Talbingo Battery

Application Number: **02906** Commencement Date: **07/05/2025** Status: **Locked**

1. About the project

1.1 Project details

1.1.1 Project title *

Talbingo Battery

1.1.2 Project industry type *

Energy Generation and Supply (non-renewable)

1.1.3 Project industry sub-type

—

1.1.4 Estimated start date *

31/12/2028

1.1.4 Estimated end date *

31/12/2064

1.2 Proposed Action details

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

Project Introduction

ACE Power, through its subsidiary Talbingo Battery Pty Ltd ATF Talbingo Battery Trust is proposing to construct a 450 MW / 1,800 MWh / 4 hours grid connected Battery Energy Storage System (BESS) at 563-571 Miles Franklin Drive Talbingo, NSW within the Snowy Valley Local Government Area (LGA), approximately 5 km south of the town of Talbingo, which is in turn located 40 km from Tumut and 110 km from Tumbarumba (refer to Att 1 Regional Locality).

The Project Area is adjacent to the Lower Tumut 330 kV Switching Station, in proximity to the Tumut 3 Power Station, a pumped hydro facility part of the Snowy Scheme and the largest operating hydroelectric generator in Australia. The Talbingo BESS is planned to connect to the Lower Tumut Switching Station via overhead transmission lines; the connection type is subject to Transgrid requirements.

Access to the Project Area would be provided from Miles Franklin Drive which is located on the western side of the switching station. Miles Franklin Drive would be accessed from the Snowy Mountain Highway; this intersection will be upgraded as part of the Proposed Action and is located approximately 10k km north-east (refer to Att 2 Project Area).

Definition of the Project Area

For the purposes of this referal, the Project Area encompassing the BESS and its associated infrastructure is named **Project Area A** whereas the upgrade at the intersection of Miles Franklin Drive and Snowy Mountain Highway is referred to as **Project Area B.**

Involved Lots

The Street Address for Project Area A is 563-571 Miles Franklin Drive Talbingo, NSW 2720. The involved lots include Lot 100 DP1290552, Lot 2 DP1178709 and Lot 50 DP 1091285. Project Area B is a council managed road and therefore there has no assigned lot number.

The Applicant would lease Part of Lot 100 D1290552 from the host landholder for the operation of the proposed action.

Project Area, Disturbance Footprint and Avoidance Area

The sizes of the Project Area, Disturbance Footprint and Avoidance Area are listed below.

- Project Area - A + B = 30.10 ha
- Disturbance Footprint - this is the area that is directly or indirectly impacted by the ‘Proposed Action' = 21.86 ha
- Avoidance Area - refers to the collective space within the Project Area(s) that does not intersect with the Disturbance Footprint = 8.24ha
- The sum of the Disturbance Footprint and Avoidance Area equals the Project Area.
- The area calculations of the Project Area, Disturbance Footprint and Avoidance Area differ very marginally from the areas calculated by the EPBC Act Business Portal itself under Section 2. This discrepancy is due to the difference between GIS software and is experienced on all referrals submitted by the referrer.

Project Lifecycle

Planned activities associated with the proposed action are discussed below:

Pre-construction (site establishment), 4 months:

- Obtaining any necessary pre-construction approvals
- Clearing of the disturbance footprint
- Site preparation and services connection including temporary laydown areas, car parking and internal access tracks
- Installation of security fencing

Construction, 18 months

- During peak construction ~ 180 people (full time equivalent) people will be employed during construction. In addition to this manpower, there will be considerable employment opportunities for local people with the provision of services including civil works, transport, electrical and ancillary services as well as more localised opportunities for catering and provision of accommodation in supporting the project.
- Delivery of BESS components
- Construction of the on-site substation and O&M building
- Provision of services

Commissioning and Post Construction, 6 months

- Removal of all temporary structures, including offices, storage containers, and workshops.
- Clearance of remaining debris and construction materials.
- Grid connection and commissioning of plant
- Completion certificate

Operation, ~35 years

- The proposed action will have a capacity of 450 MW with 4 hours storage duration. The BESS will store excess energy during the day and will discharge that energy back into the network during evening peak demands.
- Due to the nature of its operation, the BESS will also assist with grid reliability and network frequency and voltage stabilisation.
- Vegetation management within the disturbance footprint in accordance with approved management plans.
- The battery cells have a design life of approximately 20 years and can be periodically replaced to maintain the batteries performance. Discarded cells will be disposed of in accordance with an approved Waste Management Plan.

Decommissioning

- The operational life of the Proposed Action is expected to be ~ 35 years.
- Over the long-term, consideration will be given to replacing plant to extend the life for a further 25–30 years or decommission depending on market and economic factors at the time.
- If the decision is made to decommission the BESS, decommissioning activities will include dismantling of the battery containers, the substations and removal of all associated materials and infrastructure.
- Decommissioning activities will be undertaken in accordance with an approved Decommissioning and Rehabilitation Management Plan.

Project Benefits

The Proposed Action would support grid stability, reliability and efficiency, important to the integration of greater renewable energy sources. It aims to minimise potential environmental impacts, through its design, construction, operation and decommissioning phases. As dictated by market demands and grid needs, the Proposed Action would:

- Provide new industries and opportunities to the broader region
- Facilitate energy shifting or level out the imbalances between supply and demand, especially during peak demand periods
- Improve voltage support and improved power quality
- Provide stored electricity, to supply the National Energy Market closer to main consumption areas
- Better integrate the contribution of renewables
- Reduce energy wastage (curtailment).

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? *

Key NSW Planning Policy and Framework

Planning Systems State Environmental Planning Policy 2021 ***Environmental Planning and Assessment Act 1979 (EP&A Act).:***

Clause 20 of Schedule 1 of the NSW State Environmental Planning Policy (SEPP) states that the following is considered a State Significant Development (SSD):

Development for the purpose of electricity generating works or heat or their co-generation (using any energy source, including gas, coal, biofuel, distillate, waste, hydro, wave, solar or wind power) that:

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

'Electricity generating works' as defined by the Principal Local Environment Plan 2006 include electricity storage.

The Proposed Action would have a capital investment cost estimate of more than $30 million and therefore, the Proposed Action is classified as SSD under division 4.7 of the EP&A Act. The Minister for Planning and Public Spaces is the consent authority for SSD. Applications are typically assessed by the Department of Planning, Housing and Infrastructure (DPHI) unless specific conditions occur whereby the Independent Planning Commission (IPC) would be the consent authority.

The provisions of the EP&A Act are regulated by the control authority through the application of the Environmental Planning and Assessment Regulation 2021.

Commonwealth Approval under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act):

The Proposed Action has the potential to impact upon matters of National Environmental Significance (MNES) including threatened species. The MNES Significant Impact Guidelines are utilised to help determine if the Proposed Action is likely to have a significant impact upon MNES.

Under Part 3 of the EPBC Act, approval from the Australian Government Minster for the Environment is required for:

- An action that is likely to have a significant impact on MNES.
- An action taken by a person on Commonwealth land that is likely to have significant impact on the environment.
- An action taken by any person outside of Commonwealth land that is likely to have significant impact of the environment on Commonwealth land.
- An action taken by a Commonwealth agency anywhere in the world that is likely to have a significant impact on the environment.

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. *

Community /Stakeholder Engagement

Scoping Phase

Engagement with the community and key stakeholders was initiated in Q4 2024 as part of the initial stages of a NSW SSD planning application, called a Scoping Report. The Scoping Phase involved a rigorous community and stakeholder engagement process gathering as much information from the community as possible. Information was gathered via face to face and on-line meetings, phone calls, letter mailouts, email, and an online survey.

EIS Phase

Community consultation for the EIS Phase recommenced in January 2025 with continued discussions with stakeholders including near neighbours, targeted stakeholders and the broader community. Other stakeholder engagement during this phase included:

- Community information drop-in sessions for neighbours, members of the broader community and identified stakeholders to learn more about the project, and provide their feedback.
- In person briefings / interviews
- Ongoing liaison via email, phone calls and meetings continued throughout the engagement period.

Engagement with Indigenous Stakeholders

Consultation with Aboriginal stakeholders was undertaken in accordance with Section 60 of the National Parks and Wildlife Amendment (Aboriginal Objects and Aboriginal Places) Regulation 2019 and following the process outlined in the Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010 (ACHCRP). The guide outlines a four-stage process of consultation as follows:

- Stage 1 – Notification of the project proposal and registration of interest
- Stage 2 – Presentation of information about the proposed project
- Stage 3 – Gathering information about cultural significance
- Stage 4 – Review of draft cultural heritage assessment report.

Stage 1

Letters outlining the proposed action and the need to carry out an Aboriginal Cultural Heritage Assessment (ACHA) were sent to statutory authorities including Heritage NSW, as identified under the ACHCRP in Q4 2024 (November). An advertisement was placed in the local newspaper, the Tumut and Adelong Times, on 29 November 2024 seeking registrations of interest from Aboriginal people and organisations (RAPS).

Stage 2

On 7 March 2025, an Assessment Methodology was sent to the registered RAPs. This document provided the necessary background, a summary of previous archaeological surveys, and the proposed heritage assessment methodology. The document invited comments regarding the proposed methodology and sought any information regarding known Aboriginal cultural significance values associated with the Project Area and/or any Aboriginal objects contained therein.

Stage 3

The *Assessment Methodology* outlined in Stage 2 included a written request to provide any information that may be relevant to the cultural heritage assessment of the Proposed Action. It was noted that sensitive information would be treated as confidential and not shared if requested. Cultural information pertaining to the area was received in response to the methodology and in instances that any such information was approved by the RAP for inclusion in the this report it was incorporated into the cultural context information of the ACHA. In any instances when information was asked to be kept confidential and not shared this

information has been held as confidential. The survey fieldwork was organised, and in line with the ACHCRP, the Proponent chose to invite Aboriginal community representatives from the registered Aboriginal groups. The survey fieldwork was carried out in May 2025.

Stage 4

The initial draft version of the ACHA for the proposed action will be forwarded to the RAPs inviting comment on the results, the significance assessment and the recommendations post completion of the testing program.

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	31124444622
Organisation name	NGH PTY LTD
Organisation address	2010 NSW

Referring party details

Name	Tammy Vesely
Job title	Senior Project Manager
Phone	0452 151 752
Email	tammy.v@nghconsulting.com.au
Address	T3, Level 7, 348 Edward St, Brisbane City, Qld 4000

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	681072391
Organisation name	Talbingo Battery PtyLtd
Organisation address	Suite 402, 39 East Esplanade, Manly, NSW, 2095

Person proposing to take the action details

Name	Daniel Ross
Job title	Development Manager
Phone	0422 381 339
Email	dross@acepower.com.au
Address	Suite 402, 39 East Esplanade, Manly, NSW, 2095

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? *

Yes

1.3.2.16 Describe the nature of the trust arrangement in relation to the proposed action. *

The Project is being developed by ACE Power under Talbingo Battery Pty Ltd as trustee for the Talbingo Battery Trust (Att 3 Trust Deed).

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 Person Proposing the Action has not been subject to any proceedings under Commonwealth, State, or Territory law concerning the protection of the environment or the conservation and sustainable use of natural resources. ACE Power continues to implement industry-leading environmental standards, including comprehensive environmental impact assessments, habitat rehabilitation measures, and strict compliance with environmental laws, ensuring minimal impact on local ecosystems and communities as made evident on it's other projects including but not limited to Nebo BESS, Ragland BESS, Yabulu BESS Tranmission Line and Burdekin BESS and Transmission Line.

Talbingo Battery Pty Ltd as trustee for the Talbingo Battery Trust has been set up as a special purpose vehicle for the development of the Project and therefore has no history to date.

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

Talbingo Battery Pty Ltd does not have a corporate environmental policy or framework, however all works will be undertaken to the highest environmental standards. This is reflected in the proactive approach by ACE Power takes with referring all of its projects under the EPBC Act, as well as the "avoidance" design principles which are followed at every site where the project has been designed in such a way as to avoid impacts on MNES as much as possible.

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	681072391
Organisation name	Talbingo Battery PtyLtd
Organisation address	Suite 402, 39 East Esplanade, Manly, NSW, 2095

Proposed designated proponent details

Name	Daniel Ross
Job title	Development Manager
Phone	0422 381 339
Email	dross@acepower.com.au
Address	Suite 402, 39 East Esplanade, Manly, NSW, 2095

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	31124444622
Organisation name	NGH PTY LTD
Organisation address	2010 NSW
Representative's name	Tammy Vesely
Representative's job title	Senior Project Manager
Phone	0452 151 752
Email	tammy.v@nghconsulting.com.au
Address	T3, Level 7, 348 Edward St, Brisbane City, Qld 4000

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	681072391
Organisation name	Talbingo Battery PtyLtd
Organisation address	Suite 402, 39 East Esplanade, Manly, NSW, 2095
Representative's name	Daniel Ross
Representative's job title	Development Manager
Phone	0422 381 339
Email	dross@acepower.com.au
Address	Suite 402, 39 East Esplanade, Manly, NSW, 2095

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

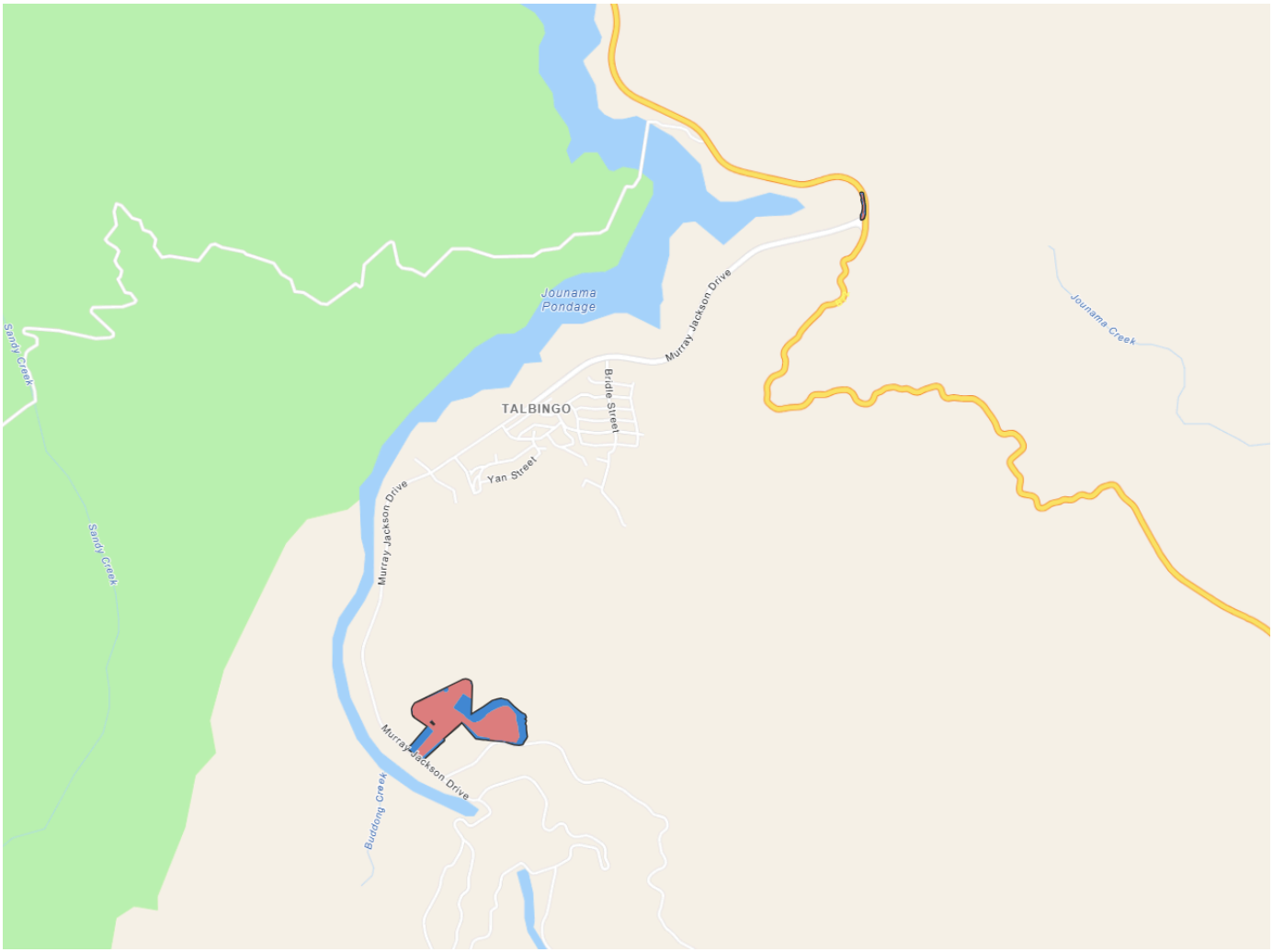
1.4 Payment details: Payment allocation

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: 30.11 Ha **Disturbance Footprint:** 22.11 Ha **Avoidance Area:** 8.00 Ha

2.2 Footprint details

2.2.1 What is the address of the proposed action? *

Project Area A - 563-571 Miles Franklin Drive Talbingo, NSW 2720; Project Area B - intersection

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? *

- The siting of the BESS will be on DP 1290552 which is freehold
- The proposed laydown area will be located on DP 1290552 and DP 1178709 both freehold
- The grid connection point will be located at DP 1091285 which is owned by Transgrid under freehold title
- The main site access point is off Mile Franklin Drive which is owned by Snowy Valley Council
- The intersection of Miles Franklin Drive and Snowy Mountain Highway is currently owned by Crown Lands. A request for the transfer of ownership to Snowy Valley Council has been placed and is awaiting approval. This status is current of mid-May 2025.

3. Existing environment

3.1 Physical description

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

Project Area A (i.e. the BESS and its associated infrastructure) is zoned Primary Production (RU1) under the Tumut Local Environmental Plan 2012 (Tumut LEP). The objectives of this zone are:

- *To encourage sustainable primary industry production by maintaining and enhancing the natural resource base*
- *To encourage diversity in primary industry enterprises and systems appropriate for the area*
- *To minimise the fragmentation and alienation of resource lands*
- *To minimise conflict between land uses within this zone and land uses within adjoining zones*
- *To protect, enhance and conserve the natural environment, including native vegetation, wetlands and wildlife habitat*
- *To ensure development prevents or mitigates land degradation*
- *To protect significant scenic landscapes*

Development of electricity generating works (which includes storage) are permitted with consent in land zoned RU1 under the Tumut LEP. Part 2.3 Division 4 of the State Environmental Planning Policy (Transport and Infrastructure) 2021 (TISEPP) provides that development for the purpose of electricity generating works may be carried out by any person with consent on any land in a prescribed non-residential zone. As such, the Proposed Action is permissible with consent under the provisions of the TISEPP and the Tumut LEP.

The selection of the Project Area to develop an energy facility supports the above objectives. It will:

- *Be highly compatible with the existing adjacent transmission line, dam infrastructure and hydroelectric generators*
- *Encourage employment opportunities during construction and operational phases*
- *Be located in proximity to the nearby transmission lines and nearby Lower Tumut 330kV Switching Station, so would not lead to fragmentation of agricultural land and assets*
- *Be located on pre-cleared land thus minimising clearing requirements.*

The Project Area is mixed use and includes farming land (predominately grazing for cattle), existing above-ground transmission lines and easements, the Tumut 3 hydroelectric power generator (1,800 MW) and associated dams, reservoirs and infrastructure including a storage and maintenance depot, the Lower Tumut 330 kV switching station and several roads and access tracks. The Proposed Action is therefore consistent with current land uses.

The broader Snowy Valley LGA has been impacted by bushfires and floods in recent years. There is a history of serious bushfires in the region, with instances occurring as recently as 2020. There are sections within the Project Area that are mapped as Category 1 bushfire prone land, with a mapped vegetation buffer zone surrounding the areas.

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

Broader Region

The Project Area is located entirely within the Snowy Valley LGA in the Riverina Murray region of NSW within the western foothills of the Snowy Mountains, bordered by the Kosciuszko National Park and Murray River. The region is predominantly rural, largely used for agriculture (i.e. cattle, timber, sheep, fruit) and power generation).

Tourism plays a significant role through both agritourism and adventure tourism including trail and mountain biking, hiking, winter sports and fishing (Department of Regional NSW, 2023). Examples of development in this area include (but are not limited to):

- The Hume & Hovell Track Mountain Bike Master Plan, covering a 70-kilometre section of the Hume and Hovell Track between Talbingo and Mannus Lake
- The Snowy Valleys Sculpture Trail

Project Area

Existing uses within the Project Area and adjacent to the Project Area include:

- Power generation and / distribution / transmission
    - The Project is immediately adjacent to the Transgrid Lower Tumut 330kV Switching Station
    - The Tumut 3 Power Station is located approximately 700m south of the Project Area
    - Existing above-ground transmission lines and easements (including a single 66 kV transmission line and several 330 kV transmission lines that connect to the Lower Tumut 330kV Switching Station)
- Grazing, predominately for cattle
- There are no current exploration and mining title lease across the Project Area.

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 consists of mostly cleared grassland which on flatter lower elevation areas is dominated by exotic species. Native groundcover dominates on the steeper slope in the eastern half of the site.

- One hollow bearing tree was confirmed inside the Disturbance Footprint which will not be removed as part of the Proposed Action.
- No large rocky outcrops were observed inside the Disturbance Footprint.
- Ground resources across the Project Area are few with no fallen timber or leaf litter.
- The Project Area ground is heavily grazed and compacted by cattle.
- The Disturbance Footprint contains a small farm dam which contains emergent Eleocharis reeds.
- The Tumut River is located within 200 m and may provide habitat for mobile water dependent species, such as microbats and birds.

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 topography within the Project Area varies from a minimum elevation of 395 m above sea level (ASL) and reaches a maximum elevation of 487 m ASL. The Disturbance Footprint is approximately 430 m ASL at its highest point.

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.

PMST Search

The EPBC Protected Matters Search Tool identified 59 threatened species with the potential to occur within the search area (i.e. noting the search area extends 10 km outside of the Project Area). The majority of those species have only marginal habitat present in the Project Area and a low likelihood of occurrence due to a lack of key habitat components, zero or few local records and the degraded nature of the Project Area itself (e.g. heavily grazed with compacted soil).

Four EPBC Act listed threatened species were considered to have the potential to utilise the Project Area or have a moderate / greater potential of occurring within the Project Area.

- Gang-gang Cockatoo *Callocephalon fimbriatum* (50 records between 1972-2024), Endangered under the EPBC Act
- White-throated Needletail *Hirundapus caudacutus* (one record 2016), Vulnerable under the EPBC Act
- Grey-headed Flying-fox *Pteropus poliocephalus* (one record in 2018; Tumut River Island camp ~40km north), Vulnerable under the EPBC Act
- Koala *Phascolarctos cinereus* (one record 1980), Endangered under the EPBC Act.

The EPBC Protected Matters Search Tool identified eight listed migratory species with the potential to occur within the search area (i.e. noting again the search area extends 10 km outside of the Project Area) . Of those species, two were considered to have a moderate or greater potential of occurring within the Project Area.

- White-throated Needletail (one record 2016), Vulnerable under the EPBC Act
- White-bellied Sea-eagle (10 records), not threatened under the EPBC Act and does not have a profile under the Species Profile and Threats Database. Mention of this species in this referral is done on a precautionary basis.

Survey Effort and Results

A combination of desktop assessments and field surveys were used to identify the flora and fauna within the Project Area (refer to Att 4 Survey Effort) with those results summarised below.

- Project Area A consists of mostly cleared grassland which, on flatter lower elevation areas is dominated by exotic species with native groundcover dominating on the steeper slope in the eastern half of the site. Groundcover species which were recorded include Couch *(Cynodon dactylon)*, Graceful Bent Grass *(Agrostis venusta)* and Creeping Bent *(Agrostis stolonifera)* and rush *(Juncus australis)*.
- There are some planted trees and shrubs located along the site entrance directly west of the Lower Tumut Switching Station and additional planted trees along Miles Franklin Drive.
- Across the entirety of Project Area A, ground resources were scant with no fallen timber or leaf litter and the ground is heavily compacted and grazed by cattle.
- The Disturbance Footprint within Project Area A contains a farm dam with emergent Eleocharis reeds.
- The Tumut River is located 200 m away from Project Area A and may provide habitat for mobile water dependent species, such as microbats and birds.
- Overall, Project Area A lacks understory species diversity which can be attributed to extensive historical clearing and prolonged grazing practices which have significantly altered the natural structure, species composition, and ecological function of the vegetation.

Two PCTs have been identified as detailed below:

- Project Area A has 21.04 ha of PCT 298 - *Apple Box - Nortons Box - Blakely's Red Gum valley flat moist grassy tall open forest* (refer to Att 5 Plant Community Types). PCT 298 is associated with the EPBC Act listed critically endangered ecological community White Box-Yellow Box-Blakely’s Red

Gum Grassy Woodland and Derived Native Grassland however the vegetation within the Project Area **does not** qualify as this threatened ecological community as explained below:
    - There are no indicator tree species present within Project Area A *(E.melliodora, E.albens, E.blakelyi*) or located nearby
    - The groundcover is of low species diversity including areas dominated by exotic species
- Across both Project Area A and B there is a lack of habitat features for threatened species.
- There are a few remnant and planted trees in Project Area.
    - The Disturbance Footprint is largely devoid of trees though there are some isolated shrubs within 50 m, observed to be tea trees (Leptospermum spp.).
    - Paddocks within the Project Area would provide habitat for rabbits and rodents when the groundcover is less grazed which in turn would provide some foraging opportunities for raptors.
    - Only one Hollow Bearing Tree with hollows was found, though the hollows are not suitable for Gang Gang cockatoo, or Barking Owl. This Hollow Bearing Tree will not be removed and forms part of the Avoidance Area.

Threatened and Migratory Species

- No Koalas (*Phascolarctos cinereus)*, nor evidence of Koala presence was observed during field surveys
- No Gang-gang Cockatoo (*Callocephalon fimbriatum)*, Little Eagle (*Hieraaetus morphnoides)* or White-bellied Sea-eagle (*Icthyophaga leucogaster)* were found to be present during field surveys.

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

Vegetation

Most of the Disturbance Footprint comprises highly degraded vegetation with a low percentage of native groundcover (i.e. ~36%). Vegetation shows evidence of compaction and grazing from cattle. More specifically, groundcover contained a combination of native and exotic perennial grasses and rushes such as Couch (*Cynodon dactylon*), Graceful Bent Grass (*Agrostis venusta*), Creeping Bent (*Agrostis stolonifera*) and rush (*Juncus australis*).

Soils

A search of the State eSPADE (NSW DPHI, 2024) soil mapping database identified that within the Snowy Mountains sub-region, namely around Talbingo, soils are comprised of shallow, well-drained Rudosols with moderately deep, moderately well-drained Red Chromosols. There are steeply sloping sections of the site, which influence land use and hazards (erosion, fire spread).

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.

No Commonwealth Heritage places overlay the Project Area.

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

A native title search was undertaken on 21 October 2024 which identified that there are no native title determination or active native title applications over the Project Area.

A search of relevant heritage registers for Aboriginal sites and places provides an indication of the presence of previously recorded sites. A search of the NSW State Heritage Inventory database was conducted on 05 November 2024 which indicated that there are four previously recorded Aboriginal Places listed under the NPW Act within the Snowy Valleys LGA. None of these sites are located within or adjacent to the Project Area, the closest being Hannibal Hamilton Grave, located approximately 32 km north-northwest.

An extensive search of the AHIMS database was conducted on 05 November 2024. There was a total of 83 Aboriginal sites and no declared Aboriginal Places recorded within the search area with no records located within or in close proximity to the Project Area.
The closest previously recorded sites on the AHIMS database to the Project Area is located over 1.8 km to the northwest. Stone artefacts are noted to be the most common site type recorded in the surrounding area.

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. *

There are three waterways mapped across the Project Area with two unnamed ephemeral streams (i.e. 1st and 2nd Strahler order) located on the western extent of Project Area A. There is also a 3rd order stream located on the eastern extent, adjacent to the secondary access point which is mapped as Key Fish Habitat. All three waterways mentioned above are upgradient of the Tumut River (i.e. >5th order stream) and likely drain into it under appropriate conditions. (refer to Att 6 Hydrology).

The section of Tumut River along Talbingo flows into the Jounama Pondage, which was created by the Jounama Dam, as part of the Snowy Mountains Scheme. As of 9 September 2024, the Jounama Pondage is at 85% total capacity, a 9% increase from the same time last year (BOM, 2024). The water quality of Jounama Pondage is generally considered good, making it ideal for recreational activities like swimming, fishing and boating. The Jounama Pondage is an important tourist destination, hosting the annual Jounama Fishing Classic event.

The Project Area is not mapped as being Flood Prone Land and National Groundwater Information System mapping indicates no groundwater on-site boreholes. The central portion of the Project Area is located on a mapped terrestrial groundwater dependent ecosystem. There are no mapped areas of acid sulphate soil presence or notable salinity.

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	Yes	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 Areas have been identified in the Project Area or within 10 km of the Project.

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.

Direct impact	Indirect impact	National heritage
No	No	Australian Alps National Parks and Reserves
No	No	Snowy Mountains Scheme

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. *

The Snowy Mountains Scheme is an item on the National Heritage List. While the Project Area is located within the boundaries of this item and will therefore result in a change to the immediate landscape of a small part of the listed item, it is noted there will no direct or indirect impacts to the values that the Snowy Mountains Scheme is listed for. It is further noted that the proposed action will complement the dialogue of the generation and storage of electricity in the Talbingo area as the project will connect directly to the Lower Tumut 330kV Switching Station.

The Australian Alps National Parks and Reserves is an item on the National Heritage List. The Project Area (Project Area A being the BESS and associated infrastructure) is located approximately 1 km from the boundary of the Australian Alps National Parks and Reserves site and there will be no impact (direct or indirect) on this site or the values for which it is listed for by the works for the proposed BESS site. While the road upgrade works at the intersection of the Snowy Mountains Highway and Miles Franklin Drive (Project Area B) is in close proximity to the boundary of the Alps National Parks and Reserves site (at its nearest point 10 m away) the existing Snowy Mountains Highway is located between the proposed road upgrade area and the site. This area has been highly disturbed by historic land disturbances and there will be no impact (direct or indirect) on the portion of the site which is in proximity to the proposed road upgrade works or the values for which this site is listed by these works.

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.

Direct impact	Indirect impact	Ramsar wetland
No	No	Banrock Station Wetland Complex
No	No	Hattah-Kulkyne Lakes
No	No	Riverland
No	No	The Coorong, and Lakes Alexandrina and Albert Wetland

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. *

The EPBC Protected Matters Report identified the following four Ramsar Wetlands of International Importance which are all located at a significant distance from the Project Area with no apparent hydrological connection.

- Banrock station wetland complex 700 – 800 km upstream/downstream
- Hattah-kulkyne lakes 500 – 600 km upstream/downstream
- Riverland 600 – 700 km upstream/downstream
- The Coorong, and Lakes Alexandria and Albert wetland 700 – 800 km upstream/downstream

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	Ammobium craspedioides	Yass Daisy
No	No	Amphibromus fluitans	River Swamp Wallaby-grass, Floating Swamp Wallaby-grass
No	No	Anthochaera phrygia	Regent Honeyeater
No	No	Aphelocephala leucopsis	Southern Whiteface
No	No	Aprasia parapulchella	Pink-tailed Worm-lizard, Pink-tailed Legless Lizard
No	No	Caladenia concolor	Crimson Spider-orchid, Maroon Spider-orchid
No	No	Calidris acuminata	Sharp-tailed Sandpiper
No	No	Calidris ferruginea	Curlew Sandpiper
No	No	Callocephalon fimbriatum	Gang-gang Cockatoo
No	No	Climacteris picumnus victoriae	Brown Treecreeper (south-eastern)
No	No	Crinia sloanei	Sloane's Froglet
No	No	Dasyurus maculatus maculatus (SE mainland population)	Spot-tailed Quoll, Spotted-tail Quoll, Tiger Quoll (southeastern mainland population)
No	No	Euastacus armatus	Murray Crayfish
No	No	Euastacus rieki	Riek's Crayfish
No	No	Gallinago hardwickii	Latham's Snipe, Japanese Snipe
No	No	Grantiella picta	Painted Honeyeater
No	No	Hirundapus caudacutus	White-throated Needletail
No	No	Lathamus discolor	Swift Parrot
No	No	Litoria booroolongensis	Booroolong Frog

Direct impact	Indirect impact	Species	Common name
No	No	Litoria raniformis	Southern Bell Frog,, Growling Grass Frog, Green and Golden Frog, Warty Swamp Frog, Golden Bell Frog
No	No	Maccullochella macquariensis	Trout Cod
No	No	Maccullochella peelii	Murray Cod
No	No	Macquaria australasica	Macquarie Perch
No	No	Mastacomys fuscus mordicus	Broad-toothed Rat (mainland), Tooarrana
No	No	Melanodryas cucullata cucullata	South-eastern Hooded Robin, Hooded Robin (south-eastern)
No	No	Neophema chrysostoma	Blue-winged Parrot
No	No	Nyctophilus corbeni	Corben's Long-eared Bat, South-eastern Long-eared Bat
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	Pimelea bracteata	
No	No	Polytelis swainsonii	Superb Parrot
No	No	Pomaderris cotoneaster	Cotoneaster Pomaderris
No	No	Prasophyllum bagoense	Bago Leek-orchid
No	No	Prasophyllum petilum	Tarengo Leek Orchid
No	No	Pseudomys fumeus	Smoky Mouse, Konoom
No	No	Pteropus poliocephalus	Grey-headed Flying-fox
No	No	Pterostylis oreophila	Blue-tongued Orchid, Kiandra Greenhood
No	No	Pycnoptilus floccosus	Pilotbird
No	No	Rostratula australis	Australian Painted Snipe
No	No	Stagonopleura guttata	Diamond Firetail

Direct impact	Indirect impact	Species	Common name
No	No	Swainsona recta	Small Purple-pea, Mountain Swainson-pea, Small Purple Pea
No	No	Synemon plana	Golden Sun Moth
No	No	Thesium australe	Austral Toadflax, Toadflax

Ecological communities

Direct impact	Indirect impact	Ecological community
No	No	Grey Box (Eucalyptus microcarpa) Grassy Woodlands and Derived Native Grasslands of South-eastern Australia
No	No	Natural Temperate Grassland of the South Eastern Highlands
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. *

Threatened Ecological Communities (TEC)

Only one community was identified within the Project Area (namely PCT 298 *Apple Box – Norton's Box – Blakely's Red Gum valley flat moist grassy tall open forest in the south NSW south-western Slopes Bioregion and adjoining South-Eastern Highlands Bioregion* which is associated with White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland. An area of 21.04 ha of PCT 298 exists within Project Area A (being the primary Project Area with the BESS and associated infrastructure). However, the vegetation **does not** qualify as this TEC because of the reasons listed below:

- There are no indicator tree species present within Project Area A *(E.melliodora, E.albens, E.blakelyi*) or located nearby
- The groundcover is of low species diversity including areas dominated by exotic species

In conclusion, there are no EPBC Listed TECs present in the Project Area that would be impacted directly or indirectly by the proposed action.

Threatened Species

Four EPBC Act listed species were considered to have a greater potential to occur / utilise the Project Area.

- Endangered Gang-gang Cockatoo *Callocephalon fimbriatum* (50 records between 1972-2024)
- Vulnerable White-throated Needletail *Hirundapus caudacutus* (one record 2016)
- Vulnerable Grey-headed Flying-fox *Pteropus poliocephalus* (one record in 2018; Tumut River Island camp ~40km north)
- Endangered Koala *Phascolarctos cinereus* (one record 1980). Of the species with the potential to occur, two have potential for impact from the proposed action:

Of these species only one has the potential to be impacted by the Proposed Action, being the Grey-headed Flying-fox which could be impacted through entanglement in powerlines. Habitat suitable for Grey Headed located outside of the Project Area is shown in Att 7 and 8).

- Koala is not considered likely to be impacted as survey efforts (i.e. spotlighting and Spot Assessment Techniques) found no koala or presence of koala.
- Surveys also found no presence of Gang-gang Cockatoo or White-throated Needletail.
- Vegetation surveys confirmed a lack of habitat features for Gang-gang Cockatoo. Only one Hollow Bearing Tree was located during survey efforts and even though this specimen will not be removed, the hollows found were considered unsuitable for use by Gang-gang Cockatoo.

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

No

4.1.4.6 Describe why you do not consider this to be a Significant Impact. *

Of the Threatened species with the potential to occur, one has the potential for impact from the proposed action:

- Grey-headed Flying-fox through entanglement in powerlines.

An Assessment Significance has been undertaken for Greg-Headed Flying Fox which concludes the proposed action is **unlikely** to have significant impact upon the species.

Key source population

The local population at Talbingo occurs in an area with a low foraging habitat score for Grey-headed Flying-fox (Eby, Sims, & Bracks, 2019). Red Stringybark *(Eucalyptus macrorhyncha),* Mugga Ironbark *(E.sideroxylon)* and Ribbon Gum *(E.viminalis)* were recorded on site while Apple Box *(E. bridgesiana)*, Blakely's Red Gum (E. *blakelyi*) and Yellow Box (*E.melliodora)* were recorded nearby. Of these six species, two are listed in the blossom diet of Grey-headed Flying-fox: Mugga Ironbark and Yellow Box (Eby, Sims, & Bracks, 2019). Neither are considered significant food plants for the species (Eby & Law, 2008).

The nearest known flying-fox camp to the Project Area in Talbingo is at Tumut River Island approximately 40 km north. This places the Project Area at the limit of daily foraging distance from the camp as the average distance is 11 km (DAWE, 2021). The Tumut camp is not classed as nationally important and therefore unlikely to be a key source population.

Based on records of Grey-headed Flying-fox on Atlas of Living Australia, the Project Area is not at the limit of the species' range, there are records as far west as Wagga and Griffith (ALA, 2025). However, the range of the Grey-headed Flying-fox does not extend into the alpine region of south-eastern Australia. It could be considered that at Talbingo, the occurrence of Grey-headed Flying-foxes is a vagrant than a regular occurrence.

Based on the above information the group of Grey-headed Flying-foxes that occur in Talbingo are not considered to be part of an important population.

Would the action lead to a long-term decrease in the size of an important population?

Not applicable.

Would the action reduce the area of occupancy of an important population?

Not applicable.

Would the action fragment an existing important population into two or more species?

Not applicable.

Would the action adversely affect habitat critical to the survival of a species?

The National Recovery plan outlines four criteria to determine whether vegetation provides habitat critical to the survival of Grey-headed Flying-fox. Overall, the Project Area would not be considered critical habitat, but the individual trees present in the Project Area may provide foraging habitat during a period when resources are not reliable (DAWE, 2021).

- Listed important blossom species - Mugga Ironbark is listed in the National Recovery Plan as important and occurs along the roadside at the south-eastern border of the Project Area
- Native species known to be produced as foraging habitat between August and May - Other species within the Project Area include Red Stringybark, Apple Box and Ribbon Gum, which all flower in between January and May, falling into the latter period specified.
- Contain native species used for foraging and occur within 20 km of a nationally important camp - Tumut River camp is 40 km away and is listed as not nationally important.
- Contain native and/or exotic species used for roosting at the site of a nationally important Grey-Headed Flying-Fox - The Project Area is not at a nationally important camp.

Would the action disrupt the breeding cycle of an important population?

Not applicable.

Would the action modify, destroy, remove or isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline?

The habitat in the Project Area is substantially modified and degraded, consisting mostly of exotic dominant pasture grazed by cattle and sheep. The patches of Grey-headed Flying-fox habitat are degraded and isolated. The effect of the action is likely to have a negligible impact on the species given it is likely vagrant to the area and the habitat is of poor quality.

Would the action result in invasive species that are harmful to a vulnerable species becoming established in the habitat?

The proposed action would not introduce invasive species to the area nor exacerbate the occurrence of those already established (such as deer, rabbit). There are no invasive species documented as harmful to Grey-headed Flying-fox in the National Recovery Plan, Commonwealth Conservation Advice or the NSW threatened species determination.

Would the action introduce a disease that may cause the species to decline?

The habitat in the Project Ares is substantially modified and degraded, consisting mostly of exotic dominant pasture grazed by cattle and sheep. The patches of Grey-headed Flying-fox habitat are degraded and isolated. The effect of the action is likely to have a negligible impact on the species given it is likely vagrant to the area and the habitat is of poor quality.

Would the action interfere substantially with the recovery of the species?

The potential impact upon Grey-headed Flying-fox that has been identified from the proposed action would be due to possible electrocution or entanglement on powerlines. The level of threat to the population from this hazard generally is unknown (DAWE, 2021). As around 90% of bird and bat electrocutions in Australia occur on distribution lines rather than transmission lines (McGoldrick, 2022), collision is seen to be the key operational threat for the species above. Regarding the transmission line components, it is the earthwire that is the highest risk for collision, as it is the highest and thinnest wire. The conductors are thick and considered visible to birds and bats. The design configuration of the transmission towers and lines will have a direct effect on the incidence of bat collisions.

Available research shows a strong correlation between the threat to birds of powerlines and proimxity to bird habitat or main movement corridors. This correlation is like to hold true for bats particularly flying-foxes. The transmission line would be located along a major gully which although not vegetated may provide an orographic movement corridor (i.e. most energetically efficient pathway through the undulating landscape). Flying-foxes have dichromatic vision (see fewer colours) and fewer colour-detecting cones in their eyes than people, thus see colours less intensively. Instead, flying-foxes have well-developed night vision and navigate using contrast (SCC 2023). For both birds and bats, high contrast markers are likely to be most effective over the greatest range of light levels and background (sunny/cloud/trees) (Martin 2022, RPS 2021). NGH recently undertook a literature review to determine the effectiveness of different line markers and identified three bird/bat effective trademarked products:

BirdMark AfterglowTM

ROTAMARKATM

FireFlyTM

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. *

The proposed action is not considered by the referrer or the person proposing the action to be a controlled action as there will be no significant impacts to any MNES.

Threatened Ecological Communities

No EPBC Act listed Threatened Ecological Communities were found within the Project Area which could be impacted either directly or indirectly.

Threatened Species

Grey Headed Flying Fox is the only Threatened EPBC Act listed species with the potential to be impacted by the proposed action and an Assessment Significance has been undertaken which concludes the proposed action is **unlikely** to have significant impact upon the species.

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. *

There are no anticipated significant impacts to EPBC Listed Threatened Ecological Communities or Threatened Species and therefore no targeted mitigation measures proposed as part of this EPBC Referral. However, mitigation measures will be employed as per the recommendations of the Biodiversity Development Assessment Report and the Biodiversity Management Plan which will be required under the Approval's Conditions of Consent.

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

No EPBC Listed Threatened Ecological Community or Threatened Species have been identified as having the potential to be significantly impacted by the proposed action. As such, the proposal is not considered to require referral or offsets in accordance with the EPBC Offsets Policy.

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

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

Yes

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

The EPBC Protected Matters Report identified eight listed migratory species with the potential to occur within the search area. The majority of those species considered have only marginal habitat present in the Project Area and a low likelihood of occurrence due to lack of key habitat components (e.g. hollow bearing trees, ground debris), zero or few local records and the degraded nature of the Project Area (e.g. heavily grazed with compacted soil). Of those eight, two species were considered to have a moderate or greater potential to occur within the Project Area.

- White-throated Needletail (one record 2016)
- White-bellied Sea-eagle (10 records),

White-throated Needletail may forage in the Project Area from time to time however roosting habitat is not present. Therefore, of the migratory species with potential to occur, only White-bellied Sea-eagle has the potential for impact due to reduced foraging habitat and entanglement in powerlines.

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

No

4.1.5.6 Describe why you do not consider this to be a Significant Impact. *

Stick nest surveys were conducted for White-bellied Sea-eagle and no large stick nests were located although foraging habitat occurs along the nearby Tumut River corridor and adjacent bushlands (refer to Att 9 and 10). An Assessment of Significance has been undertaken and concludes that the proposed action is not expected to significantly impact White-bellied Sea-eagle as the Project Area and foraging habitat associated with the nearby Tumut River is not considered important habitat nor does it host an ecologically significant proportion of the population.

Important habitat criteria

Important habitat criteria include the following:

- Habitat utilised by a migratory species occasionally or periodically within a region that supports an ecologically significant proportion of the species' population
- Habitat of critical importance at a particular life-cycle stage
- Habitat at the limit of the species' range
- Habitat within an area where the species is declining.

Records for White-bellied Sea-eagle were accessed via the Atlas of Living Australia spatial portal. Records for this species are clustered along the Australia coastline and extend inland in the south-east of the continent. Away from the coast in southern NSW, White-bellied Sea-eagle records occur mostly along major river corridors such as the Murray and Murrumbidgee Rivers, minor rivers such as Tumut River and Eucumbene River and lakes and dams including Lake Jindabyne, Lake Eucumbene and Blowering Reservoir in Talbingo. From a national perspective, records around Blowering Reservoir and lower Tumut River are fairly sparse compared to more significant watercourses in southern NSW such as Murray River and Gippsland Lakes. The *New Atlas of Australian Birds* marks the occurrence of White-bellied Sea-eagle in the Tumut-Talbingo region as 'incidental' (Barrett, Silcocks, Barry, Cunningham, & Poulter, 2003). Based on this information, the Tumut River and surrounds does not provide habitat for an ecologically significant proportion of the species' population.

There are 10 BioNet records of White-bellied Sea-eagle within 10 km of the Project Area between 1968 and 2023. Atlas of Living Australia shows around 40 records along the eastern shore of Blowering Reservoir and connected Talbingo Reservoir over a similar time period spanning all months of the year although records during the breeding period (June to September) are sparse. This indicates that White-bellied Sea-eagle are resident year-round although may be less visible during breeding periods. While the reservoirs themselves provide habitat critical for foraging and the fringing forest habitat critical for breeding, none of this habitat occurs in the Project Area. Therefore, habitat of critical importance at a particular life-cycle does not occur in the Project Area.

The Project Area is not at the limit of White-bellied Sea-eagle range. While White-bellied Sea-eagle is in decline in NSW (where it is listed as Vulnerable), the Tumut River is not within an area where the species is in decline (as discussed, was considered 'incidental' occurrence in that locality in 2003). In summary, the habitat in the Project Area does not qualify as important habitat.

Would the action substantially modify (including by fragmenting, altering fire regimes, altering nutrient cycles or altering hydrological cycles), destroy or isolate an area of important habitat for a migratory species?

Not applicable - the habitat in the Project Area is not important habitat.

Would the action result in an invasive species that is harmful to the migratory species becoming established in an area of important habitat?

Not applicable - the habitat in the Project Area is not important habitat. But it is worth noting that management to control invasive species such as foxes are acknowledged as a threat to White-bellied Sea-eagle due to non-target poisoning. If a BMP for this project involves fox or wild dog poisoning, ejectors rather than poisoned baits should be used to minimise non-target poisoning.

Would the action seriously disrupt the lifecycle (breeding, feeding, migration or resting) of an ecologically significant proportion of the population?

Not applicable – the Tumut River area does not host an ecologically significant proportion of the White-bellied Sea-eagle population.

In summary, the proposed action is not expected to significantly impact White-bellied Sea-eagle as the Project Area is not considered important habitat and does not host an ecologically significant proportion of the population.

4.1.5.7 Do you think your proposed action is a controlled action? *

No

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

The proposed action is not considered by the referrer or the person proposing the action to be a controlled action as there will be no significant impacts to any MNES.

White-bellied Sea-eagle is the only EPBC Act listed migratory species with the potential to be impacted by the proposed action and an Assessment Significance has been undertaken on a precautionary basis which concludes the proposed action is **unlikely** to have significant impact upon the species.

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

There are no anticipated significant impacts to EPBC Listed Migratory Species and therefore no targeted mitigation measures proposed as part of this EPBC Referral. However, mitigation measures will be employed as per the recommendations of the Biodiversity Development Assessment Report and the Biodiversity Management Plan which will be required under the Approval's Conditions of Consent.

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

No EPBC Listed Migratory Species has been identified as having the potential to be significantly impacted by the proposed action. As such, the proposal is not considered to require referral or offsets in accordance with the EPBC Offsets Policy.

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. *

The controlling provision is not present in the Project Area.

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. *

The controlling provision is not present in the Project 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 controlling provision is not present in the Project 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 controlling provision is not present in the Project Area.

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. *

The controlling provision is not present in the Project 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. *

The controlling provision is not present in the Project 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:

None

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)
- Threatened Species and Ecological Communities (S18)
- 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. *

Alternative site locations and alternative renewable energy generating technologies were considered as part of the site identification process, including other potential sites in NSW, other potential locations within the Tumut region and several different project layouts. ACE Power has developed a site selection model to locate potential battery sites, across the National Electricity Market (in QLD, NSW, VIC, SA and TAS). The analysis factored in a broad range of input parameters, including;

- Land zoning
- Proximity to dwellings
- Natural hazards
- Environmental and social factors
- Electrical network considerations, such as line capacities and loss factors for generation and loads.

The proposed Project Area was selected as an location following a review of over 100 candidate locations.

The Project Area has been selected with the goal of balancing the social, environmental and economic aspects associated with the development of a BESS. The Project Area is considered suitable for the following reasons:

- The Project Area is not located on land identified as BSAL (Biophysical Strategic Agricultural Land) which is land with high quality soil and water resources capable of sustaining high levels of productivity. BSAL plays a critical role sustaining the State's agricultural industry
- The Disturbance Footprint is a relatively small and would not significantly impact on the surrounding agricultural enterprises due both size and location (i.e. adjacent to the Lower Tumut 330kV Switching Station).
- The Project Area has been surveyed and and confirmed has having low ecological value, having been used excessively for grazing and other agricultural purposes. While there are small, isolated patches of vegetation within the Project Area, the Disturbance Footprint is devoid of trees and is dominated by extremely low-quality exotic pastures.
- The Project Area is located sufficiently close to a grid connection with sufficient levels of available capacity that has planned upgrades to support additional capacity subject to future upgrades (i.e. Energyconnect and Humelink Infrastructure Projects)
- The Planning Context is suitable for the development of a BESS being consistent with existing land uses and minimal sensitive receivers within 2 km of the Project Area (i.e. distant from non-associated receivers and shielded from view of the nearby township of Talbingo by a large ridgeline).
- The Proposed Action location will have low impact on the transport route due to existing infrastructure for Snowy Hydro and Transgrid.

Given the motivation provided above, the only alternative option is to not undertake the Proposed Action. This is reflected as Option 1.

Do nothing alternative

The do-nothing option considers the consequences of not carrying out the development. The strategic need for the Proposed Action is justified to address the state's current need for storage methods that address grid firming to support climate change commitments that are moving away from reliance on fossil fuels. Not undertaking the Proposed Action would not assist in the transition away from fossil fuel reliant energy production.

It would also forgo any socio-economic benefits of the Proposed Action.

Alternative site access points

Consideration for site access was given to utilising the existing access road for the Transgrid Lower Tumut 330kV Switching Station. Discussions with Transgrid detailed that use of this access road was not feasible as Transgrid requires unobstructed access to their assets. Consideration was also given to accessing the site from the unnamed road to the south of the Project Area. This access point would have been utilised for

heavy vehicles but not for over size over mass vehicles. This was not considered further due to access restrictions with Snowy Hydro, who manage the road. Heavy vehicles that are required to access the eastern section of the Project Area would enter off Miles Franklin Drive and then via an internal access road.

Layout consideration

The indicative design has been developed to be responsive to the Project Area's environmental features including limits on the constructability due the steep topography of the Project Area and existing biodiversity values such as dams and native vegetation patches and as such, has minimised impact on biodiversity values. Remaining environmental considerations on this site were considered minor and appropriately addressed with mitigation measures.

A progressive construction approach is being considered, whereby construction compounds would be placed within the Disturbance Footprint on the western section of the Project Area. This would further minimise the area of disturbance required during construction.

Alternative technologies

Over recent years, the underlying technology surrounding BESS development has been evolving at an increasingly rapid rate. The latest technical and cost-efficient technology available at the time of construction would be used. At this stage, it is proposed to utilise a Lithium-iron phosphate (LFP) chemistry. While other battery technology exists, LFP battery technology is currently selected as the preferred option based on the following criteria:

- Minimal risk of thermal runaway
- Safety, fire management and containment
- Ability to support the network to increase renewable energy penetration
- Ability to provide energy during periods of peak demands
- Minimal environmental impact
- Safety and ease of integration
- Demonstration and maturity of technology
- Value for money.

Scale and suitability of the Proposed Action

The scale of the Proposed Action has been determined after considering the following factors:

- A desire to provide more secure energy for times of need and supporting Commonwealth and State level efforts to mitigate the effect of climate change
- A need to ensure the Proposed Action is commercially viable
- The capacity of the electricity grid to absorb the energy generated by the Proposed Action
- The opinions expressed by landowners and the local community
- The constraints identified during the preparation of Planning Approval Documentation
- Minimisation of energy wastage, either through curtailment or loss.

5. Lodgement

5.1 Attachments

1.2.1 Overview of the proposed action

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att 1 Regional Map.pdf Map	20/05/2025	No	High
#2.	Document	Att 2 Project Areas.pdf Project Areas	20/05/2025	No	High

1.3.2.16 (Person proposing to take the action) Nature of the trust arrangement in relation to the proposed action

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att 3 Talbingo Battery Trust - Trust Deed.pdf	26/09/2024	Yes	

3.2.1 Flora and fauna within the affected area

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att 4 Survey Effort.pdf Project Survey Effort	20/05/2025	No	High
#2.	Document	Att 5 Plant Community Types.pdf Plant Community Types	20/05/2025	No	High

3.4.1 Hydrology characteristics that apply to the project area

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att 6 Hydrology.pdf Site Hydrology	20/05/2025	No	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 7 Habitat for Grey headed flying fox Project A.pdf Habitat for Grey headed flying fox surrounding Project Area A	20/05/2025	No	High
#2.	Document	Att 8 Habitat for Grey headed flying fox Project Area B.pdf Habitat for Grey headed flying fox surrounding Project Area B	20/05/2025	No	High

4.1.5.6 (Migratory Species) Why you do not consider the direct and/or indirect impact to be a Significant Impact

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att 10 Habitat for White bellied sea eagle Project Area B.pdf	20/05/2025	No	High

Habitat for White bellied sea eagle surrounding Project Area B					
#2.	Document	Att 9 Habitat for White bellied sea eagle Project Area A.pdf Habitat for White bellied sea eagle surrounding Project Area A	20/05/2025	No	High

5.2 Declarations

Completed Referring party's declaration

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

ABN/ACN	31124444622
Organisation name	NGH PTY LTD
Organisation address	2010 NSW
Representative's name	Tammy Vesely
Representative's job title	Senior Project Manager
Phone	0452 151 752
Email	tammy.v@nghconsulting.com.au
Address	T3, Level 7, 348 Edward St, Brisbane City, Qld 4000

☑ 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, **Tammy Vesely of NGH PTY LTD**, 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	681072391
Organisation name	Talbingo Battery PtyLtd
Organisation address	Suite 402, 39 East Esplanade, Manly, NSW, 2095
Representative's name	Daniel Ross

Representative's job title	Development Manager
Phone	0422 381 339
Email	dross@acepower.com.au
Address	Suite 402, 39 East Esplanade, Manly, NSW, 2095

☑ 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, **Daniel Ross of Talbingo Battery PtyLtd**, 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, **Daniel Ross of Talbingo Battery PtyLtd**, 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. *