# Canyonleigh Battery Energy Storage System

Application Number: **02928** Commencement Date: **21/05/2025** Status: **Locked**

# 1. About the project

## 1.1 Project details

**1.1.1 Project title ***

Canyonleigh Battery Energy Storage System

**1.1.2 Project industry type ***

Energy Generation and Supply (renewable)

**1.1.3 Project industry sub-type**

—

**1.1.4 Estimated start date ***

01/07/2026

**1.1.4 Estimated end date ***

01/12/2026

# 1.2 Proposed Action details

### 1.2.1 Provide an overview of the proposed action, including all proposed activities. *

The Project involves the construction, operation and decommissioning of a BESS, with an estimated capacity of up to 300MW / 1,200 MWh, at 962 Canyonleigh Road, Brayton, NSW. The Project area is 98.11 hectares (ha), including disturbance footprint of 10.18 ha. The Project will include the following:

- One BESS with 300MW /1,200 MWh storage capacity. Located within proximity to existing transmission lines, east and south of Canyonleigh Road
- Existing substation located on Lot 2341 DP 622834
- Project substation 6 m from the BESS
- Electrical reticulation will connect into 330 kV underground transmission lines.
- Feeder lines connect the substation to the transmission network
- Carpark, storage area, site fencing, lighting, temporary construction site office and amenities.
- Two access roads at Canyonleigh Road
- Access tracks, drainage and access point
- Waste and wastewater disposal facilities
- Existing public road and communications network

The Project construction will comprise of 3 stages, with each stage consisting of approximately 12-24 months. The construction will involve:

- Construction hours as per standard daytime construction working hours
- 75-115 Full Time Equivalent (FTE) employees during construction
- Delivery of Project components, including battery modules, substations, transformers and associated components
- Installation of underground and overhead cabling, maintenance and environmental management processes and equipment
- Access roads upgrade
- Sourcing of water for construction (this may include offsite or onsite water sourcing, including the construction or bores and / or manmade dams onsite)
- Subdivision and boundary adjustments relating to lease arrangements, where required
- Visual screening, where required
- Geotechnical investigations to inform the siting and location of Project layout and infrastructure
- Adjustment, protection or relocation of existing utilities
- Main equipment and Over Size, Over Mass (OSOM) deliveries via Port Botany or Port Kembla
- Associated external road upgrades (also used for operational maintenance or decommissioning activities)

In terms of operations, the Development Consent is in perpetuity and infrastructure life is a minimum of 20-30 years. The BESS will operate when completed 24 hours a day, seven days a week. The operation workforces are required periodically for maintenance activities; this will be equivalent to approximately 5 FTE.

### 1.2.2 Is the project action part of a staged development or related to other actions or proposals in the region?

No

### 1.2.6 What Commonwealth or state legislation, planning frameworks or policy documents are relevant to the proposed action, and how are they relevant? *

**Att A - Cayonleigh BESS - EPBC Act MNES Impact Assessment, Section 1.3, Table 1-2, page 5** for the Proposed Action outlines the specific Commonwealth legislation associated with the proposed development. Additionally, State and local legislation has been outlined below.

Commonwealth legislation

*Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). This referral addresses the potential impact on matters of national environmental significance and whether the Proposed Action is expected to be a controlled action requiring environmental approval.

Native Title Act 1993.A review of the potential for native title will be undertaken for the Proposed Action. The Project Area is not located within the boundaries of a native title claim or determination.

State (NSW) legislation

*Environmental Planning and Assessment Act 1979* (EP&A Act). Under Section 4.2, the Proposed Action requires land use and development consent in accordance with Clause 2.35 of the State Environmental Planning Policy (Transport and Infrastructure) 2007, being a development of "electricity generating works" in a prescribed zone (RU1). Specifically, the Proposed Action is a State Significant Development (SSD) in accordance with Section 2.6 (1) of the Environmental Planning Policy (Planning Systems) 2021 (Planning Systems SEPP).

*Biodiversity Conservation Act 2016* (BC Act). Under Section 7.9, a Biodiversity Development Assessment Report (BDAR) must be prepared because the Proposed Action is an SSD.

The Bilateral Agreement established between the Commonwealth and NSW Governments allows the Federal Minister for the Environment to rely on the NSW environmental impact assessment processes when assessing actions under the EPBC Act. The Bilateral Agreement applies to certain types of major projects under the EP&A Act, including projects for SSD that also require assessment and approval under the EPBC Act. The Commonwealth may elect to issue supplementary assessment requirements to address specific matters not covered by the Bilateral Agreement.

The Bilateral Agreement allows for the use of the NSW Biodiversity Offset Scheme (BOS) to address any residual impacts arising from the Proposed Action. Offsets are determined by application of the NSW Biodiversity Assessment Method (BAM) and associated Biodiversity Assessment Method Calculator (BAM-C) to the satisfaction of the NSW Environment Agency head and Minister for Planning.

### 1.2.7 Describe any public consultation that has been, is being or will be undertaken regarding the project area, including with Indigenous stakeholders. Attach any completed consultation documentations, if relevant. *

X-Elio recognises that individual communities are both diverse and unique and is committed to working closely with local people in the areas projects are being delivered so that they leave a positive, long-term impact on the regions in which they operate.

In line with the NSW Government's Undertaking Engagement Guidelines for State Significant Projects, X-Elio has undertaken early engagement to identify potential issues to be avoided or managed as part of planning and project design. These initial activities have also focused on building rapport and establishing trusting relationships with communities affected by the proposed project.

X-Elio are proposing two projects located approximately 40km apart within the Goulburn Mulwaree LGA; Canyonleigh BESS and Willavale Park BESS. In order to maximise engagement benefits and reduce consultation fatigue, where possible X-ELIO has coordinated the engagement activities for the two projects.

A Community and Stakeholder Engagement Strategy will document the activities that will be undertaken by the Project team up to and including the EIS public exhibition phase of Project. The Strategy will remain a live document and will be updated to accord with the SEARs and to reflect any changes to the Project based on stakeholder feedback, project decisions and milestones (as shown in **Att B - Canyonleigh BESS - Scoping Report, Section 5, page 32**).

# 1.3.1 Identity: Referring party

**Privacy Notice:**

Personal information means information or an opinion about an identified individual, or an individual who is reasonably identifiable.

By completing and submitting this form, you consent to the collection of all personal information contained in this form. If you are providing the personal information of other individuals in this form, please ensure you have their consent before doing so.

The Department of Climate Change, Energy, the Environment and Water (the department) collects your personal information (as defined by the Privacy Act 1988) through this platform for the purposes of enabling the department to consider your submission and contact you in relation to your submission. If you fail to provide some or all of the personal information requested on this platform (name and email address), the department will be unable to contact you to seek further information (if required) and subsequently may impact the consideration given to your submission.

Personal information may be disclosed to other Australian government agencies, persons or organisations where necessary for the above purposes, provided the disclosure is consistent with relevant laws, in particular the Privacy Act 1988 (Privacy Act). Your personal information will be used and stored in accordance with the Australian Privacy Principles.

See our Privacy Policy to learn more about accessing or correcting personal information or making a complaint.

Alternatively, email us at privacy@awe.gov.au.

☑ **Confirm that you have read and understand this Privacy Notice ***

### 1.3.1.1 Is Referring party an organisation or business? *

Yes

Referring party organisation details

| | |
|---|---|
| **ABN/ACN** | 12002773248 |
| **Organisation name** | ENVIRONMENTAL RESOURCES MANAGEMENT AUSTRALIA PTY LIMITED |
| **Organisation address** | Level 14, 207 Kent Street, Sydney, Australia, NSW 2000 |

Referring party details

| | |
|---|---|
| **Name** | Joe Clement |
| **Job title** | Senior Ecologist |
| **Phone** | 0461364911 |
| **Email** | joe.clement@erm.com |
| **Address** | Level 14, 207 Kent Street, Sydney, Australia, NSW 2000 |

# 1.3.2 Identity: Person proposing to take the action

### 1.3.2.1 Are the Person proposing to take the action details the same as the Referring party details? *

No

### 1.3.2.2 Is Person proposing to take the action an organisation or business? *

Yes

Person proposing to take the action organisation details

| | |
|---|---|
| **ABN/ACN** | 15678801315 |
| **Organisation name** | X-ELIO AUS2 PTY LTD |
| **Organisation address** | 3006 VIC |

Person proposing to take the action details


| | |
|---|---|
| **Name** | Matilde Tobon |
| **Job title** | Project Developer |
| **Phone** | +61 458 949 956 |
| **Email** | matilde.tobon@x-elio.com |
| **Address** | Level 7, 67 Palmerston Cres, South Melbourne, VIC 3205 |

### 1.3.2.14 Are you proposing the action as part of a Joint Venture? *

No

### 1.3.2.15 Are you proposing the action as part of a Trust? *

No

### 1.3.2.17 Describe the Person proposing the action's history of responsible environmental management including details of any proceedings under a Commonwealth, State or Territory law for the protection of the environment or the conservation and sustainable use of natural resources against the Person proposing to take the action. *

The Proponent is an international organisation that specialises in the development, operation and maintenance of large-scale assets, predominantly focusing on solar and industrial scale battery storage. X-Elio have submitted two EPBC referrals in the past; Sixteen Mile Solar Farm (2024/09827) and North Burnett Renewables Energy Hub (2024/09827).

They also have a lot of other renewables projects in development, including Willavale Park BESS (NSW), and Rollsvile Solar Farm (NSW), which will be submitting EPBC referrals later in the year. They have several more renewable projects under construction and in operation, such as Blue Grass Solar Farm (QLD) and Forest Glen Solar Farm (NSW). X-Elio are an international company with renewable projects in Chile, France, Italy, Honduras, Japan and USA.

### 1.3.2.18 If the person proposing to take the action is a corporation, provide details of the corporation's environmental policy and planning framework

X-Elio considers the environment a key element in their sustainability agenda and one of the key elements in achieving a sustainable energy model. They are committed to the following guiding principles:

- Observing environmental regulations and complying with legal requirements in the countries where they operate.
- Managing and mitigating the risks and impacts on the environment related to their operations with continuous improvement as a global objective.
- Consume with responsibility, by making a sustainable, efficient and conscientious use of natural resources.
- Establish adequate management systems, based on continuous improvement, that contribute to reduce environmental risks.
- Respect nature, biodiversity and historical and artistic heritage in the natural environments in which the company's assets are located.
- Establish a constructive dialogue with public administrations, regulatory bodies, non-governmental organizations, multilateral organizations, shareholders, customers, local communities and other stakeholders.

**Att C - X-Elio Health, Safety, Environment and Security Policy** gives further detail.

# 1.3.3 Identity: Proposed designated proponent

### 1.3.3.1 Are the Proposed designated proponent details the same as the Person proposing to take the action? *

Yes

Proposed designated proponent organisation details

| | |
|---|---|
| **ABN/ACN** | 15678801315 |
| **Organisation name** | X-ELIO AUS2 PTY LTD |
| **Organisation address** | 3006 VIC |

Proposed designated proponent details

| | |
|---|---|
| **Name** | Matilde Tobon |
| **Job title** | Project Developer |
| **Phone** | +61 458 949 956 |
| **Email** | matilde.tobon@x-elio.com |
| **Address** | Level 7, 67 Palmerston Cres, South Melbourne, VIC 3205 |

### 1.3.4 Identity: Summary of allocation

## Confirmed Referring party's identity

The Referring party is the person preparing the information in this referral.

| | |
|---|---|
| ABN/ACN | 12002773248 |
| Organisation name | ENVIRONMENTAL RESOURCES MANAGEMENT AUSTRALIA PTY LIMITED |
| Organisation address | Level 14, 207 Kent Street, Sydney, Australia, NSW 2000 |
| Representative's name | Joe Clement |
| Representative's job title | Senior Ecologist |
| Phone | 0461364911 |
| Email | joe.clement@erm.com |
| Address | Level 14, 207 Kent Street, Sydney, Australia, NSW 2000 |

## Confirmed Person proposing to take the action's identity

The Person proposing to take the action is the individual, business, government agency or trustee that will be responsible for the proposed action.

| | |
|---|---|
| ABN/ACN | 15678801315 |
| Organisation name | X-ELIO AUS2 PTY LTD |
| Organisation address | 3006 VIC |
| Representative's name | Matilde Tobon |
| Representative's job title | Project Developer |
| Phone | +61 458 949 956 |
| Email | matilde.tobon@x-elio.com |
| Address | Level 7, 67 Palmerston Cres, South Melbourne, VIC 3205 |

## Confirmed Proposed designated proponent's identity

The Person proposing to take the action is the individual or organisation proposed to be responsible for meeting the requirements of the EPBC Act during the assessment process, if the Minister decides that this project is a controlled action.

Same as Person proposing to take the action information.

## 1.4 Payment details: Payment exemption and fee waiver

**1.4.1 Do you qualify for an exemption from fees under EPBC Regulation 5.23 (1) (a)? ***

No

**1.4.3 Have you applied for or been granted a waiver for full or partial fees under Regulation 5.21A? ***

No

**1.4.5 Are you going to apply for a waiver of full or partial fees under EPBC Regulation 5.21A?**

No

**1.4.7 Has the department issued you with a credit note? ***

No

**1.4.9 Would you like to add a purchase order number to your invoice? ***

No

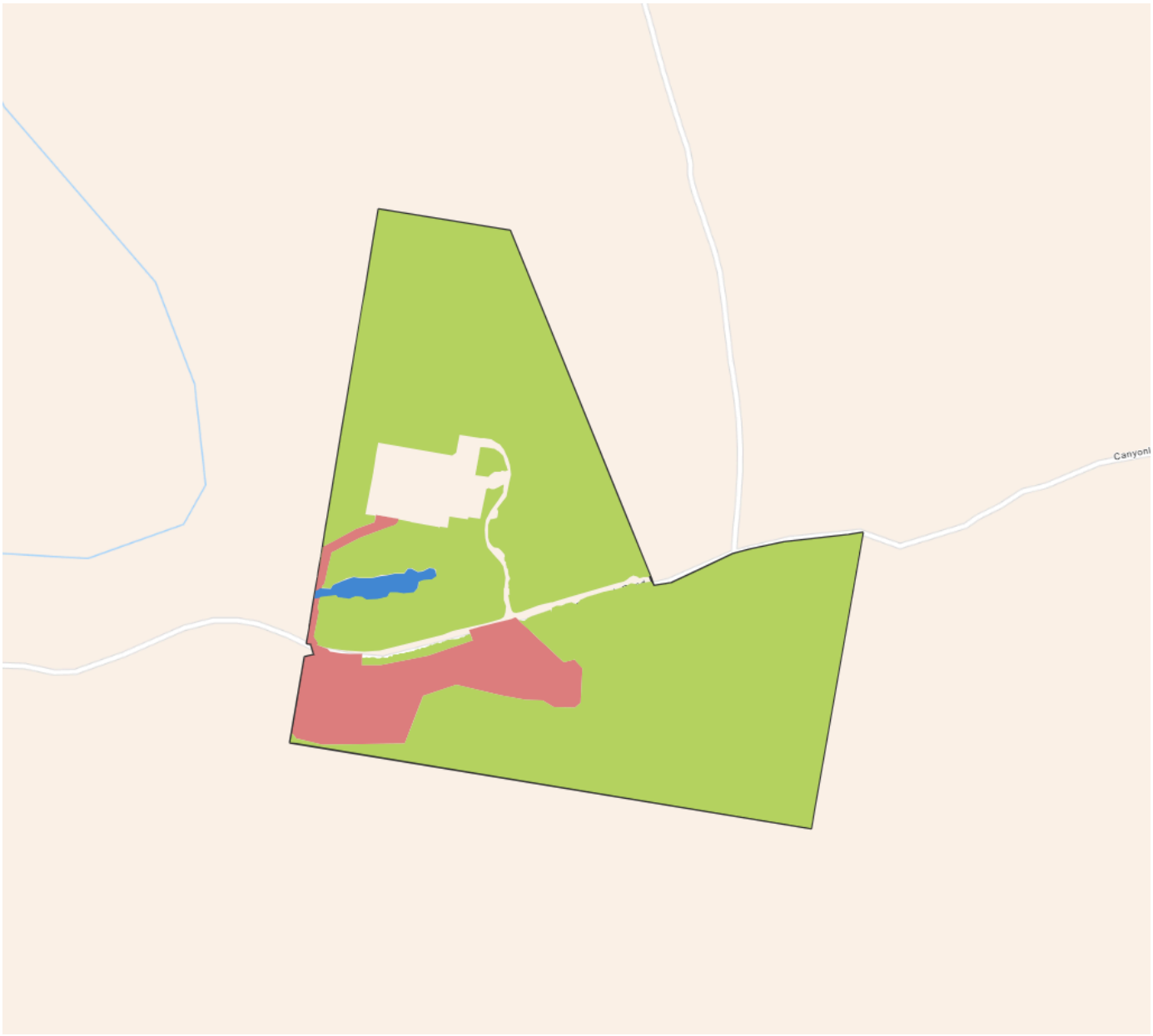
## 1.4 Payment details: Payment allocation

**1.4.11 Who would you like to allocate as the entity responsible for payment? ***

Person proposing to take the action

# 2. Location

# 2.1 Project footprint



**Project Area:** 98.11 Ha **Disturbance Footprint:** 10.18 Ha **Avoidance Area:** 1.01 Ha **Retention Area:** 81.31 Ha

## 2.2 Footprint details

**2.2.1 What is the address of the proposed action? ***

The Proposed Action is located at 962 Canyonleigh Road, Brayton, NSW within the Goulburn M

**2.2.2 Where is the primary jurisdiction of the proposed action? ***

New South Wales

**2.2.3 Is there a secondary jurisdiction for this proposed action? ***

No

**2.2.5 What is the tenure of the action area relevant to the project area? ***

All of the land is freehold land and will be leased. The allotments within which the Project area are outlined below:

- **Lot -** 2341
- **Deposit Plan -** 622834
- **Title -** Freehold
- **Landowner -** Transgrid

- **Lot -** 12
- **Deposit Plan -** 727493
- **Title -** Freehold
- **Landowner -** X-Elio

# 3. Existing environment

# 3.1 Physical description

### 3.1.1 Describe the current condition of the project area's environment.

The project area totals approximately 98.11 hectares and falls within the NSW South Eastern Highlands IBRA Bioregion and Bungonia IBRA Subregion. The project area is situated across multiple NSW (Mitchell) Landscapes with the northern portion of the project area occurring within the Wollondilly-Bindook Tablelands and Gorges Landscape whilst the development footprint is largely located within the Bungonia Tablelands Landscape (as shown in **Figure 2-1 Att D - Canyoneleigh BESS – Preliminary Biodiversity Report, Section 2.1.2, Figure 2-1, page 7**).

Vegetation present across the project area consists of native woodland and forest in varying conditions with areas of mixed natives and planted native vegetation also present. Disturbance within the project area is evident with signs of livestock grazing, cropping, and vegetation clearing. However, areas of remnant native vegetation consistent with woodland and forest communities known to occur within the NSW South-eastern Highlands IBRA Bioregion and Bungonia IBRA subregion were recorded across the project area, including the Plant Community Types (PCT):

- PCT 3373 Goulburn Tableland Box-Gum Grassy Forest - Woodland
- PCT 3746 Southern Tableland Snow Gum-Candlebark Shrub Forest
- PCT 4063 Central and Southern Tableland River Oak Forest - Woodland

The field verified PCT mapping is shown in **Figure 3-1** in **Att A- Cayonleigh BESS - EPBC Act MNES Impact Assessment, Section 3.2, page 24 and 25.**

The development footprint of the proposal totals 10.18 hectares and has been located within parts of the project area that were considered to have the least amount of habitat values present and within areas of previous disturbance. NSW hydrological mapping (State of NSW and DCCEEW, 2025) shows an unnamed ephemeral watercourse intersecting part of the development footprint and extending within the northern section of the project area. The Wollondilly River occurs approximately 220 m west of the development footprint and will not be impacted by the development. Several farm dams are scattered throughout the project area but are absent within the development footprint.

Habitat connectivity within the project area is isolated to small patches of woodlands that provide connectivity to the larger vegetated areas surrounding the Subject Land. Connectivity features within the development footprint reflect small patches of woodlands and the overall habitat connectivity of the development footprint is considered to have moderate value. The project area will continue to provide connectivity across the Subject Land and surrounds post development. No karsts, caves, crevices, cliffs or other areas of geological significance were present within the project area or development footprint, although there are some small, isolated areas within the development footprint that are rocky. A search of the Australian Soil Classification (ASC) Soil Type Map (State of NSW and DCCEEW, 2025) revealed that the development footprint occurs entirely on the Sodosol soil type.

### 3.1.2 Describe any existing or proposed uses for the project area.

The project area covers approximately 98.11 hectares and currently supports multiple land uses with the Marulan substation and its associated infrastructure covering a small portion of the project area whilst active agriculture in the form of grazing and cropping continues across the remaining area. Historically, the development footprint has been the subject of grazing and clearing activities since at least 1963, which is evident in historical aerial imagery, as shown in **Figure 2-4** in **Att E - Canyonleigh BESS - Land Category Assessment Report, Section 2.1.2, page 10.**

Proposed use of the project area is largely to remain for agricultural purposes, with the development footprint of approximately 10.18 hectares to be the only proposed change of use to facilitate the development, ongoing use and maintenance of the proposed Battery Energy Storage System (BESS), including an electrical reticulation network, access tracks, associated infrastructure, temporary construction facilities and permanent operation and maintenance infrastructure. The development footprint has been largely located within a degraded portion of the land that has been historically grazed and cleared

### 3.1.3 Describe any outstanding natural features and/or any other important or unique values that applies to the project area.

The project area is reflective of lands historically utilised for agriculture, and limited features and values are present. Such features are restricted to riparian habitats, connectivity and native vegetation.

Riparian habitat associated with the Wollondilly River, approximately 220 m west of the development footprint is present along the western boundary of the Subject Land but will not be impacted by the development. The important riparian corridor continues to surrounding lands and provides connections to surrounding vegetation, supporting the movement and dispersal of a range of fauna.

Vegetation corridors are largely restricted to riparian habitat, fencelines and road reserves. The development footprint will reduce connectivity, but connectivity will remain across the project area.

The development footprint totals approximately 10.18 hectares and although it has a history of grazing and clearing, it does contain patches of native vegetation identified as PCT 3746 (9.57 hectares) and PCT 4063 (0.02 ha) with a further 0.34 hectares of non-native vegetation. These relatively small areas of vegetation provide habitat values for several MNES.

### 3.1.4 Describe the gradient (or depth range if action is to be taken in a marine area) relevant to the project area.

The Project Area and surrounds are characterised by generally flat plains with gentle undulations, transitioning into low-lying hills and ridges in the southwest and northeast sections. Elevation peaks at approximately 667m in the northeastern section of the project area, with land sloping down toward Wollondilly River. Wollondilly River is a prominent landform feature of the area.

## 3.2 Flora and fauna

**3.2.1 Describe the flora and fauna within the affected area and attach any investigations of surveys if applicable.**

ERM has completed: **Att A - EPBC Act MNES Impact Assessment, Att D - Preliminary Biodiversity Report** and **Att E - Land Category Assessment Report.** A BDAR is currently being prepared.

ERM ecologists and subcontractors from Capital Ecology and Red-Gum Environmental undertook field surveys across the Project Area during the following survey events:

- Summer 2024: 19th – 23rd February;
- Autumn 2024: 29th April – 1st May;
- Spring 2024: 23rd – 30th October;
- Spring 2024: 11th – 13th November;
- Summer 2025: 22nd January – 22nd February;
- Autumn 2025: 11th April; and 20th & 29th May.

Field survey methods, effort and results are provided in **Table 2-1** of **Att A Canyonleigh BESS - MNES Impact Assessment, Section 2.3, pages 12 - 21.** The field survey effort is presented in **Figure 2-1** in **Att A Canyonleigh BESS - MNES Impact Assessment, Section 2.3, page 10** and the results are presented in **Figure 2-2, Section 2.3, page 11.**

Site evaluation of native vegetation was conducted through rapid vegetation assessments, and vegetation integrity plots (BAM plots) to determine the likely PCTs present and identify TECs.

Field survey methods included habitat feature identification and assessments, targeted threatened species surveys and opportunistic flora and fauna observations. Where possible, presence or absence of the following fauna habitat features were noted during the surveys:

- Water sources with emergent vegetation.
- Large stick nests.
- Fallen/standing dead timber and logs.
- Mistletoe presence and abundance.
- Hollow-Bearing Trees (HBT), particularly with hollows greater than 20cm diameter.

Further targeted fauna surveys were completed for the Koala (*Phascolarctos cinereus*) on May 19 –20 2025, including the completion of Koala Spot Assessment Technique (SAT) on all the trees in the development footprint. Following this, Key's Matchstick Grasshopper (*Keyacris scurra*) and the Glossy Black-Cockatoo (*Calyptorhynchus lathami*), were surveyed for on 29 May 2025, in accordance with the requirements of the BAM, as part of the EIS phase. In addition, an expert report to determine the likelihood of presence of the Pink-tailed Legless Lizard (*Aprasia parapulchella*) and the Striped Legless Lizard (*Delma impar*) was completed on the 11 April 2025. The ecologists from Capital Ecology identified suitable habitat within the development footprint for the Pink-tailed Legless Lizard (*Aprasia parapulchella*), this input has been used to amend the project design, and the suitable habitat mapping is being updated (Capital Ecology, 2025). No suitable habitat for Striped Legless Lizard (*Delma impar*) was identified within the development footprint.

**Plant Communities**

PCTs mapped within the project area and development footprint are detailed below, condition classes of each PCT are also provided.

- 3373 - Goulbourn Tableland Box-Gum Grassy Forest- Woodland (present in different conditions: Woodland and Grassland),
- 3746 - Southern Tableland Snow Gum-Candlebark Shrub Forest (present in different conditions: Woodland, Grassland, Planted Natives, Shrubland and Highly Disturbed), and
- 4063 - Central and Southern Tableland River Oak Forest- Woodland (present only in Woodland).

PCT 3373 is associated with the EPBC Act listed Threatened Ecological Community (TEC), White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland. The TEC is found within the Project Area, but through design refinement, it has been excluded from the development footprint. In general, areas of remnant and regrowth vegetation have been avoided at the design and micro siting stages, particularly to avoid any losses in PCT 3373 and to minimise losses of woody vegetation in PCT 3746 where practicable.

There is 0.34 ha of Planted Non-native Woody Vegetation within the development footprint, which have been separated into 'PCT 0 - Planted Non-native Woody Vegetation' and consists of degraded and modified land with potential to provide habitat for some threatened species.

**Threatened Flora**

Initially, two (2) parallel transects were completed in Feb/Apr 2024 for flowering *Genoplesium plumosum.* No individuals of the species were detected. Then during the Oct-Nov surveys, 20 parallel walking transects were conducted by two ecologists, walking 10-15 m apart, in PCTs associated with the species likely to occur. Another four (4) transect were completed in the summer months. None of the following threatened flora species, that were determined to have a potential or high likelihood of occurrence, were recorded during this survey effort:

- Black Gum *(Eucalyptus aggregata)*
- Cotoneaster Pomaderris *(Pomaderris cotoneaster)*
- Dwarf Kerrawang (*Commersonia prostrata)*
- Camden Woollybutt *(Eucalyptus macarthurii)*
- Hoary Sunray *(Leucochrysum albicans* subsp. *tricolor)*

The Likelihood of Occurrence (LoO) assessment identified that the Hoary Sunray *(Leucochrysum albicans* subsp*. tricolor)* has the potential to occur within the project area. The species is listed as endangered under the EPBC Act and the species has been recorded within the locality. There is the potential for the Hoary Sunray to utilise dry open forest and grassland habitat associated with PCT 3746 within the development footprint (approximately 8.71 ha) (State of NSW and DCCEEW, 2025a). It is noted that field surveys have not identified any individuals or populations of Hoary Sunray in the project area or development footprint, and potential habitat has been mapped following the precautionary principle. In the event the species is identified to be present during any further surveys, there is potential that the project will result in the fragmentation of a population. However, this will be avoided and/or minimised during the EIS phase, where required.

No further threatened flora species are expected to be identified within the project area.

**Threatened Fauna**

Targeted fauna surveys for threatened fauna with a potential or higher likelihood of occurrence to occur within the project area were undertaken.

Gang-gang Cockatoo *(Callocephalon fimbriatum)* has been recorded foraging within the development footprint during recent field surveys. A tree hollow survey was completed, which identified several hollows within the development footprint and wider project area that provide suitable breeding habitat. Following this, a breeding bird survey was completed during the breeding window (Oct - Jan) and no evidence of the bird breeding was observed.

South-eastern Glossy Black-Cockatoo (*Calyptorhynchus lathami lathami)* were determined likely to be present within the project area due to recent records within the locality and suitable hollow bearing trees being present. Following this, a breeding bird survey was completed during the breeding window (Apr-Aug) and no evidence of the bird breeding was observed.

Several additional bird species, such as Brown Treecreeper (south-eastern) *(Climacteris picumnus victoriae)* and Diamond Firetail *(Stagonopleura guttata),* were considered to have a potential or higher likelihood of occurrence. While no targeted surveys for these species have been conducted, the bird surveys completed involved noting any bird species observed including any threatened birds if observed and neither bird was recorded.

Large-eared Pied Bat *(Chalinolobus dwyeri)* has potential to occur within the project area and recent records occur nearby and suitable habitat is present in the project area. Bat acoustic monitoring was completed; two Song Meter Minis were left in-situ for 36 nights in total and this species was not detected. Three species listed as 'vulnerable' under the BC Act were recorded:

- Large Bent-winged bat *(Miniopterus orianae oceanensis),*
- Yellow-bellied Sheathtail-bat *(Saccolaimus flaviventris),* and
- Eastern False Pipistrelle *(Falsistrellus tasmaniensis).*

Camera trap monitoring confirmed that Squirrel Gliders (*Petaurus norfolcensis*were) present in the project area, which are listed as 'vulnerable' under the BC Act. Camer trapping found that Southern Greater Glider *(Petauroides volans)* and Brush-tailed Rock Wallaby *(Petrogale penicillata)* were not present within the project area. The camera trap monitoring did not detect koala *(Phascolarctos cinereus).* However, these species can be hard to detect. Therefore, additional koala SATs were completed, with all 155 trees within the development footprint surveyed resulting in no evidence of koala occupation or presence (no scats, no scratches on trees, no species observed).

Grey-headed Flying-fox *(Pteropus poliocephalus)* have been recorded in the locality and their preferred foraging habitat is present within the project area. However, no camps or evidence of the species were found during a daytime search and several dusk surveys.

Pink-tailed Legless Lizard *(Aprasia parapulchella)* and the Striped Legless Lizard *(Delma impar) were* flagged as having potential to occur within the project area, according to the initial LoO. ERM engaged an expert ecologist who completed a site investigation and prepared an Expert Report. The report found suitable habitat for the Pink-tailed Legless Lizard within the development footprint and provided mapping of the suitable habitat, this is currently being updated to reflect the updated project design. the report also found no suitable habitat for Striped Legless Lizard (Delma impar) within the development footprint.

Key's Matchstick Grasshopper *(Keyacris scurra)* has
been recorded opportunistically within the development footprint. Targeted surveys were then completed on 29 May 2025, and a large population was recorded, and 5.24 ha of the development footprint is considered suitable habitat.

### 3.2.2 Describe the vegetation (including the status of native vegetation and soil) within the project area.

Vegetation present across the project area consists of native woodland and forest in varying conditions with areas of mixed natives and planted native vegetation also present. Disturbance within the project area is evident with signs of livestock grazing, cropping, and vegetation clearing. However, areas of remnant native vegetation consistent with woodland and forest communities known to occur within the NSW South-eastern Highlands IBRA Bioregion and Bungonia IBRA subregion were recorded across the project area, including the Plant Community Types (PCT):

- PCT 3373 Goulburn Tableland Box-Gum Grassy Forest – Woodland and Grassland
- PCT 3746 Southern Tableland Snow Gum-Candlebark Shrub Forest - Woodland, Grassland, Shrubland, Planted Natives and Highly Disturbed
- PCT 4063 Central and Southern Tableland River Oak Forest – Woodland

Descriptions of each PCT are provided below, according to the BioNet Vegetation Classification System.

**PCT 3373 Goulburn Tableland Box-Gum Grassy Forest – Woodland**

A mid-high to tall dry sclerophyll grassy open forest to woodland of northern parts of the Southern Tablelands, occurring from Canberra and Queanbeyan north to Pejar and east to Durran Durra and Canyonleigh, with a northern outlier at Golspie. It is found in landscape positions with moderately deep soil profiles, particularly footslopes of gently undulating low hills, on a wide range of substrates including sedimentary (sandstone, arenite, greywacke, shale), acid volcanic (ignimbrite, rhyolite) and granitic rocks. This PCT is found at elevations of 600-850 metres asl with mean annual rainfall of 650-800 mm. Remnants of this community often have a long history of disturbance and the tree canopy may be sparse to very sparse, commonly including *Eucalyptus melliodora* and occasionally with *Eucalyptus macrorhyncha*, *Eucalyptus blakelyi* or *Eucalyptus dives*. A very sparse shrub stratum commonly includes scattered *Lissanthe strigosa*, *Pimelea curviflora*, *Melichrus urceolatus* or *Hibbertia obtusifolia*, while the ground layer is predominantly grassy and commonly includes *Themeda triandra*, *Microlaena stipoides*, *Poa sieberiana*, *Elymus scaber* and *Aristida ramosa*, with occasional high cover of *Rytidosperma laeve*. Common forbs include *Lomandra filiformis*, *Lomandra multiflora subsp. multiflora*, *Goodenia hederacea*, *Hydrocotyle laxiflora*, *Oxalis perennans*, *Chrysocephalum apiculatum*, T*ricoryne elatior*, *Gonocarpus tetragynus* and *Hypericum gramineum*. In lower landscape positions subject to cold air drainage this community may be replaced by PCT 3338, while on stony dry hills it commonly grades into PCT 3747. The vegetation along the western boundary was classified as PCT 3373 because it is located on a deep soil profile, on the footslopes of undulating hills, on granite rock, at 667m above sea level. The PCT also shares the following species with this classification: *Themeda triandra, Rubus fruticosus, Fimbristylis dichotoma, Kunzea parvifolia, Hypochaeris radicata, Conyza bonariensis, Acacia parramattensis* and *Euchiton sphaericus.*

The project area contains approximately 55.31 ha of this PCT. No extent of this PCT occurs within the development footprint.

**PCT 3746 Southern Tableland Snow Gum-Candlebark Shrub Forest**

This PCT is described as a mid-high to tall shrubby sclerophyll open forest to woodland restricted to intermittently damp flats along streams, and adjacent footslopes, in north-east parts of the Southern Tablelands. This PCT is known from Nerriga west to Boro and south to Snowball, and from Mandemar south to Penrose and west to Brayton, with a northern outlier at Hartley. It occurs at elevations of 500-900 metres asl with mean annual precipitation of 650-1050 mm, commonly on sandy-clay alluvium and colluvium derived from sandstone, rhyolite and granitoid substrates. A sparse to mid-dense canopy very frequently includes *Eucalyptus pauciflora*, commonly with *Eucalyptus rubida* and occasionally *Eucalyptus viminalis*. The shrub stratum may be sparse to mid-dense and commonly includes *Kunzea parvifolia* and *Melichrus urceolatus*, occasionally *Brachyloma daphnoides*, *Leptospermum myrtifolium*, *Bossiaea buxifolia* or *Kunzea ericoides*, and rarely *Gompholobium minus*, *Aotus ericoides*, *Banksia marginata*, *Daviesia mimosoides* or *Pultenaea subspicata*. A mid-dense ground layer includes a diverse suite of grasses, graminoids, forbs and ferns, commonly including *Goodenia hederacea*, *Hypericum gramineum*, *Microlaena stipoides, Gonocarpus tetragynus*, *Themeda triandra*, *Lomandra longifolia*, *Hydrocotyle laxiflora*,

*Poranthera microphylla*, *Pteridium esculentum* and *Stylidium graminifolium*, occasionally with *Aristida ramosa*, *Dianella revoluta*, *Lomandra filiformis*, *Senecio prenanthoides* or *Lomandra multiflora subsp. multiflora*. On well-drained flats derived from more fertile substrates this community may be replaced by PCT 3347.The PCT 3746 classification has been used because there is an annual precipitation of 950 mm, the vegetation is located on granitoid substrates at 667m above sea level, sharing the following species: *Eucalyptus pauciflora, Acacia parramattensis, Kunzea parvifolia, Cassinia aculeata, Cassinia sifton, Gonocarpus tetragynus, Oxalis perennans, Wahlenbergia stricta, Microlaena stipoides, Lomandra filiformis, Cheilanthes sieberi* and *Themeda triandra,*

The project area contains approximately 34.94 hectares of this PCT in varying conditions with 9.57 hectares occurring across the development footprint, consisting of 0.33 ha Woodland, 5.24 ha Grassland, 0.28 ha Planted Native Vegetation, 3.14 ha Shrublands and 0.58 ha highly disturbed.

**PCT 4063 Central and Southern Tableland River Oak Forest – Woodland**

A tall, dense to open grassy riparian open forest distributed widely across the Central Tablelands and Southern Tablelands on narrow bands of shallow sand/gravel/boulder alluvium on swift-flowing streams of gorges and hilly country on a variety of bedrocks. This community occurs at elevations of 400-800 metres asl with mean annual rainfall of 650-850 mm, from Gardens of Stone National Park and Turon west to Borenore and Barton and south to the Wollondilly River and Jerrara Creek, with outlying plots along the Murrumbidgee in the ACT. It is characterised by a frequently dense and tall canopy of *Casuarina cunninghamiana subsp. cunninghamiana*, and a sparse to patchy shrub layer that may include occasional *Bursaria spinosa*, *Melicytus dentatus* or *Acacia dealbata*. The predominantly grassy ground layer is almost always dominated by *Microlaena stipoides* and *Lomandra longifolia*, frequently with grasses *Poa labillardierei var. labillardierei*, *Echinopogon ovatus* and *Rytidosperma racemosum*, and the tussocky riparian sedge *Carex appressa*. Other ground layer species include ferns *Asplenium flabellifolium*, *Adiantum aethiopicum*, *Pellaea falcata* and *Pteridium esculentum*, and soft-leaved forbs *Dichondra repens*, *Urtica incisa*, *Acaena novae-zelandiae*, *Hydrocotyle laxiflora*, *Rumex brownii*, *Geranium solanderi* and *Senecio quadridentatus*. This community adjoins a wide variety of other vegetation types on adjacent footslopes, such as PCT 3228 in sheltered tributary valleys of the Wollondilly. In similar riparian habitats at lower altitudes to the east it may be replaced by PCT 4084, which shares many species however is distinguished by warm and moist rainforest elements. PCT 4063 was observed in a gully to the south of the existing substation. The characteristic canopy species present include *Allocasuarina littoralis*, *Acacia parramattensis* and *Acacia melanoxylon.* A small area (1.01 ha) of this PCT in a woodland condition was recorded within the Project Area, 0.02 ha occurs within the development footprint.

**Non-Native Vegetation**

A portion of the project area is mapped as containing non-native vegetation. A row of planted *Pinus sp.* has been identified on the southern side of Canyonleigh Rd. The project area contains approximately 0.72 ha with 0.34 ha located within the development footprint.

The field verified PCT mapping is shown in **Figure 3-1** in **Att A- Cayonleigh BESS - EPBC Act MNES Impact Assessment, Section 3.2, Page 25.**

Habitat connectivity within the project area is isolated to small patches of woodlands that provide connectivity to the larger vegetated areas surrounding the Subject Land. Connectivity features within the development footprint reflect small patches of woodlands and the overall habitat connectivity of the development footprint is considered to have moderate value. The project area will continue to provide connectivity across the Subject Land and surrounds post development. Larger patches of native vegetation within the larger locality occur to the east and north-east of the project area and are predominantly associated with elevated areas.

The overall land and soil capability of the development footprint is ranked between 4 and 5 (State of NSW and DPIE, 2025), meaning the land contains moderate to severe limitations. Class 4 and Class 5 lands include sloping lands (10-20% slope) and Class 5 land contains highly erodible soils and/ or significant

existing soil erosion. These lands are not generally suitable for cultivation (State of NSW and OEH, 2012). A search of the Australian Soil Classification (ASC) Soil Type Map (State of NSW and DCCEEW, 2025) reveals that the Sodosol soil type occurs across the entirety of the development footprint. Sodosols are categorised as soils which have a strong texture contrast soils between A and B horizons, with impermeable subsoils, and have very low agricultural potential due to the presence of sodium which can lead to high erodibility and poor structure (Isbell, R. F. and the National Committee on Soil and Terrain, 2021).

# 3.3 Heritage

### 3.3.1 Describe any Commonwealth Heritage Places Overseas or other places recognised as having heritage values that apply to the project area.

There are no identified Commonwealth Heritage Places or other places that have heritage values relevant to the Project Area.

### 3.3.2 Describe any Indigenous heritage values that apply to the project area.

An Aboriginal Cultural Heritage Assessment Report (ACHAR) has been prepared to assess the potential impacts the construction and operation of the Project may have on Aboriginal cultural heritage and to identify mitigation and risk management measures to avoid or minimise these impacts (**Att F - Canyonleigh BESS - Aboriginal Cultural Heritage Assessment Report**).

Prior to colonial settlement, the Marulan region was inhabited by the Gundungurra peoples. Aboriginal occupation and land use would have utilised a variety of topographic features with gently sloped and raised environments such as alluvial flats or crest landforms likely to be the focus of past activities.

The Project Area is located within the South Eastern Highlands Bioregion (IBRA 5.1). The bioregion is located inland from the coastal bioregions of the South East Corner and the Sydney Basic, and borders the Australian Alps and South Western Slopes bioregions to the south and west. It encompasses most of the ACT and extends into Victoria, and includes the towns of Orange, Bathurst, Lithgow, Goulburn, Queanbeyan, Yass, Cooma, Jindabyne and Bombala. The Lachlan, Macquarie, Murrumbidgee, Shoalhaven and Snowy Rivers flow across the bioregion. 2 km South of the project area lies the boundary of the Sydney Basin Bioregion.

The nature of the surrounding and local geology, along with the availability and distribution of stone materials, has a number of implications for Aboriginal land use and archaeological implications. The implications for past Aboriginal land use mainly relate to location of stone resources or raw materials, and their procurement for manufacturing and modification for stone tools. The Project Area is underlain by a series of geological features, part of the Lachlan fold belt including saprolite residual deposits (Q r), colluvial talus deposits (Q_ct), Pleasant Hill granite (Darp) and ungrouped Cenozoic sedimentary units (CZus). The saprolite deposits mostly developed in-situ from weathering and/or pedogenesis.

The Bungonia sub-bioregion is generally comprised of a distinct plateau bordering the Great escarpment dropping into the Shoalhaven River. The soils are mostly yellow texture contrast soils, some with harsh clay subsoils. Shallow structured organic loams on limestone and basalt, deep siliceous sands and clayey sands on Tertiary sediments are present (NPWS, 2003: 209).

The archaeological potential of an area is determined by its landform, surrounding environment, and level of historical disturbance. Certain landforms are conducive to both Aboriginal occupation and the survivability of subsurface deposits. The location of these landforms in proximity to natural resources (e.g. water, food) increases the likelihood that these landforms would have been used by Aboriginal people in the past.

The Project Area has been delineated into areas of low, moderate and high Aboriginal heritage sensitivity. The area of high sensitivity includes a pocket on the Eastern side of the Marulan Substation Buffer area located in remnant woodland away from the existing substation and the project area

An assessment of the Aboriginal cultural heritage significance of the Project Area has been completed in accordance with the requirements of the ACHAR Guide.

- The Project Area is considered to demonstrate low historic significance as there is no historic evidence in the ethnographic literature or within the Aboriginal community for specific use or memories within the Project Area.
- The vegetated areas largely maintain a connection to the pre-Contact landscape through the presence of a variety of native trees and plant species, however, these areas also contain significant amounts of regrowth and weeds, as well as the existing substation and transmission lines and as such have low to moderate aesthetic value.
- The Project Area demonstrates a moderate-high scientific significance due to the presence of an identified site, AHIMS # 52-4-0134.
- It is understood that all landscapes maintain some significance to the Gundungurra community as part of the wider cultural landscape. The presence of site AHIMS # 52-4-0134, and likelihood of subsurface remnants across part of the Project Area outside the Disturbance Footprint, means the

Project Area is considered to maintain a moderate-high level of social and cultural significance as part of this wider landscape.

The site survey did not uncover any new sites within the project area. Difficulties were encountered due to the prevalence of grasses and bushes, and the level of disturbance from livestock in the project area. The lack of modified trees may be accounted for due to past land clearing activities.

## 3.4 Hydrology

### 3.4.1 Describe the hydrology characteristics that apply to the project area and attach any hydrological investigations or surveys if applicable. *

The Project area boundary is located within the Hawkesbury-Nepean Catchment which covers an area of 21,400 km2. Over 70 percent of the catchment consists of mountainous terrain, with about 10 percent of flat terrain. The Development Footprint is located approximately 220 m east of the Wollondilly River. NSW hydrological mapping (State of NSW and DCCEEW, 2025) shows one unnamed ephemeral watercourse intersects part of the Development Footprint, within the northern section of the Project Area. Farm dams also occur throughout the broader Project Area, however, are absent within the Development Footprint. There are no Ramsar Wetlands or Important Wetlands, as listed in the Directory of Important Wetlands of Australia, located within the Project Area or within its locality. No aquatic, terrestrial or subterranean Groundwater Dependent Ecosystems were mapped withing the Project Area, and the probability of GDEs has not been identified.

A Flooding and Hydrology Assessment and a Water Impact Assessment will be conducted. These assessments will involve the following:

- Assessing the existing and post development flood behaviour
- Reviewing the CEMP to aim to minimise mitigation and management measures
- Assessing impacts on hydrology and groundwater
- Determining if a water access license is required under the Water Management Act 2000.

Noting all required licenses and approvals would be obtained prior to the commencement of construction activities.

# 4. Impacts and mitigation

# 4.1 Impact details

**Potential Matters of National Environmental Significance (MNES) relevant to your proposed action area.**

| EPBC Act section | Controlling provision | Impacted | Reviewed |
|---|---|---|---|
| S12 | World Heritage | No | Yes |
| S15B | National Heritage | No | Yes |
| S16 | Ramsar Wetland | No | Yes |
| S18 | Threatened Species and Ecological Communities | Yes | Yes |
| S20 | Migratory Species | No | Yes |
| S21 | Nuclear | No | Yes |
| S23 | Commonwealth Marine Area | No | Yes |
| S24B | Great Barrier Reef | No | Yes |
| S24D | Water resource in relation to large coal mining development or coal seam gas | No | Yes |
| S26 | Commonwealth Land | No | Yes |
| S27B | Commonwealth Heritage Places Overseas | No | Yes |
| S28 | Commonwealth or Commonwealth Agency | No | Yes |

## 4.1.1 World Heritage

You have identified your proposed action will likely directly and/or indirectly impact the following protected matters.

A direct impact is a direct consequence of an action taken – for example, clearing of habitat for a threatened species or permanent shading on an ecological community as the result of installing solar panels.

An indirect impact is an 'indirect consequence' such as a downstream impact or a facilitated third-party action.

—

### 4.1.1.1 Is the proposed action likely to have any direct and/or indirect impact on any of these protected matters? *

No

### 4.1.1.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact. *

No World Heritage Properties are mapped within or are adjacent to the Development Footprint.

## 4.1.2 National Heritage

You have identified your proposed action will likely directly and/or indirectly impact the following protected matters.

A direct impact is a direct consequence of an action taken – for example, clearing of habitat for a threatened species or permanent shading on an ecological community as the result of installing solar panels.

An indirect impact is an 'indirect consequence' such as a downstream impact or a facilitated third-party action.

—

### 4.1.2.1 Is the proposed action likely to have any direct and/or indirect impact on any of these protected matters? *

No

### 4.1.2.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact. *

No National Heritage Places are mapped within or are adjacent to the Development Footprint.

## 4.1.3 Ramsar Wetland

You have identified your proposed action will likely directly and/or indirectly impact the following protected matters.

A direct impact is a direct consequence of an action taken – for example, clearing of habitat for a threatened species or permanent shading on an ecological community as the result of installing solar panels.

An indirect impact is an 'indirect consequence' such as a downstream impact or a facilitated third-party action.

—

### 4.1.3.1 Is the proposed action likely to have any direct and/or indirect impact on any of these protected matters? *

No

### 4.1.3.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact. *

No Wetlands of Internation Importance (Ramsar Wetlands) are mapped within or are adjacent to the Development Footprint.

## 4.1.4 Threatened Species and Ecological Communities

You have identified your proposed action will likely directly and/or indirectly impact the following protected matters.

A direct impact is a direct consequence of an action taken – for example, clearing of habitat for a threatened species or permanent shading on an ecological community as the result of installing solar panels.

An indirect impact is an 'indirect consequence' such as a downstream impact or a facilitated third-party action.

### Threatened species

| Direct impact | Indirect impact | Species | Common name |
|---|---|---|---|
| No | No | Acacia bynoeana | Bynoe's Wattle, Tiny Wattle |
| No | No | Anthochaera phrygia | Regent Honeyeater |
| No | No | Aphelocephala leucopsis | Southern Whiteface |
| Yes | Yes | Aprasia parapulchella | Pink-tailed Worm-lizard, Pink-tailed Legless Lizard |
| No | No | Botaurus poiciloptilus | Australasian Bittern |
| No | No | Calidris acuminata | Sharp-tailed Sandpiper |
| No | No | Calidris ferruginea | Curlew Sandpiper |
| No | No | Callocephalon fimbriatum | Gang-gang Cockatoo |
| No | No | Calyptorhynchus lathami lathami | South-eastern Glossy Black-Cockatoo |
| No | No | Chalinolobus dwyeri | Large-eared Pied Bat, Large Pied Bat |
| No | No | Climacteris picumnus victoriae | Brown Treecreeper (south-eastern) |
| No | No | Commersonia prostrata | Dwarf Kerrawang |
| No | No | Dasyurus maculatus maculatus (SE mainland population) | Spot-tailed Quoll, Spotted-tail Quoll, Tiger Quoll (southeastern mainland population) |
| Yes | Yes | Delma impar | Striped Legless Lizard, Striped Snake-lizard |
| No | No | Dodonaea procumbens | Trailing Hop-bush |
| No | No | Eucalyptus aggregata | Black Gum |
| No | No | Falco hypoleucos | Grey Falcon |
| No | No | Gallinago hardwickii | Latham's Snipe, Japanese Snipe |
| No | No | Genoplesium baueri | Yellow Gnat-orchid, Bauer's Midge Orchid, Brittle Midge Orchid |
| No | No | Grantiella picta | Painted Honeyeater |

| Direct impact | Indirect impact | Species | Common name |
|---|---|---|---|
| No | No | Grevillea raybrownii | |
| No | No | Hibbertia acaulothrix | |
| No | No | Hirundapus caudacutus | White-throated Needletail |
| Yes | Yes | Keyacris scurra | Key's Matchstick Grasshopper |
| No | No | Kunzea cambagei | |
| No | No | Lathamus discolor | Swift Parrot |
| Yes | Yes | Leucochrysum albicans subsp. tricolor | Hoary Sunray, Grassland Paper-daisy |
| No | No | Macquaria australasica | Macquarie Perch |
| No | No | Melanodryas cucullata cucullata | South-eastern Hooded Robin, Hooded Robin (south-eastern) |
| No | No | Neophema chrysostoma | Blue-winged Parrot |
| No | No | Persoonia oxycoccoides | |
| No | No | Petauroides volans | Greater Glider (southern and central) |
| No | No | Petaurus australis australis | Yellow-bellied Glider (south-eastern) |
| No | No | Phascolarctos cinereus (combined populations of Qld, NSW and the ACT) | Koala (combined populations of Queensland, New South Wales and the Australian Capital Territory) |
| No | No | Polytelis swainsonii | Superb Parrot |
| No | No | Pomaderris brunnea | Rufous Pomaderris, Brown Pomaderris |
| No | No | Pomaderris cotoneaster | Cotoneaster Pomaderris |
| No | No | Pomaderris pallida | Pale Pomaderris |
| No | No | Pseudomys novaehollandiae | New Holland Mouse, Pookila |
| No | No | Pteropus poliocephalus | Grey-headed Flying-fox |
| No | No | Pycnoptilus floccosus | Pilotbird |
| No | No | Rhizanthella slateri | Eastern Underground Orchid |
| No | No | Rostratula australis | Australian Painted Snipe |
| Yes | Yes | Stagonopleura guttata | Diamond Firetail |

| Direct impact | Indirect impact | Species | Common name |
|---|---|---|---|
| No | No | Thelymitra kangaloonica | Kangaloon Sun Orchid |
| No | No | Thesium australe | Austral Toadflax, Toadflax |

### Ecological communities

| Direct impact | Indirect impact | Ecological community |
|---|---|---|
| No | No | Natural Temperate Grassland of the South Eastern Highlands |
| No | No | Southern Highlands Shale Forest and Woodland in the Sydney Basin Bioregion |
| No | No | Temperate Highland Peat Swamps on Sandstone |
| No | No | Upland Basalt Eucalypt Forests of the Sydney Basin Bioregion |
| No | No | White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland |

**4.1.4.1 Is the proposed action likely to have any direct and/or indirect impact on any of these protected matters? ***

Yes

**4.1.4.2 Briefly describe why your action has a direct and/or indirect impact on these protected matters. ***

MNES identified as potentially present within the development footprint have been subject to a risk assessment. **Att A - Canyonleigh BESS - MNES Impact Assessment, Section 5-2, Page 51,** identified the residual consequence of the Proposed Action warranted the following species to be subject to a significant impact assessment:

- Hoary Sunray *(Leucochrysum albicans subsp. tricolor)*- Endangered;
- Diamond Firetail *(Stagonopleura guttata)*- Vulnerable;
- Key's Matchstick Grasshopper (*Keyacris scurra*) – Endangered;
- Pink-tailed Legless Lizard *(Aprasia parapulchella)* - Vulnerable; and
- Striped Legless Lizard (*Delma impar)* - Vulnerable.

A Protected Matters Search was conducted on 16 September 2024 and is appended to **Att A - Canyonleigh BESS - MNES Impact Assessment.**

**Hoary Sunray**

Hoary Sunray occurs in grasslands, grassy areas in woodlands and dry open forests, and modified habitats, on a variety of soil types.

The species has been recorded within a 10km of the project area. There is the potential for this species to utilise dry open forest and grassland habitats associated with PCT 3746 Southern Tableland Snow Gum-Candlebark Shrub Forest, of which 8.71 ha occurs within the development footprint (State of NSW and DCCEEW, 2025a).

A significant impact assessment is presented in the **Table 5-3** in **Att A- Canyonleigh BESS - MNES Impact Assessment. Section 5.2.1.1, Page 52 - 54.**

**Diamond Firetail**

The species is often found in grassy eucalypt woodlands, including Box-Gum Woodlands and Snow Gum Woodlands. Also occurs in open forest, mallee, Natural Temperate Grassland, and in secondary grassland derived from other communities. Often found in riparian areas, and sometimes in lightly wooded farmland (Cth DCCEEW, 2023c).

The species has been recorded within 10km of the project area. As such, there is the potential for direct impacts to the Diamond Firetail to occur across 8.99 ha of habitat within the development footprint (State of NSW and DCCEEW, 2025a). Indirect impacts are associated with reduced connectivity and disruption of the breeding cycle. Although direct impacts will see a reduction of species' habitat, impacts to the overall available habitat across the project area are unlikely to cause significant degradation and fragmentation of habitat or this species.

There is no adopted or made recovery plan for the Diamond Firetail. The population is not identified as necessary for maintaining genetic diversity for the species nor as a key source population for breeding or dispersal. Further, the project is not situated at the limit of the species' range. As such, the potential individuals within the development footprint do not form part of an 'important population'.

A significant impact assessment is presented in **Table 5-4** in **Att A - Canyonleigh BESS - MNES Impact Assessment, Section 5.2.2.1, Page 56-57.**

**Key's Matchstick Grasshopper**

Key's Matchstick Grasshopper is a small, flightless grasshopper that is largely confined to relatively undisturbed grassland areas dominated by native grass species and forbs. It may be found in grassy woodlands also and is most likely to be found in areas with a high component of Kangaroo Grass *Themeda triandra* and *Asteraceae* species.

The lifecycle is annual, with only one generation per year. Eggs are laid in pods in the soil in late spring and early summer, hatching from January to March. This insect has limited dispersal abilities and is susceptible to habitat clearance and fragmentation.

Key's Matchstick Grasshopper records for the Goulburn Mulwaree Council area are recent and most records are for 2023 and 2024, with the closest located in Marulan approximately 11km from the project area. Targeted surveys were conducted in May 2025 throughout the development footprint and project area, 125 records were collected, 12 of which were within the development footprint and the other 113 records were in very close proximity (see **Figure 2-2** in **Att A - Canyonleigh BESS - MNES Impact Assessment, Section 2.3, Page 11** for more detail). At this stage it is not clear how abundant the grasshopper is locally, or the full extent of its range within the LGA.

Suitable habitat for Key's Matchstick Grasshopper is present within the grass and woodland patches of PCT 3746 (5.24 ha). A significant impact assessment is presented in **Table 5-5** in **Att A - Canyonleigh BESS - MNES Impact Assessment, Section 5.2.2.2, Page 58-60**.

**Pink-tailed Legless Lizard**

The Pink-tailed Legless Lizard occurs within NSW, VIC and the ACT. It has a wide, yet patchy distribution along the western slopes of the Great Dividing Range, across foothills between Bendigo (VIC) and Gunnedah (NSW). Within NSW, the species is known from the Central and Southern Tablelands and Southwestern Slopes, with population sites being highly fragmented and isolated.

Primary habitat for the Pink-tailed Legless Lizard includes grasslands, grassy woodlands and woodland communities, particularly those with rocky slopes, outcrops, or scattered buried rocks. The Pink tailed Legless Lizard utilises these rocky habitats for shelter and forage within ant burrows and soil. Native grasses within the ground layer are a key microhabitat attribute for the species, particularly *Themeda australis.*

Observations of the species activity are limited, due to their cryptic nature and majority of their time is spent underground, although, travelling above ground has been recorded. The Pink-tailed Legless Lizard is thought to use thigmothermy as a strategy for thermoregulation, where they will utilise heat from the underside of rocks. As such, ant burrows are used for their thermoregulation and potentially be a critical habitat feature for the species.

Suitable habitat for Pink-tailed Legless Lizard is present within the grass and woodland patches of PCT 3746 (5.57 ha). There is no adopted or made recovery plan for Pink-tailed Legless Lizard, however, approved Conservation Advice has been in effect since 2015. A significant impact assessment is presented in **Table 5-6** in **Att A - Canyonleigh BESS - MNES Impact Assessment, Section 5.2.2.1, Page 61-62.**

**Striped Legless Lizard**

The Striped Legless Lizard was once distributed throughout temperate lowland grasslands in the ACT, NSW, Victoria and South Australia. This distribution has largely reduced in size and as such the species has declined, likely remaining in isolated, small populations (Threatened Species Scientific Committee, 2016). The species is a grassland specialist, occurring in areas that have, or once had native grasslands or grassy woodlands, within its range. The Striped Legless Lizard will inhabit undisturbed sites with suitable grass ground cover, sometimes with a mix of native and exotic perennials and annual tussock species with suitable soil types. Grass species within these habitats can include *Stipa bigeniculata, Themeda triandra* and some introduced species including *Phalaris aquatica,* Nasella *trichotoma* and *Hypochaeris radicata.* Pasture lands that have been managed well with improved pastures can also support the species.

A comprehensive assessment of utilised habitat by the species within Victoria, found the following attributes:

- No recent fire history;
- Persisted in ungrazed and grazed areas;

- Soils predominantly basalt with high clay content;
- Sites characterised by presence of lightly embedded rocks (1-10% cover);
- Low to moderate physical disturbance;
- All sites were perennial native or introduced species grasslands ;
- Tussock grass structure varied from widely spaced open grassland to dense closes grasslands;
- Sites where species was most commonly recorded contained little bare ground with litter depth of 3 cm.

Suitable habitat for the Striped Legless Lizard is present within the grassland and woodland patches of PCT 3746 Southern Tableland Snow Gum-Candlebark Shrub Forest. PCT 3746 was interrogated through the NSW BioNet Vegetation Classification System (VIS) and identified that this species is not associated with this PCT within NSW. However, this species is associated with the adjacent native vegetation within the project area identified as PCT 3373 Goulburn Tableland Box-Gum Grassy Forest. Due to the adjoining PCT association and confirmation of suitable habitat characteristics, it is considered that the development will directly impact suitable habitat for this species, across 5.57 ha of PCT 3746 within the development footprint.

The species Conservation Advice lists 18 populations in private land or reserves that are classified as important to the species' genetic diversity and survival. The development is approximately 55 km from Windellama Road, near Goulburn NSW, where one of the important populations is located.

No recovery plan has been accepted or made for the Striped Legless Lizard, as threats and recovery actions for the species are well-understood and are largely being addressed via existing mechanisms (Threatened Species Scientific Committee, 2016).

A significant impact assessment is presented in **Table 5-7** in **Att A - Canyonleigh BESS - MNES Impact Assessment, Section 5.2.2.4, Pages 64-66.**

### 4.1.4.4 Do you consider this likely direct and/or indirect impact to be a Significant Impact? *

Yes

### 4.1.4.5 Describe why you consider this to be a Significant Impact. *

The desktop assessment and preliminary field surveys have considered a range of known, likely and potential biodiversity values. All four MNES addressed in **Section 4.1.4.2** of this referral were assessed as having the potential to be significantly impacted. Detail is provided below for each of the four MNES entities:

Hoary Sunray *(Leucochrysum albicans subsp. tricolor)*

Targeted surveys for the species were undertaken during survey events Oct/Nov 24 and Jan/Feb 25, no individuals or an extent of a population was observed. Despite this, there is a potential of fragmenting an existing population of Hoary Sunray *(*which was not identified during the survey*)* into two or more populations. In the event the species is identified to be present during any further surveys, there is potential that the Project will result in the fragmentation of a population, however, this will be avoided and/or minimised during the EIS phase, where required.

Diamond Firetail *(Stagonopleura guttata)*

Although Diamond Firetail was not identified during the surveys, there is potential that Project will adversely affect habitat, critical to the survival of the species. Potential habitat for the species includes:

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

The Project will result in the potential disturbance of grassy, shrubby and woody eucalypt areas associated with PCT 3746 constituting 8.99 ha of potential critical habitat for the species. Therefore, there is potential for the project to impact 8.99 ha of habitat critical to the survival of the species.

Key's Matchstick Grasshopper (*Keyacris scurra*)

The proposed activity involves the removal of up to 5.24 ha of suitable habitat. The Key's Matchstick Grasshopper is highly susceptible to disturbance. Part of the lifecycle is spent underground, but even the adult stage lacks mobility and the insects are unlikely to be able to readily escape the path of an excavator or other earthmoving equipment. The insect is known to have a low fecundity rate and the population is not likely to experience rapid recruitment even under favourable conditions. It is therefore likely that the proposed clearing of native vegetation may have an adverse effect on the life cycle of the species. Despite this, there is a large amount of alternative habitat and substantial records of the species outside of the development footprint.

Pink-tailed Legless Lizard *(Aprasia parapulchella)*

The rocky outcrops within the development footprint provide suitable habitat for *Aprasia parapulchella*, although no observations of the species were recorded. Therefore, there is potential that the project will adversely affect Pink-tailed Legless Lizard *(Aprasia parapulchella)* habitat*,* which is critical to the survival of the species. Key critical habitat for the species includes:

- Native grass dominated grasslands (particularly *Themeda* sp., woodlands and woodland communities.
- Rocky outcrops, scattered rocks and buried rocks on sloping sites, with loose rocky substrate
- Ant burrows and galleries present within rocky habitats

The Project will result in the potential disturbance of grassland and woodland areas associated with PCT 3746 constituting 5.57 ha of potential critical habitat for the species.

Striped Legless Lizard (*Delma impar)*

There are no records within 10km of the project area, however, the development footprint is within the species' mapped distribution. Striped Legless Lizard was not recorded during the expert survey and the habitat on site was deemed unsuitable. Despite this, there is potential, albeit slim, that the Project will adversely affect Striped Legless Lizard *(Delma impar)* habitat which is critical to the survival of the species due to the adjoining PCT association and confirmation of suitable habitat characteristics. Habitat critical to the survival of the Striped Legless Lizard should include more than one of the following characteristics:

- Provides breeding habitat.
- Provides foraging habitat
- Provides refuge from disturbance events
- Provides for long term protection from development
- Has connectivity value and contributes to the evolutionary potential of the species in the wild across its natural geographical range.

The project will result in the potential disturbance of grassland and woodland areas (particularly the areas of rocky habitat) associated with PCT 3746 constituting 5.57 hectares of potential critical habitat for the species. Therefore, there is potential for the project to impact 5.57 hectares of habitat critical to the survival of the species.

### 4.1.4.7 Do you think your proposed action is a controlled action? *

No

### 4.1.4.9 Please elaborate why you do not think your proposed action is a controlled action. *

**Att A - EPBC Act MNES Impact Assessment, Section 6, Page 67-68 ,** discusses the potential MNES. These impacts are limited in extent and are not expected to result in a significant impact to any MNES. As such, the Proposed Action is not expected to be a controlled action.

**Att A – EPBC Act MNES Impact Assessment Section 5, Page 49-66,** discusses the potential MNES. Impacts to MNES are limited in extent largely to areas of grassland and woodland associated with PCT 3746 Southern Tableland Snow Gum-Candlebark Shrub Forest and planted native vegetation. Impacts to MNES will occur within a small portion of the Subject Land, associated with the development footprint. The Subject Land will continue to provide functional habitat for MNES. As such, it is unlikely that the development will significantly affect MNES, although the potential is still possible. Therefore, the proposed action is not expected to be a controlled action

### 4.1.4.10 Please describe any avoidance or mitigation measures proposed for this action and attach any supporting documentation for these avoidance and mitigation measures. *

The design of the Proposed Action will require ongoing review during the Scoping Report and subsequent EIS process as a result of preliminary findings. The design process has and will continue to be subject to revision focusing on three main principles:

- Minimising and/or avoiding negative environmental and social impacts; and
- Incorporating feasible and reasonable mitigation/management measures, safeguards and provisions (e.g. for compliance monitoring) into the construction and operational aspects of the Proposed Action.

Potential impacts of the proposed activities will be managed in a manner consistent with the management approaches for battery energy storage
system activities, and, where relevant, additional measures will be implemented as described in **Att A - EPBC Act MNES Impact Assessment Section 5, Page 49-66** and in **Att B- Scoping Report.**

To effectively avoid and minimise impacts associated with the Proposed Action, the following management recommendations have been suggested for each identified impact:

- Reducing the loss of existing native vegetation:
    - Areas of remnant and regrowth vegetation have been avoided at the design and micro siting stages, particularly to avoid any losses in PCT 3373 and to minimise losses of woody vegetation in PCT 3746 where practicable;
    - Where unavoidable, the Project design has been preferentially aligned with areas where vegetation and habitat values are of lower vegetation integrity;
    - If vegetation clearing is required, a Vegetation Management Plan (VMP) will be implemented to ensure that clearing is undertaken in accordance with legislative standards and requirements; and
    - To assist in the preservation of the threatened ecological community identified in the Project area (associated with PCT 3373), it is recommended that a suitable buffer zone be maintained from the outer edge of an identified patch.
- Reducing the loss of habitat occupied/ utilised by a threatened species:
    - Areas of threatened flora and fauna habitat have been avoided at the design and micro siting stages, where practicable;
    - Landscape features, such as wildlife corridors, stepping stones of vegetation, waterways and rocky outcrops will be preserved or enhanced, where practicable; and
    - If loss of habitat features is required, actions will be taken to provide alternative habitat, such as constructed hollows.
- Manage weed and pest species:
    - A Pest Management Plan will be developed and implemented for the Project. This will include measures such as vehicle wash downs, weed certification and obligations to stick to access tracks throughout the development footprint;
    - Weed management and control methods will depend upon the location, weed species identified, the degree of the infestation, relevant landholder agreement or conduct and compensation agreements provisions, and local, state and national regulatory requirements;
    - Imported material able to transport weed seed will be assessed to ensure they are free of contamination, disease and invasive weeds; and
    - Weeds of National Significance (WoNS) and invasive species will be identified and monitored in the Development footprint. Appropriate weed monitoring will occur to ensure new weed species are identified, recorded and managed appropriately.
- Mortality or injury to native fauna:
    - No driving will occur in unauthorised areas, and in other areas will be carried out at safe speeds adopted suitable for the road conditions; and

- If vegetation clearing is required, injured, sick or dead fauna will be recorded and reported during construction. This can be carried out by a trained fauna spotter-catcher.

A Biodiversity Management Plan (BMP), incorporating a VMP and Pest Management Plan will be developed and implemented as part of the project. The BMP will be prepared to satisfy the NSW Minister of Planning and requirements identified in any consent. The BMP will be prepared as part of any post approvals documentation to be prepared in response to a proposed action consent and its conditions. The focus of the BMP will be to limit the:

- Influence of edge effects;
- Proliferation of weeds; and
- Management of feral / invasive fauna.

Mortality of fauna due to vehicle strike is possible yet unlikely as internal roads will be infrequently utilised and at safe speeds. However, the BMP will include fauna management protocols to be followed in the unlikely event of a vehicle strike.

#### 4.1.4.11 Please describe any proposed offsets and attach any supporting documentation relevant to these measures. *

The Biodiversity Assessment that will be prepared to accompany the EIS will provide a discussion of the management and protection of listed threatened species of native flora and fauna and assess biodiversity offsets consistent with the Biodiversity Offset Scheme.

### 4.1.5 Migratory Species

You have identified your proposed action will likely directly and/or indirectly impact the following protected matters.

A direct impact is a direct consequence of an action taken – for example, clearing of habitat for a threatened species or permanent shading on an ecological community as the result of installing solar panels.

An indirect impact is an 'indirect consequence' such as a downstream impact or a facilitated third-party action.

| Direct impact | Indirect impact | Species | Common name |
|---|---|---|---|
| No | No | Actitis hypoleucos | Common Sandpiper |
| No | No | Apus pacificus | Fork-tailed Swift |
| No | No | Calidris acuminata | Sharp-tailed Sandpiper |
| No | No | Calidris ferruginea | Curlew Sandpiper |
| No | No | Calidris melanotos | Pectoral Sandpiper |
| No | No | Gallinago hardwickii | Latham's Snipe, Japanese Snipe |
| No | No | Hirundapus caudacutus | White-throated Needletail |
| No | No | Motacilla flava | Yellow Wagtail |
| Yes | | Pandion haliaetus | Osprey |

### 4.1.5.1 Is the proposed action likely to have any direct and/or indirect impact on any of these protected matters? *

No

### 4.1.5.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact. *

The PMST search and likelihood of occurrence assessment indicated that Fork-tailed Swift (*Apus pacificus*) and White-throated Needletail (*Hirundapus caudacutus)* would potentially be present within the disturbance footprint. However, following a risk matrix assessment, the residual consequences of the Proposed Action on the species would be low. Therefore, no direct and/or indirect impacts are expected to either species or other migratory species identified in the PMST search.

## 4.1.6 Nuclear

#### 4.1.6.1 Is the proposed action likely to have any direct and/or indirect impact on this protected matter? *

No

#### 4.1.6.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact. *

There are no nuclear actions within the Project or within the 10 km project buffer.

### 4.1.7 Commonwealth Marine Area

You have identified your proposed action will likely directly and/or indirectly impact the following protected matters.

A direct impact is a direct consequence of an action taken – for example, clearing of habitat for a threatened species or permanent shading on an ecological community as the result of installing solar panels.

An indirect impact is an 'indirect consequence' such as a downstream impact or a facilitated third-party action.

—

#### 4.1.7.1 Is the proposed action likely to have any direct and/or indirect impact on any of these protected matters? *

No

#### 4.1.7.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact. *

There are no Commonwealth Marine Area within the buffer area.

### 4.1.8 Great Barrier Reef

#### 4.1.8.1 Is the proposed action likely to have any direct and/or indirect impact on this protected matter? *

No

#### 4.1.8.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact. *

The Great Barrier Reef is not located within the buffer area.

### 4.1.9 Water resource in relation to large coal mining development or coal seam gas

#### 4.1.9.1 Is the proposed action likely to have any direct and/or indirect impact on this protected matter? *

No

#### 4.1.9.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact. *

The proposed Project does not require consideration of water resources (the water trigger).

### 4.1.10 Commonwealth Land

You have identified your proposed action will likely directly and/or indirectly impact the following protected matters.

A direct impact is a direct consequence of an action taken – for example, clearing of habitat for a threatened species or permanent shading on an ecological community as the result of installing solar panels.

An indirect impact is an 'indirect consequence' such as a downstream impact or a facilitated third-party action.

—

#### 4.1.10.1 Is the proposed action likely to have any direct and/or indirect impact on any of these protected matters? *

No

#### 4.1.10.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact. *

There is no Commonwealth Land within the Project or within the impact area.

### 4.1.11 Commonwealth Heritage Places Overseas

You have identified your proposed action will likely directly and/or indirectly impact the following protected matters.

A direct impact is a direct consequence of an action taken – for example, clearing of habitat for a threatened species or permanent shading on an ecological community as the result of installing solar panels.

An indirect impact is an 'indirect consequence' such as a downstream impact or a facilitated third-party action.

—

#### 4.1.11.1 Is the proposed action likely to have any direct and/or indirect impact on any of these protected matters? *

No

#### 4.1.11.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact. *

There are no Commonwealth Heritage Places Overseas within the Project or within the impact area.

### 4.1.12 Commonwealth or Commonwealth Agency

**4.1.12.1 Is the proposed action to be taken by the Commonwealth or a Commonwealth Agency? ***

No

# 4.2 Impact summary

## Conclusion on the likelihood of significant impacts

You have indicated that the proposed action will likely have a significant impact on the following Matters of National Environmental Significance:

- Threatened Species and Ecological Communities (S18)

## Conclusion on the likelihood of unlikely significant impacts

You have indicated that the proposed action will unlikely have a significant impact on the following Matters of National Environmental Significance:

- World Heritage (S12)
- National Heritage (S15B)
- Ramsar Wetland (S16)
- Migratory Species (S20)
- Nuclear (S21)
- Commonwealth Marine Area (S23)
- Great Barrier Reef (S24B)
- Water resource in relation to large coal mining development or coal seam gas (S24D)
- Commonwealth Land (S26)
- Commonwealth Heritage Places Overseas (S27B)
- Commonwealth or Commonwealth Agency (S28)

# 4.3 Alternatives

**4.3.1 Do you have any possible alternatives for your proposed action to be considered as part of your referral? ***

No

**4.3.8 Describe why alternatives for your proposed action were not possible. ***

Alternatives to the development of the Project
have been considered as a part of this assessment. These include:

- 'Do nothing' (not undertaking the Project);
- Alternative site selection; and
- Alternative project, electricity generation.

**Do Nothing**

The site is currently used for agricultural land uses. The 'do nothing' scenario would lead to a slower transition to renewable energy and a missed opportunity to generate additional renewable energy to reduce Australia's dependency on fossil fuels for energy generations and the consequential emissions of GHGs. The Project could supply to 173,000 NSW households with energy annually.

In addition, the local area and wider region would not benefit from the Project outcomes including:

- The economic benefits to the local and regional community provided directly and indirectly by the employment associated with the Project; and
- A capital investment creating direct and indirect employment during construction and operations.

Failing to adequately transition to renewable energy sources will result in the continued use of fossil fuels, including coal (both black and brown) and natural gas. The reliance on these energy sources results in the release of GHG emissions such as CO2, which contributes to the harmful effects of climate change. The RET discussed in **Att - Canyonleigh BESS - Scoping Report, Section 2.1.1, Page 4** outlines the commitment by Australia and NSW in reducing greenhouse gas emissions and have set targets for increasing the generation of renewable energy.

Alternative Site Selection

The site has been selected for the installation of the BESS, due to its strategic advantages and favourable conditions, including, but not limited to, the following:

- Proximity to infrastructure - the site is located near the existing TransGrid Marulan Substation, ensuring efficient connectivity and minimising the need for extensive additional transmission infrastructure. The existing road network also facilitates easy access for construction and ongoing maintenance activities.
- Compatible Land Use - The surrounding area consists of a mix of farming, renewable energy infrastructure and transport uses, which are generally compatible with the operation of a BESS. Rural zones in the area support the co-existence of the BESS with ongoing operations, minimising any potential land use conflicts.
- Topography- the relatively flat topography of the site allows for the straightforward construction and efficient layout of the BESS and ancillary infrastructure, reducing the complexity and cost of installation.
- Low Environmental Impact - the Project area contains a limited amount of native vegetation, minimising the need for significant vegetation clearing and reducing the environmental impact of the Project.

Amenity considerations - The site is situated away from a large number of sensitive receptors, such as residential areas, thereby reducing the likelihood of adverse amenity impacts, such as noise or visual disturbance.

Alternative Project

The Applicant has considered energy generation as a Project alternative using wind or solar power generation. The Project's current form is preferred due to the small size of the parcel of land identified (98.11 ha). This area is not large enough to house a wind or solar development with the capacity to supply

electricity to the NEM. These developments would increase the potential for impacts to environmental sensitivities such as biodiversity, as energy generation projects typically require larger development footprints. The project is expected to occupy 10.18 ha of the 98.11 ha lot.

The design of the Project will require ongoing review during the EIS phase. These design revisions will be an iterative process, allowing for improvement in BESS siting based on information from environmental assessment, landowner feedback and inclusion into the Project (as involved landowners), and broader community consultation.

The design process will be focused around three main principles:

- Minimising and/or avoiding negative environmental and social impacts;
- Maximising energy storage; and
- Incorporating feasible and reasonable mitigation/management measures, safeguards and provisions (e.g. for compliance monitoring) into the construction and operational aspects of the Project.

The preliminary layout of the BESS was chosen to minimise potential environmental impacts that may occur. The preliminary layout, whilst indicative, has considered the preliminary constraints that have been mapped within the Site boundary. In addition, the design of the Project will be subject to further assessment and community feedback throughout the Project development.

# 5. Lodgement

## 5.1 Attachments

1.2.6 Commonwealth or state legislation, planning frameworks or policy documents that are relevant to the proposed action

| | Type | Name | Date | Sensitivity | Confidence |
|---|---|---|---|---|---|
| #1. | Document | Att A - Canyonleigh BESS - MNES Impact Assessment.pdf<br>EPBC Act MNES Impact Assessment | 01/07/2025 | Yes | High |
| #2. | Document | Att A - Canyonleigh BESS - MNES Impact Assessment_Public Display.pdf<br>Public display | 01/07/2025 | No | High |

1.2.7 Public consultation regarding the project area

| | Type | Name | Date | Sensitivity | Confidence |
|---|---|---|---|---|---|
| #1. | Document | Att B - Canyonleigh BESS - Scoping Report.pdf<br>Scoping report | 24/11/2024 | Yes | High |
| #2. | Document | Att B - Canyonleigh BESS - Scoping Report_Public Display.pdf<br>Public display | | No | High |

1.3.2.18 (Person proposing to take the action) If the person proposing to take the action is a corporation, provide details of the corporation’s environmental policy and planning framework

| | Type | Name | Date | Sensitivity | Confidence |
|---|---|---|---|---|---|
| #1. | Document | Att C - X-Elio Health, Safety, Environment and Security Policy for.pdf<br>Health , Safety, Environment and Security Policy | 16/11/2021 | No | High |

3.1.1 Current condition of the project area's environment

| | Type | Name | Date | Sensitivity | Confidence |
|---|---|---|---|---|---|
| #1. | Document | Att A - Canyonleigh BESS - MNES Impact Assessment.pdf<br>EPBC Act MNES Impact Assessment | 30/06/2025 | | High |
| #2. | Document | Att D - Canyonleigh BESS - Preliminary Biodiversity Report.pdf<br>Preliminary Biodiversity Report | 15/11/2024 | Yes | High |
| #3. | Document | Att D - Canyonleigh BESS - Preliminary Biodiversity Report_Public Displ.pdf<br>Public display | 24/11/2024 | No | High |
| #4. | Link | NSW SEED Portal.<br>https://www.seed.nsw.gov.au/ | | | High |

3.1.2 Existing or proposed uses for the project area

| Type | Name | Date | Sensitivity | Confidence |
|---|---|---|---|---|
| #1. Document | Att E - Canyonleigh BESS - Land Category Assessment Report.pdf<br>Land Category Assessment Report | 05/12/2024 | | High |

3.2.1 Flora and fauna within the affected area

| | Type | Name | Date | Sensitivity | Confidence |
|---|---|---|---|---|---|
| #1. | Document | Att A - Canyonleigh BESS - MNES Impact Assessment.pdf<br>EPBC Act MNES Impact Assessment | 30/06/2025 | | High |
| #2. | Document | Att D - Canyonleigh BESS - Preliminary Biodiversity Report.pdf<br>Preliminary Biodiversity Report | 12/11/2024 | Yes | High |
| #3. | Document | Att E - Canyonleigh BESS - Land Category Assessment Report.pdf<br>Land Category Assessment Report | 06/12/2024 | No | High |
| #4. | Document | Att G - Capital Ecology Aprasia parapulchella Expert Report.pdf<br>Capital Ecology Expert Report on Aprasia parapulchella | 24/06/2025 | Yes | High |

3.2.2 Vegetation within the project area

| | Type | Name | Date | Sensitivity | Confidence |
|---|---|---|---|---|---|
| #1. | Document | Att A - Canyonleigh BESS - MNES Impact Assessment.pdf<br>EPBC Act MNES Impact Assessment | 30/06/2025 | Yes | High |
| #2. | Link | eSPADE<br>https://espade.environment.nsw.gov.au/ | | | High |
| #3. | Link | SEED The Central Resource for Sharing and Enabling Environmental Data in NSW<br>https://www.seed.nsw.gov.au/ | | | High |
| #4. | Link | The Australian Soil Classification<br>https://ebooks.publish.csiro.au/content/australi.. | 01/03/2021 | | High |
| #5. | Link | The land and soil capability assessment scheme: Second Approximation<br>https://www.environment.nsw.gov.au/research-and-.. | | | High |

3.3.2 Indigenous heritage values that apply to the project area

| | Type | Name | Date | Sensitivity | Confidence |
|---|---|---|---|---|---|
| #1. | Document | Att F - Canyonleigh BESS - Aboriginal Cultural Heritage Assessment Report.pdf<br>ACHAR | 04/07/2025 | Yes | High |
| #2. | Document | Att F - Canyonleigh BESS - ACHAR Final_Public Display.pdf<br>Public display | 04/07/2025 | No | High |
| #3. | Link | The Bioregions of New South Wales<br>https://www.environment.nsw.gov.au/sites/default.. | | | High |

3.4.1 Hydrology characteristics that apply to the project area

| | Type | Name | Date | Sensitivity | Confidence |
|---|---|---|---|---|---|
| #1. | Link | SEED The Central Resource for Sharing and Enabling Environmental Data in NSW<br>https://www.seed.nsw.gov.au/ | | | High |

4.1.4.2 (Threatened Species and Ecological Communities) Why your action has a direct and/or indirect impact on the identified protected matters

| | Type | Name | Date | Sensitivity | Confidence |
|---|---|---|---|---|---|
| #1. | Document | Att A - Canyonleigh BESS - MNES Impact Assessment.pdf<br>EPBC Act MNES Impact Assessment | 30/06/2025 | Yes | High |
| #2. | Link | Conservation Advice for Stagonopleura guttata (diamond firetail)<br>https://www.environment.gov.au/biodiversity/thre.. | | | High |
| #3. | Link | NSW BioNet<br>https://www.environment.nsw.gov.au/topics/animal.. | | | High |
| #4. | Link | Species Profile and Threats Database<br>http://www.environment.gov.au/cgi-bin/sprat/publ.. | | | High |

4.1.4.9 (Threatened Species and Ecological Communities) Why you do not think your proposed action is a controlled action

| Type | Name | Date | Sensitivity | Confidence | |
|---|---|---|---|---|---|
| #1. | Document | Att A - Canyonleigh BESS - MNES Impact Assessment.pdf<br>EPBC Act MNES Impact Assessment | 30/06/2025 | Yes | High |

4.1.4.10 (Threatened Species and Ecological Communities) Avoidance or mitigation measures proposed for this action

| | Type | Name | Date | Sensitivity | Confidence |
|---|---|---|---|---|---|
| #1. | Document | Att A - Canyonleigh BESS - MNES Impact Assessment.pdf<br>EPBC Act MNES Impact Assessment | 30/06/2025 | Yes | High |
| #2. | Document | Att B - Canyonleigh BESS - Scoping Report.pdf<br>Scoping report | 23/11/2024 | Yes | High |

4.3.8 Why alternatives for your proposed action were not possible

| | Type | Name | Date | Sensitivity | Confidence |
|---|---|---|---|---|---|
| #1. | Document | Att B - Canyonleigh BESS - Scoping Report.pdf<br>Scoping report | 23/11/2024 | Yes | High |

## 5.2 Declarations

## Completed Referring party's declaration

The Referring party is the person preparing the information in this referral.

| | |
|---|---|
| ABN/ACN | 12002773248 |
| Organisation name | ENVIRONMENTAL RESOURCES MANAGEMENT AUSTRALIA PTY LIMITED |
| Organisation address | Level 14, 207 Kent Street, Sydney, Australia, NSW 2000 |
| Representative's name | Joe Clement |
| Representative's job title | Senior Ecologist |
| Phone | 0461364911 |
| Email | joe.clement@erm.com |
| Address | Level 14, 207 Kent Street, Sydney, Australia, NSW 2000 |

☑ Check this box to indicate you have read the referral form. *

☑ I would like to receive notifications and track the referral progress through the EPBC portal. *

☑ By checking this box, I, **Joe Clement of ENVIRONMENTAL RESOURCES MANAGEMENT AUSTRALIA PTY LIMITED**, declare that to the best of my knowledge the information I have given on, or attached to this EPBC Act Referral is complete, current and correct. I understand that giving false or misleading information is a serious offence. *

☑ I would like to receive notifications and track the referral progress through the EPBC portal. *

## Completed Person proposing to take the action's declaration

The Person proposing to take the action is the individual, business, government agency or trustee that will be responsible for the proposed action.

| | |
|---|---|
| ABN/ACN | 15678801315 |
| Organisation name | X-ELIO AUS2 PTY LTD |
| Organisation address | 3006 VIC |
| Representative's name | Matilde Tobon |

| | |
|---|---|
| Representative's job title | Project Developer |
| Phone | +61 458 949 956 |
| Email | matilde.tobon@x-elio.com |
| Address | Level 7, 67 Palmerston Cres, South Melbourne, VIC 3205 |

☑ Check this box to indicate you have read the referral form. *

☑ I would like to receive notifications and track the referral progress through the EPBC portal. *

☑ I, **Matilde Tobon of X-ELIO AUS2 PTY LTD**, declare that to the best of my knowledge the information I have given on, or attached to the EPBC Act Referral is complete, current and correct. I understand that giving false or misleading information is a serious offence. I declare that I am not taking the action on behalf or for the benefit of any other person or entity. *

☑ I would like to receive notifications and track the referral progress through the EPBC portal. *

## ✔ Completed Proposed designated proponent's declaration

The Proposed designated proponent is the individual or organisation proposed to be responsible for meeting the requirements of the EPBC Act during the assessment process, if the Minister decides that this project is a controlled action.

Same as Person proposing to take the action information.

☑ Check this box to indicate you have read the referral form. *

☑ I would like to receive notifications and track the referral progress through the EPBC portal. *

☑ I, **Matilde Tobon of X-ELIO AUS2 PTY LTD**, the Proposed designated proponent, consent to the designation of myself as the Proposed designated proponent for the purposes of the action described in this EPBC Act Referral. *

☐ I would like to receive notifications and track the referral progress through the EPBC portal. *