implemented as required, including:

- Any potential dust-borne materials transported to and from the activity site will be covered at all times during transportation
- Any temporary stockpiles of surplus excavated material will be covered or wet down during dry and windy conditions
- All vehicles and machinery will be well maintained according to manufacturer requirements to ensure emissions are kept within acceptable limits.

#### 6.1.4 Conclusion

The proposal is not anticipated to result in substantial or uncontrollable dust or exhaust emissions in the area during construction or operation. Any air quality impacts would be short-term and minor during construction or future maintenance. Given the mitigation measures outlined in this assessment the overall environmental risk is considered to be low.



## 6.2 Geology and Soil

### 6.2.1 Existing environment

Reference to the NSW Geology Plus website indicates the proposal site is underlain by Silurian S-type volcanic rocks varying in composition from felsic to intermediate, and associated sedimentary rocks. Lithologies include pyroclastic flows (ignimbrite), tuff, sandstone, shale, and minor limestone.

Review of the Mitchell Landscapes Mapping V3 (Department of Environment, Climate Change and Water [DECCW] 2010a) indicates that the proposal site is located on the Canberra Plains soil landscape, comprising open grassy plains with meandering channels and terraces in Quaternary alluvium of loams and sandy clays, with small areas of red-brown sands of source bordering dunes over Silurian rhyolite and rhyodacite. General elevation is between 650m and 800m, with peaks to 1000m. Soils are characterised by shallow stony uniform loams on steeper slopes, stony harsh red-brown texture-contrast soils on alluvial fans from ranges, yellow-brown to yellow texture-contrast soils on the alluvium, usually with hard setting and bleached A-horizons. **Figure 6-1** illustrates the soil landscapes relative to the proposal site.

Given the elevation of the land and distance from the coast, the proposal site is not likely to contain actual or potential acid sulfate soils.

### 6.2.2 Assessment of impact

The proposed works will involve site disturbance through excavations, vegetation (groundcover) removal, construction access, additional benching works and general construction activities associated with the construction of the substation. These activities have the potential to impact on soil stability and erosion potential within the site. However, the extent of these impacts is likely to be minimal as works will be restricted to the ZS site. The proposed activity is expected to have a low impact on soils and geology in the area.

Mitigation measures proposed to manage erosion and sedimentation are outlined in **Section 6.2.3**. Water quality impacts are discussed in **Section 6.3.2**, air quality impacts are discussed in **Section 6.1.2**, and contamination impacts are discussed in **Section 6.8.2**.

### 6.2.3 Environmental mitigation measures

The following mitigation measures will be employed to manage erosion and sedimentation:

- Risks associated with sediment and erosion will be managed in accordance with The Blue Book – Managing Urban Stormwater: Soils and Construction (Landcom 2004)
- Disturbed areas will be stabilised as soon as practicable following construction activities
- Essential Energy's CEOP8064 Management of Excavated Material; Guideline for Construction Sites will be consulted to determine the most appropriate beneficial reuse or disposal method for any surplus excavated materials.

### 6.2.4 Conclusion

The proposal is not anticipated to have any adverse impacts on the soils and geology of the environment. Given the mitigation measures outlined in this assessment, the overall environmental risk is considered to be low. Further potential impacts to water quality are discussed in the following section.

## 6.3 Water Quality and Hydrology

### 6.3.1 Existing environment

The closest waterways are two unnamed Strahler First Order drainage lines commencing approximately 150m north and 250m west of the proposal site, respectively. The closest named waterway is Jerrabomberra Creek, located approximately 670m south at its closest point. Current site drainage would be expected to follow overland flow, towards the aforementioned drainage lines, and eventually south towards Jerrabomberra Creek. Surface flows are directed around the subdivision or flows within the subdivision are directed into roadside stormwater drains in Wolseley Place.

**Figure 6-2** provides an illustration of waterways in the vicinity of the proposal site.

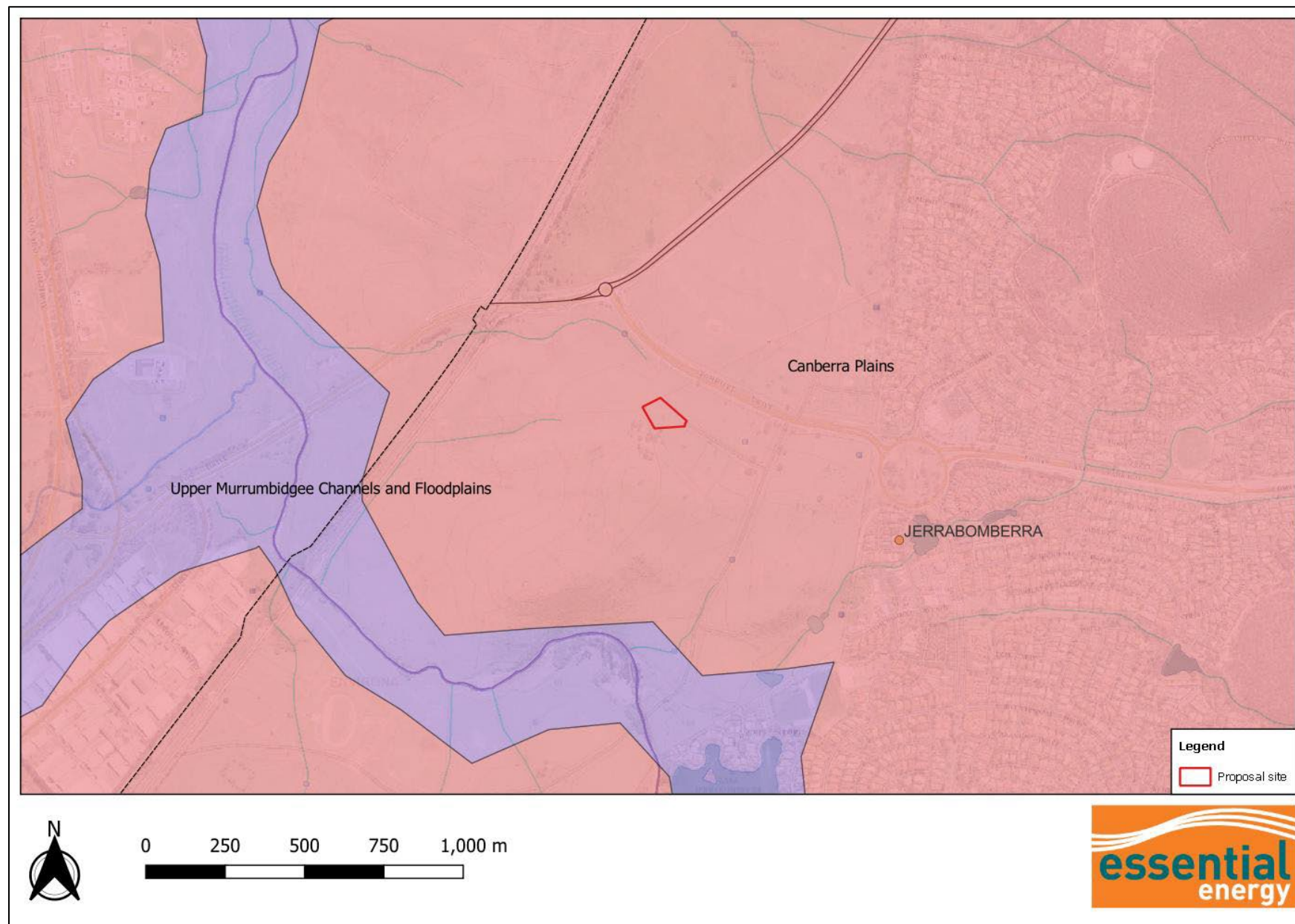


Figure 6-1: Soil landscapes relative to the proposal site

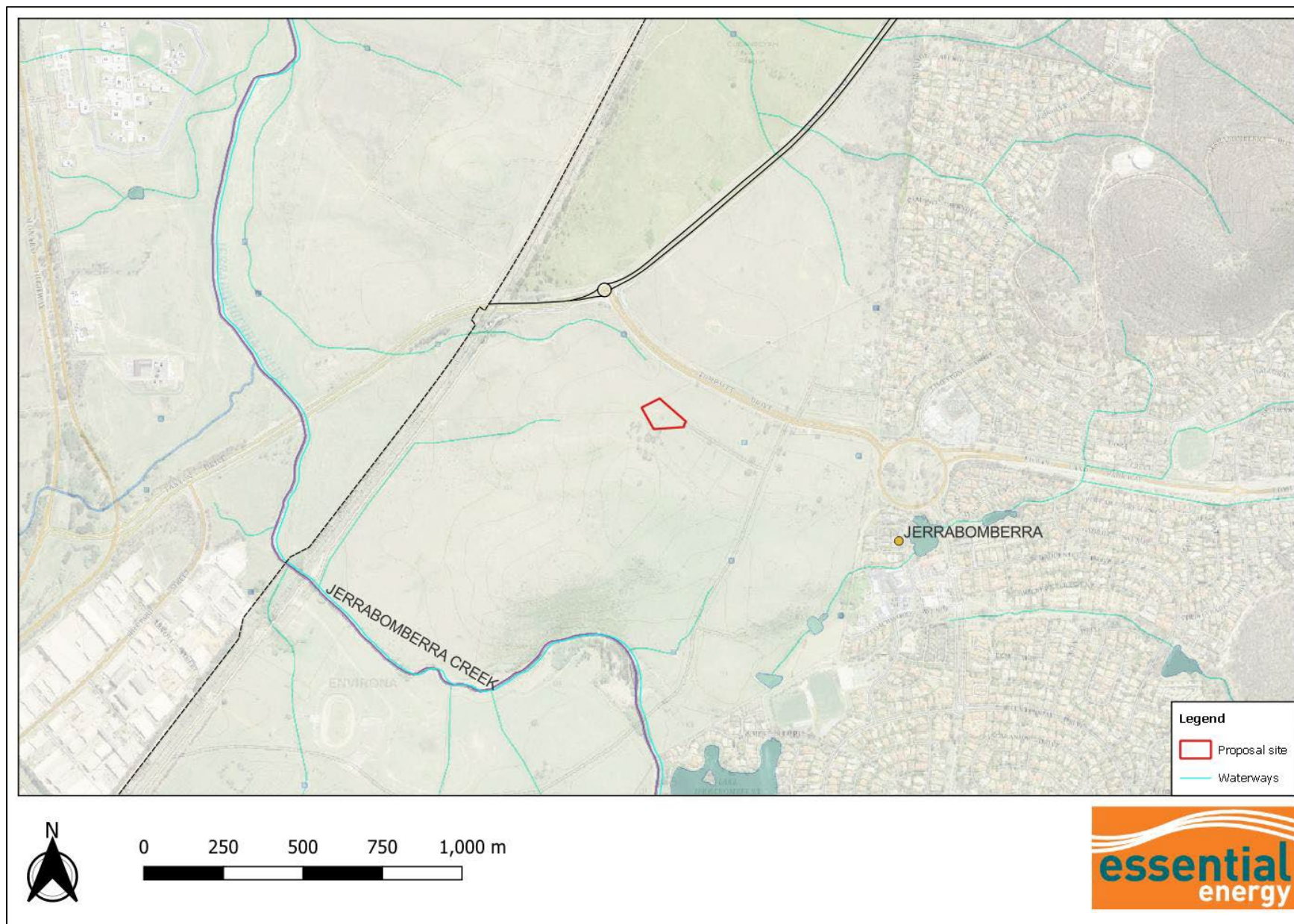


Figure 6-2: Waterways in the vicinity of the proposal site



### 6.3.2 Assessment of impact

The following activities have the potential to impact on water quality during the construction and operation of the project:

- Earthworks, including benching and excavations
- Concreting works
- Fuel or oil leaks from construction and maintenance equipment.

These activities have the potential to affect the water quality in the area. In consideration of the small, isolated area of disturbance and location away from the receiving waterways, any potential impacts to surface water flows are likely to be negligible. Similarly, the proposal is not expected to have an impact on the Jerrabomberra Creek system.

Regarding groundwater, it is unlikely that excavation and trenching works will result in interaction with any aquifer.

As the construction of the proposed activities presents no impediments to surface water flows, it is expected that there would be no impact on local hydrological conditions.

### 6.3.3 Environmental mitigation measures

The following mitigation measures will be applied:

- Control measures will be implemented to manage risks associated with the handling of fuel through using spill trays when undertaking in field re-fuelling
- Disturbed areas will be managed in accordance with the requirements of the Blue Book to minimise potential impacts to waterways. Sediment fencing will be erected, where required, downslope of disturbed areas, and impacts would be minimised where practicable. The use of filter bags may be required to discharge collected sediment-laden water where there are insufficient grassed areas available
- Any water collected in excavations and trenches during rainfall and surface water ingress should be pumped to a grassed area on-site (where a suitable area is available) to allow for infiltration, reused for dust suppression, or pumped to stormwater using a sediment sock. All options should be conducted in a manner that does not result in turbid water entering the stormwater system or nearby waterway.

### 6.3.4 Conclusion

The proposal is not anticipated to have any impact upon the water quality or hydrological conditions in the area. Any impacts that might occur would be short-term and minor, and would occur during construction and maintenance. Given the mitigation measures outlined in this assessment, the overall environmental risk is considered to be low.

## 6.4 Noise and Vibration

### 6.4.1 Existing environment

The proposal site is located in a predominately rural environment, with some urban and commercial areas located nearby. The main noise influences on the existing environment would be road traffic noise from Tomsitt Drive to the north, and machinery and vehicles associated with works related to the SJDP, as well as commercial and domestic noise sources. The closest existing sensitive receivers are residential properties located approximately 650m east, within an existing residential subdivision associated with Franklin Court, north of the Jerrabomberra Parkway roundabout. Once the subdivision is constructed there will be several commercial premises in the near vicinity of the proposal site.

With the exception of current construction noise associated with the construction of the broader subdivision, the immediate surrounding landscape would be characterised as a low noise environment.

## 6.4.2 Assessment of impact

### Construction noise

Noise impacts during construction may potentially disturb sensitive receivers in close proximity to the ZS. The main sources of noise during the construction phase will be equipment needed for site works and the transportation and installation of electrical equipment. The following activities are likely to be the main sources of construction noise impacts:

- Site preparation and benching
- Vehicles and trucks transporting construction materials to and from the site
- Set up and movement of construction vehicles and equipment
- Alteration of traffic movements on surrounding roads.

Construction vehicles will use the local road network to access the proposal site. Given the duration of the works, surrounding land use, the open landscape, the nature of existing traffic movements and relatively low intensity construction methods, it is anticipated that construction activities will not substantially affect the ambient noise in the area.

### Operational noise

The proposal will include the installation of a new building housing high voltage switchboards, and two new outdoor 132/11kV transformers. Noise from the 132/11kV transformers has been conservatively estimated at 75dB(A) (worst case scenario with fans and pumps in operation).

Based upon the land use type of the local area, a background noise level of 30dB(A) has conservatively been adopted. As noted above, the nearest residential property to the proposal site is approximately 650m away.

To determine the potential sound power level or 'noise' from the substation at the nearest sensitive receiver the following formula can be applied as per the EPA 2013:

**SPL=SWL-20log10r-8**, where:

- **SPL** is sound pressure level in dB(A),
- **SWL** is sound power level (noise source) in dB(A),
- **r** is the distance from the source to the measuring point.

Based on this calculation, the estimated 75db(A) noise at the transformer source will be attenuated to a noise level of approximately 11dB(A) at the receiving properties 650m away (given the grassland nature of the surrounding environment, the attenuation will, in reality, be greater). This figure is at least 19dB(A) under the noise goal for the surrounding land use.

Regarding the nearest future commercial/industrial premises (a data centre), the distance from the ZS transformers to the outside wall of the data centre building is conservatively estimated to be approximately 15m. Using the same basic noise attenuation calculation, while adopting the worst-case noise emission at the source of the transformers (i.e., 75dB(A)), and a 15m distance to the outside wall of the adjoining data centre building from the transformers, it is estimated that noise levels will be attenuated to approximately 43dB(A). This is well below the commercial amenity noise level of 65dB(A), and industrial amenity noise level of 70 dB(A), adopted in the Noise Policy for Industry (EPA, 2017).

## 6.4.3 Environmental mitigation measures

In considering the remote nature of the proposed substation site location, being at least 650m away from the nearest sensitive residential receiver, work hours will be between 7am and 6pm Monday to Saturday. On occasions works outside these hours may be undertaken where the following requirements are met:

- Neighbours (and other sensitive receivers) adjacent to the works or the local council or the NSW Environment Protection Authority (EPA) have been notified; and
- Where the works are required to take place in the vicinity of private access ways or driveways, consultation with individual residents would be undertaken to advise residents of the planned timing of the works.

Future commercial receivers located in close proximity to the proposal will be advised of the works schedule and provided with details of a site contact. All plant and equipment will be operated and maintained in accordance with the manufacturer's specifications. Any noise complaint will be investigated with additional control measures put in place if required.

#### 6.4.4 Conclusion

The proposal will have acoustic and vibration impacts during construction and operation. The acoustic and vibration impacts during the construction phase will be medium term and moderate, whilst operational noise generated by the proposal will be negligible and unlikely to impact on the closest sensitive receivers.

Given the mitigation measures outlined in this assessment, the impacts can be effectively managed, and the overall environmental risk is considered to be low to moderate.

## 6.5 Flora and Fauna

### 6.5.1 Existing environment

The proposal site is situated on predominately cleared land, historically used for grazing. More recently the proposal site has undergone vegetation clearing and preliminary earthworks, including benching, associated with the broader six lot subdivision of the PIP (refer **Plates 1-1** and **1-2**). The immediate surrounding landscape consists of predominately cleared land, historically used for grazing, intersected by roads, with existing urban development of South Jerrabomberra commencing approximately 650m east.

Small patches of remnant vegetation are scattered within the predominately cleared landscape that surrounds the proposal site. Review of the NSW State Vegetation Type Mapping (Department of Planning and Environment [DPE]) indicates the proposal site is located on land predominately mapped as non-native vegetation. A patch of vegetation skirting the southern boundary of the site is mapped as PCT 3375: Monaro-Queanbeyan Rolling Hills Grassy Forest, and a small patch of PCT 3376: Southern Tableland Grassy Box Woodland, is located just inside the ZS lot boundary. PCT 3376 is associated with the Threatened Ecological Community (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*, listed as a critically endangered under the BC Act (NSW) and the *White Box – Yellow Box – Blakely's Red Gum Grassy Woodland and Derived Native Grassland* TEC, listed as critically endangered under the EPBC Act (Cth). Collectively the TEC listing under the BC and EPBC Act can be referred to as the "Box Gum Woodland TEC".

No TEC is associated with PCT 3375.

**Figure 6-3**, shows PCTs relative to the proposal site, as provided by the NSW State Vegetation Mapping (NSW DPE).

A Biodiversity Development Assessment Report (BDAR), titled *Poplars Innovation Precinct (Stage 1), Jerrabomberra, NSW* (Capital Ecology, 2020), was prepared for the broader PIP development, which includes the proposal site. Field work for the BDAR involved nine ecological surveys undertaken by Capital Ecology (2020) between 27 September 2019 and 23 July 2020. These surveys indicated the vegetation on the proposal site represented PCT1334: Yellow Box grassy woodland of the northern Monaro and Upper Shoalhaven area, South Eastern Highlands Bioregion, associated with the both the BC and EPBC Act-listed Box Gum Woodland TEC referred to above.

Capital Ecology (2020) state that although the *NSW Final Determination for the TSC Act endangered listed ecological community White Box – Yellow Box – Blakely's Red Gum Woodland* (NSW Scientific Committee 2002, gazetted 15 March 2002) does not provide specific listing criteria against which to assess a patch of vegetation, a useful key is provided in *Identification Guidelines for Endangered Ecological Communities – White Box Yellow Box Blakely's Red Gum Woodland (Box-Gum Woodland)* (NPWS 200247), which draws its information from the final determination. As described in the final determination and the associated key, the definition for the BC Act Box-Gum Woodland TEC is extremely broad. In effect, any land for which the climax community is Box-Gum Woodland that has not been cultivated, become a stock camp, or otherwise been entirely modified, is likely to meet the minimum definition of the BC Act-listed TEC. However, using the key, PCT1334, can be broken down into the following zones:

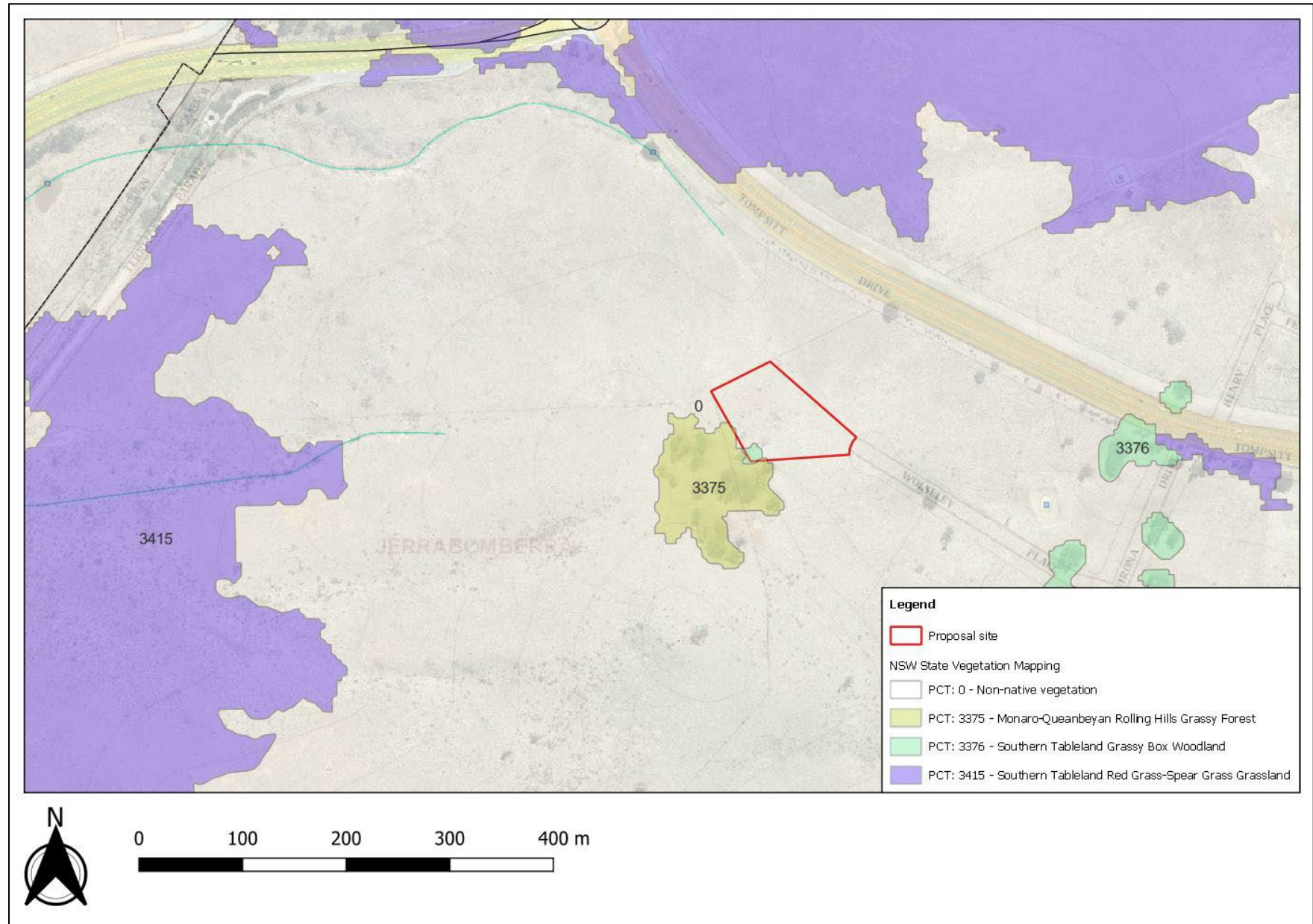


Figure 6-3: PCTs mapped according to the NSW DPE State Vegetation Type Mapping relative to the proposal site

- Zone 1 is characterised by a native overstorey with a moderate to high diversity native understorey
- Zone 2 is characterised by a native overstorey with a low diversity native understorey
- Zone 3 is characterised by a native overstorey with a low diversity exotic understorey,
- Zone 4 is characterised by no overstorey with a low diversity native understorey
- Zone 5 is characterised by no overstorey with a low diversity exotic understorey.

Zones 1, 2, 3, and 4 support vegetation which meets the criteria for Box Gum Woodland TEC under the BC Act. PCT1334 Zone 5 lacks a native overstorey and has a ground storey that is highly modified and dominated by perennial exotic grasses and herbaceous weeds. As such, PCT1334 Zone 5 does not support vegetation which meets the criteria for Box-Gum Woodland TEC under the BC Act. Based on the floristic surveys undertaken by Capital Ecology (2020), PCT1334 Zones 1 and 2 do not occur within the broader PIP, including the proposal site. As such, Capital Ecology concluded that the portions of the broader PIP, which support the BC Act Box-Gum Woodland TEC, are defined by the extent of PCT1334 Zones 3 and 4. Only PCT1334 Zones 4 and 5 are present at the proposal site, as illustrated in **Figure 6-4** (taken from Capital Ecology [2020]).

Based on the floristic surveys and assessment against the listing criteria for the EPBC-listed form of the TEC, taken from the *EPBC Act Policy Statement 3.5 – White Box – Yellow Box – Blakely's Red Gum grassy woodlands and derived native grasslands* (Commonwealth of Australia 2006), Capital Ecology concluded that the broader PIP, including the proposal site, did not support the EPBC Act form the Box-Gum Woodland TEC.

A database review of the NSW DPE (2022) BioNet records of threatened flora and fauna, and search of the Commonwealth Department of the Climate Change, Energy, the Environment and Water (DCCEEW, 2022a) protected matters search tool were also completed to inform the ecological assessment.

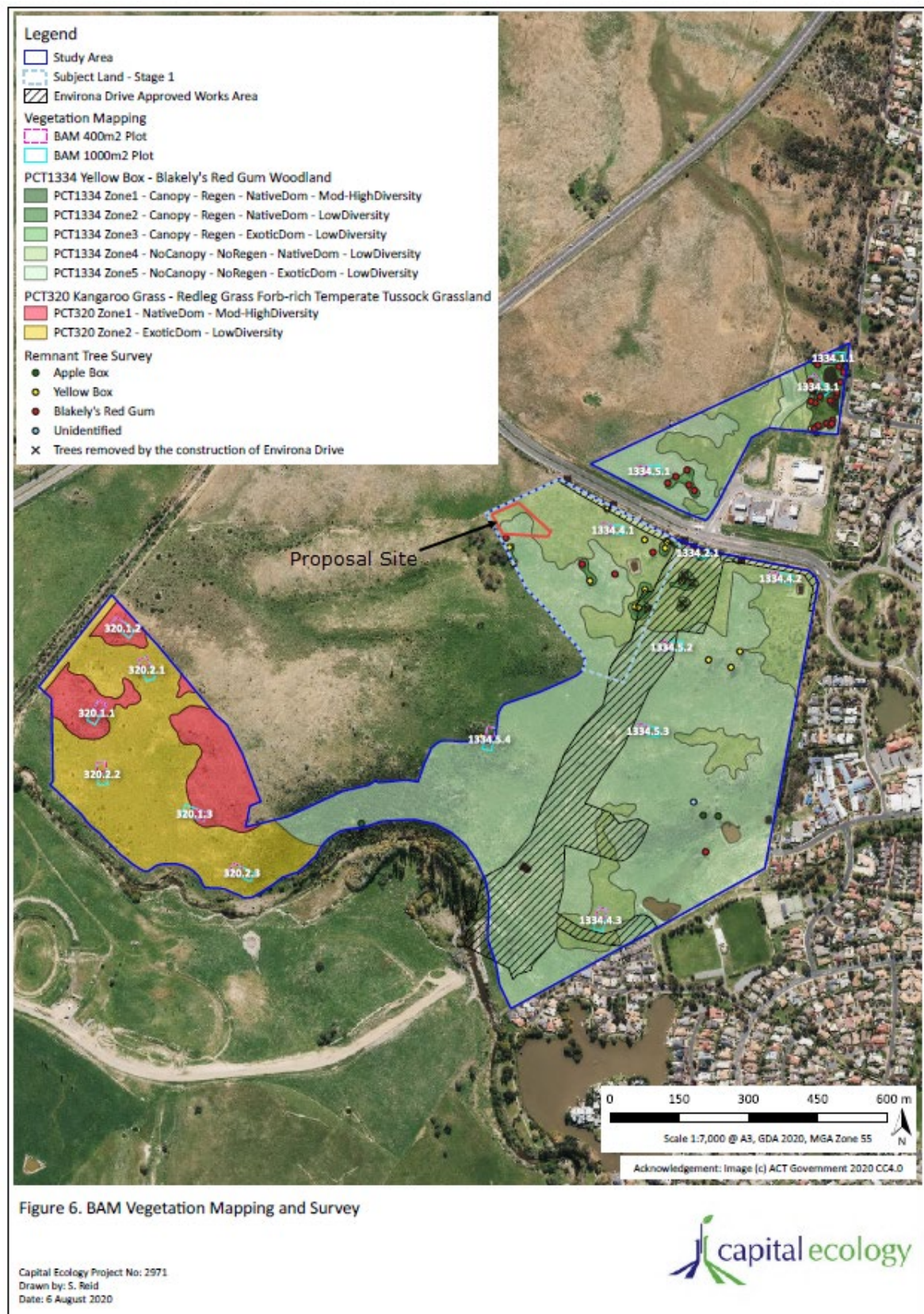
Desktop searches indicate that 17 threatened flora species listed under the EPBC Act or BC Act have been recorded or have the potential to occur within a 10 kilometre buffer of the ZS. According to the NSW BioNet there have been 84 recorded sightings of six threatened flora species within a 10 kilometre buffer of the ZS site as presented in **Table 6-1**. The additional 11 threatened flora species not recorded but having the potential to occur within the 10km buffer are detailed in the EPBC Act protected matters search report (**Appendix A**).

There have been no recorded sightings of threatened flora at or within close proximity to the proposed work areas, with the nearest threatened flora species record, a *Rutidosia leptorrhynchoides* (Button Wrinklewort) located approximately 850m east of the proposal site.

**Table 6-1: OEH Atlas threatened flora species recorded within a 10 kilometre buffer of the proposal**

| Scientific Name   | Common Name             | BC Act Status | EPBC Act Status | OEH Atlas Recorded Sightings |
|---|-------------------------|---------------|-----------------|------------------------------|
| <i>Caladenia tessellata</i>   | Thick Lip Spider Orchid | E1            | V               | 2                            |
| <i>Eucalyptus aggregata</i>   | Black Gum               | V             | V               | 3                            |
| <i>Pomaderris pallida</i>   | Pale Pomaderris         | V             | V               | 7                            |
| <i>Rutidosia leptorrhynchoides</i>  | Button Wrinklewort      | E1            | E               | 50                           |
| <i>Swainsona recta</i>  | Small Purple-pea        | E1            | E               | 9                            |
| <i>Swainsona sericea</i>  | Silky Swainson-pea      | V             | (blank)         | 13                           |
|   |                         |               | <b>Total</b>    | <b>84</b>                    |
| Notes:<br>E1 – Endangered (BC Act)      V – Vulnerable (BC and EPBC Act)<br>E – Endangered (EPBC Act) |                         |               |                 |                              |





**Figure 6-4: Vegetation mapping for broader Poplars Innovation Precinct (Capital Ecology, 2020)**

Desktop searches for threatened fauna indicated that 50 species listed under the EPBC Act or BC Act have been recorded or have the potential to occur within a 10 kilometre buffer of the ZS site. According to NSW BioNet there have been 366 recorded sightings of 34 threatened fauna species or populations within a 10 kilometre buffer of the ZS, as presented in **Table 6-2**. The additional 16 threatened fauna species not recorded but having the potential to occur within the 10km buffer are detailed in the EPBC Act protected matters search report (**Appendix A**).

There have been no recorded sightings of threatened fauna at the proposal site. The nearest threatened fauna species record, a *Callocephalon fimbriatum* (Gang-gang Cockatoo) is located approximately 180m northeast of the proposal site.

**Table 6-2: NSW Bionet threatened fauna species recorded within a 10 kilometre buffer of the proposal**

| Scientific Name                       | Common Name                                   | BC Act Status | EPBC Act Status | NSW BioNet Recorded Sightings |
|---------------------------------------|---|---------------|-----------------|-------------------------------|
| <i>Anthochaera phrygia</i>            | Regent Honeyeater                             | E4A           | CE              | 1                             |
| <i>Aprasia parapulchella</i>          | Pink-tailed Legless Lizard                    | V             | V               | 77                            |
| <i>Artamus cyanopterus</i>            | Dusky Woodswallow                             | V             | -               | 33                            |
| <i>Botaurus poiciloptilus</i>         | Australasian Bittern                          | E1            | E               | 1                             |
| <i>Callocephalon fimbriatum</i>       | Gang-gang Cockatoo                            | V             | -               | 27                            |
| <i>Calyptrorhynchus lathami</i>       | Glossy Black-Cockatoo                         | V             | -               | 1                             |
| <i>Chthonicola sagittata</i>          | Speckled Warbler                              | V             | -               | 24                            |
| <i>Circus assimilis</i>               | Spotted Harrier                               | V             | -               | 1                             |
| <i>Climacteris picumnus victoriae</i> | Brown Treecreeper (eastern subspecies)        | V             | -               | 3                             |
| <i>Daphoenositta chrysoptera</i>      | Varied Sittella                               | V             | -               | 11                            |
| <i>Dasyurus maculatus</i>             | Spotted-tailed Quoll                          | V             | E               | 2                             |
| <i>Epthianura albifrons</i>           | White-fronted Chat                            | V             | -               | 1                             |
| <i>Falsistrellus tasmaniensis</i>     | Eastern False Pipistrelle                     | V             | -               | 1                             |
| <i>Glossopsitta pusilla</i>           | Little Lorikeet                               | V             | -               | 1                             |
| <i>Grantiella picta</i>               | Painted Honeyeater                            | V             | V               | 1                             |
| <i>Haliaeetus leucogaster</i>         | White-bellied Sea-Eagle                       | V             | C               | 1                             |
| <i>Hieraetus morphnoides</i>          | Little Eagle                                  | V             | (blank)         | 14                            |
| <i>Lathamus discolor</i>              | Swift Parrot                                  | E1            | CE              | 2                             |
| <i>Litoria aurea</i>                  | Green and Golden Bell Frog                    | E1            | V               | 1                             |
| <i>Litoria raniformis</i>             | Southern Bell Frog                            | E1            | V               | 1                             |
| <i>Melanodryas cucullata</i>          | Hooded Robin (south-eastern form)             | V             | -               | 13                            |
| <i>Melithreptus gularis</i>           | Black-chinned Honeyeater (eastern subspecies) | V             | -               | 1                             |
| <i>Miniopterus orianae oceanensis</i> | Large Bent-winged Bat                         | V             | -               | 13                            |
| <i>Myotis macropus</i>                | Southern Myotis                               | V             | -               | 1                             |
| <i>Pachycephala olivacea</i>          | Olive Whistler                                | V             | -               | 2                             |

| Scientific Name   | Common Name              | BC Act Status | EPBC Act Status | NSW BioNet Recorded Sightings |
|---|--------------------------|---------------|-----------------|-------------------------------|
| <i>Petroica boodang</i>   | Scarlet Robin            | V             | -               | 42                            |
| <i>Petroica phoenicea</i>   | Flame Robin              | V             | -               | 16                            |
| <i>Phascolarctos cinereus</i>   | Koala                    | V             | V               | 7                             |
| <i>Polytelis swainsonii</i>   | Superb Parrot            | V             | V               | 2                             |
| <i>Pteropus poliocephalus</i>   | Grey-headed Flying-fox   | V             | V               | 7                             |
| <i>Stagonopleura guttata</i>  | Diamond Firetail         | V             | -               | 10                            |
| <i>Synemon plana</i>  | Golden Sun Moth          | V             | V               | 25                            |
| <i>Tympanocryptis pinguicolla</i>   | Grassland Earless Dragon | E1            | E               | 14                            |
| <i>Varanus rosenbergi</i>   | Rosenberg's Goanna       | V             | -               | 9                             |
|   |                          |               | <b>Total</b>    | <b>366</b>                    |
| Notes:<br>E1 – Endangered (BC Act)<br>E4A – Critically Endangered, (BC Act)<br>CE – Critically Endangered (EPBC Act)<br>E – Endangered (EPBC Act)<br>V – Vulnerable (BC Act) and EPBC Act)<br>C – CAMBA (bilateral migratory bird agreement with China) |                          |               |                 |                               |

**Figure 6-5** illustrates the distribution of NSW BioNet threatened fauna and flora records within 10km of the proposal.

Vegetation and potential flora/fauna habitat were surveyed by Capital Ecology (2020) as part of the BDAR prepared for the broader PIP. Capital Ecology (2020) found that the historic activities which have occurred across the majority of the broader Polars Innovation Precinct, including the proposal site have substantially degraded the habitat value for native flora and fauna. As a result, no threatened flora species were recorded within the subject land, nor were the majority of the threatened fauna species considered to have the potential to occur. However, targeted surveys did detect *Synemon plana* (Golden Sun Moth), listed as vulnerable under the BC Act, and EPBC Act, including some detections in the close vicinity of the proposal site (refer **Figure 6-6**)

The protected matters search (**Appendix A**) indicates that the following three TECs have the potential to exist within areas surrounding the proposal:

- Alpine Sphagnum Bogs and Associated Fens
- Natural Temperate Grassland of the South Eastern Highlands
- White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland.

Vegetation at the proposal site does not meet the requirements of the first two of the above listed Commonwealth listed TECs, both according to the NSW Vegetation Mapping and the BDAR prepared for Stage 1 of the PIP (Capital Ecology, 2020). Based on the floristic surveys and assessment against the listing criteria for the EPBC-listed Box Gum Woodland, Capital Ecology (2020) concluded that the broader PIP, including the proposal site, did not support the EPBC Act form the Box Gum Woodland TEC.

Fourteen migratory species listed under the EBPC Act have the potential to occur within 10km of the ZS site. However, based on the degraded habitat value, the proposal site is unlikely to support habitat for these species.

A number of weeds, including *Crataegus monogyna* (Common Hawthorn), *Lycium ferocissimum* (African Boxthorn), *Rosa rubiginosa* (Briar Rose), and *Nassella trichotoma* (Serrated Tussock) were noted to be very widespread and often occurred at high densities across the broader PIP (Capital Ecology, 2020).



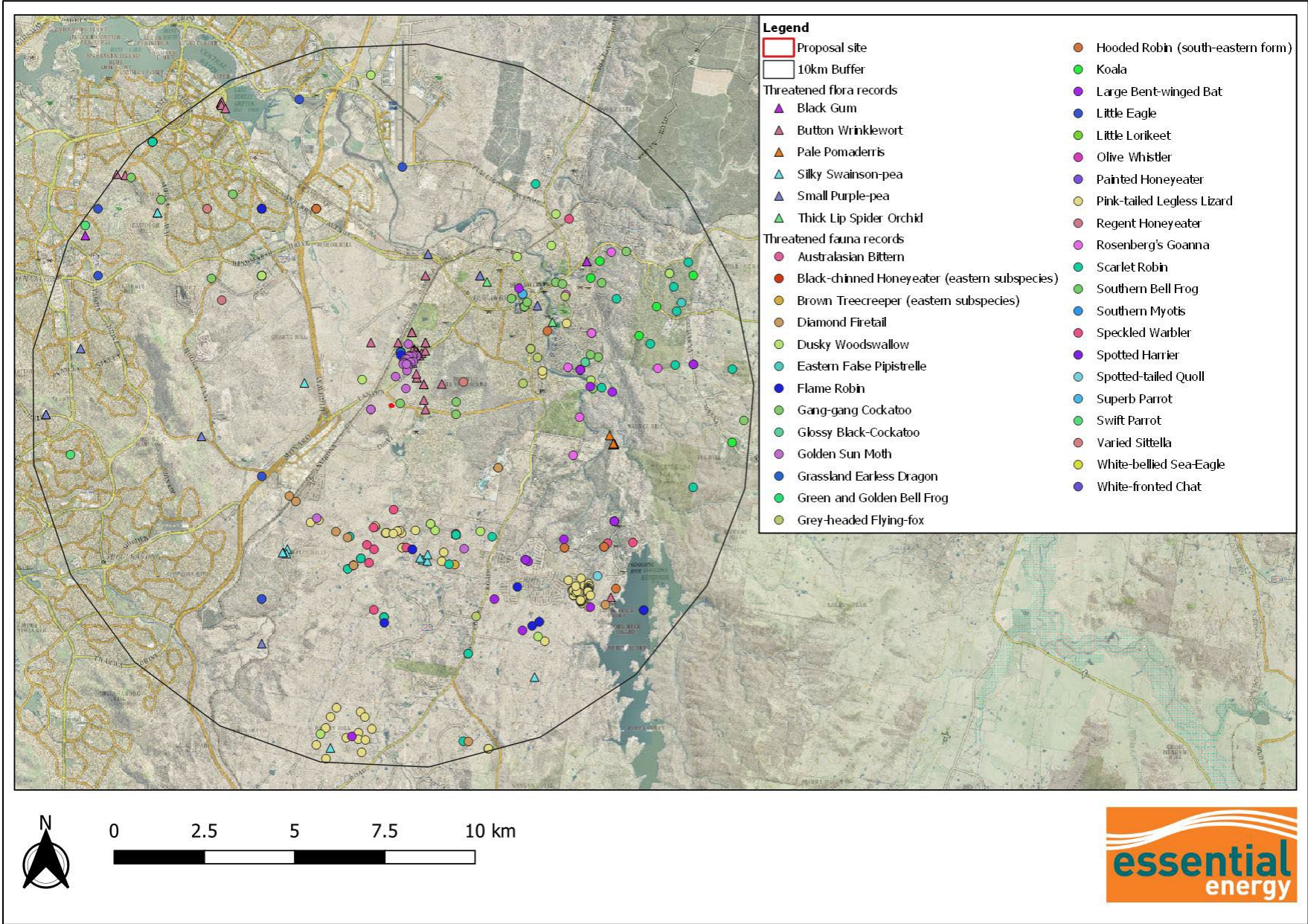


Figure 6-5: NSW BioNet threatened species records within 10km of the proposal site



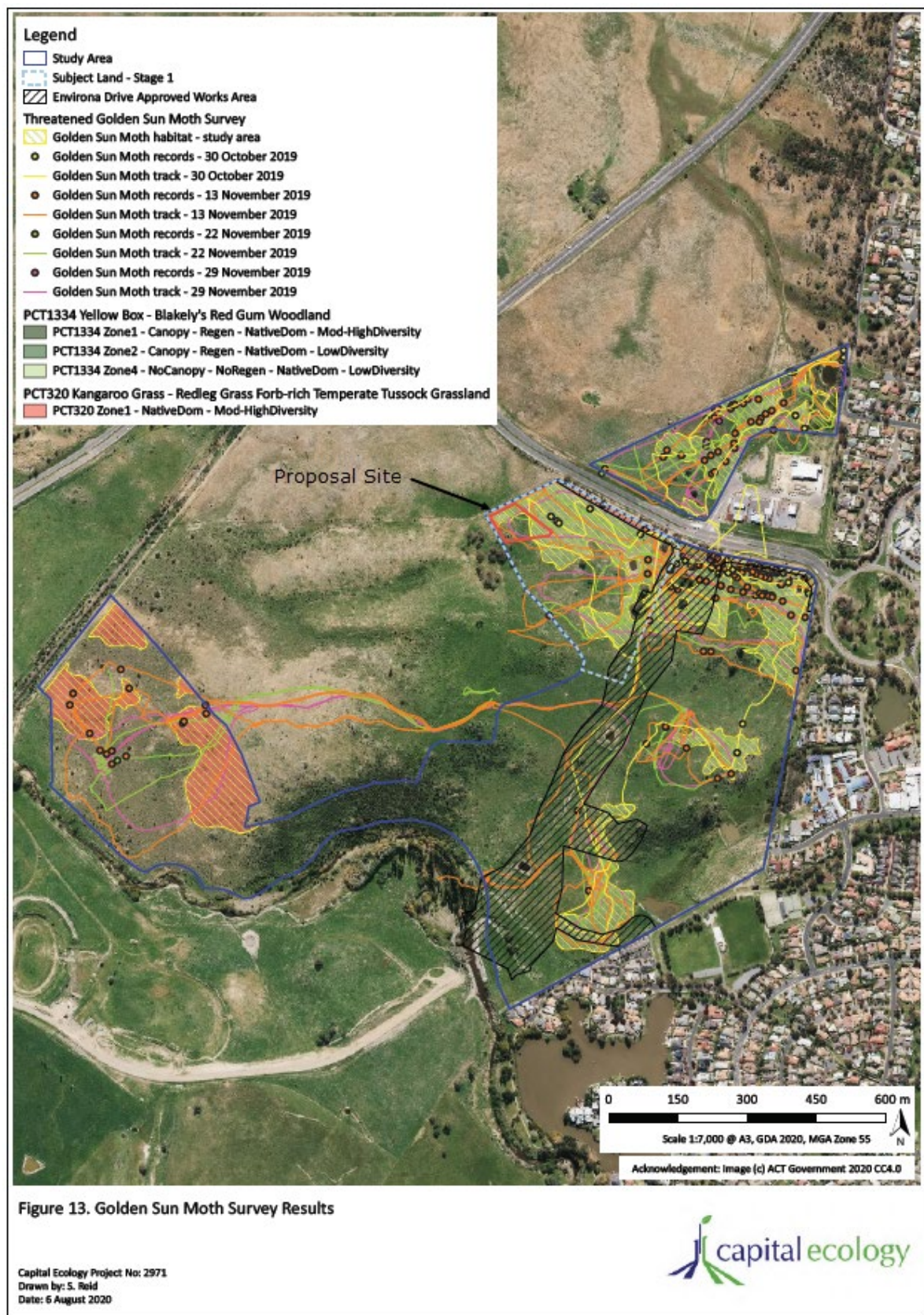


Figure 6-6: Golden Sun Moth Survey Results (Capital Ecology, 2020)

### 6.5.2 Assessment of impact

The proposed 132/11kV ZS site forms part of Stage 1 of the PIP, which has been subject to a BDAR (Capital Ecology, 2020) prepared to support a development application (DA.2020.1427) under Part 4 of the EP&A Act, for a six lot subdivision.

Assessment of potential impacts to threatened species, populations and communities listed under the BC Act for the broader PIP was undertaken as part of the BDAR prepared by Capital Ecology (2020). The BDAR indicated the broader PIP development would result in the clearance of the following native vegetation.

- 0.32 hectares (ha) of PCT1334 Zone 3 – mature canopy, regeneration, exotic dominant understorey with low diversity (BC Act Native Vegetation, BC Act Box-Gum Woodland);
- 4.58 ha of PCT1334 Zone 4 – low diversity native pasture (BC Act Native Vegetation, BC Act Box-Gum Woodland); and
- 13 remnant trees located in PCT1334 Zone 3, four of which contain at least one functional hollow.

Capital Ecology (2020) indicated that only PCT1334 Zone 3 has a vegetation integrity score that requires offsetting for impacts on ecosystem credits. PCT1334 Zone 3 has vegetation integrity score of 30.3, generating 5 ecosystem credits for the broader PIP. No areas of PCT1334 Zone 3, and none of the 13 remnant trees slated for removal, are located on the proposal site (refer **Figure 6-4**).

Capital Ecology (2020) indicated that the broader PIP would result in the clearance of 4.58 ha of Golden Sun Moth habitat (listed as vulnerable under the BC Act and EPBC Act), located in PCT1334 Zone 4, generating 29 species credits. Part of the mapped Golden Sun Moth habitat (PCT1334 Zone 4) is located on the proposal site (refer **Figure 6-6**).

Assessment of potential impacts to threatened species, populations and communities listed under the EPBC Act for the broader PIP (Capital Ecology, 2020) concluded that the PIP was unlikely to have a significant impact on EPBC Act-listed flora or ecological communities given the subject land does not:

- support any EPBC Act-listed flora species; or
- support any EPBC Act-listed ecological communities.

However, the PIP will impact 4.58 ha of Golden Sun Moth habitat, listed as vulnerable under the EPBC Act. Capital Ecology (2020a) prepared a separate report to assess the impact of the current and future stages of the Poplars development on matters of NES. That report will be the primary informing document for any EPBC Act referral and will ensure that the full impact of the entire Poplars development on matters of NES is appropriately assessed. As such, Capital Ecology (2020) stated that given that the PIP is a component of the wider action of The Poplars development land (which will have a larger impact on Golden Sun Moth), referral of the larger action to the Commonwealth Minister for the Environment and Water is considered warranted and recommended. Accordingly, Poplars Developments referred the larger action to the Minister and received approval (EPBC 2020/8801) subject to a number of conditions, including the requirement to obtain 34 species credits for Golden Sun Moth for the broader Poplars development.

The proposed 132/11kV ZS will be located within the disturbance footprint of the six lot subdivision (forming part of Stage 1 of the PIP), which has been separately assessed and approved under Part 4 of the EP&A Act, and EPBC Act. Essential Energy's lot, Lot 5, as part of subdivision works, has undergone extensive disturbance, including benching, and consequently any additional impacts to threatened species, populations and ecological communities from the construction, operation and maintenance of the ZS will be negligible to nil, and not likely to result in a significant impact.

### 6.5.3 Environmental mitigation measures

Siting the location of the proposed new ZS on previously cleared and disturbed rural land within a new six lot subdivision has minimised potential impact to flora and fauna considerably. Notwithstanding, to ensure potential impacts to flora and fauna are further minimised and managed, the following mitigation and management measures are to be implemented:

- No clearing or disturbance to vegetation outside the lot boundary, which is located within the broader six lot subdivision, is permitted
- A site induction program to ensure that all construction, operation and maintenance staff and

contractors are aware of the need to, and how to, avoid and protect vegetation outside the six lot subdivision approval

- Essential Energy has a general biosecurity duty to ensure the biosecurity risks posed by pests, weeds and diseases are prevented, eliminated or minimised, and that the risk of importing additional weeds to the project site is appropriately managed.

#### **6.5.4 Conclusion**

It is unlikely the proposal will have impacts on flora and fauna during construction and operational activities, in addition to those that have already occurred from the disturbance associated with the new six lot subdivision forming part of Stage 1 of the PIP. The environmental risk is considered to be low.

## **6.6 Aboriginal Heritage**

### **6.6.1 Existing environment**

A desktop assessment of Aboriginal heritage was undertaken in the general vicinity of the proposal site. A review of registered sites from OEH's Aboriginal Heritage Information Management System (AHIMS) (OEH 2017b) was undertaken. No Aboriginal sites or objects were identified at the proposal site (refer **Appendix B**). The closest registered AHIMS site (ID 57-2-0111), an artefact (open camp site), is located approximately 230m west of the proposal site (refer **Figure 6-7**) and will not be impacted by the proposal.

The proposal site has been subjected to varying degrees of land disturbance associated with clearing for previous agricultural use of the site, and more recently through preliminary earthworks, including benching, associated with the six lot subdivision forming part of the PIP.

The location of registered artefacts is generally isolated to areas of potential developments and hence the result of investigations for development/rezoning applications. The presence of registered artefacts does not indicate the significance of sites in regional context, nor reflect the absence of artefacts in other locations.

### **6.6.2 Assessment of impact**

The NPW Act requires that proponents follow a due diligence approach in regards to the protection of Aboriginal objects. There are three essential issues to consider when undertaking a due diligence assessment:

- The nature of the proposed activity (e.g. the extent of development impacts)
- Land condition and prior land uses (e.g. impacts to bushland or undisturbed ground, areas containing sandstone outcrops, rock shelters and overhangs, old growth trees, sand bodies, ground adjacent to creeks, rivers, lakes and swamps)
- Knowledge and available information (e.g. AHIMS database search, previous reports or studies relating to the site or in the area, and local knowledge, such as councils or Local Aboriginal Land Councils (LALC)).

An assessment against the due diligence requirements is provided in **Table 6-3**.



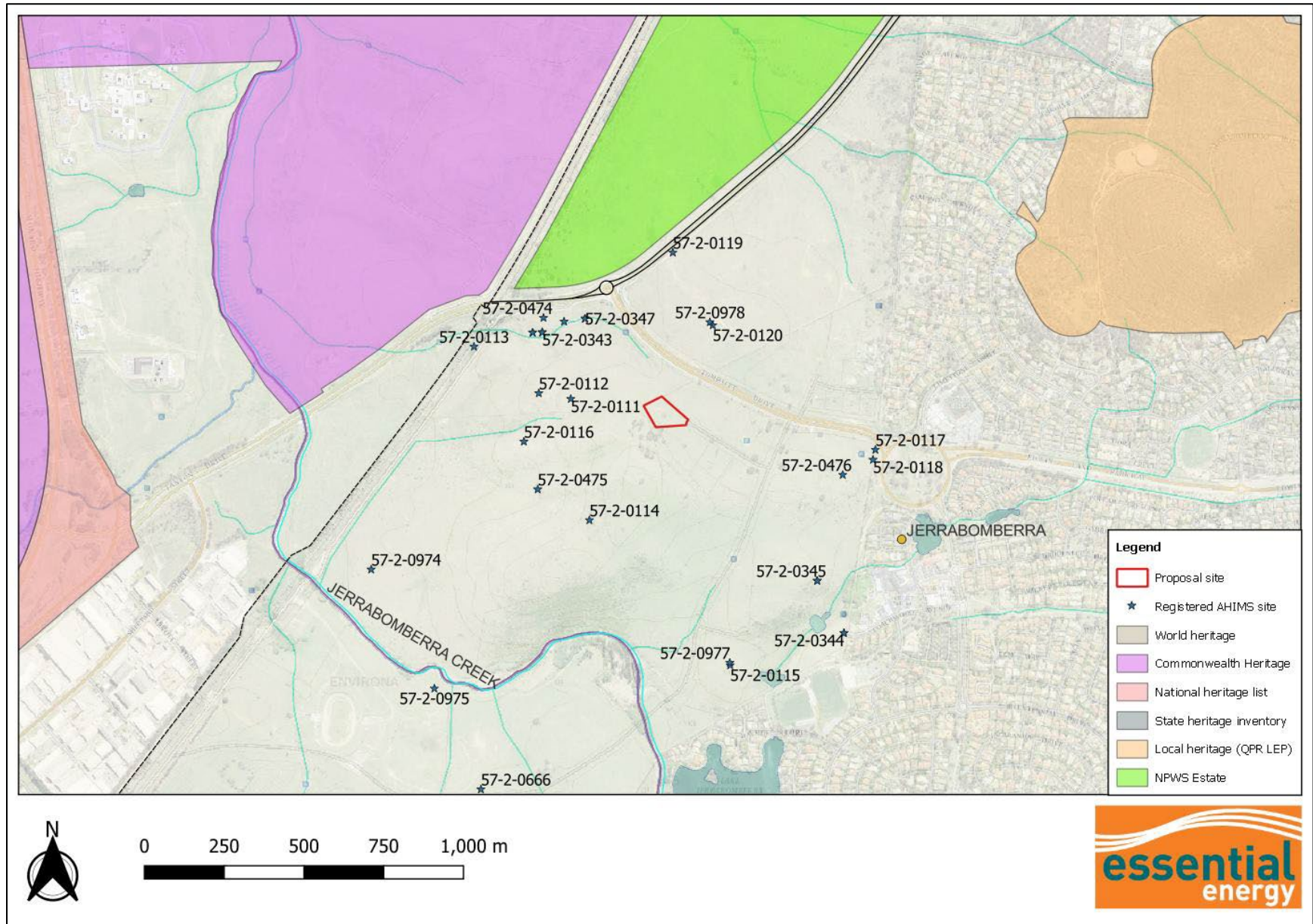


Figure 6-7: Aboriginal and non-Aboriginal heritage within the vicinity of the proposal



**Table 6-3: Assessment against due diligence requirements**

| Step | Question   | Response   | Process   |
|------|--|--|---|
| 1    | Are you disturbing the ground surface or culturally modified tree?   | Yes <input checked="" type="checkbox"/><br>No <input type="checkbox"/> | If Yes proceed to Step 2<br>If No AHIP not required proceed with caution  |
| 2    | Check AHIMS – working near known Aboriginal sites?<br><a href="http://www.environment.nsw.gov.au/awssapp/login.aspx">http://www.environment.nsw.gov.au/awssapp/login.aspx</a>  | Yes <input type="checkbox"/><br>No <input checked="" type="checkbox"/> | If yes obtain site cards and proceed to Step 4<br>If No proceed to Step 3   |
| 3    | Is the proposed activity on disturbed (e.g., ploughing, cleared vegetation, grazing) land?<br>Check the land use layer   | Yes <input checked="" type="checkbox"/><br>No <input type="checkbox"/> | If Yes AHIP not required proceed with caution.<br>If No proceed to step 4   |
| 4    | Confirm the following:<br>a) Does any other source of information indicate likely presence of Aboriginal heritage? (previous studies)? and/or<br>b) Landscape features are likely to indicate presence of Aboriginal objects (e.g., within 200m of water, below or above a cliff face, located within a dune system, within 20m of or in a cave, rock shelter and is land not disturbed)? and/or<br>c) Objects will, or are likely to be harmed? | Yes <input type="checkbox"/><br>No <input type="checkbox"/>            | If Yes to any or all questions further investigations or an AHIP is required<br><br>If No AHIP not require proceed with caution |

The proposal site is located within the disturbance footprint of a six lot subdivision forming part of the PIP, which is located on what was previously cleared land used for agricultural purposes. As such, the land on which the proposal site will be located can be considered disturbed land in accordance with the Code due to past impacts of clearing, agricultural activities and subdivision development. The AHIMS search indicated no sites or places of Aboriginal heritage identified within the work area. No trees exhibiting signs of cultural modification (scarring) have been identified within the proposal site.

Considering the highly disturbed nature of the work site, and the location of the activities away from any known Aboriginal sites, the proposal is not likely to impact Aboriginal heritage.

### 6.6.3 Environmental mitigation measures

In order to mitigate any potential impacts on Aboriginal heritage, the following mitigation measures will be employed:

- In the unlikely event that an Aboriginal heritage site or object is located during the construction phase of the project, works will cease in that area and a representative from Essential Energy's Environmental Services will be notified. Works with the potential to disturb the object would not resume until the object had been properly identified, and appropriate action taken
- If human remains are uncovered, works must immediately cease and the NSW Police department and Essential Energy's Environmental Services team will be notified.

### 6.6.4 Conclusion

The proposal is not anticipated to have any impact upon Aboriginal heritage in the area. Given the mitigation measures outlined in this assessment, the overall environmental risk is considered to be low.

## 6.7 Non-Aboriginal Heritage

### 6.7.1 Existing environment

Non-Aboriginal heritage refers to any deposit, object or material evidence which relates to the settlement of New South Wales, not being Aboriginal settlement, and is of state or local heritage significance (Section 4 of the Heritage Act).

A desktop search of Australia's World Heritage Sites (Commonwealth DCCEEW, 2022b), National Heritage List (Commonwealth DCCEEW, 2022c), NSW State Heritage Inventory (Heritage NSW, 2022), and QPR LEP was conducted to determine the extent of non-Aboriginal heritage in the vicinity of the proposal.

#### **6.7.2 Assessment of impact**

A review of the above-mentioned heritage registers indicated no sites of world, national, state or local heritage significance are located within, or intersected by, the boundary of the proposal site.

#### **6.7.3 Environmental mitigation measures**

The following mitigation measures would be applied:

- All construction work would be undertaken within the assessed areas of the proposal site only
- In the unlikely event that a previously unknown heritage site or object is located during construction of the proposal, works would cease immediately in that area and a representative from Essential Energy's Environmental Services would be notified. Works with the potential to disturb the object would not resume until the object had been properly identified, and appropriate action taken.

#### **6.7.4 Conclusion**

The proposal is unlikely to have a significant impact upon non-Aboriginal heritage in the area. Given the mitigation measures outlined in this assessment, the overall environmental risk is considered to be low.

### **6.8 Contamination**

#### **6.8.1 Existing environment**

Current land uses within the study area may have resulted in the contamination of soils. Potential on-site sources of contamination include weed and pest spraying. The contaminants that may be encountered within the study area include insecticides, fungicides and herbicides

A search of the NSW EPA 'Contaminated Land – Record of Notices' (EPA, 2022a) and 'List of NSW Contaminated Sites Notified to EPA' (EPA, 2022b) did not identify any contaminated sites within or in the near vicinity of the proposal site.

A search of NSW Department of Primary Industries (DPI) Cattle Tick Dip Site Locator did not indicate any tick dip sites within or in the near vicinity of the proposal site.

#### **6.8.2 Assessment of impact**

There are no known records of contamination at, or within the near vicinity of, the proposal site. The site has undergone substantial vegetation clearing and benching activities associated with the development of the subdivision. No areas of contamination have been uncovered during that process and there is unlikely to be any further contamination risks on the site. Therefore, the risk of encountering significant areas of contamination is considered low, and could be managed on-site during construction.

Spillage of diesel, lubricating oils or other chemicals could occur during refuelling and/or maintenance of construction plant/equipment and vehicles, whilst leakage of fuels or oils could occur from poorly maintained construction plant/equipment and vehicles. Any on-site chemical spill or leak could adversely affect the water quality of surrounding waterways. The risk of chemical spills and leaks is expected to be minor, provided that adequate mitigation measures are implemented (see **Section 6.8.3**).

#### **6.8.3 Environmental mitigation measures**

The following mitigation measures will be adopted if and where required:

- It is intended to reuse surplus spoil beneficially on site
- Essential Energy's CEOP8064 Management of Excavated Material; Guideline for Construction Sites will be consulted to determine the most appropriate beneficial reuse or disposal method for excavated materials
- In the event of encountering any suspected contamination in the work area, it will be separated and contained on site until it can be classified in accordance with the EPA (2014) Waste Classification Guidelines, and then disposed of at a facility that is lawfully able to accept the waste

- Control measures will be implemented to manage risks associated with the handling of fuel through using spill trays when undertaking in field re-fuelling
- Sediment and erosion control structures will be established and maintained in accordance with The Blue Book to minimise potential impacts on receiving watercourses.

#### **6.8.4 Conclusion**

The proposal is not anticipated to have any impact upon contamination in the area. Given the mitigation measures outlined in this assessment, the overall environmental risk is considered to be low.

## **6.9 Electric and Magnetic Fields**

### **6.9.1 Existing environment**

Electric and magnetic fields (EMF) are part of the natural environment and are present in the Earth's core and the atmosphere. EMF is also produced wherever electricity or electrical equipment are in use. Powerlines, electrical wiring, household appliances and electrical equipment all produce EMF.

The electric field is proportional to the voltage (which can be considered as the pressure with which electricity is pushed through the wires). The magnetic field is proportional to the current, that is, to the amount of electricity flowing through the wires. Both electric and magnetic fields are also dependent on the source geometry (i.e. conductor heights, cable depths, phase separations and so on). All fields decrease rapidly with distance from the source. Generally, the smaller the object or closer the conductors producing the field, the more rapidly the field would decrease with distance from the source. Essential Energy is aware of concerns in the community and some scientists regarding the possibility of adverse health effects from exposure to EMF.

All of the research has been extensively reviewed over the last 30 years by Australian and international inquiries and expert panels established for the purpose of trying to determine whether or not human exposure to EMF is related to adverse health effects.

There is scientific consensus that health effects have not been established, but that the possibility cannot be ruled out. Some scientists argue that there is a need for ongoing high quality scientific research in order to give better answers to the questions which have been raised. Others hold the view that no further research is required and that EMF should not be regarded as a risk to health.

It is well accepted by scientists that no study considered in isolation would provide a meaningful answer to the question of whether or not EMF can contribute to adverse health effects. In order to make an informed conclusion from all of the research, it is necessary to consider the science in its totality. Over many years, governments and regulatory agencies around the world have commissioned independent scientific review panels to provide such an overall assessment. The Australian Radiation Protection and Nuclear Safety Agency (ARPANSA), as part of the Health and Ageing Portfolio, is a Federal Government agency charged with responsibility for protecting the health and safety of people, and the environment, from EMF.

ARPANSA advises that:

“On balance, the scientific evidence does not indicate that exposure to 50 Hz EMFs found around the home, the office or near power lines is a hazard to human health.”

“... the majority of scientists and Australian radiation health authorities in particular, do not regard chronic exposure to 50 Hz electric and magnetic fields at the levels commonly found in the environment as a proven health risk. Moreover, the evidence we have is inconclusive and does not allow health authorities to decide whether there is a specific magnetic field level above which chronic exposure is dangerous or compromises human health.”

“At the present time there is no evidence that exposure to electric fields is a health hazard (excluding of course electric shock).”

There are currently no Australian standards regulating exposure to these fields. The National Health and Medical Research Council has issued interim guidelines on limits of exposure to 50/60 Hz electric and magnetic fields. These guidelines are aimed at preventing immediate health effects resulting from exposure to these fields. The recommended magnetic field exposure limit for members of the public (24 hour exposure) is 0.1 millitesla (1,000 mG - milligauss) and for occupational exposure (whole working day) is 0.5 millitesla (5,000 mG).

Essential Energy operates its powerlines, substations and other electrical infrastructure well within

these interim guideline limits.

Essential Energy's policy involves providing balanced and accurate information, operating our electrical power system prudently within Australian health guidelines, and closely monitoring scientific research on the EMF health issue.

### 6.9.2 Assessment of impact

The proposed new 132/11kV ZS incorporates prudent EMF avoidance measures into the standard designs for substations. The design of the proposal has minimised the magnetic field as far as technically reasonable and within the context of "...[doing] whatever can be done without undue inconvenience and at modest expense to avert the possible risk [to health]", consistent with Gibbs Inquiry (1991).

Given the closest sensitive residential receivers are 650m away, it is unlikely the new ZS will expose sensitive receivers to EMF.

### 6.9.3 Conclusion

The proposal will comply with all relevant national and international guidelines. The resulting magnetic fields from the substation are within the range of fields expected from electricity infrastructure in the area. The overall environmental risk is considered to be low.

## 6.10 Visual and Aesthetics

### 6.10.1 Approach

The following visual amenity assessment approach was applied to evaluate the potential visual impacts associated with the project. It is based on a professionally recognised system developed by the United States Forest Service (1974), and similar methods adopted by the Forestry Commission of Tasmania (1983) and the NSW Department of Planning (1980).

The approach used in this assessment is as follows:

- The existing visual environment of the site is described (in terms of landscape character, scenic quality, visual and landscape sensitivity and major view points);
- A brief description is made of the proposed visual changes; and
- An impact assessment is then undertaken, assessing both the changes to the site itself, and any impacts to views from surrounding areas.

The visual impact of the proposed activity has been determined through the interaction of visual modification and visual sensitivity. These are discussed in more detail in the following sections. The 'visual impact matrix', illustrated in **Table 6-4**, is used to determine the potential visual impact of the proposed activity by combining a ranking of high, medium and low for both visual modification and visual sensitivity.

**Table 6-4: Visual impact matrix**

| Visual Sensitivity  |        |                 |                 |                 |
|---------------------|--------|-----------------|-----------------|-----------------|
| Visual Modification |        | High            | Medium          | Low             |
|                     | High   | High Impact     | High Impact     | Moderate Impact |
|                     | Medium | High Impact     | Moderate Impact | Minor Impact    |
|                     | Low    | Moderate Impact | Minor Impact    | Minor Impact    |

### 6.10.2 Visual modification

Visual modification expresses the visual interaction between the proposal and the existing visual environment. It is the visual contrast between pre and post-development, and is a combination of the appearance of the development (size, form, colour, texture), absorptive capacity of the landscape setting, and the distance from which the development is viewed. Visual modification is expressed here as high, medium or low.

***High modification***

A high degree of visual modification would result if the proposed developments are a major element and contrast strongly with the existing landscape. The contrast is likely to occur if there is little or no natural screening or integration created by vegetation, or if there is an open plain. For example, powerlines passing over vegetated ridge tops also usually represent a high visual modification, particularly if it is a new powerline passing through otherwise undisturbed vegetated terrain and the viewer is parallel to the line.

***Medium visual modification***

A medium degree of visual modification would result if the proposed developments are visible and contrast with the landscape but are integrated to some degree. This would happen if the surrounding vegetation and/or topography provide some measure of visual screening, backgrounding or other form of visual integration of the development with its setting. An example of a medium visual modification is an urbanised streetscape with existing powerlines and/or established trees on the roadside.

***Low visual modification***

A low degree of visual modification occurs if there is minimal visual contrast and a high level of integration of size, form, colour or texture between the development and the environment. This would occur if there is a high degree of visual integration of the development into the existing landscape or a low level of visual modification of the existing visual setting is achieved. A low visual modification may reflect a situation where the development may be noticeable, but it does not markedly contrast with the existing landscape, as is the case with upgrading existing powerlines.

Throughout the study area, the degree of visual modification is highly dependent on the distance the viewer is from a new development. As the distance from the new development to the viewing location increases, the development becomes less prominent, and therefore its visual modification is less.

Visual modification is also affected by the angle at which a new development is viewed. In general, the visual modification when viewing the new development at right angles is less than when viewing in parallel, depending on the distance from the new development.

**6.10.3 Visual sensitivity**

Visual sensitivity is a measure of how critically a change to the existing landscape would be viewed from various viewpoints. This is dependent on a number of viewer characteristics, such as the number of viewers affected, land use, existing vegetation patterns, distance of the development from viewers, and the visibility of the development from critical viewing locations.

***High visual sensitivity***

Occupiers of residential properties with long viewing periods adjacent or within close proximity to the proposal. High sensitive areas can also apply to users of outdoor recreational areas, including reserved land or nature recreation such as walking, swimming, fishing or trail riding. This is particularly the case where their attention is focussed, in part, on the landscape and amenity that is being affected by the proposed development.

***Medium sensitivity***

Medium sensitivity would apply to circumstances in which viewers have intermittent exposure, such as outdoor workers and outdoor recreation users, however, for the recreational user, attention is focussed predominantly on the activity they are viewing, such as a sporting event, rather than the proposed development. In addition, medium sensitivity would also apply to occupiers of residential properties with long viewing periods at a distance from or partially screened from the proposed development or project area.

***Low sensitivity***

Low sensitive viewers include predominantly those groups that have a short term view of the proposed development. This would be limited to mainly road users, trains or transport routes that are passing through or adjacent to the study area. Low sensitivity would also apply where viewers are adequately screened from the proposed development so that their viewing periods are limited to short periods.

**6.10.4 Existing visual environment (landscape description)**

The proposal site is situated on predominately cleared land, historically used for grazing. More

recently the proposal site has undergone a degree of disturbance, through vegetation clearing and preliminary earthworks, including benching, associated with a new six lot subdivision. The proposal site will be accessed via the newly constructed Wolseley Place and Environs Drive to the east, and the existing nearby road of Tomsitt Drive to the north, from which the proposal site may be partly visible to from passing motorists. The closest existing sensitive receivers are residential properties located approximately 650m east, within an existing residential subdivision associated with Franklin Court, north of the Jerrabomberra Parkway roundabout.

### **6.10.5 Visual changes**

The PIP will incorporate a campus style pedestrian boulevard with large setbacks and attractive open spaces through the implementation of the master landscape plan. To bring the vision of the masterplan for the precinct to fruition, developments within the PIP are required to be consistent with the Poplar Innovation Precinct West Design Guide (PIPWDG). However, given the importance of the safety and security of electrical installations, such as a substation, Essential Energy is not required to comply with the PIPWDG. Nonetheless important design approaches have been adopted in the design of the ZS to integrate with the vision for the PIP. For example, the substation will largely be an indoor substation with the only external equipment being the transformers. Fencing has been selected to be sympathetic with the PIPWDG, whilst also providing the necessary security required for an electrical substation.

### **6.10.6 Visual Sensitivity**

Construction of the new 132/11kV ZS will essentially take place on what is currently a greenfield site, in a semi-rural / residential setting. The proposal site will be located at the end of Wolseley Place, in what will become a new six lot subdivision, forming part of the PIP. The ZS site will comprise construction of two transformer bays (with provision for a third if required in the future), high voltage switchgear operating at 11kV and 132kV, a masonry tilt panel building with amenities, control equipment, underground cabling and associated conduits, and auxiliary equipment and structures including lightning masts, fencing, and driveways. In the short-term there will be a high degree of visual change associated with site preparatory works, civil works and construction of the ZS. Over the longer term the ZS will also be a permanent change in the visual landscape, however, integration will occur as the remainder of the commercial buildings making up the six lot subdivision are built. As such, visual modification is expected to be medium over the longer term.

Being located in what is currently a primarily semi-rural / residential setting, and what will become a commercial subdivision, the proposal is generally located away from sensitive residential receivers. The closest existing sensitive receivers are residential properties located approximately 650m east, within an existing residential subdivision associated with Franklin Court, north of the Jerrabomberra Parkway roundabout. Partial and intermittent views of the substation will occur from vehicles travelling along Tomsitt Drive, however, any such views will be of short duration and transitory in nature.

Given the distance and other infrastructure between these residences and the proposal, direct views of the proposal site are not expected. Once construction of the new subdivision is completed, there will be several commercial premises in the near vicinity that will likely have views of the proposal site. Given the largely rural, but what will become partly commercial, landscape in which the proposal site will be located, and distance to sensitive residential receivers, visual sensitivity is considered to be low to medium.

### **6.10.7 Summary of potential impacts**

Visual modification has been assessed as being medium over the longer term, whilst visual sensitivity is considered to be low to medium. In accordance with the visual impact matrix, the proposed activity is likely to result in a low to moderate visual impact.

## **6.11 Waste**

### **6.11.1 Assessment of impact**

Waste material generated from the proposal would generally comprise the following:

- General construction waste including but not limited to cardboard, paper, wood, mesh, steel, concrete, and other damaged or excess construction materials
- General refuse generated by personnel including putrescible wastes, food scraps, packaging and other domestic wastes
- Surplus excavated soil material from excavation and trenching works.

Any surplus soil that cannot be reused on site will be assessed against the virgin excavated natural material (VENM) criteria, any relevant waste exemption order, or classified and disposed of at a facility lawfully able to accept the waste.

Operation of the proposal is not expected to generate any substantial quantities of waste material, with the exception of transformer oil.

#### **6.11.2 Environmental mitigation measures**

The following mitigation measures will be employed to minimise and manage impacts to waste:

- All wastes that are generated as a result of the project will be classified in accordance with the Waste Classification Guidelines (EPA, 2014)
- All waste material will be reused, recycled, or disposed of at a facility lawfully capable of receiving the waste.

#### **6.11.3 Conclusion**

The proposal is not anticipated to generate a large quantity of waste. Given the mitigation measures outlined in this assessment, the overall environmental risk is considered to be low.

### **6.12 Bushfire**

#### **6.12.1 Existing environment**

The proposal site is located on land mapped as Category 2 bushfire prone land, (refer **Figure 6-8**).

#### **6.12.2 Environmental impact assessment**

The proposal comprises the construction of a new ZS on what is currently rural land, with grass cover as the predominate vegetation type. Activities with the potential to generate a spark will be avoided where possible during times of heightened bushfire risk.

#### **6.12.3 Environmental mitigation measures**

Ongoing vegetation maintenance would occur to ensure safe clearance distances are maintained for around the ZS perimeter.

### **6.13 Traffic and Access**

#### **6.13.1 Existing environment**

The proposal site will be located at the end of the newly constructed Wolseley Place within the new six lot subdivision. Access to this subdivision will be via the newly constructed Environa Drive, and the existing nearby road of Tomsitt Drive to the north.

#### **6.13.2 Environmental impact assessment**

No new roads, aside from those required as part of the broader subdivision, will need to be constructed to access the proposal site. The work site would be accessed via existing local roads and the newly constructed Wolseley Place and Environa Drive. During construction, the work site will receive multiple vehicle movements per day ranging from light utility vehicles through to heavy commercial machinery and trucks. Local road users may be subject to minor delays during the delivery of equipment or materials to the proposal site.

During operation, the proposal would only be accessed irregularly by maintenance personnel. The proposal would not strain the capacity of the road system.

#### **6.13.3 Environmental mitigation measures**

The following mitigation measures will be employed:

- The need for a traffic management plan (TMP) for the construction phase would be determined and, if required, completed prior to works commencing. The TMP would outline requirements for the safe and continued use of local transport corridors during construction



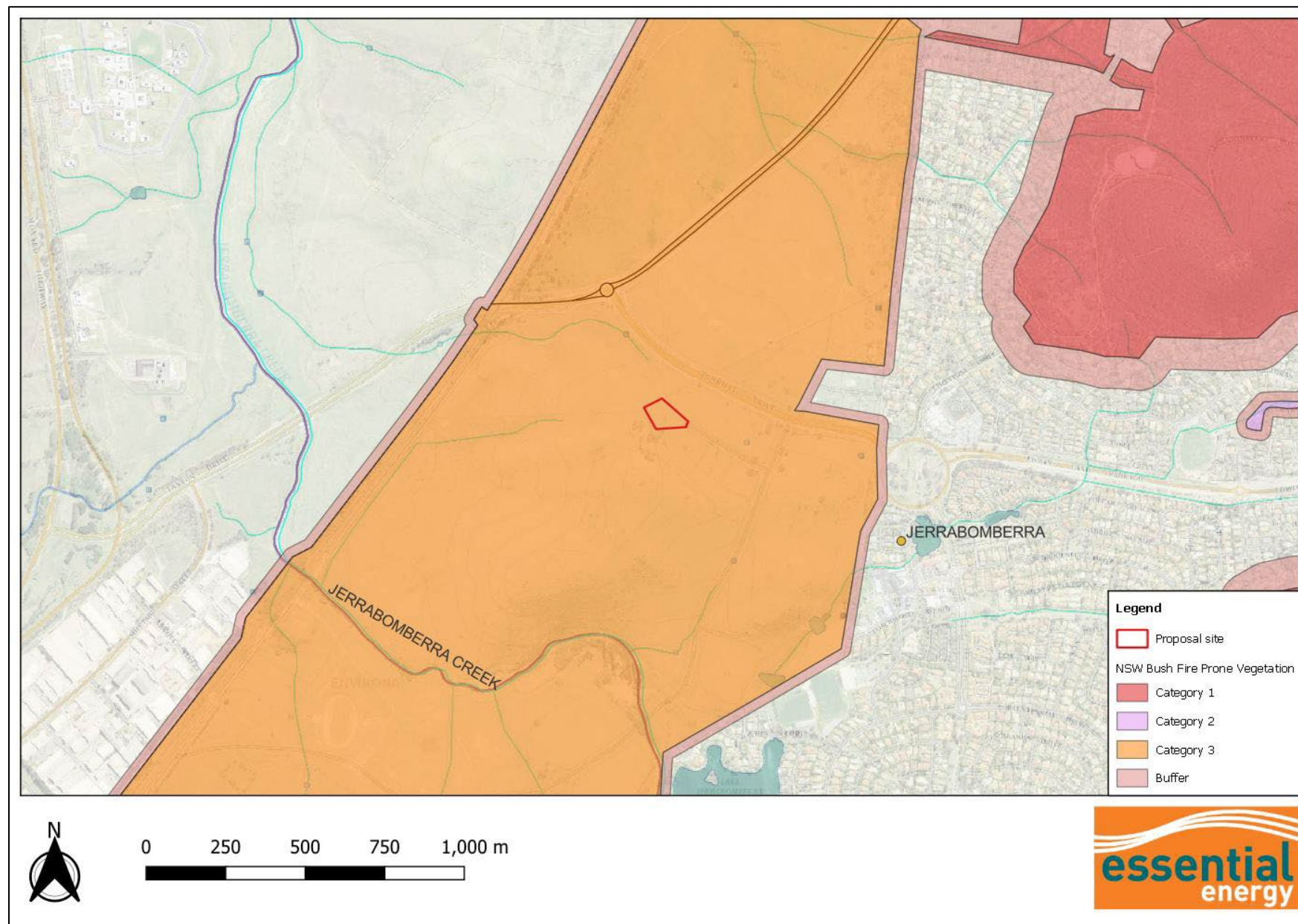


Figure 6-8: Mapped bushfire prone land in the vicinity of the proposal

#### 6.13.4 Conclusion

The proposal would have traffic and access impacts during construction and maintenance operations. The impacts would be short-term and minor. Given the mitigation measures outlined in this assessment, the overall environmental risk is considered to be low.

### 6.14 Land Use

#### 6.14.1 Existing environment

The proposal site is located in what is a rural area but is currently undergoing development for a new six lot subdivision, forming part of the PIP. The proposal site is currently zoned B7 Business Park, according to the QPR LEP.

#### 6.14.2 Assessment of impact

Whilst the construction of the new 132/11kV ZS will change the land use from a current rural use to a business use, the new ZS will be located within a new commercial/business subdivision precinct, away from sensitive residential receivers, limiting potential land use conflict.

#### 6.14.3 Environmental mitigation measures

The following measures should be adhered to during the construction phase of the proposed activity:

- Consultation about the proposed works and schedule will be undertaken directly with subdivision developers
- The site should be left in a tidy condition at the conclusion of construction activities.

#### 6.14.4 Conclusion

Any impacts on land use are likely to be minor and manageable. Given the nature of existing land uses, the overall environmental risk is considered to be low.

### 6.15 Social and Economic

#### 6.15.1 Existing environment

Electricity is an essential service in the human environment, by enhancing productivity, comfort, safety, health and the economy. The benefits of a secure and reliable electricity supply are evident in every aspect of our lives. Construction and operation of the South Jerrabomberra 132/11kV ZS will support the SJHVSP, in particular supporting the development of the SJDP, and ensure safe and reliable electricity supply to the broader South Jerrabomberra area.

Queanbeyan council has adopted a number of strategic plans relating to housing and employment lands. South Jerrabomberra features prominently in the plans, recognising the importance of the SJDP to council for providing affordable housing and employment opportunities.

The South Jerrabomberra Structure Plan 2013 and Residential and Economic Strategy 2015-2031 identify South Jerrabomberra as providing approximately 2,500 new dwellings as well as approximately 130ha dedicated to employment lands. The purpose of the SJHVSP is to provide sufficient supply to meet the current and forecast demand for electricity within this region. The SJHVSP has been designed to enable future augmentations should demand exceed current projections.

The PIP, of which the proposal site forms a part, is referred to in the *Towards 2040 Queanbeyan-Palerang Regional Council Local Strategic Planning Statement* (QPRC, July 2020) and supports Planning Policy 10 and 11 of that Statement. The proposal site, in particular the broader PIP, supports Goal 1 (A connected and prosperous economy), and Goal 3 (Healthy connected communities) of the *South East and Tablelands Regional Plan 2036*.

#### 6.15.2 Environmental impact assessment

An improvement to the electricity supply network provides many benefits to the broader community through a secure and reliable electricity supply. The construction and operation of the new 132/11kV ZS will be undertaken on Essential Energy property, within a broader subdivision.

In the absence of further augmentation to the high voltage supply network, there is an increased risk of supply interruptions, and it is unlikely that any further development could proceed. This would detrimentally impact on economic and social development of the region, and potentially prove to be disruptive to existing commercial enterprises and to residences throughout the local area.

The proposal is unlikely to affect community resources; this may include the use of community infrastructure roads, water, and waste management services. The proposal is unlikely to cause substantial change or disruption to the community through loss of neighbourhood cohesion, access to facilities, community identity, or cultural character.

### 6.15.3 Environmental mitigation measures

The following mitigation measures will be employed to manage and minimise potential negative social and economic impacts:

- Management of construction traffic in the vicinity of construction works, including communication with local residents and road users
- Signs and barriers would be erected around construction work sites, where appropriate, to minimise the possibility of personnel injuries and prevent placing the public at risk.

### 6.15.4 Conclusion

Construction will be temporary in nature, and apart from some changes to the visual amenity, long-term impacts are not expected.

The social impact would be short-term and minor. Given the mitigation measures outlined in this assessment, the overall environmental risk is considered to be low.

## 6.16 Cumulative Impacts

Cumulative impacts may be experienced due to the interaction of elements within the proposal, or with other existing or proposed developments within the locality. The new 132/11kV ZS will be located within an approved six lot subdivision as part of Stage 1 of the PIP, which is in itself part of the much broader SJDP. Poplars Pty Ltd has obtained approval under Part 4 of the EP&A Act for disturbance of all areas within Stage 1 of the PIP. Essential Energy understands that as part of the subdivision works, Poplars Pty Ltd has purchased and retired all necessary biodiversity offset credits. As such, any potential cumulative impacts to threatened species, populations and ecological communities from the construction, operation and maintenance of the ZS will be negligible to nil, and not likely to result in a significant impact.

Similarly, given the relatively small disturbance footprint and the localised extent of potential impacts during construction and operational phases, the potential cumulative impact to other environmental factors during construction and operation of the ZS has been minimised to the greatest extent possible, and would not be significant. Any residual, minor impacts identified in this section of the REF, can be mitigated and managed through the range of measures outlined in this section and summarised in **Table 6-5**.

Associated with the construction of the ZS will be the completion of a new high voltage, dual circuit 132kV powerline, which together form the SJHVSP, and will support the SJDP. Currently, the powerline has been designed to fit within a small section of the disused Queanbeyan to Monaro railway corridor. The proposed powerline will connect to the existing 132kV powerline, 975, just to the east of the Transgrid Oakes Estate substation. The powerline will extend across a small 230m section of the ACT before crossing into NSW. The powerline will extend along the railway corridor in a mostly southerly direction before heading east across the Queanbeyan Nature Reserve and into the road reserve of Tompsitt Drive. The powerline, once in Tompsitt Drive will be underground and connect to the substation via an easement across Lot 6 of the new subdivision.

A number of environmental studies have been completed as part of the powerline, including heritage and ecological studies. As a small component of the powerline extends into the ACT, being 132kV, the Impact Track development assessment pathway is triggered requiring the preparation and submission of an environmental impact statement (EIS).

Despite being a heavily disturbed railway corridor, some sensitive ecological values are present. The design of the powerline has considered those values and the design avoids or minimises impacts. Some vegetation clearing within the corridor, particularly near Canberra Avenue will be required, however, such clearing is minor in extent and will largely take place in heavily modified and disturbed land. Notwithstanding some of that vegetation meets the criteria, however disturbed, of threatened ecological communities.

The key environmental issue and potential impact of the powerline is related to threatened fauna and, in particular, reptiles inhabiting the grassland areas adjacent to the powerline alignment. The railway corridor and, therefore, the proposed powerline dissects two grassland areas dedicated as reserves in the ACT and NSW. The scoping requirements for the EIS required the assessment of

potential impacts the powerline may have on increasing predation and abundance of threatened reptiles from birds. A detailed paper was prepared based upon published literature examining various aspects of this matter, including powerline design and operation, bird physiology and predation methods, and behavioural characteristics. The paper also considered the available natural and artificial structures within or adjacent to the powerline corridor.

The paper, through a rigorous, methodological and scientific credible approach determined that there is no evidence to suggest the powerline will lead to an increase in predation efficiency, nor abundance. On that basis, in considering the cumulative impacts of the proposed ZS together with potential impacts of the powerline, the proposed SJHVSP is not likely to significantly impact upon any threatened species, nor the environment.

## **6.17 Summary of Environmental Mitigation Measures**

The environmental mitigation measures outlined in this document would be incorporated into the Project Construction Environmental Management Plan (CEMP). These safeguards would minimise any potential adverse impacts arising from the proposed works on the surrounding environment. The mitigation measures are summarised in **Table 6-5**.

**Table 6-5: Summary of Environmental Mitigation Measures**

| Aspect   | Environmental Mitigation Measures  | Timing  |
|--|--|---|
| General  | <ul style="list-style-type: none"> <li>All environmental mitigation measures must be incorporated within the Construction Environmental Management Plan (CEMP), or relevant works plan as applicable for the proposed works.</li> </ul>  | Pre-works.  |
| General  | <ul style="list-style-type: none"> <li>Environmental awareness training must be provided to all field personnel, contractors and subcontractors.</li> </ul>  | Pre-works and during works as required.   |
| Consultation                                   | <ul style="list-style-type: none"> <li>Considerable public engagement has already occurred during the project planning and pre-work stages, including, letter box drop of project information newsletter to 2250 residences in the ACT and NSW; project information made available on Essential Energy's website; establishment of a free call line and email address; community briefings and engagement with community based organisations.</li> <li>In addition specific stakeholder engagement has occurred via Ministerial and MP briefings; one on one meetings with the NSW Government (BCT, DPE, TfNSW, and Department of Regional NSW), e-mails and other direct correspondence with impacted landholders.</li> <li>Ongoing engagement and updates on project progression will continue via the Essential Energy Engagement website, and with affected stakeholders, where required.</li> </ul> | <p>Project planning and re-works.</p> <p>Project planning and re-works.</p> <p>During works.</p>  |
| Licences, Permits, Approvals and Notifications | <ul style="list-style-type: none"> <li>Notification to the local council and occupiers of adjoining land in accordance with clause 2.45 of <i>State Environmental Planning Policy (Transport and Infrastructure) 2021</i>.</li> <li>Notification to the local council in accordance with clause section 45 of the <i>Electricity Supply Act 1995</i>.</li> <li>Section 68 approval under the <i>Local Government Act 1994</i> may be required for construction and extension of water supply and any sewerage service pipes or fittings or fixtures communicating or intended to communicate, directly or indirectly, with any water supply and sewer of a council.</li> </ul>   | <p>21 days prior to works commencing. These notifications have been sent.</p> <p>40 days prior to works commencing. This notification has been sent.</p> <p>Prior to commissioning of ZS.</p> |
| Air Quality                                    | <ul style="list-style-type: none"> <li>Any potential dust-borne materials transported to and from the activity site will be covered at all times during transportation</li> <li>Any temporary stockpiles of surplus excavated material will be covered or wet down during dry and windy conditions</li> <li>All vehicles and machinery will be well maintained according to manufacturer requirements to ensure emissions are kept within acceptable limits.</li> </ul>  | During works.   |
| Geology and Soil                               | <ul style="list-style-type: none"> <li>Risks associated with sediment and erosion will be managed in accordance with The Blue Book – Managing Urban Stormwater: Soils and Construction (Landcom 2004)</li> </ul>   | During works.   |

| Aspect                      | Environmental Mitigation Measures  | Timing                                  |
|-----------------------------|--|---|
|                             | <ul style="list-style-type: none"> <li>Disturbed areas will be stabilised as soon as practicable following construction activities</li> <li>Essential Energy's CEOP8064 Management of Excavated Material; Guideline for Construction Sites will be consulted to determine the most appropriate beneficial reuse or disposal method for any surplus excavated materials.</li> </ul>   |   |
| Water Quality and Hydrology | <ul style="list-style-type: none"> <li>Control measures will be implemented to manage risks associated with the handling of fuel through using spill trays when undertaking in field re-fuelling</li> <li>Disturbed areas will be managed in accordance with the requirements of the Blue Book to minimise potential impacts to waterways. Sediment fencing will be erected, where required, downslope of disturbed areas, and impacts would be minimised where practicable. The use of filter bags may be required to discharge collected sediment-laden water where there are insufficient grassed areas available</li> <li>Any water collected in excavations and trenches during rainfall and surface water ingress should be pumped to a grassed area on-site (where a suitable area is available) to allow for infiltration, reused for dust suppression, or pumped to stormwater using a sediment sock. All options should be conducted in a manner that does not result in turbid water entering the stormwater system or nearby waterway</li> </ul>   | During works.                           |
| Noise and Vibration         | <ul style="list-style-type: none"> <li>In considering the remote nature of the proposed substation site location, being at least 650m away from the nearest sensitive residential receiver, work hours will be between 7am and 6pm Monday to Saturday. On occasions works outside these hours may be undertaken where the following requirements are met: <ul style="list-style-type: none"> <li>Neighbours (and other sensitive receivers) adjacent to the works or the local council or the NSW Environment Protection Authority (EPA) have been notified; and</li> <li>Where the works are required to take place in the vicinity of private access ways or driveways, consultation with individual residents would be undertaken to advise residents of the planned timing of the works.</li> </ul> </li> <li>Future commercial receivers located in close proximity to the proposal will be advised of the works schedule and provided with details of a site contact. All plant and equipment will be operated and maintained in accordance with the manufacturer's specifications. Any noise complaint will be investigated with additional control measures put in place if required.</li> </ul> | During works.                           |
| Flora and Fauna             | <ul style="list-style-type: none"> <li>Siting the location of the proposed new ZS on previously cleared and disturbed rural land within a new six lot subdivision has minimised potential impact to flora and fauna considerably.</li> <li>No clearing or disturbance to vegetation outside the lot boundary, which is located within the broader six lot subdivision, is permitted</li> <li>A site induction program to ensure that all construction, operation and maintenance staff and contractors are aware of the need to, and how to, avoid and protect vegetation outside the six lot</li> </ul>   | Pre-works, during works and post works. |



| Aspect                       | Environmental Mitigation Measures   | Timing                       |
|------------------------------|---|------------------------------|
|                              | subdivision approval <ul style="list-style-type: none"> <li>Essential Energy has a general biosecurity duty to ensure the biosecurity risks posed by pests, weeds and diseases are prevented, eliminated or minimised, and that the risk of importing additional weeds to the project site is appropriately managed.</li> </ul>   |                              |
| Aboriginal Heritage          | <ul style="list-style-type: none"> <li>In the unlikely event that an Aboriginal heritage site or object is located during the construction phase of the project, works will cease in that area and a representative from Essential Energy's Environmental Services will be notified. Works with the potential to disturb the object would not resume until the object had been properly identified, and appropriate action taken</li> <li>If human remains are uncovered, works must immediately cease and the NSW Police department and Essential Energy's Environmental Services team will be notified</li> </ul>   | During works.                |
| Non-Aboriginal Heritage      | <ul style="list-style-type: none"> <li>All construction work would be undertaken within the assessed areas of the proposal site only</li> <li>In the unlikely event that a previously unknown heritage site or object is located during construction of the proposal, works would cease immediately in that area and a representative from Essential Energy's Environmental Services would be notified. Works with the potential to disturb the object would not resume until the object had been properly identified, and appropriate action taken.</li> </ul>   | During works.                |
| Contamination                | <ul style="list-style-type: none"> <li>It is intended to reuse surplus spoil beneficially on site</li> <li>Essential Energy's CEOP8064 Management of Excavated Material; Guideline for Construction Sites will be consulted to determine the most appropriate beneficial reuse or disposal method for excavated materials</li> <li>In the event of encountering any suspected contamination in the work area, it will be separated and contained on site until it can be classified in accordance with the EPA (2014) Waste Classification Guidelines, and then disposed of at a facility that is lawfully able to accept the waste</li> <li>Control measures will be implemented to manage risks associated with the handling of fuel through using spill trays when undertaking in field re-fuelling</li> <li>Sediment and erosion control structures will be established and maintained in accordance with The Blue Book to minimise potential impacts on receiving watercourses.</li> </ul> | During works.                |
| Electric and Magnetic Fields | <ul style="list-style-type: none"> <li>The proposal will comply with all relevant national and international guidelines</li> <li>Siting the location of the proposed new ZS away (approximately 650m) from sensitive residential receivers greatly minimises any potential residual EMF exposure risk</li> </ul>  | Project planning and design. |
| Visual                       | <ul style="list-style-type: none"> <li>Siting the location of the proposed new ZS away (approximately 650m) from sensitive residential receivers minimises potential views of the proposal from these receivers.</li> <li>ZS design to integrate with the PIPWDG, for example the ZS will largely be an indoor substation with</li> </ul>   | Project planning and design. |

| Aspect              | Environmental Mitigation Measures   | Timing                      |
|---------------------|---|-----------------------------|
|                     | the only external equipment being the transformers. Fencing has been selected to be sympathetic with the PIPWDG, whilst also providing the necessary security required for an electrical substation.  |                             |
| Waste               | <ul style="list-style-type: none"> <li>All wastes that are generated as a result of the project will be classified in accordance with the Waste Classification Guidelines (EPA, 2014)</li> <li>All waste material will be reused, recycled, or disposed of at a facility lawfully capable of receiving the waste.</li> </ul>  | During works.               |
| Bushfire            | <ul style="list-style-type: none"> <li>Ongoing vegetation maintenance would occur to ensure safe clearance distances are maintained for around the ZS perimeter.</li> </ul>   | Post construction           |
| Traffic and Access  | <ul style="list-style-type: none"> <li>The need for a traffic management plan (TMP) for the construction phase would be determined and, if required, completed prior to works commencing. The TMP would outline requirements for the safe and continued use of local transport corridors during construction</li> </ul>   | Pre-works and during works. |
| Land Use            | <ul style="list-style-type: none"> <li>Consultation about the proposed works and schedule will be undertaken directly with subdivision developers</li> <li>The site should be left in a tidy condition at the conclusion of construction activities</li> </ul>  | During works.               |
| Social and Economic | <ul style="list-style-type: none"> <li>Management of construction traffic in the vicinity of construction works, including communication with local residents and road users</li> <li>Signs and barriers would be erected around construction work sites, where appropriate, to minimise the possibility of personnel injuries and prevent placing the public at risk.</li> </ul> | Pre-works and during works. |

## 7. Ecologically Sustainable Development

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Ecologically sustainable development (ESD) is an attempt to provide the best outcomes for the human and natural environments both now and into the indefinite future. One of the most often cited definitions of sustainability is development that "meets the needs of the present without compromising the ability of future generations to meet their own needs". Sustainability relates to the continuity of economic, technical, social, institutional and environmental aspects of human society, as well as the non-human environment.

The existing environment has been described throughout **Section 6** of this REF for the various aspects of the natural environment assessed as part of this proposed activity.

The proposal has been assessed against the following four principles of ESD listed in the *Protection of the Environment Administration Act 1991*.

The four principles of ESD are:

- The precautionary principle: section 6(2)(a)(i)(ii)
- The principle of inter-generational equity: section 6(2)(b)
- The principle of biological diversity and ecological integrity: section 6(2)(c)
- The principle of improved valuation of environmental resources: section 6(2)(d)(i)(ii)(iii).

An assessment of the proposal against the principles is provided below.

### 7.1 Precautionary Principle

The precautionary principle states that:

*'If there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation.'*

*In the application of the precautionary principle, public and private decisions should be guided by:*

- 1) *careful evaluation to avoid, wherever practicable, serious or irreversible damage to the environment; and*
- 2) *an assessment of the risk weighted consequence of various options.'*

For the precautionary principle to be applicable, two pre-conditions must be satisfied; *"first it is not necessary that serious or irreversible environmental damage has actually occurred – it is the threat of such damage that is required. Secondly, the environmental damage threatened must attain the threshold of being serious or irreversible"*<sup>4</sup>.

If there is no threat of serious or irreversible environmental damage, there is no basis upon which the precautionary principle can apply.

Environmental investigations, including desktop ecological, Aboriginal due diligence, and visual impact assessments, have been undertaken during the preparation of this REF to ensure that the potential environmental impacts are understood with a high degree of certainty. The spatial scale of impacts would be local and isolated to the immediate construction area. Therefore, it can be concluded that this proposal will not result in a threat of serious or irreversible damage.

Mitigation measures have also been proposed in this REF to minimise the identified potential impacts of the project. A Construction Environmental Management Plan (CEMP) will be developed and implemented as a precautionary measure, and no mitigation measures have been deferred due to a lack of scientific certainty. The proposal is therefore consistent with the precautionary principle.

### 7.2 Principle of Inter-Generational Equity

The principle of inter-generational equity states that:

*'The present generation should ensure that the health, diversity and productivity of the environment*

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<sup>4</sup> Telstra Corporation Limited v Hornsby Shire Council [2006] NSWLEC 133, Preston CJ at 129

*are maintained or enhanced for the benefit of future generations.'*

To the extent possible, all environmental impacts and appropriate mitigation measures have been identified. The proposal would not harm the health, diversity and productivity of the environment to such an extent that future generations would not be able to benefit.

The proposal is therefore consistent with the principle of inter-generational equity.

### 7.3 Principle of Biological Diversity and Ecological Integrity

The principle of biological diversity and ecological integrity states that:

*'Conservation of biological diversity and ecological integrity should be a fundamental consideration.'*

The proposal comprises the construction of a new 132kV ZS on predominately cleared land, historically used for grazing, and which has more recently undergone a degree of disturbance, through vegetation clearing and preliminary earthworks, including benching, associated with a broader six lot subdivision forming part of the PIP. A desktop ecological assessment which has been prepared concluded there are not likely to be any significant impacts to threatened species or ecological communities as a result of the proposal. Impacts upon the ecological integrity would therefore be negligible, as described in **Section 6.5**.

### 7.4 Improved Valuation of Environmental Resources

The principle of improved valuation of environmental resources states that:

*'Environmental factors should be included in the valuation of assets and services such as:*

- Polluter pays – that is, those who generate pollution and waste should bear the cost of containment, avoidance and abatement
- The users of goods and services should pay prices based on the full life cycle of costs of providing those goods and services, including the use of natural resources and assets and the ultimate disposal of any waste
- Environmental goals, having been established, should be pursued in the most cost effective way, by establishing incentive structures, including market mechanisms that enable those best placed to maximise benefits or minimise cost to develop their own solutions and responses to environmental problems.'

The proposal has been designed taking into consideration the least possible impact on the environment. All costs associated with the containment, avoidance and abatement of pollution have been factored into the design of this proposal. The proposal will have the positive benefit of supporting the broader SJDP, creating regional economic opportunities and job growth in the area.

## 8. Construction Environmental Management Plan

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### 8.1 Introduction

A Construction Environmental Management Plan (CEMP) outlines the environmental objectives of a project, the environmental mitigation measures to be implemented, the timing of implementation, responsibilities for implementation and management, and a review process to determine the effectiveness of the strategies.

The construction contractor(s) would be required to develop a project-specific CEMP that addresses the scope of works to be undertaken. The CEMP would detail how the works would be undertaken to comply with all environmental laws, Essential Energy's environmental policy, and the environmental mitigation measures described in this REF.

The key objectives of the CEMP would include:

- Ensuring that the works are carried out in accordance with legislative requirements and relevant non-statutory policies
- Ensuring that the works are carried out in accordance with the requirements detailed in this REF, including all requirements outlined in any relevant approvals, permits or licences and the mitigation measures described in **Section 6**
- Ensuring that employees engaged to undertake the works comply with the conditions detailed in the CEMP
- Identifying management responsibilities and reporting requirements to demonstrate compliance with the CEMP.

It is also noted that the CEMP would be a working document and may be amended over the course of the project.

If a particular activity falls outside the scope of the REF and CEMP, and it would increase the environmental impact, the activity is not permitted to continue without an appropriate environmental assessment under the EP&A Act.

### 8.2 Implementation of the CEMP

The CEMP would be a working document and would be amended should strategies initially implemented be found to be inadequate to manage environmental impacts. The CEMP would typically:

- Establish environmental goals and objectives
- Detail the conditions of approval
- List actions, timing and responsibilities for implementation that arise from the mitigation measures recommended in this REF
- Detail statutory requirements
- Provide a framework for reporting on relevant matters on an ongoing basis
- Detail training requirements for personnel in environmental awareness and best practice environmental management systems
- Outline emergency procedures, including contact names and corrective actions
- Detail process surveillance and auditing procedures
- List complaint handling procedures
- Detail quality assurance procedures.

#### 8.2.1 Auditing schedule of the CEMP

Auditing of the proposal would be undertaken to establish whether the contractor is conducting activities in accordance with their current environmental management plans and whether the

management plans are providing an effective tool to control adverse environmental impacts.

The following activities are proposed to achieve the audit's purpose:

- Review the on-site implementation of the contractor's CEMP
- Review the documentation process to determine if planned works have received endorsement to proceed
- Monitor the compliance of construction activities with the project determination and environmental legislation
- Review the outcomes of any previous audit(s) and determine if there has been any change in the environmental performance of the construction contractor
- Identify opportunities to improve on-site environmental management practices.

The benefits of conducting the environmental audit are to allow:

- Feedback on the CEMP implementation process to assist both the contractor and project manager to improve the future preparation of site environmental management documentation
- Improve the planning of construction projects through documentation and impact assessment to ensure best environmental management practices are implemented on site
- Improve environmental management processes on site.



## 9. Environmental Checklist

In accordance with section 5.5 of the EP&A Act and clause 171 of the EP&A Reg, Essential Energy, when assessing the environmental impact of an activity on the environment, must consider the factors identified in **Table 9-1** and **Table 9-2** below.

**Table 9-1: Section 5.5 requirements**

| Requirement  | Section Reference  |
|--|--|
| For the purpose of attaining the objects of this Act relating to the protection and enhancement of the environment, a determining authority in its consideration of an activity shall, notwithstanding any other provisions of this Act or the provisions of any other Act or of any instrument made under this or any other Act, examine and take into account to the fullest extent possible all matters affecting or likely to affect the environment by reason of that activity. | Section 2, 6, 7 and 8  |
| Without limiting the above, a determining authority shall consider the effect of an activity on any wilderness area (within the meaning of the <i>Wilderness Act 1987</i> ) in the locality in which the activity is intended to be carried on   | N/A – there are no wilderness areas within or close to the activity area |

**Table 9-2: Clause 171 checklist**

| 171 Factor   | Section Reference   |
|--|---|
| The environmental impact on a community<br><i>The works are located in a predominately rural landscape, and within what will become a new commercial subdivision. Impacts on the community have been considered by this REF. These include noise, dust, biodiversity, social and visual impacts. With the exception of noise and visual, these have been assessed to be low. Noise and visual impacts have been assessed as low to moderate</i>  | Sections 6.1, 6.2, 6.3, 6.4, 6.6, 6.7, 6.8, 6.9, 6.10, 6.11, 6.12, 6.13, 6.14 and 6.15. |
| The transformation of a locality<br><i>In the short term there will be a high degree of visual change associated with site preparatory works, civil works and construction of the ZS. Over the longer term the ZS will also be a permanent change in the visual landscape, however, some degree of integration will occur as the remainder of the commercial buildings making up the six lot subdivision are built. While transformation of the locality will occur as a result of the new six lot subdivision, forming part of the PIP, the contribution of the ZS is not considered significant.</i> | Sections 6.10, 6.14 and 6.15  |
| The environmental impact on the ecosystems of the locality<br><i>As the proposed 132/11kV ZS will be located within the disturbance footprint of the six lot subdivision (forming part of Stage 1 of the PIP), which has been separately assessed and approved under Part 4 of the EP&amp;A Act, and EPBC Act, any additional impacts to threatened species, populations and ecological communities from the construction, operation and maintenance of the ZS will be negligible to nil, and not likely to result in a significant impact.</i>  | Sections 6.5 and 7.   |
| Reduction of the aesthetic, recreational, scientific, or other environmental quality or value of a locality<br><i>An overall reduction in aesthetic and recreational quality of the locality is unlikely to occur during the proposed works. Localised impacts may occur at the construction site, however these impacts will be temporary and of short duration, and can be managed through implementation of mitigation measures in this REF.</i>  | Sections 6.1, 6.2, 6.3, 6.4, 6.5, 6.6, 6.7, 6.8, 6.9, 6.10, 6.14, 6.15 and 6.16         |
| The effect on a locality, place or building having aesthetic, anthropological, archaeological, architectural, cultural, historical, scientific or social significance or other special value for present or future generations.<br><i>No sites of Aboriginal heritage will be impacted by the proposal. A review of non-Aboriginal heritage databases, registers and LEPs indicated no sites of world, national, state, or local heritage were located at or within close proximity to the proposal site.</i>  | Sections 6.6, 6.7.  |

| 171 Factor  | Section Reference  |
|---|--|
| <p>The impact on the habitat of protected fauna (within the meaning of the <i>Biodiversity Conservation Act, 2016</i>).</p> <p><i>The proposed activity is not likely to significantly impact threatened fauna species.</i></p>   | Section 6.5  |
| <p>The endangering of any species of animal, plant or other form of life, whether living on land, in water or in the air.</p> <p><i>It is not anticipated that the proposal will endanger any species of animal, plant or other form of life, whether living on land, in water, or in the air.</i></p>  | Section 6.5  |
| <p>Long-term effects on the environment.</p> <p><i>Long-term adverse environmental effects are not anticipated.</i></p>   | Sections 6 and 7   |
| <p>Degradation of the quality of the environment.</p> <p><i>This risk is considered low with the implementation of soil and water management measures included in this REF.</i></p>   | Sections 6.1, 6.2, 6.3, 6.5 and 6.8.                       |
| <p>Risk to the safety of the environment.</p> <p><i>There is the potential risk to the environment from spillage of materials during construction of the proposal. Implementation of the mitigation measures contained in Section 6 of this REF will ensure that potential environmental risks are minimised.</i></p>   | Sections 6.1, 6.2, 6.3, 6.8, 6.11, 6.12, 6.13, 6.14 and 7. |
| <p>Reduction in the range of beneficial uses of the environment.</p> <p><i>No long-term reduction in the range of beneficial uses of the environment is anticipated as a result of the proposal.</i></p>  | Section 6 and 7  |
| <p>Pollution of the environment.</p> <p><i>Risk of pollution to the environment is considered low and can be managed with implementation of mitigation measures provided in this REF.</i></p>   | Section 6  |
| <p>Environmental problems associated with the disposal of waste</p> <p><i>Waste generated as a result of the proposed works will be minor. All wastes that are generated as a result of the project will be appropriately disposed of in accordance with the Waste Classification Guidelines (EPA, 2014).</i></p>   | Section 6.11   |
| <p>Increased demands on resources (natural or otherwise) that are, or are likely to become, in short supply.</p> <p><i>The proposal is unlikely to increase demands upon rare natural resources.</i></p>  | Section 6  |
| <p>The cumulative environmental effect with other existing or likely future activities</p> <p><i>The proposal will be located within an approved six lot subdivision as part of Stage 1 of the PIP, which is in itself part of the much broader SJDP. Poplars Pty Ltd has obtained approval under Part 4 of the EP&amp;A Act for disturbance of all areas within Stage 1 of the PIP. Essential Energy understands that as part of the subdivision works, Poplars Pty Ltd has purchased and retired all necessary biodiversity offset credits. As such, any potential cumulative impacts to threatened species, populations and ecological communities from the construction, operation and maintenance of the ZS will be negligible to nil, and not likely to result in a significant impact.</i></p> <p><i>Similarly, given the relatively small disturbance footprint and the localised extent of potential impacts during construction and operational phases, the potential cumulative impact to other environmental factors during construction and operation of the ZS has been minimised to the greatest extent possible, and would not be significant. Any residual, minor impacts identified in this REF, can be mitigated and managed through the range of measures outlined in Section 6, and summarised in Table 6-5.</i></p> | Section 6.16   |
| <p>The impact on coastal processes and coastal hazards, including those under projected climate change conditions?</p> <p><i>The proposal is not located on the coast.</i></p>  | Section 1 and 6.   |

| 171 Factor  | Section Reference |
|---|-------------------|
| <p>Applicable local strategic planning statements, regional strategic plans or district strategic plans made under the Act, Division 3.1,</p> <p><i>The Poplars Innovation Precinct (PIP), of which the proposal site forms a part, is referred to in the Towards 2040 Queanbeyan-Palerang Regional Council Local Strategic Planning Statement (QPRC, July 2020) and supports Planning Policies 10 and 11 of that Statement. The proposal site, and in particular the broader PIP, also supports Goal 1 (A connected and prosperous economy), and Goal 3 (Healthy connected communities) of the South East and Tablelands Regional Plan 2036.</i></p> <p><i>In addition, Queanbeyan council has adopted a number of strategic plans relating to housing and employment lands. South Jerrabomberra features prominently in the plans, recognising the importance of the SJDP to council for providing affordable housing and employment opportunities.</i></p> <p><i>The South Jerrabomberra Structure Plan 2013 and Residential and Economic Strategy 2015-2031 identify South Jerrabomberra as providing approximately 2,500 new dwellings as well as approximately 130ha dedicated to employment lands. The purpose of the SJHVSP is to provide sufficient supply to meet the current and forecast demand for electricity within this region. The substationZS, and associated high voltage powerline, are required to enable the development to occur. The SJHVSP has been designed to enable future augmentations should demand exceed current projections.</i></p> | Section 6.15      |
| <p>Other relevant environmental factors.</p> <p><i>No other relevant environmental factors have been identified during the preparation of this REF</i></p>  | N/A               |

## 10. Conclusion

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This REF has been prepared to assess the environmental impacts associated with the construction, operation and maintenance of the new South Jerrabomberra 132/11kV ZS. Essential Energy is a determining authority as defined in the EP&A Act. As such, the activity does not require consent under Part 4 of the EP&A Act. The activity has been assessed under Part 5, Division 5.1 of the EP&A Act.

The proposal would enable the upgrade of the local electricity network to both support the SJDP and increase overall network capacity, placing Essential Energy in a better position to meet customers' future electricity needs.

The proposal complies with the provisions of section 5.5 of the EP&A Act and clause 171 of the EP&A Reg as shown in **Section 9**.

The proposal and its associated environmental impacts are unlikely to have a significant impact on the environment. In conjunction with a proposed new 132kV dual circuit powerline, the proposal would support the SJDP, and strengthen Essential Energy's electricity network in the broader area, maximising the social and economic benefits, whilst minimising any adverse environmental impacts.

# 11. References

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## **Appendix A – EPBC Act Protected Matters Tool Search Result**

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Australian Government

Department of Climate Change, Energy,  
the Environment and Water

# EPBC Act Protected Matters Report

This report provides general guidance on matters of national environmental significance and other matters protected by the EPBC Act in the area you have selected. Please see the caveat for interpretation of information provided here.

Report created: 15-Dec-2022

[Summary](#)

[Details](#)

[Matters of NES](#)

[Other Matters Protected by the EPBC Act](#)

[Extra Information](#)

[Caveat](#)

[Acknowledgements](#)



# Summary

## Matters of National Environment Significance

This part of the report summarises the matters of national environmental significance that may occur in, or may relate to, the area you nominated. Further information is available in the detail part of the report, which can be accessed by scrolling or following the links below. If you are proposing to undertake an activity that may have a significant impact on one or more matters of national environmental significance then you should consider the [Administrative Guidelines on Significance](#).

|  |      |
|--|------|
| <a href="#">World Heritage Properties:</a>                   | None |
| <a href="#">National Heritage Places:</a>                    | 3    |
| <a href="#">Wetlands of International Importance (Ramsar</a> | 4    |
| <a href="#">Great Barrier Reef Marine Park:</a>              | None |
| <a href="#">Commonwealth Marine Area:</a>                    | None |
| <a href="#">Listed Threatened Ecological Communities:</a>    | 3    |
| <a href="#">Listed Threatened Species:</a>                   | 46   |
| <a href="#">Listed Migratory Species:</a>                    | 14   |

## Other Matters Protected by the EPBC Act

This part of the report summarises other matters protected under the Act that may relate to the area you nominated. Approval may be required for a proposed activity that significantly affects the environment on Commonwealth land, when the action is outside the Commonwealth land, or the environment anywhere when the action is taken on Commonwealth land. Approval may also be required for the Commonwealth or Commonwealth agencies proposing to take an action that is likely to have a significant impact on the environment anywhere.

The EPBC Act protects the environment on Commonwealth land, the environment from the actions taken on Commonwealth land, and the environment from actions taken by Commonwealth agencies. As heritage values of a place are part of the 'environment', these aspects of the EPBC Act protect the Commonwealth Heritage values of a Commonwealth Heritage place. Information on the new heritage laws can be found at <https://www.dcceew.gov.au/parks-heritage/heritage>

A [permit](#) may be required for activities in or on a Commonwealth area that may affect a member of a listed threatened species or ecological community, a member of a listed migratory species, whales and other cetaceans, or a member of a listed marine species.

|   |      |
|---|------|
| <a href="#">Commonwealth Lands:</a>                                 | 258  |
| <a href="#">Commonwealth Heritage Places:</a>                       | 51   |
| <a href="#">Listed Marine Species:</a>                              | 21   |
| <a href="#">Whales and Other Cetaceans:</a>                         | None |
| <a href="#">Critical Habitats:</a>                                  | None |
| <a href="#">Commonwealth Reserves Terrestrial:</a>                  | None |
| <a href="#">Australian Marine Parks:</a>                            | None |
| <a href="#">Habitat Critical to the Survival of Marine Turtles:</a> | None |

## Extra Information

This part of the report provides information that may also be relevant to the area you have

|   |      |
|---|------|
| <a href="#">State and Territory Reserves:</a>           | 20   |
| <a href="#">Regional Forest Agreements:</a>             | 1    |
| <a href="#">Nationally Important Wetlands:</a>          | 1    |
| <a href="#">EPBC Act Referrals:</a>                     | 140  |
| <a href="#">Key Ecological Features (Marine):</a>       | None |
| <a href="#">Biologically Important Areas:</a>           | None |
| <a href="#">Bioregional Assessments:</a>                | None |
| <a href="#">Geological and Bioregional Assessments:</a> | None |

# Details

## Matters of National Environmental Significance

| National Heritage Places  |       |              | [ Resource Information ] |
|---|-------|--------------|--------------------------|
| Name  | State | Legal Status | Buffer Status            |
| Historic  |       |              |                          |
| <a href="#">Australian War Memorial and the Memorial Parade</a> | ACT   | Listed place | In buffer area only      |
| <a href="#">High Court - National Gallery Precinct</a>          | ACT   | Listed place | In buffer area only      |
| <a href="#">Old Parliament House and Curtilage</a>              | ACT   | Listed place | In buffer area only      |

| Wetlands of International Importance (Ramsar Wetlands)                |                                       | [ Resource Information ] |
|---|---------------------------------------|--------------------------|
| Ramsar Site Name  | Proximity                             | Buffer Status            |
| <a href="#">Banrock station wetland complex</a>                       | 800 - 900km upstream from Ramsar site | In feature area          |
| <a href="#">Hattah-kulkyne lakes</a>                                  | 600 - 700km upstream from Ramsar site | In feature area          |
| <a href="#">Riverland</a>   | 700 - 800km upstream from Ramsar site | In feature area          |
| <a href="#">The coorong, and lakes alexandrina and albert wetland</a> | 800 - 900km upstream from Ramsar site | In feature area          |

Listed Threatened Ecological Communities

[ Resource Information ]

For threatened ecological communities where the distribution is well known, maps are derived from recovery plans, State vegetation maps, remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.

Status of Vulnerable, Disallowed and Ineligible are not MNES under the EPBC Act.

| Community Name  | Threatened Category   | Presence Text                         | Buffer Status       |
|---|-----------------------|---------------------------------------|---------------------|
| <a href="#">Alpine Sphagnum Bogs and Associated Fens</a>  | Endangered            | Community may occur within area       | In buffer area only |
| <a href="#">Natural Temperate Grassland of the South Eastern Highlands</a>                          | Critically Endangered | Community likely to occur within area | In feature area     |
| <a href="#">White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland</a> | Critically Endangered | Community likely to occur within area | In feature area     |

Listed Threatened Species

[ Resource Information ]

Status of Conservation Dependent and Extinct are not MNES under the EPBC Act.  
Number is the current name ID.

| Scientific Name   | Threatened Category   | Presence Text  | Buffer Status       |
|---|-----------------------|--|---------------------|
| BIRD  |                       |  |                     |
| <a href="#">Anthochaera phrygia</a><br>Regent Honeyeater [82338]  | Critically Endangered | Species or species habitat known to occur within area  | In feature area     |
| <a href="#">Botaurus poiciloptilus</a><br>Australasian Bittern [1001]   | Endangered            | Species or species habitat known to occur within area  | In feature area     |
| <a href="#">Calidris ferruginea</a><br>Curlew Sandpiper [856]   | Critically Endangered | Species or species habitat known to occur within area  | In feature area     |
| <a href="#">Callocephalon fimbriatum</a><br>Gang-gang Cockatoo [768]  | Endangered            | Species or species habitat known to occur within area  | In feature area     |
| <a href="#">Calyptorhynchus lathami lathami</a><br>South-eastern Glossy Black-Cockatoo [67036]                  | Vulnerable            | Species or species habitat known to occur within area  | In feature area     |
| <a href="#">Falco hypoleucos</a><br>Grey Falcon [929]   | Vulnerable            | Species or species habitat likely to occur within area | In feature area     |
| <a href="#">Grantiella picta</a><br>Painted Honeyeater [470]  | Vulnerable            | Species or species habitat known to occur within area  | In feature area     |
| <a href="#">Hirundapus caudacutus</a><br>White-throated Needletail [682]  | Vulnerable            | Species or species habitat known to occur within area  | In feature area     |
| <a href="#">Lathamus discolor</a><br>Swift Parrot [744]   | Critically Endangered | Species or species habitat known to occur within area  | In buffer area only |
| <a href="#">Limosa lapponica baueri</a><br>Nunivak Bar-tailed Godwit, Western Alaskan Bar-tailed Godwit [86380] | Vulnerable            | Species or species habitat may occur within area       | In buffer area only |

| Scientific Name   | Threatened Category   | Presence Text  | Buffer Status       |
|---|-----------------------|--|---------------------|
| <a href="#">Numenius madagascariensis</a><br>Eastern Curlew, Far Eastern Curlew [847]         | Critically Endangered | Species or species habitat may occur within area       | In feature area     |
| <a href="#">Polytelis swainsonii</a><br>Superb Parrot [738]                                   | Vulnerable            | Species or species habitat known to occur within area  | In feature area     |
| <a href="#">Pycnoptilus floccosus</a><br>Pilotbird [525]                                      | Vulnerable            | Species or species habitat may occur within area       | In buffer area only |
| <a href="#">Rostratula australis</a><br>Australian Painted Snipe [77037]                      | Endangered            | Species or species habitat known to occur within area  | In feature area     |
| FISH  |                       |  |                     |
| <a href="#">Bidyanus bidyanus</a><br>Silver Perch, Bidyan [76155]                             | Critically Endangered | Translocated population known to occur within area     | In buffer area only |
| <a href="#">Maccullochella macquariensis</a><br>Trout Cod [26171]                             | Endangered            | Species or species habitat may occur within area       | In buffer area only |
| <a href="#">Maccullochella peelii</a><br>Murray Cod [66633]                                   | Vulnerable            | Species or species habitat likely to occur within area | In buffer area only |
| <a href="#">Macquaria australasica</a><br>Macquarie Perch [66632]                             | Endangered            | Species or species habitat may occur within area       | In feature area     |
| FROG  |                       |  |                     |
| <a href="#">Litoria aurea</a><br>Green and Golden Bell Frog [1870]                            | Vulnerable            | Species or species habitat may occur within area       | In feature area     |
| <a href="#">Litoria booroolongensis</a><br>Booroolong Frog [1844]                             | Endangered            | Species or species habitat may occur within area       | In buffer area only |
| <a href="#">Litoria castanea</a><br>Yellow-spotted Tree Frog, Yellow-spotted Bell Frog [1848] | Critically Endangered | Species or species habitat likely to occur within area | In feature area     |

| Scientific Name   | Threatened Category   | Presence Text  | Buffer Status       |
|---|-----------------------|--|---------------------|
| <a href="#">Litoria raniformis</a><br>Growling Grass Frog, Southern Bell Frog, Green and Golden Frog, Warty Swamp Frog, Golden Bell Frog [1828]   | Vulnerable            | Species or species habitat may occur within area       | In buffer area only |
| INSECT  |                       |  |                     |
| <a href="#">Keyacris scurra</a><br>Key's Matchstick Grasshopper [89739]   | Endangered            | Species or species habitat may occur within area       | In buffer area only |
| <a href="#">Synemon plana</a><br>Golden Sun Moth [25234]  | Vulnerable            | Species or species habitat known to occur within area  | In feature area     |
| MAMMAL  |                       |  |                     |
| <a href="#">Chalinolobus dwyeri</a><br>Large-eared Pied Bat, Large Pied Bat [183]   | Vulnerable            | Species or species habitat may occur within area       | In feature area     |
| <a href="#">Dasyurus maculatus maculatus (SE mainland population)</a><br>Spot-tailed Quoll, Spotted-tail Quoll, Tiger Quoll (southeastern mainland population) [75184]                            | Endangered            | Species or species habitat known to occur within area  | In feature area     |
| <a href="#">Petaurus australis australis</a><br>Yellow-bellied Glider (south-eastern) [87600]   | Vulnerable            | Species or species habitat likely to occur within area | In feature area     |
| <a href="#">Phascolarctos cinereus (combined populations of Qld, NSW and the ACT)</a><br>Koala (combined populations of Queensland, New South Wales and the Australian Capital Territory) [85104] | Endangered            | Species or species habitat known to occur within area  | In feature area     |
| <a href="#">Pteropus poliocephalus</a><br>Grey-headed Flying-fox [186]  | Vulnerable            | Roosting known to occur within area                    | In feature area     |
| PLANT   |                       |  |                     |
| <a href="#">Caladenia actensis</a><br>Canberra Spider Orchid [76138]  | Critically Endangered | Species or species habitat known to occur within area  | In buffer area only |
| <a href="#">Calotis glandulosa</a><br>Mauve Burr-daisy [7842]   | Vulnerable            | Species or species habitat may occur within area       | In buffer area only |
| <a href="#">Dodonaea procumbens</a><br>Trailing Hop-bush [12149]  | Vulnerable            | Species or species habitat likely to occur within area | In feature area     |



| Scientific Name   | Threatened Category | Presence Text  | Buffer Status   |
|---|---------------------|--|-----------------|
| <a href="#">Eucalyptus aggregata</a><br>Black Gum [20890]   | Vulnerable          | Species or species habitat likely to occur within area | In feature area |
| <a href="#">Lepidium aschersonii</a><br>Spiny Pepper-cress [10976]  | Vulnerable          | Species or species habitat may occur within area       | In feature area |
| <a href="#">Lepidium ginninderrense</a><br>Ginninderra Peppercress [78474]  | Vulnerable          | Species or species habitat known to occur within area  | In feature area |
| <a href="#">Lepidium hyssopifolium</a><br>Basalt Pepper-cress, Peppercress, Rubble Pepper-cress, Pepperweed [16542] | Endangered          | Species or species habitat likely to occur within area | In feature area |
| <a href="#">Leucochrysum albicans subsp. tricolor</a><br>Hoary Sunray, Grassland Paper-daisy [89104]                | Endangered          | Species or species habitat known to occur within area  | In feature area |
| <a href="#">Pomaderris pallida</a><br>Pale Pomaderris [13684]   | Vulnerable          | Species or species habitat known to occur within area  | In feature area |
| <a href="#">Prasophyllum petilum</a><br>Tarengo Leek Orchid [55144]   | Endangered          | Species or species habitat may occur within area       | In feature area |
| <a href="#">Rutidosis leptorhynchoides</a><br>Button Wrinklewort [67251]  | Endangered          | Species or species habitat known to occur within area  | In feature area |
| <a href="#">Senecio macrocarpus</a><br>Large-fruit Fireweed, Large-fruit Groundsel [16333]                          | Vulnerable          | Species or species habitat may occur within area       | In feature area |
| <a href="#">Swainsona recta</a><br>Small Purple-pea, Mountain Swainson-pea, Small Purple Pea [7580]                 | Endangered          | Species or species habitat likely to occur within area | In feature area |
| <a href="#">Thesium australe</a><br>Austral Toadflax, Toadflax [15202]  | Vulnerable          | Species or species habitat known to occur within area  | In feature area |

REPTILE



| Scientific Name   | Threatened Category | Presence Text   | Buffer Status   |
|---|---------------------|---|-----------------|
| <a href="#">Aprasia parapulchella</a><br>Pink-tailed Worm-lizard, Pink-tailed Legless Lizard [1665] | Vulnerable          | Species or species habitat known to occur within area | In feature area |
| <a href="#">Delma impar</a><br>Striped Legless Lizard, Striped Snake-lizard [1649]                  | Vulnerable          | Species or species habitat known to occur within area | In feature area |
| <a href="#">Tymanocryptis pinguicolla</a><br>Grassland Earless Dragon [66727]                       | Endangered          | Species or species habitat known to occur within area | In feature area |

Listed Migratory Species

[ Resource Information ]

| Scientific Name   | Threatened Category | Presence Text  | Buffer Status   |
|---|---------------------|--|-----------------|
| Migratory Marine Birds                                    |                     |  |                 |
| <a href="#">Apus pacificus</a><br>Fork-tailed Swift [678] |                     | Species or species habitat likely to occur within area | In feature area |

Migratory Terrestrial Species

|  |            |   |                 |
|--|------------|---|-----------------|
| <a href="#">Hirundapus caudacutus</a><br>White-throated Needletail [682] | Vulnerable | Species or species habitat known to occur within area | In feature area |
| <a href="#">Monarcha melanopsis</a><br>Black-faced Monarch [609]         |            | Species or species habitat known to occur within area | In feature area |
| <a href="#">Motacilla flava</a><br>Yellow Wagtail [644]                  |            | Species or species habitat may occur within area      | In feature area |
| <a href="#">Myiagra cyanoleuca</a><br>Satin Flycatcher [612]             |            | Species or species habitat known to occur within area | In feature area |
| <a href="#">Rhipidura rufifrons</a><br>Rufous Fantail [592]              |            | Species or species habitat known to occur within area | In feature area |

Migratory Wetlands Species

|  |  |  |                 |
|--|--|--|-----------------|
| <a href="#">Actitis hypoleucos</a><br>Common Sandpiper [59309] |  | Species or species habitat likely to occur within area | In feature area |
|--|--|--|-----------------|

| Scientific Name   | Threatened Category   | Presence Text  | Buffer Status       |
|---|-----------------------|--|---------------------|
| <a href="#">Calidris acuminata</a><br>Sharp-tailed Sandpiper [874]                    | Critically Endangered | Species or species habitat known to occur within area  | In feature area     |
| <a href="#">Calidris ferruginea</a><br>Curlew Sandpiper [856]                         |                       | Species or species habitat known to occur within area  | In feature area     |
| <a href="#">Calidris melanotos</a><br>Pectoral Sandpiper [858]                        |                       | Species or species habitat known to occur within area  | In feature area     |
| <a href="#">Gallinago hardwickii</a><br>Latham's Snipe, Japanese Snipe [863]          |                       | Species or species habitat known to occur within area  | In feature area     |
| <a href="#">Limosa lapponica</a><br>Bar-tailed Godwit [844]                           |                       | Species or species habitat known to occur within area  | In buffer area only |
| <a href="#">Numenius madagascariensis</a><br>Eastern Curlew, Far Eastern Curlew [847] | Critically Endangered | Species or species habitat may occur within area       | In feature area     |
| <a href="#">Pandion haliaetus</a><br>Osprey [952]                                     |                       | Species or species habitat likely to occur within area | In buffer area only |

### Other Matters Protected by the EPBC Act

| Commonwealth Lands <a href="#">[ Resource Information ]</a>   |       |                     |
|---|-------|---------------------|
| The Commonwealth area listed below may indicate the presence of Commonwealth land in this vicinity. Due to the unreliability of the data source, all proposals should be checked as to whether it impacts on a Commonwealth area, before making a definitive decision. Contact the State or Territory government land department for further information. |       |                     |
| Commonwealth Land Name  | State | Buffer Status       |
| Communications, Information Technology and the Arts - Australian Postal Corporation   |       |                     |
| Commonwealth Land - Australian Postal Corporation [12324]   | NSW   | In buffer area only |
| Communications, Information Technology and the Arts - Telstra Corporation Limited   |       |                     |
| Commonwealth Land - Australian Telecommunications Commission [12321]  | NSW   | In buffer area only |
| Commonwealth Land - Australian Telecommunications Commission [12322]  | NSW   | In buffer area only |
| Commonwealth Land - Telstra Corporation Limited [12320]   | NSW   | In buffer area only |

| Commonwealth Land Name  | State | Buffer Status       |
|---|-------|---------------------|
| Defence   |       |                     |
| Defence - 10 WHYALLA ST - FYSHWICK [80001]                    | ACT   | In buffer area only |
| Defence - 139 CANBERRA AVE - FYSHWICK [80004]                 | ACT   | In buffer area only |
| Defence - 139 CANBERRA AVE - FYSHWICK [80003]                 | ACT   | In buffer area only |
| Defence - 139 CANBERRA AVE - FYSHWICK [80002]                 | ACT   | In buffer area only |
| Defence - 169 GLADSTONE ST - FYSHWICK [80005]                 | ACT   | In buffer area only |
| Defence - AUSTRALIAN DEFENCE FORCE ACADEMY [80104]            | ACT   | In buffer area only |
| Defence - CAMPBELL PARK [80040]                               | ACT   | In buffer area only |
| Defence - DEFENCE ARCHIVES - QUEANBEYAN [10098]               | NSW   | In buffer area only |
| Defence - DEFENCE ARCHIVES - QUEANBEYAN [10097]               | NSW   | In buffer area only |
| Defence - HMAS HARMAN - SYMONSTOWN [80106]                    | ACT   | In buffer area only |
| Defence - HMAS HARMAN - SYMONSTOWN [80107]                    | ACT   | In buffer area only |
| Defence - HMAS HARMAN - SYMONSTOWN [80105]                    | ACT   | In buffer area only |
| Defence - MAJURA FIELD FIRING RANGE [80013]                   | ACT   | In buffer area only |
| Defence - MAJURA FIELD FIRING RANGE [80012]                   | ACT   | In buffer area only |
| Defence - MAJURA FIELD FIRING RANGE [80011]                   | ACT   | In buffer area only |
| Defence - MAJURA FIELD FIRING RANGE [80019]                   | ACT   | In buffer area only |
| Defence - MAJURA FIELD FIRING RANGE [80021]                   | ACT   | In buffer area only |
| Defence - MAJURA FIELD FIRING RANGE [80022]                   | ACT   | In buffer area only |
| Defence - MAJURA NAVIGATION BEACON [80033]                    | ACT   | In buffer area only |
| Defence - MAWSON OFFICE ACCOMM [80045]                        | ACT   | In buffer area only |
| Defence - MT JERRABOMBERRA OBSTRUCTION WARNING [80046]        | NSW   | In buffer area only |
| Defence - MT JERRABOMBERRA OBSTRUCTION WARNING [80047]        | NSW   | In buffer area only |
| Defence - NAVAL COMBAT DATA SYSTEM CENTRE - FYSHWICK [80006]  | ACT   | In buffer area only |
| Defence - NAVAL COMBAT DATA SYSTEM CENTRE - FYSHWICK [80007]  | ACT   | In buffer area only |
| Defence - NORTHCOTT DRIVE PLAYING FIELDS (Addison Rd) [80048] | ACT   | In buffer area only |

| Commonwealth Land Name                                     | State | Buffer Status       |
|--|-------|---------------------|
| Defence - PHYSICS FIELD TESTING STATION - CANBERRA [80103] | ACT   | In buffer area only |
| Defence - RAAF BASE FAIRBAIRN [80049]                      | ACT   | In buffer area only |
| Defence - RAAF BASE FAIRBAIRN [80065]                      | ACT   | In buffer area only |
| Defence - RAAF BASE FAIRBAIRN [80066]                      | ACT   | In buffer area only |
| Defence - RAAF BASE FAIRBAIRN [80061]                      | ACT   | In buffer area only |
| Defence - RAAF BASE FAIRBAIRN [80064]                      | ACT   | In buffer area only |
| Defence - RAAF BASE FAIRBAIRN [80067]                      | ACT   | In buffer area only |
| Defence - RAAF BASE FAIRBAIRN [80078]                      | ACT   | In buffer area only |
| Defence - RAAF BASE FAIRBAIRN [80062]                      | ACT   | In buffer area only |
| Defence - RAAF BASE FAIRBAIRN [80063]                      | ACT   | In buffer area only |
| Defence - RAAF BASE FAIRBAIRN [80060]                      | ACT   | In buffer area only |
| Defence - RAAF BASE FAIRBAIRN [80075]                      | ACT   | In buffer area only |
| Defence - RAAF BASE FAIRBAIRN [80076]                      | ACT   | In buffer area only |
| Defence - RAAF BASE FAIRBAIRN [80071]                      | ACT   | In buffer area only |
| Defence - RAAF BASE FAIRBAIRN [80074]                      | ACT   | In buffer area only |
| Defence - RAAF BASE FAIRBAIRN [80077]                      | ACT   | In buffer area only |
| Defence - RAAF BASE FAIRBAIRN [80072]                      | ACT   | In buffer area only |
| Defence - RAAF BASE FAIRBAIRN [80070]                      | ACT   | In buffer area only |
| Defence - RAAF BASE FAIRBAIRN [80073]                      | ACT   | In buffer area only |
| Defence - RAAF BASE FAIRBAIRN [80079]                      | ACT   | In buffer area only |
| Defence - RAAF BASE FAIRBAIRN [80059]                      | ACT   | In buffer area only |
| Defence - RAAF BASE FAIRBAIRN [80055]                      | ACT   | In buffer area only |
| Defence - RAAF BASE FAIRBAIRN [80054]                      | ACT   | In buffer area only |
| Defence - RAAF BASE FAIRBAIRN [80057]                      | ACT   | In buffer area only |
| Defence - RAAF BASE FAIRBAIRN [80056]                      | ACT   | In buffer area only |
| Defence - RAAF BASE FAIRBAIRN [80068]                      | ACT   | In buffer area only |
| Defence - RAAF BASE FAIRBAIRN [80053]                      | ACT   | In buffer area only |

| Commonwealth Land Name                                | State | Buffer Status       |
|---|-------|---------------------|
| Defence - RAAF BASE FAIRBAIRN [80052]                 | ACT   | In buffer area only |
| Defence - RAAF BASE FAIRBAIRN [80080]                 | ACT   | In buffer area only |
| Defence - RAAF BASE FAIRBAIRN [80082]                 | ACT   | In buffer area only |
| Defence - RAAF BASE FAIRBAIRN [80081]                 | ACT   | In buffer area only |
| Defence - RAAF BASE FAIRBAIRN [80083]                 | ACT   | In buffer area only |
| Defence - ROYAL MILITARY COLLEGE - DUNTROON [80085]   | ACT   | In buffer area only |
| Defence - ROYAL MILITARY COLLEGE - DUNTROON [80084]   | ACT   | In buffer area only |
| Defence - RUSSELL HILL COMPLEX [80087]                | ACT   | In buffer area only |
| Defence - RUSSELL HILL COMPLEX [80086]                | ACT   | In buffer area only |
| Defence - RUSSELL HILL COMPLEX [80101]                | ACT   | In buffer area only |
| Defence - RUSSELL HILL COMPLEX [80100]                | ACT   | In buffer area only |
| Defence - RUSSELL HILL COMPLEX [80090]                | ACT   | In buffer area only |
| Defence - RUSSELL HILL COMPLEX [80089]                | ACT   | In buffer area only |
| Defence - RUSSELL HILL COMPLEX [80088]                | ACT   | In buffer area only |
| Defence - RUSSELL HILL COMPLEX [80093]                | ACT   | In buffer area only |
| Defence - RUSSELL HILL COMPLEX [80097]                | ACT   | In buffer area only |
| Defence - RUSSELL HILL COMPLEX [80091]                | ACT   | In buffer area only |
| Defence - RUSSELL HILL COMPLEX [80092]                | ACT   | In buffer area only |
| Defence - RUSSELL HILL COMPLEX [80094]                | ACT   | In buffer area only |
| Defence - RUSSELL HILL COMPLEX [80095]                | ACT   | In buffer area only |
| Defence - RUSSELL HILL COMPLEX [80096]                | ACT   | In buffer area only |
| Defence - RUSSELL HILL COMPLEX [80099]                | ACT   | In buffer area only |
| Defence - RUSSELL HILL COMPLEX [80098]                | ACT   | In buffer area only |
| Defence - WERRIWA DEPOT [80108]                       | ACT   | In buffer area only |
| Defence - Defence Housing Authority                   |       |                     |
| Commonwealth Land - Defence Housing Authority [16294] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [16295] | NSW   | In buffer area only |



| Commonwealth Land Name                                | State | Buffer Status       |
|---|-------|---------------------|
| Commonwealth Land - Defence Housing Authority [16237] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [15904] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [15595] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [15905] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [15906] | NSW   | In feature area     |
| Commonwealth Land - Defence Housing Authority [16296] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [15907] | NSW   | In feature area     |
| Commonwealth Land - Defence Housing Authority [16297] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [15908] | NSW   | In feature area     |
| Commonwealth Land - Defence Housing Authority [16292] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [16074] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [16293] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [16076] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [16077] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [12306] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [12307] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [15727] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [16301] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [16263] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [16110] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [16113] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [16112] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [15931] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [16262] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [16114] | NSW   | In feature area     |
| Commonwealth Land - Defence Housing Authority [16261] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [16218] | NSW   | In buffer area only |



| Commonwealth Land Name                                | State | Buffer Status       |
|---|-------|---------------------|
| Commonwealth Land - Defence Housing Authority [16260] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [16224] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [16266] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [15728] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [16111] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [16264] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [16265] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [15935] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [16223] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [16226] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [16225] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [12318] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [16109] | NSW   | In feature area     |
| Commonwealth Land - Defence Housing Authority [12319] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [16227] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [15934] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [16108] | NSW   | In feature area     |
| Commonwealth Land - Defence Housing Authority [16107] | NSW   | In feature area     |
| Commonwealth Land - Defence Housing Authority [16492] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [16298] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [15933] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [16299] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [15594] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [12328] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [16075] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [12326] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [12317] | NSW   | In buffer area only |

| Commonwealth Land Name                                | State | Buffer Status       |
|---|-------|---------------------|
| Commonwealth Land - Defence Housing Authority [12327] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [15932] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [12310] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [15540] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [12294] | NSW   | In feature area     |
| Commonwealth Land - Defence Housing Authority [12316] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [16229] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [16222] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [16221] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [16220] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [12313] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [12312] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [12311] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [16206] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [16201] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [16200] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [16230] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [16203] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [16208] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [16232] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [16205] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [16231] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [16204] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [16238] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [16207] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [16233] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [16024] | NSW   | In buffer area only |

| Commonwealth Land Name                                | State | Buffer Status       |
|---|-------|---------------------|
| Commonwealth Land - Defence Housing Authority [16239] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [16022] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [16023] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [16202] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [16209] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [16078] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [16360] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [16106] | NSW   | In feature area     |
| Commonwealth Land - Defence Housing Authority [12309] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [12300] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [12301] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [12302] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [12303] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [12305] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [12308] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [12314] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [12315] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [16247] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [16244] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [15696] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [15697] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [16246] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [16561] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [15695] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [15699] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [16212] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [16213] | NSW   | In buffer area only |

| Commonwealth Land Name                                | State | Buffer Status       |
|---|-------|---------------------|
| Commonwealth Land - Defence Housing Authority [16079] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [15617] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [16241] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [16240] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [16243] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [16242] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [16245] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [15747] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [15745] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [16234] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [15746] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [16193] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [15409] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [16235] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [15412] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [15926] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [16094] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [12325] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [15927] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [12299] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [12298] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [12323] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [16493] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [15924] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [15925] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [15684] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [16098] | NSW   | In buffer area only |



| Commonwealth Land Name                                | State | Buffer Status       |
|---|-------|---------------------|
| Commonwealth Land - Defence Housing Authority [16253] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [16197] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [16196] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [16194] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [12296] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [16211] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [16198] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [16199] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [12295] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [16228] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [12297] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [16219] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [15965] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [16095] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [16096] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [16097] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [15726] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [16210] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [16216] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [15593] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [16214] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [16217] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [16359] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [16215] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [16195] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [16358] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [16254] | NSW   | In buffer area only |

| Commonwealth Land Name                                | State | Buffer Status       |
|---|-------|---------------------|
| Commonwealth Land - Defence Housing Authority [16257] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [16255] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [16258] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [16565] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [16256] | NSW   | In buffer area only |
| Commonwealth Land - Defence Housing Authority [16259] | NSW   | In buffer area only |

| Transport and Regional Services - Airservices Australia |     |                     |
|---|-----|---------------------|
| Commonwealth Land - Airservices Australia [12293]       | NSW | In buffer area only |
| Commonwealth Land - Airservices Australia [16011]       | NSW | In buffer area only |

| Unknown                     |     |                     |
|-----------------------------|-----|---------------------|
| Commonwealth Land - [16524] | NSW | In buffer area only |
| Commonwealth Land - [16559] | NSW | In buffer area only |
| Commonwealth Land - [12336] | NSW | In buffer area only |
| Commonwealth Land - [12304] | NSW | In buffer area only |
| Commonwealth Land - [16236] | NSW | In buffer area only |
| Commonwealth Land - [12337] | NSW | In buffer area only |

| Commonwealth Heritage Places [ Resource Information ]                     |       |              |                     |
|---|-------|--------------|---------------------|
| Name  | State | Status       | Buffer Status       |
| Historic  |       |              |                     |
| <a href="#">Anzac Memorial Chapel of St Paul</a>                          | ACT   | Listed place | In buffer area only |
| <a href="#">Apostolic Nunciature</a>                                      | ACT   | Listed place | In buffer area only |
| <a href="#">Apple Shed Asset C58</a>                                      | ACT   | Listed place | In buffer area only |
| <a href="#">Australian American Memorial and Sir Thomas Blamey Square</a> | ACT   | Listed place | In buffer area only |
| <a href="#">Australian War Memorial</a>                                   | ACT   | Listed place | In buffer area only |
| <a href="#">Blundells Farmhouse, Slab Outbuilding and Surrounds</a>       | ACT   | Listed place | In buffer area only |
| <a href="#">Captains Quarters Assets B1 to B4</a>                         | ACT   | Listed place | In buffer area only |
| <a href="#">Carillon</a>  | ACT   | Listed place | In buffer area only |
| <a href="#">Casey House and Garden</a>                                    | ACT   | Listed place | In buffer area only |



| Name  | State | Status       | Buffer Status       |
|---|-------|--------------|---------------------|
| <a href="#">Changi Chapel</a>                                       | ACT   | Listed place | In buffer area only |
| <a href="#">Commandants House Asset B9</a>                          | ACT   | Listed place | In buffer area only |
| <a href="#">Commencement Column Monument</a>                        | ACT   | Listed place | In buffer area only |
| <a href="#">Communications Centre</a>                               | ACT   | Listed place | In buffer area only |
| <a href="#">Duntroon House and Garden</a>                           | ACT   | Listed place | In buffer area only |
| <a href="#">East Block Government Offices</a>                       | ACT   | Listed place | In buffer area only |
| <a href="#">Edmund Barton Offices</a>                               | ACT   | Listed place | In buffer area only |
| <a href="#">General Bridges Grave</a>                               | ACT   | Listed place | In buffer area only |
| <a href="#">High Court - National Gallery Precinct</a>              | ACT   | Listed place | In buffer area only |
| <a href="#">High Court of Australia</a>                             | ACT   | Listed place | In buffer area only |
| <a href="#">John Gorton Building</a>                                | ACT   | Listed place | In buffer area only |
| <a href="#">King George V Memorial</a>                              | ACT   | Listed place | In buffer area only |
| <a href="#">Lake Burley Griffin and Adjacent Lands</a>              | ACT   | Listed place | In buffer area only |
| <a href="#">National Gallery of Australia</a>                       | ACT   | Listed place | In buffer area only |
| <a href="#">National Library of Australia and Surrounds</a>         | ACT   | Listed place | In buffer area only |
| <a href="#">National Rose Gardens</a>                               | ACT   | Listed place | In buffer area only |
| <a href="#">Old Parliament House and Curtilage</a>                  | ACT   | Listed place | In buffer area only |
| <a href="#">Old Parliament House Gardens</a>                        | ACT   | Listed place | In buffer area only |
| <a href="#">Parade Ground and Associated Buildings Group</a>        | ACT   | Listed place | In buffer area only |
| <a href="#">Parliament House Vista</a>                              | ACT   | Listed place | In buffer area only |
| <a href="#">Parliament House Vista Extension - Portal Buildings</a> | ACT   | Listed place | In buffer area only |
| <a href="#">Patent Office (former)</a>                              | ACT   | Listed place | In buffer area only |
| <a href="#">Redwood Plantation</a>                                  | ACT   | Listed place | In buffer area only |
| <a href="#">Residence Asset B5</a>                                  | ACT   | Listed place | In buffer area only |
| <a href="#">Residence Asset B7</a>                                  | ACT   | Listed place | In buffer area only |
| <a href="#">Residence Asset C12</a>                                 | ACT   | Listed place | In buffer area only |

| Name   | State | Status              | Buffer Status       |
|--|-------|---------------------|---------------------|
| <a href="#">Residence Asset C13</a>                            | ACT   | Listed place        | In buffer area only |
| <a href="#">Residence Asset C14</a>                            | ACT   | Listed place        | In buffer area only |
| <a href="#">Residence Asset C15</a>                            | ACT   | Listed place        | In buffer area only |
| <a href="#">Residence Asset C7</a>                             | ACT   | Listed place        | In buffer area only |
| <a href="#">Residence Asset C8</a>                             | ACT   | Listed place        | In buffer area only |
| <a href="#">RMC Duntroon Conservation Area</a>                 | ACT   | Listed place        | In buffer area only |
| <a href="#">Russell Cafeteria</a>                              | ACT   | Within listed place | In buffer area only |
| <a href="#">Russell Precinct Heritage Area</a>                 | ACT   | Listed place        | In buffer area only |
| <a href="#">Sculpture Garden National Gallery of Australia</a> | ACT   | Listed place        | In buffer area only |
| <a href="#">The Lodge</a>                                      | ACT   | Listed place        | In buffer area only |
| <a href="#">The Surveyors Hut</a>                              | ACT   | Listed place        | In buffer area only |
| <a href="#">Three Wartime Bomb Dump Buildings</a>              | ACT   | Listed place        | In buffer area only |
| <a href="#">West Block and the Dugout</a>                      | ACT   | Listed place        | In buffer area only |
| <a href="#">York Park North Tree Plantation</a>                | ACT   | Listed place        | In buffer area only |

| Natural   |     |              |                     |
|---|-----|--------------|---------------------|
| <a href="#">Majura Valley Natural Temperate Grassland</a> | ACT | Listed place | In buffer area only |
| <a href="#">State Circle Cutting</a>                      | ACT | Listed place | In buffer area only |

| Listed Marine Species                       |                     | [ Resource Information ]   |                 |
|---|---------------------|--|-----------------|
| Scientific Name                             | Threatened Category | Presence Text  | Buffer Status   |
| Bird  |                     |  |                 |
| <a href="#">Actitis hypoleucos</a>          |                     |  |                 |
| Common Sandpiper [59309]                    |                     | Species or species habitat likely to occur within area                     | In feature area |
| <a href="#">Apus pacificus</a>              |                     |  |                 |
| Fork-tailed Swift [678]                     |                     | Species or species habitat likely to occur within area overfly marine area | In feature area |
| <a href="#">Bubulcus ibis as Ardea ibis</a> |                     |  |                 |
| Cattle Egret [66521]                        |                     | Species or species habitat may occur within area overfly marine area       | In feature area |

| Scientific Name   | Threatened Category   | Presence Text  | Buffer Status       |
|---|-----------------------|--|---------------------|
| <a href="#">Calidris acuminata</a><br>Sharp-tailed Sandpiper [874]                        |                       | Species or species habitat known to occur within area                      | In feature area     |
| <a href="#">Calidris ferruginea</a><br>Curlew Sandpiper [856]                             | Critically Endangered | Species or species habitat known to occur within area overfly marine area  | In feature area     |
| <a href="#">Calidris melanotos</a><br>Pectoral Sandpiper [858]                            |                       | Species or species habitat known to occur within area overfly marine area  | In feature area     |
| <a href="#">Chalcites osculans as Chrysococcyx osculans</a><br>Black-eared Cuckoo [83425] |                       | Species or species habitat likely to occur within area overfly marine area | In feature area     |
| <a href="#">Gallinago hardwickii</a><br>Latham's Snipe, Japanese Snipe [863]              |                       | Species or species habitat known to occur within area overfly marine area  | In feature area     |
| <a href="#">Haliaeetus leucogaster</a><br>White-bellied Sea-Eagle [943]                   |                       | Breeding known to occur within area  | In feature area     |
| <a href="#">Hirundapus caudacutus</a><br>White-throated Needletail [682]                  | Vulnerable            | Species or species habitat known to occur within area overfly marine area  | In feature area     |
| <a href="#">Lathamus discolor</a><br>Swift Parrot [744]                                   | Critically Endangered | Species or species habitat known to occur within area overfly marine area  | In buffer area only |
| <a href="#">Limosa lapponica</a><br>Bar-tailed Godwit [844]                               |                       | Species or species habitat known to occur within area                      | In buffer area only |
| <a href="#">Merops ornatus</a><br>Rainbow Bee-eater [670]                                 |                       | Species or species habitat may occur within area overfly marine area       | In feature area     |

| Scientific Name  | Threatened Category   | Presence Text   | Buffer Status       |
|--|-----------------------|---|---------------------|
| <a href="#">Monarcha melanopsis</a><br>Black-faced Monarch [609]   |                       | Species or species habitat known to occur within area overfly marine area | In feature area     |
| <a href="#">Motacilla flava</a><br>Yellow Wagtail [644]  |                       | Species or species habitat may occur within area overfly marine area      | In feature area     |
| <a href="#">Myiagra cyanoleuca</a><br>Satin Flycatcher [612]   |                       | Species or species habitat known to occur within area overfly marine area | In feature area     |
| <a href="#">Neophema chrysostoma</a><br>Blue-winged Parrot [726]   |                       | Species or species habitat known to occur within area overfly marine area | In feature area     |
| <a href="#">Numenius madagascariensis</a><br>Eastern Curlew, Far Eastern Curlew [847]                            | Critically Endangered | Species or species habitat may occur within area                          | In feature area     |
| <a href="#">Pandion haliaetus</a><br>Osprey [952]  |                       | Species or species habitat likely to occur within area                    | In buffer area only |
| <a href="#">Rhipidura rufifrons</a><br>Rufous Fantail [592]  |                       | Species or species habitat known to occur within area overfly marine area | In feature area     |
| <a href="#">Rostratula australis as Rostratula benghalensis (sensu lato)</a><br>Australian Painted Snipe [77037] | Endangered            | Species or species habitat known to occur within area overfly marine area | In feature area     |

### Extra Information

| State and Territory Reserves |                |       | [ <a href="#">Resource Information</a> ] |
|------------------------------|----------------|-------|--|
| Protected Area Name          | Reserve Type   | State | Buffer Status                            |
| Callum Brae                  | Nature Reserve | ACT   | In buffer area only                      |
| Cuumbeun                     | Nature Reserve | NSW   | In buffer area only                      |
| Farrer Ridge                 | Nature Reserve | ACT   | In buffer area only                      |

| Protected Area Name    | Reserve Type   | State | Buffer Status       |
|------------------------|----------------|-------|---------------------|
| Isaacs Ridge           | Nature Reserve | ACT   | In buffer area only |
| Jerrabomberra Wetlands | Nature Reserve | ACT   | In buffer area only |
| Kowen Escarpment       | Nature Reserve | ACT   | In buffer area only |
| Melrose                | Nature Reserve | ACT   | In buffer area only |
| Molonglo Gorge         | Nature Reserve | ACT   | In buffer area only |
| Mt Ainslie             | Nature Reserve | ACT   | In buffer area only |
| Mt Mugga Mugga         | Nature Reserve | ACT   | In buffer area only |
| Mt Pleasant            | Nature Reserve | ACT   | In buffer area only |
| Mt Taylor              | Nature Reserve | ACT   | In buffer area only |
| Queanbeyan             | Nature Reserve | NSW   | In buffer area only |
| Red Hill               | Nature Reserve | ACT   | In buffer area only |
| Rob Roy                | Nature Reserve | ACT   | In buffer area only |
| Tuggeranong Hill       | Nature Reserve | ACT   | In buffer area only |
| Unnamed                | Nature Reserve | ACT   | In buffer area only |
| Wanna Wanna            | Nature Reserve | NSW   | In buffer area only |
| Wanniassa Hills        | Nature Reserve | ACT   | In buffer area only |
| West Jerrabomberra     | Nature Reserve | ACT   | In buffer area only |

Regional Forest Agreements

[ Resource Information ]

Note that all areas with completed RFAs have been included.

| RFA Name                     | State           | Buffer Status   |
|------------------------------|-----------------|-----------------|
| <a href="#">Southern RFA</a> | New South Wales | In feature area |

Nationally Important Wetlands

[ Resource Information ]

| Wetland Name                           | State | Buffer Status       |
|--|-------|---------------------|
| <a href="#">Jerrabomberra Wetlands</a> | ACT   | In buffer area only |

EPBC Act Referrals

[ Resource Information ]

| Title of referral   | Reference  | Referral Outcome | Assessment Status | Buffer Status       |
|---|------------|------------------|-------------------|---------------------|
| <a href="#">Campbell Park Car Park Consolidation Project</a>                  | 2022/09354 |                  | Referral Decision | In buffer area only |
| <a href="#">Federal Golf Club Retirement Village and Water Infrastructure</a> | 2022/09201 |                  | Completed         | In buffer area only |

| Title of referral  | Reference  | Referral Outcome  | Assessment Status           | Buffer Status       |
|--|------------|-------------------|-----------------------------|---------------------|
| <a href="#">John Gorton Campus Carpark</a>   | 2022/09400 |                   | Referral Decision           | In buffer area only |
| <a href="#">New RSPCA Facility</a>   | 2022/09285 |                   | Assessment                  | In buffer area only |
| Controlled action  |            |                   |                             |                     |
| <a href="#">132kV Sub-Transmission Line, Tuggeranong</a>                                   | 2008/4621  | Controlled Action | Post-Approval               | In buffer area only |
| <a href="#">ANZAC Park East and ANZAC Park West sale - Parkes, ACT</a>                     | 2016/7766  | Controlled Action | Post-Approval               | In buffer area only |
| <a href="#">Australian War Memorial Redevelopment</a>                                      | 2019/8574  | Controlled Action | Post-Approval               | In buffer area only |
| <a href="#">Beatty Hill, Royalla - 5 Lot Residential Subdivision</a>                       | 2021/8974  | Controlled Action | Further Information Request | In buffer area only |
| <a href="#">Blocks 3 and 15, Section 22, Barton, ACT Divestment</a>                        | 2017/8028  | Controlled Action | Post-Approval               | In buffer area only |
| <a href="#">Campbell Station 5 Development</a>   | 2012/6292  | Controlled Action | Post-Approval               | In buffer area only |
| <a href="#">Commonwealth Park to Woden Light Rail Project, ACT</a>                         | 2019/8491  | Controlled Action | Assessment Approach         | In buffer area only |
| <a href="#">Development of the Narrabundah Long Stay Caravan Park Land Swap Site</a>       | 2007/3554  | Controlled Action | Post-Approval               | In buffer area only |
| <a href="#">Divestment of York Park North</a>  | 2004/1426  | Controlled Action | Completed                   | In buffer area only |
| <a href="#">Edwin Land Parkway Stage 2 - Jerrabomberra to Kambah</a>                       | 2009/5162  | Controlled Action | Post-Approval               | In buffer area only |
| <a href="#">Ellerton Drive Extension, East Queanbeyan, NSW</a>                             | 2014/7304  | Controlled Action | Post-Approval               | In buffer area only |
| <a href="#">Expansion of the Mugga Lane Resource Management Centre</a>                     | 2011/5808  | Controlled Action | Post-Approval               | In buffer area only |
| <a href="#">Extension of Taxiway Bravo</a>   | 2008/4170  | Controlled Action | Post-Approval               | In buffer area only |
| <a href="#">Federal Golf Club Retirement Village Project, ACT</a>                          | 2018/8277  | Controlled Action | Assessment Approach         | In buffer area only |
| <a href="#">Googong Township Urban Development &amp; associated infrastructure Project</a> | 2011/5829  | Controlled Action | Post-Approval               | In buffer area only |
| <a href="#">Hotel and Carpark Development</a>  | 2012/6606  | Controlled Action | Post-Approval               | In buffer area only |



| Title of referral  | Reference | Referral Outcome      | Assessment Status           | Buffer Status       |
|--|-----------|-----------------------|-----------------------------|---------------------|
| Controlled action  |           |                       |                             |                     |
| <a href="#">Infrastructure Upgrade and Construction at Canberra Airport</a>                      | 2009/4748 | Controlled Action     | Post-Approval               | In buffer area only |
| <a href="#">Malcolmvale West Detention Basin</a>   | 2011/6218 | Controlled Action     | Further Information Request | In buffer area only |
| <a href="#">Monaro Highway - Lanyon Drive Upgrade Package 1C</a>                                 | 2020/8768 | Controlled Action     | Post-Approval               | In buffer area only |
| <a href="#">Mugga Quarry overburden expansion project, ACT</a>                                   | 2018/8151 | Controlled Action     | Post-Approval               | In buffer area only |
| <a href="#">Refurbishment of the SE Wing of Old Parliament House</a>                             | 2008/4325 | Controlled Action     | Post-Approval               | In buffer area only |
| <a href="#">Removal of Trees on National Land</a>  | 2009/5204 | Controlled Action     | Post-Approval               | In buffer area only |
| <a href="#">School for Special Purposes at Karabar High School, Queanbeyan, NSW</a>              | 2019/8418 | Controlled Action     | Post-Approval               | In buffer area only |
| <a href="#">The Poplars, Jerrabomberra, NSW</a>  | 2020/8801 | Controlled Action     | Post-Approval               | In feature area     |
| <a href="#">Transfer of Defence Land at Majura</a>   | 2007/3756 | Controlled Action     | Post-Approval               | In buffer area only |
| Not controlled action  |           |                       |                             |                     |
| <a href="#">Angel of the North Installation</a>  | 2010/5591 | Not Controlled Action | Completed                   | In buffer area only |
| <a href="#">Benjamin Offices Redevelopment</a>   | 2001/317  | Not Controlled Action | Completed                   | In buffer area only |
| <a href="#">Bomber Command Memorial</a>  | 2004/1353 | Not Controlled Action | Completed                   | In buffer area only |
| <a href="#">Bowen Place Crossing</a>   | 2011/6203 | Not Controlled Action | Completed                   | In buffer area only |
| <a href="#">Calwell Estate Development</a>   | 2000/38   | Not Controlled Action | Completed                   | In buffer area only |
| <a href="#">Canberra Primary Mains Extension Gas Pipeline Project</a>                            | 2000/15   | Not Controlled Action | Completed                   | In buffer area only |
| <a href="#">construct addition to Admin Annex</a>  | 2004/1891 | Not Controlled Action | Completed                   | In buffer area only |
| <a href="#">Construction of a link road on Marjura Parkway, Pialligo, ACT</a>                    | 2015/7483 | Not Controlled Action | Completed                   | In buffer area only |
| <a href="#">Construction of an Advanced Instrumentation and Technology Centre at the Mt Stro</a> | 2004/1748 | Not Controlled Action | Completed                   | In buffer area only |

| Title of referral  | Reference | Referral Outcome      | Assessment Status | Buffer Status       |
|--|-----------|-----------------------|-------------------|---------------------|
| Not controlled action  |           |                       |                   |                     |
| <a href="#">Construction of a New Cooling Tower Enclosure</a>                                    | 2008/4457 | Not Controlled Action | Completed         | In buffer area only |
| <a href="#">Construction of a New Office Building</a>  | 2009/4814 | Not Controlled Action | Completed         | In buffer area only |
| <a href="#">Construction of a short haul road</a>  | 2013/6802 | Not Controlled Action | Completed         | In buffer area only |
| <a href="#">construction of new admin bldg</a>   | 2004/1731 | Not Controlled Action | Completed         | In buffer area only |
| <a href="#">Construction of New Australian Government Offices and On-Site Parking</a>            | 2008/4158 | Not Controlled Action | Completed         | In buffer area only |
| <a href="#">Construction of office building and associated activities</a>                        | 2005/2383 | Not Controlled Action | Completed         | In buffer area only |
| <a href="#">Construction of public housing units within Block 29, Section 36, Mawson, ACT.</a>   | 2017/8013 | Not Controlled Action | Completed         | In buffer area only |
| <a href="#">Construction of the IKEA Canberra Northern Access Road, ACT</a>                      | 2016/7742 | Not Controlled Action | Completed         | In buffer area only |
| <a href="#">Construction of Two Office Buildings on Block 1 Section 3, Barton</a>                | 2010/5367 | Not Controlled Action | Completed         | In buffer area only |
| <a href="#">Development of area for Diplomatic Mission Lease</a>                                 | 2007/3644 | Not Controlled Action | Completed         | In buffer area only |
| <a href="#">Development of Block 8 S48 for commercial purposes</a>                               | 2006/2570 | Not Controlled Action | Completed         | In buffer area only |
| <a href="#">Development of John Gorton Building Basement</a>                                     | 2001/453  | Not Controlled Action | Completed         | In buffer area only |
| <a href="#">Development of residential estate, 47 Mowatt Street</a>                              | 2005/2368 | Not Controlled Action | Completed         | In buffer area only |
| <a href="#">Dunlop 4 West Residential Development</a>  | 2003/1055 | Not Controlled Action | Completed         | In buffer area only |
| <a href="#">Eastern Precinct Development and National Service Memorial</a>                       | 2008/4629 | Not Controlled Action | Completed         | In buffer area only |
| <a href="#">East O'Malley Residential Estate</a>   | 2003/1163 | Not Controlled Action | Completed         | In feature area     |
| <a href="#">Edmund Barton Building Upgrade and Refurbishment Works</a>                           | 2007/3712 | Not Controlled Action | Completed         | In buffer area only |
| <a href="#">establishment of a prison on part Block 6 Section 24 and part Block 12 Section 1</a> | 2004/1723 | Not Controlled Action | Completed         | In buffer area only |

| Title of referral  | Reference | Referral Outcome      | Assessment Status | Buffer Status       |
|--|-----------|-----------------------|-------------------|---------------------|
| Not controlled action  |           |                       |                   |                     |
| <a href="#">Extension to cooling towers at the rear of Old Parliament House</a>                              | 2004/1625 | Not Controlled Action | Completed         | In buffer area only |
| <a href="#">Ext of overhead powerline to western end of Googong Water Treatment Plant, NSW</a>               | 2014/7366 | Not Controlled Action | Completed         | In buffer area only |
| <a href="#">Fairbairn Avenue Upgrade, Anzac Parade to Northcott Drive</a>                                    | 2003/1257 | Not Controlled Action | Completed         | In buffer area only |
| <a href="#">Fairlane Estate Subdivision</a>  | 2001/205  | Not Controlled Action | Completed         | In buffer area only |
| <a href="#">fixing banner holders (top and bottom) to the fascia</a>   | 2007/3299 | Not Controlled Action | Completed         | In buffer area only |
| <a href="#">Gallery Development, Stage 2</a>   | 2006/2829 | Not Controlled Action | Completed         | In buffer area only |
| <a href="#">Gungaderra Trunk Sewer Stage 1</a>   | 2003/1259 | Not Controlled Action | Completed         | In buffer area only |
| <a href="#">Gungahlin Drive Extension</a>  | 2003/1156 | Not Controlled Action | Completed         | In buffer area only |
| <a href="#">Humanities and Science Campus</a>  | 2007/3525 | Not Controlled Action | Completed         | In buffer area only |
| <a href="#">Improving rabbit biocontrol: releasing another strain of RHDV, sthrn two thirds of Australia</a> | 2015/7522 | Not Controlled Action | Completed         | In feature area     |
| <a href="#">INDIGO Central Submarine Telecommunications Cable</a>  | 2017/8127 | Not Controlled Action | Completed         | In feature area     |
| <a href="#">Installation of interceptors on stormwater outlets</a>   | 2003/998  | Not Controlled Action | Completed         | In buffer area only |
| <a href="#">Installation of passive distributed antenna system in the Robert Garran Offices</a>              | 2005/2363 | Not Controlled Action | Completed         | In buffer area only |
| <a href="#">Jerrabomberra Heights Residential Estate</a>   | 2000/70   | Not Controlled Action | Completed         | In feature area     |
| <a href="#">John Gorton Building Safety Fence &amp; Overhead Protection, Parks, ACT</a>                      | 2013/7017 | Not Controlled Action | Completed         | In buffer area only |
| <a href="#">Jumping Creek Estate Project, Queanbeyan, NSW</a>  | 2019/8486 | Not Controlled Action | Completed         | In buffer area only |
| <a href="#">Kingston Foreshore Development - Harbour Civil Works</a>   | 2007/3492 | Not Controlled Action | Completed         | In buffer area only |
| <a href="#">Kingston Foreshore Development - Reclamation and Filling Lake Burley Griffin</a>                 | 2004/1383 | Not Controlled Action | Completed         | In feature area     |

| Title of referral  | Reference | Referral Outcome      | Assessment Status | Buffer Status       |
|--|-----------|-----------------------|-------------------|---------------------|
| Not controlled action  |           |                       |                   |                     |
| <a href="#">Land Divestment, Block 13, Section 9, Barton, ACT (bounded by Blackall Street, B</a> | 2005/2453 | Not Controlled Action | Completed         | In buffer area only |
| <a href="#">minor alterations to NE corner OPH</a>   | 2004/1824 | Not Controlled Action | Completed         | In buffer area only |
| <a href="#">Mixed Use Redevelopment of 1 Dairy Road, Fyshwick, ACT</a>                           | 2021/9062 | Not Controlled Action | Completed         | In buffer area only |
| <a href="#">Monaro Highway - Lanyon Drive Upgrade Package 1B, Hume, ACT</a>                      | 2020/8767 | Not Controlled Action | Completed         | In buffer area only |
| <a href="#">Mugga Lane Solar Development</a>   | 2012/6670 | Not Controlled Action | Completed         | In buffer area only |
| <a href="#">National Gallery of Australia upgrade</a>  | 2007/3335 | Not Controlled Action | Completed         | In buffer area only |
| <a href="#">National Gallery Upgrade</a>   | 2001/295  | Not Controlled Action | Completed         | In buffer area only |
| <a href="#">Navigational aid facility upgrade</a>  | 2005/2459 | Not Controlled Action | Completed         | In buffer area only |
| <a href="#">North and South Poplars Residential Development</a>                                  | 2003/1136 | Not Controlled Action | Completed         | In feature area     |
| <a href="#">North Watson Residential Estate</a>  | 2003/1231 | Not Controlled Action | Completed         | In feature area     |
| <a href="#">Observatory Restoration Works</a>  | 2004/1691 | Not Controlled Action | Completed         | In buffer area only |
| <a href="#">Old Cooma Road Realignment and Duplication</a>                                       | 2010/5663 | Not Controlled Action | Completed         | In buffer area only |
| <a href="#">Old Parliament House Lift Upgrade Project, Parkes, ACT</a>                           | 2019/8506 | Not Controlled Action | Completed         | In buffer area only |
| <a href="#">Old Parliament House South-East Wing Refurbishment</a>                               | 2008/3949 | Not Controlled Action | Completed         | In buffer area only |
| <a href="#">Permanent Access Ramp, Old Parliament House</a>                                      | 2004/1485 | Not Controlled Action | Completed         | In buffer area only |
| <a href="#">Podium Refurbishment, National Library of Australia</a>                              | 2006/3038 | Not Controlled Action | Completed         | In buffer area only |
| <a href="#">Protection, Horticultural and Upgrading Works of York Park North Oak Plantation</a>  | 2008/4637 | Not Controlled Action | Completed         | In buffer area only |
| <a href="#">Redevelopment of Anzac Park East and West</a>  | 2004/1470 | Not Controlled Action | Completed         | In buffer area only |



| Title of referral   | Reference | Referral Outcome                          | Assessment Status | Buffer Status       |
|---|-----------|---|-------------------|---------------------|
| Not controlled action   |           |   |                   |                     |
| <a href="#">Refurbishment of The Royal Australian Mint</a>                                    | 2005/2122 | Not Controlled Action                     | Completed         | In buffer area only |
| <a href="#">Refurbishment Works at The Lodge, Deakin</a>                                      | 2012/6504 | Not Controlled Action                     | Completed         | In buffer area only |
| <a href="#">refurbishment works to upper floor SW Wing, OPH, ACT</a>                          | 2007/3538 | Not Controlled Action                     | Completed         | In buffer area only |
| <a href="#">Residential subdivision and construction works</a>                                | 2003/1197 | Not Controlled Action                     | Completed         | In buffer area only |
| <a href="#">Sale of Macquarie Hotel, 18 National Circuit</a>                                  | 2002/836  | Not Controlled Action                     | Completed         | In buffer area only |
| <a href="#">Sale of part of Blkl3/Sct19 ACT Water Police HQ</a>                               | 2003/1057 | Not Controlled Action                     | Completed         | In buffer area only |
| <a href="#">South Canberra Memorial Park</a>  | 2019/8595 | Not Controlled Action                     | Completed         | In buffer area only |
| <a href="#">Telecommunication Work, Block 2 Section 364, Fadden, ACT</a>                      | 2012/6411 | Not Controlled Action                     | Completed         | In buffer area only |
| <a href="#">Transfer of Building R9 in Russell ACT to Dept of Defence for demolition</a>      | 2021/8898 | Not Controlled Action                     | Completed         | In buffer area only |
| <a href="#">Upgrade existing power-lines and installation of a new underground power-line</a> | 2010/5594 | Not Controlled Action                     | Completed         | In buffer area only |
| <a href="#">upgrade mechanical services Reps &amp; Senate Press Offices</a>                   | 2005/1933 | Not Controlled Action                     | Completed         | In buffer area only |
| <a href="#">Upgrade of Captains Flat Road between Kings Highway and Wanna Wanna Road</a>      | 2007/3401 | Not Controlled Action                     | Completed         | In buffer area only |
| <a href="#">Wells Station Drive Extension Stages 1A &amp; 1B</a>                              | 2007/3420 | Not Controlled Action                     | Completed         | In buffer area only |
| <a href="#">West Block Office Refurbishment, Queen Victoria Terrace</a>                       | 2021/9139 | Not Controlled Action                     | Completed         | In buffer area only |
| Not controlled action (particular manner)   |           |   |                   |                     |
| <a href="#">ActewAGL - upgrade to 132kv transmission line Theodore to Gilmore, ACT</a>        | 2012/6443 | Not Controlled Action (Particular Manner) | Post-Approval     | In buffer area only |
| <a href="#">Aerial baiting for wild dog control</a>   | 2006/2713 | Not Controlled Action (Particular Manner) | Post-Approval     | In feature area     |

| Title of referral  | Reference | Referral Outcome                          | Assessment Status | Buffer Status       |
|--|-----------|---|-------------------|---------------------|
| Not controlled action (particular manner)  |           |   |                   |                     |
| <a href="#">Canberra Centenary Trail Project</a>   | 2012/6645 | Not Controlled Action (Particular Manner) | Post-Approval     | In buffer area only |
| <a href="#">Capital Metro - Russell Extension Project, ACT</a>   | 2015/7576 | Not Controlled Action (Particular Manner) | Post-Approval     | In buffer area only |
| <a href="#">Carpark Access Road, Block 12, Section 22, Barton</a>  | 2010/5548 | Not Controlled Action (Particular Manner) | Post-Approval     | In buffer area only |
| <a href="#">Commonwealth Place Forecourt, Stage 2 Works</a>  | 2005/2007 | Not Controlled Action (Particular Manner) | Post-Approval     | In buffer area only |
| <a href="#">Construct, operate and decommission a 40MWac photovoltaic array plu associated coonections and ancil</a> | 2012/6431 | Not Controlled Action (Particular Manner) | Post-Approval     | In buffer area only |
| <a href="#">Construct Bioscience Lab and assoc works</a>   | 2005/2143 | Not Controlled Action (Particular Manner) | Post-Approval     | In buffer area only |
| <a href="#">Construction and operation of new National Portrait Gallery</a>  | 2005/2327 | Not Controlled Action (Particular Manner) | Post-Approval     | In buffer area only |
| <a href="#">Construction of a four lane dual carriageway road from Monaro Hwy to Federal Hwy, Majura ACT</a>         | 2009/5057 | Not Controlled Action (Particular Manner) | Post-Approval     | In buffer area only |
| <a href="#">Construction of a New Office Building</a>  | 2009/4871 | Not Controlled Action (Particular Manner) | Post-Approval     | In buffer area only |
| <a href="#">construction of shoulder and taxiway fillet</a>  | 2001/307  | Not Controlled Action (Particular Manner) | Post-Approval     | In feature area     |
| <a href="#">Construct signalised bridge and underpass &amp; remove trees</a>   | 2008/4547 | Not Controlled Action (Particular Manner) | Post-Approval     | In buffer area only |
| <a href="#">Defence Headquarters, Bungendore to HMAS Harman and Russell Defence Offices fibr</a>                     | 2007/3507 | Not Controlled Action (Particular         | Post-Approval     | In buffer area only |



| Title of referral   | Reference | Referral Outcome                          | Assessment Status | Buffer Status       |
|---|-----------|---|-------------------|---------------------|
| Not controlled action (particular manner)   |           | Manner)                                   |                   |                     |
| <a href="#">Duntroon Residential Development</a>  | 2001/374  | Not Controlled Action (Particular Manner) | Post-Approval     | In buffer area only |
| <a href="#">East Lake Electrical Infrastructure Relocation and Upgrade</a>                          | 2009/5253 | Not Controlled Action (Particular Manner) | Post-Approval     | In buffer area only |
| <a href="#">Fyshwick East Industrial Estate, Block 2223, District of Jerrabomberra</a>              | 2009/4850 | Not Controlled Action (Particular Manner) | Post-Approval     | In buffer area only |
| <a href="#">Ground floor works, Edmund Barton Building, Canberra</a>                                | 2009/5038 | Not Controlled Action (Particular Manner) | Post-Approval     | In buffer area only |
| <a href="#">Hume West Industrial Estate Development</a>   | 2009/4766 | Not Controlled Action (Particular Manner) | Post-Approval     | In buffer area only |
| <a href="#">INDIGO Marine Cable Route Survey (INDIGO)</a>   | 2017/7996 | Not Controlled Action (Particular Manner) | Post-Approval     | In feature area     |
| <a href="#">Majura Road Upgrade</a>   | 2002/825  | Not Controlled Action (Particular Manner) | Post-Approval     | In buffer area only |
| <a href="#">Refurbishment of former Patent Office &amp; demolition of Robert Garran link office</a> | 2009/4777 | Not Controlled Action (Particular Manner) | Post-Approval     | In buffer area only |
| <a href="#">Replacement of poplars at the National Library of Australia Forecourt, ACT</a>          | 2021/8950 | Not Controlled Action (Particular Manner) | Post-Approval     | In buffer area only |
| <a href="#">Temporary display of bridge sections from HMAS Brisbane</a>                             | 2005/2379 | Not Controlled Action (Particular Manner) | Post-Approval     | In buffer area only |
| Referral decision   |           |   |                   |                     |
| <a href="#">Construction of Majura Park Precinct Including Access Road, Warehouses, and Asso</a>    | 2004/1425 | Referral Decision                         | Completed         | In feature area     |

| Title of referral   | Reference | Referral Outcome  | Assessment Status | Buffer Status       |
|---|-----------|-------------------|-------------------|---------------------|
| Referral decision   |           |                   |                   |                     |
| <a href="#">Construction of two 15m height memorials</a>  | 2012/6269 | Referral Decision | Completed         | In buffer area only |
| <a href="#">Demolition of the Robert Garran Office Annex Building</a>                           | 2009/5189 | Referral Decision | Completed         | In buffer area only |
| <a href="#">Development of Symonston Stage 2</a>  | 2012/6320 | Referral Decision | Completed         | In buffer area only |
| <a href="#">Handrail installation, Treasury Building, Parkes Place West</a>                     | 2006/2832 | Referral Decision | Completed         | In buffer area only |
| <a href="#">Re-development of forecourt to create the Humanities and Science Campus Square.</a> | 2006/2759 | Referral Decision | Completed         | In buffer area only |
| <a href="#">Refurbishment works to the SE wing of Old Parliament House</a>                      | 2007/3778 | Referral Decision | Completed         | In buffer area only |
| <a href="#">South Jerrabomberra urban development project</a>                                   | 2010/5708 | Referral Decision | Completed         | In feature area     |
| <a href="#">Symonston Residential Estate Stage 2, Symonston, ACT</a>                            | 2014/7327 | Referral Decision | Completed         | In buffer area only |
| <a href="#">West Block Hotel Adaptation, Queen Victoria Terrace</a>                             | 2021/9083 | Referral Decision | Completed         | In buffer area only |

# Caveat

## 1 PURPOSE

This report is designed to assist in identifying the location of matters of national environmental significance (MNES) and other matters protected by the Environment Protection and Biodiversity Conservation Act 1999 (Cth) (EPBC Act) which may be relevant in determining obligations and requirements under the EPBC Act.

The report contains the mapped locations of:

- World and National Heritage properties;
- Wetlands of International and National Importance;
- Commonwealth and State/Territory reserves;
- distribution of listed threatened, migratory and marine species;
- listed threatened ecological communities; and
- other information that may be useful as an indicator of potential habitat value.

## 2 DISCLAIMER

This report is not intended to be exhaustive and should only be relied upon as a general guide as mapped data is not available for all species or ecological communities listed under the EPBC Act (see below). Persons seeking to use the information contained in this report to inform the referral of a proposed action under the EPBC Act should consider the limitations noted below and whether additional information is required to determine the existence and location of MNES and other protected matters.

Where data are available to inform the mapping of protected species, the presence type (e.g. known, likely or may occur) that can be determined from the data is indicated in general terms. It is the responsibility of any person using or relying on the information in this report to ensure that it is suitable for the circumstances of any proposed use. The Commonwealth cannot accept responsibility for the consequences of any use of the report or any part thereof. To the maximum extent allowed under governing law, the Commonwealth will not be liable for any loss or damage that may be occasioned directly or indirectly through the use of, or reliance

## 3 DATA SOURCES

Threatened ecological communities

For threatened ecological communities where the distribution is well known, maps are generated based on information contained in recovery plans, State vegetation maps and remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.

Threatened, migratory and marine species

Threatened, migratory and marine species distributions have been discerned through a variety of methods. Where distributions are well known and if time permits, distributions are inferred from either thematic spatial data (i.e. vegetation, soils, geology, elevation, aspect, terrain, etc.) together with point locations and described habitat; or modelled (MAXENT or BIOCLIM habitat modelling) using

Where little information is available for a species or large number of maps are required in a short time-frame, maps are derived either from 0.04 or 0.02 decimal degree cells; by an automated process using polygon capture techniques (static two kilometre grid cells, alpha-hull and convex hull); or captured manually or by using topographic features (national park boundaries, islands, etc.).

In the early stages of the distribution mapping process (1999-early 2000s) distributions were defined by degree blocks, 100K or 250K map sheets to rapidly create distribution maps. More detailed distribution mapping methods are used to update these distributions

## 4 LIMITATIONS

The following species and ecological communities have not been mapped and do not appear in this report:

- threatened species listed as extinct or considered vagrants;
- some recently listed species and ecological communities;
- some listed migratory and listed marine species, which are not listed as threatened species; and
- migratory species that are very widespread, vagrant, or only occur in Australia in small numbers.

The following groups have been mapped, but may not cover the complete distribution of the species:

- listed migratory and/or listed marine seabirds, which are not listed as threatened, have only been mapped for recorded
- seals which have only been mapped for breeding sites near the Australian continent

The breeding sites may be important for the protection of the Commonwealth Marine environment.

Refer to the metadata for the feature group (using the Resource Information link) for the currency of the information.

# Acknowledgements

This database has been compiled from a range of data sources. The department acknowledges the following custodians who have contributed valuable data and advice:

- [-Office of Environment and Heritage, New South Wales](#)
- [-Department of Environment and Primary Industries, Victoria](#)
- [-Department of Primary Industries, Parks, Water and Environment, Tasmania](#)
- [-Department of Environment, Water and Natural Resources, South Australia](#)
- [-Department of Land and Resource Management, Northern Territory](#)
- [-Department of Environmental and Heritage Protection, Queensland](#)
- [-Department of Parks and Wildlife, Western Australia](#)
- [-Environment and Planning Directorate, ACT](#)
- [-Birdlife Australia](#)
- [-Australian Bird and Bat Banding Scheme](#)
- [-Australian National Wildlife Collection](#)
- [-Natural history museums of Australia](#)
- [-Museum Victoria](#)
- [-Australian Museum](#)
- [-South Australian Museum](#)
- [-Queensland Museum](#)
- [-Online Zoological Collections of Australian Museums](#)
- [-Queensland Herbarium](#)
- [-National Herbarium of NSW](#)
- [-Royal Botanic Gardens and National Herbarium of Victoria](#)
- [-Tasmanian Herbarium](#)
- [-State Herbarium of South Australia](#)
- [-Northern Territory Herbarium](#)
- [-Western Australian Herbarium](#)
- [-Australian National Herbarium, Canberra](#)
- [-University of New England](#)
- [-Ocean Biogeographic Information System](#)
- [-Australian Government, Department of Defence](#)
- [Forestry Corporation, NSW](#)
- [-Geoscience Australia](#)
- [-CSIRO](#)
- [-Australian Tropical Herbarium, Cairns](#)
- [-eBird Australia](#)
- [-Australian Government – Australian Antarctic Data Centre](#)
- [-Museum and Art Gallery of the Northern Territory](#)
- [-Australian Government National Environmental Science Program](#)
- [-Australian Institute of Marine Science](#)
- [-Reef Life Survey Australia](#)
- [-American Museum of Natural History](#)
- [-Queen Victoria Museum and Art Gallery, Inveresk, Tasmania](#)
- [-Tasmanian Museum and Art Gallery, Hobart, Tasmania](#)
- [-Other groups and individuals](#)

The Department is extremely grateful to the many organisations and individuals who provided expert advice and information on numerous draft distributions.

Please feel free to provide feedback via the [Contact us](#) page.

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## **Appendix B – Basic AHIMS Search Result**

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Essential Energy Land & Routes Port Macquarie

Date: 14 December 2022

8 Buller St

Port Macquarie New South Wales 2444

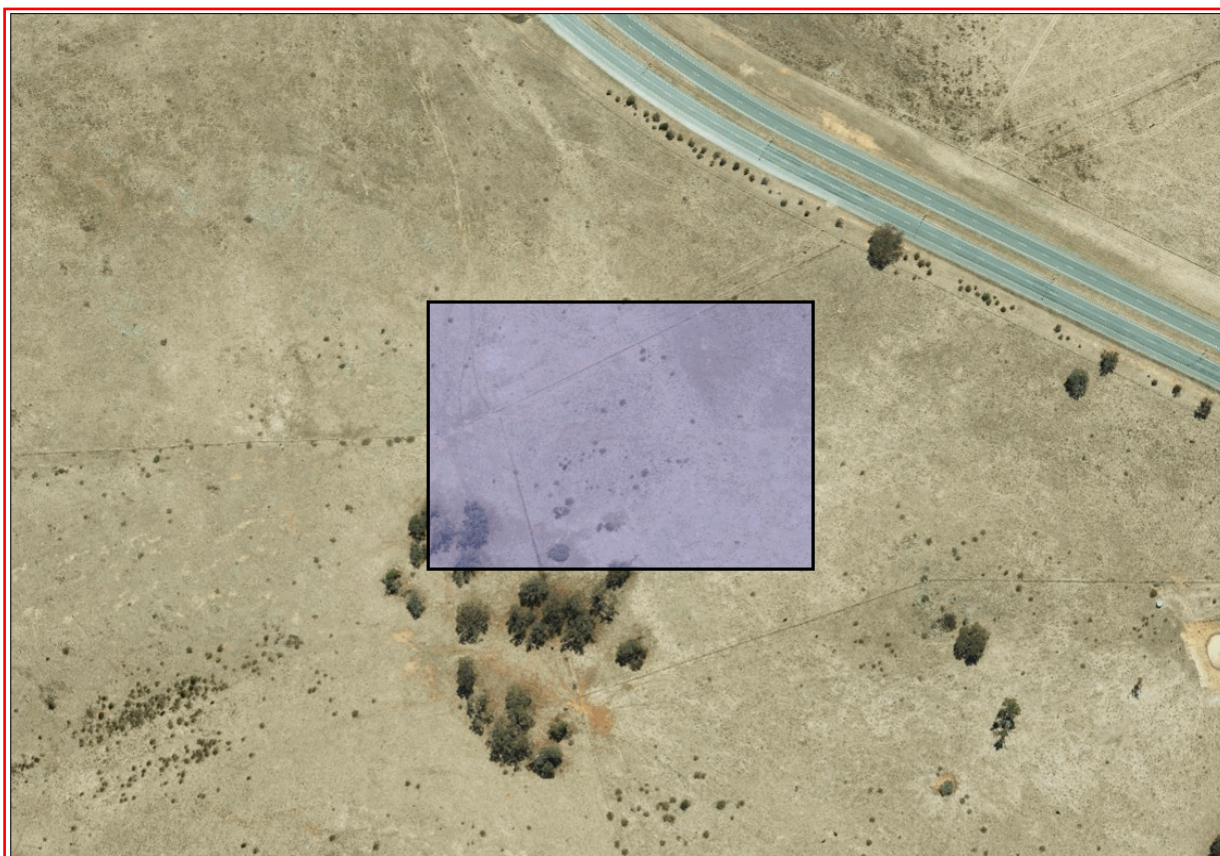
Attention: Nathan Hegerty

Email: nathan.hegerty@essentialenergy.com.au

Dear Sir or Madam:

**AHIMS Web Service search for the following area at Lat, Long From : -35.3813, 149.1898 - Lat, Long To : -35.3802, 149.1917, conducted by Nathan Hegerty on 14 December 2022.**

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:

|   |   |
|---|---|
| 0 | 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 \(https://www.legislation.nsw.gov.au/gazette\)](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.