GREENSpot

# Wallerawang
## Battery Energy Storage System

## Response to Submissions

May 2022

# Contents

# Tables

# Figures

# Acronyms and Abbreviations

| Term | Definition |
|---|---|
| AADT | Average Annual Daily Traffic |
| ACHAR | Aboriginal Cultural Heritage Assessment Report |
| AEP | Annual Exceedance Probability |
| AGTRD | Austroads Guide to Road Design |
| AHIMS | Aboriginal Heritage Information Management System |
| APZ | Asset Protection Zone |
| AQMP | Air Quality Management Plan |
| BCCAN | Bathurst Community Climate Action Network |
| BCF | Biodiversity Conservation Fund |
| BCS | Biodiversity, Conservation and Science Directorate |
| BDAR | Biodiversity Development Assessment Report |
| BESS | Battery Energy Storage System |
| BMP | Bushfire Management Plan |
| CCTV | Closed Circuit Television |
| CEMP | Construction Environmental Management Plan |
| CFFMP | Construction Flora and Fauna Management Plan |
| CNVG | Construction Noise and Vibration Guideline |
| CNVMP | Construction Noise and Vibration Management Plan |
| CNVS | Construction Noise and Vibration Strategy |
| CTMP | Construction Traffic Management Plan |
| dB | decibels |
| DP | Deposited Plan |
| DPE | NSW Department of Planning and Environment |
| DPI | Department of Primary Industries |
| DPIE | NSW Department of Planning, Industry and Environment |
| DVC | Decisive Voltage Classification |
| EEP | Emergency Evacuation Plan |
| EIS | Environmental Impact Statement |
| EP&A | *Environmental Planning and Assessment Act 1979* |
| EP&A Regs | *Environmental Planning and Assessment Regulation 2000* |
| EPA | Environment Protection Authority |

| Term | Definition |
|---|---|
| EPI | Environmental Planning Instrument |
| ERP | Emergency Response Plan |
| ESCP | Erosion and Sediment Control Plan |
| Forestry area | The area of the Project Site which is subject to a Pine Plantation Deed (between Greenspot and Forestry Corporation of NSW) and is to be harvested by Forestry Corporation of NSW. |
| FRNSW | Fire and Rescue NSW |
| GPT | Gross pollutant trap |
| GWB | Great Western Battery |
| ha | Hectares |
| HIPAP | Hazardous Industry Planning Advisory Paper |
| HVAC | Heating, ventilation and air conditioning |
| HV | High voltage |
| ICNG | Interim Construction Noise Guideline |
| ID | Identification |
| IPC | Independent Planning Commission |
| IPA | Inner protection area |
| km/h | Kilometres/hour |
| kV | kilovolt |
| L | Litre |
| LCC | Lithgow City Council |
| LGA | Local government area |
| Lithgow LEP | *Lithgow Local Environmental Plan 2014* |
| m | Metres |
| MEG-GSNSW | Mining, Exploration and Geoscience – Geological Survey of New South Wales |
| ML | Megalitres |
| MW | Megawatt |
| MWh | Megawatt hours |
| MV | Medium voltage |
| NCA | Noise Catchment Area |
| NIA | Noise Impact Assessment |
| NML | Noise Management Level |
| NorBE | Neutral or Beneficial Effect |

| Term | Definition |
|---|---|
| NPfI | Noise Policy for Industry 2017 |
| NRAR | Natural Resources Access Regulator |
| NSW RFS | NSW Rural Fire Service |
| OEMP | Operational Environmental Management Plan |
| OSOM | Over Size Over Mass |
| PAD | Potential Archaeologic Deposit |
| PBP | Planning for Bushfire Protection 2019 |
| PHA | Preliminary Hazard Analysis |
| PIP | Property Incident Plan |
| PNTL | Project Noise Trigger Levels |
| PMF | Probable Maximum Flood |
| The Project | The Project for which approval is being sought, namely the construction, operation and maintenance of a Battery Energy Storage System known as the 'Wallerawang 9 Battery'. |
| The Project Site | Within the buffer lands of the decommissioned Wallerawang Power Station, located at 1 Main Street, Wallerawang NSW. The area where the Project would be located incorporates the following lots:<br>Lot 3, DP 1018958, Lot 4, DP 1016725, Lot 3, DP 1181412, Lot 3, DP 1226927, Lot 4, DP 1226927. |
| RAP | Registered Aboriginal Party |
| RBL | Rating Background Level |
| RMS | Roads and Maritime Service |
| RtS | Response to Submissions |
| SEARs | Secretary's Environmental Assessment Requirements |
| SEPPs | State Environmental Planning Policies |
| SISD | Safe Intersection Sight Distance |
| SoHI | Statement of Heritage Impacts |
| SSD | State Significant Development |
| Transport and Infrastructure SEPP | *State Environment Planning Policy (Transport and Infrastructure) 2021* |
| SWMP | Soil and Water Management Plan |
| TDM | Travel demand management |
| TfNSW | Transport for New South Wales |
| TIA | Transport Impact Assessment |

| Term | Definition |
|---|---|
| Transport and Infrastructure SEPP | *State Environmental Planning Policy (Transport and Infrastructure) 2021* |
| WAL | Water Access License |
| WARR Act | *Waste Avoidance and Resource Recovery Act 2001* |
| WPS | Wallerawang Power Station |

# Executive Summary

## Overview

Greenspot Wallerawang Pty Ltd (Greenspot) (the Applicant) owns the decommissioned Wallerawang Power Station (WPS) and surrounding buffer lands (Project Site). The Project would utilise land within the buffer lands to construct, operate and maintain a Battery Energy Storage System (BESS).

The Applicant is seeking approval for the construction, operation and maintenance of a BESS up to 500 Megawatts (MW) which would provide up to 1,000 Megawatt hours (MWh) of battery storage capacity (two hours of storage at maximum discharge rate). The Project would assist in improving security, resilience and sustainability of the NSW electricity grid and provide critical energy storage to facilitate greater introduction of renewables into the electricity network. It will also reflect the legacy of the WPS and acknowledge the long-term role the Power Station played in the NSW energy sector.

The Environmental Impact Statement (EIS) for the Project was publicly exhibited between 9 February 2022 and 8 March 2022.

This Response to Submissions (RtS) report has been prepared to satisfy the provisions of *the Preparing a Submissions Report State Significant Development Guideline* (DPE, Exhibition Draft) to address submissions raised by government agencies, Lithgow City Council, stakeholders and the public during the exhibition of the EIS. The submissions received include those from both government agencies, organisations and the community.

## Submissions

Submissions were received from a total of 14 government agencies, comprising of the following:

- NSW Environment Protection Authority (EPA)
- Department of Planning and Environment (DPE) including:
  - Biodiversity Conservation and Science
  - Natural Resources Access Regulator (NRAR) Water Knowledge Office
- Water NSW
- Lithgow City Council (LCC)
- Transport for New South Wales (TfNSW)
- Forestry Corporation of NSW
- Heritage NSW (as delegate of Heritage Council of NSW)
- DPE Crown Lands
- Department of Primary Industries (DPI) Agricultural Land Use
- DPI Fisheries
- Fire and Rescue NSW (FRNSW)
- Geological Survey of NSW - Mining, Exploration and Geoscience
- NSW Rural Fire Service (NSW RFS)

In addition to government agencies, a number of submissions were received from the community (including residents, landowners and business operators) surrounding the Project Site. Of the seven community submissions received, three were from the Lithgow Local Government Area (LGA), two from the Sydney LGA and two from the Bathurst LGA.

Government agency and public submissions were provided to the Applicants team of technical specialists. Based on the content of the submissions, they were addressed by either an environmental impact assessment professional or where required responses to issues were provided by the technical specialists.

In response to the submissions received, some mitigation measures have been updated to better avoid, remedy or mitigate the identified impacts (refer to Section 8 of this RtS). The mitigation measures presented in this RtS represent the final mitigation measures to be incorporated in the conditions for approval of the Project, as required by Part 8, Division 2, clause 192 (e) of the *Environmental Planning and Assessment Regulation 2021* (EP&A Regs).

# 1. Introduction

Greenspot Wallerawang Pty Ltd (Greenspot) (the Applicant) is seeking development consent for the construction, operation and maintenance of a Battery Energy Storage System (BESS) within the buffer lands of the decommissioned Wallerawang Power Station (WPS) site (the Project Site) (refer to Figure 1-1). The BESS would be up to 500 Megawatts (MW) and would provide up to 1,000 Megawatt hours (MWh) of battery storage capacity (two hours of storage at maximum discharge rate).

An Environmental Impact Statement (EIS) was prepared to seek approval for the Project under Part 4, Division 4.7 of the *Environmental Planning and Assessment Act 1979* (EP&A Act) (SSD 14540514). The EIS was prepared in accordance with the Secretary's Environmental Assessment Requirements (SEARs) issued 18 March 2021 by the Department of Planning and Environment (DPE).

The EIS was publicly exhibited between 9 February 2022 and 8 March 2022. During this exhibition period submissions were invited from stakeholders, including members of the community and government agencies.

The submissions received during the public exhibition of the EIS form the subject of this report, known as a Response to Submissions (RtS) and are discussed and addressed in this report.

## 1.1 Project overview

Greenspot is seeking approval under Part 4, Division 4.7 of the EP&A Act to construct and operate a large-scale BESS, repurposing the buffer lands adjacent to the decommissioned WPS site. The Project would improve the security, resilience and sustainability of NSW's electricity grid and facilitate the greater introduction of renewables into the electricity network.

Key features of the Project include:

- Large-scale BESS including battery enclosures, inverters and transformers
- 33/330 kV (kilovolt) switchyard
- Overhead transmission line connection between the BESS and the nearby TransGrid Wallerawang 330 kV Substation
- Ancillary elements including access to site from the Castlereagh Highway, internal access roads and parking, site office and amenities, stormwater and fire management infrastructure, utilities, signage, fencing, security systems and landscaping.

The new power supply connection from the BESS to the Wallerawang 330 kV Substation would be established on land owned by Greenspot and /or TransGrid and no other third-party easements would be required. Table 1-1 details the Project overview specifications for the BESS. Figure 1-2 and Figure 1-3 of this RtS report are the indicative construction and operation BESS layouts provided in the EIS (Arcadis, January 2022).

Following submissions by the Environment Protection Authority (EPA) and Transport for New South Wales (TfNSW), minor refinements to the design were made. These refinements specifically relate to:

- **Indicative BESS design**: This was refined based on further noise modelling to ensure that compliance with the *Noise Policy for Industry 2017* (NPfI) criteria was achieved at sensitive receivers during operation.

- **Intersection of Castlereagh Highway and the access road to the Project Site:** Minor refinements were made to this intersection to address potential safety issues and to ensure Safe Intersection Sight Distance (SISD) compliance with Austroads *Guide to Road Design Part 4A*.

More details on these refinements are provided in Section 7 and the revised indicative operational layout is included in Figure 7-1 of this RtS and Figure 4 of the Noise and Vibration Impact Assessment (NVIA).

*Table 1-1: Project Overview Specifications*

| Project Component | Details |
|---|---|
| **Site details** | |
| Application Lots | • Lot 3, DP 1018958 (BESS facility and office)<br>• Lot 4, DP 1016725 (BESS facility)<br>• Lot 3, DP 1181412 (Transmission connection line, Lake Wallace and Coxs River, west of the Project Site)<br>• Lot 3, DP 1226927 (Includes the access road)<br>• Lot 4, DP 1226927 (Includes the access road)<br>• Lot 91, DP1043967 (TransGrid 330 kV Substation)<br>• Castlereagh Highway (east of the Project Site) |
| Zoning | • The Project is located on land zoned as a combination of IN3 Heavy Industrial, SP2 (Infrastructure) Electricity generating works and RU1 Primary Production |
| Project footprint [1] | • Total footprint – approximately 22 ha<br>• BESS, switchyard, ancillary development - approximately 18 ha<br>• Overhead transmission line - approximately 3.6 ha<br>• Access road to the BESS facility, office and amenities – approximately 0.5 ha |
| Access | • Access to the Project Site would be via the existing access road off the Castlereagh Highway |
| **Project design and built form** | |
| BESS facility and components | Depending on the final detailed design, the BESS facility could comprise:<br>• Up to 2,013 battery enclosures housing lithium-ion type battery cells, associated control systems and HVAC (heating, ventilation and air conditioning) units (numbers indicative only and subject to change in final design)<br>• Up to 372 power inverters (numbers indicative only and subject to change in final design)<br>• 86 Medium voltage (MV) transformers (numbers indicative only and subject to change in final design)<br>• MV switch rooms containing MV switchgear |

[1] These dimensions have been further refined in Section 7 following submissions responses

| Project Component | Details |
|---|---|
| 33/330 kV Switchyard | Switchyard (33/330 kV) including up to four high voltage (HV) transformers and HV switchgear and associated control building |
| Overhead transmission line connection | • Approximately 600 metre (m) transmission line including cabling infrastructure from the TransGrid Wallerawang 330 kV Substation to the BESS switchyard<br>• Alteration to Wallerawang 330 kV substation (bay changes for connection)<br>• Construction of foundations to support new overhead transmission line towers<br>• Installation of towers which would be craned (in sections) onto the footings and secured with holding down bolts |
| Ancillary elements | • Access road off the Castlereagh Highway<br>• Permanent site office, staff amenities and car park<br>• Signage at site entrances and within the Project Site for the purposes of way finding, safety and building identification<br>• Perimeter and internal lighting of the Project Site<br>• Stormwater drainage and management measures<br>• Two 20,000 litre (L) water tanks for fire suppression<br>• On-site security system including but not limited to, closed circuit television (CCTV) and an integrated telecommunication system<br>• Connections to telecommunications infrastructure<br>• 330 kV back fed for supply to the Project<br>• Rainwater capture in rainwater tanks<br>• Contained on-site sewage system |
| **Construction** | |
| Activities | Construction of the Project is expected to comprise:<br>• Site establishment<br>• Trenching<br>• Installation of footings for the BESS<br>• Delivery, installation and fit out of the BESS<br>• Delivery installation and fit out of the switchyard<br>• Construction of ancillary elements<br>• Installation of permanent fencing and security systems<br>• Testing and commissioning<br>• Removal of construction equipment and materials and rehabilitation of construction areas (where applicable) |
| Program | • Expected commencement of construction in Quarter 3/Quarter 4 of 2022 and would continue for approximately 12-24 months |

| Project Component | Details |
|---|---|
| Hours | • 7am to 6pm Monday to Friday<br>• 8am to 1pm Saturdays<br>• No works on Sundays or public holidays<br>• Some work outside of these hours (e.g. oversize deliveries, emergencies) as required |
| Workforce | • Approximately 100 full-time equivalents will be required for construction during the Project peak |
| **Operation** | |
| Capacity | • The BESS would have a capacity of up to 500 MW and up to 1,000 MWh of battery storage capacity (two hours duration at maximum discharge) |
| Life of BESS | • The estimated life of the initial BESS equipment is 15-20 years. It is expected that replacement of the batteries would be undertaken extending the life of the BESS to 30-40 years |
| Workforce | • Up to five operational personnel, some of which may be located off-site and work remotely. In addition to this, maintenance staff would be on-site periodically |
| Operational hours | • 24 hours, 7 days a week |

## 1.2 Purpose of this report

The purpose of this RtS is to respond to submissions raised by government agencies, Lithgow City Council (LCC), stakeholders and the Public during the exhibition of the EIS. This RtS has been prepared to satisfy the provisions of the *State Significant Development Guidelines* (DPIE, 2021). Each of the submissions received has been collated, analysed and addressed (as relevant).

## 1.3 Statutory approval process

Under the *Lithgow Local Environmental Plan 2014*, (Lithgow LEP, 2014) the Project meets the definition of 'electricity generating works', which is defined as:

> *'a building or place used for the purpose of –*
>
> *(a) Making or generating electricity; or*
> *(b) Electricity storage'*

Division 4 of the *State Environment Planning Policy (Transport and Infrastructure) 2021* (Transport and Infrastructure SEPP) applies to the development for the purposes of electricity generating works (as defined above) or solar energy systems.

Clause 36(1) notes that:

> *'development for the purpose of electricity generating works may be carried out by any person with consent on the following land –*
>
> *(a) in the case of electricity generating works comprising a building or place used for the purpose of making or generating electricity using waves, tides or aquatic thermal as the relevant fuel source- on any land*
> *(b) in any other case – any land in a prescribed rural, industrial or special use zone.'*

The Lithgow LEP 2014 is the primary Environmental Planning Instrument (EPI) that applies to the Project Site. The Project is located on land within the Lithgow Local Government Area (LGA) on land zoned under Lithgow LEP 2014. As per Clause 2.1 of the Lithgow LEP 2014, the land use zoning for the Project Site is provided in Table 1-2 and also shown on Figure 1-4.

*Table 1-2: Land use zoning*

| Lot/DP | Land Use Zone |
|---|---|
| Lot 3 DP 1018958, Lot 4 DP 1016725, Lot 3, DP 1226927, Lot 4, DP 1226927 | IN3 Heavy Industrial |
| Lot 3 DP 1181412 | SP2 (Infrastructure) - Electricity generating works<br>Road infrastructure |
| Lot 91 DP 1043967 | RU1 Primary Production |

The Project is therefore considered to be permissible with development consent under the provisions of the Transport and Infrastructure SEPP.

## 1.4 Clarifications

Section 4.3.3 of the EIS identifies a potential (and indicative) staging scenario and indicates that the 33/330 kV switchyard, the transmission line and the ancillary facilities would be constructed in Stage 1 under any staging scenario.

Further investigation since the exhibition of the EIS suggests that there may be scenarios where not all supporting infrastructure is constructed in a first stage. There would be no additional environmental impacts associated with any of the staging scenarios.

## 1.5 Structure of this report

The structure of this RtS is as follows:

- **Section 1 –** Introduction: provides an introduction to and overview of the Project, the relevant statutory approval pathway and the structure of the RtS
- **Section 2 –** Exhibition and consultation: provides a description of the consultation which was undertaken to date
- **Section 3 –** Overview of submissions: provides an analysis of the submissions received during the exhibition of the EIS and identifies the key issues raised
- **Section 4 –** Response to government agency submissions: provides a catalogue of submissions received from government agencies and their responses

- **Section 5 –** Response to community submissions: provides a summary of the community submissions received and responses to each issue raised
- **Section 6 –** Response to organisation submissions: provides a summary of the organisation submissions received and responses to each issue raised
- **Section 7 –** Refinements: provides additional refinements for the BESS design, sensitive receivers and the strategic intersection design and required vegetation removal
- **Section 8 –** Mitigation measures: provides a revised list of mitigation measures to include any changes as a result of submissions received and the revised impact assessments
- **Section 9 –** Conclusion: provides a summary and conclusion to the RtS.


*Figure 1-1: Regional context of the Project Site*


*Figure 1-2: Project construction footprint*


*Figure 1-3: Proposed EIS operational overview of the Project (Refined BESS layout is provided in Figure 7-1)*

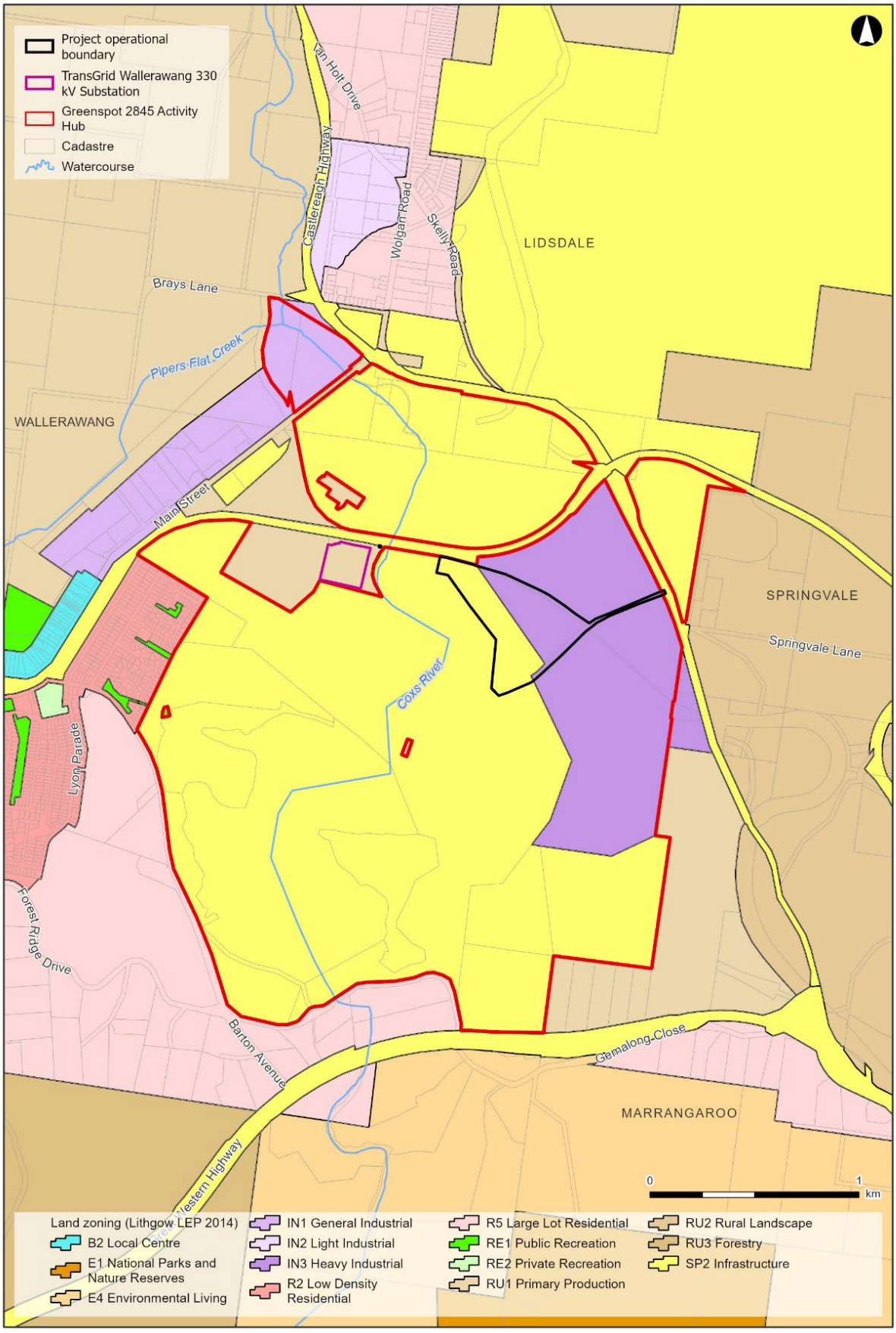



*Figure 1-4: Land use zoning of the Project Site*

# 2. Exhibition and consultation

## 2.1 EIS consultation

### 2.1.1 Agency consultation

The Applicant has undertaken ongoing consultation with government agencies throughout the preparation of the EIS, including:

- DPE including:
  - Biodiversity, Conservation and Science (DPE BCS)
  - The Natural Resources Access Regulator (DPE NRAR) (Water Knowledge Office)
- Water NSW
- Lithgow City Council
- Transport for New South Wales (TfNSW)
- Forestry Corporation of NSW
- Heritage NSW (as Delegate of Heritage Council of NSW).

### 2.1.2 EIS community consultation

Community consultation regarding the Project commenced in late 2020 and throughout the development of the EIS. The consultations offered during the preparation of the EIS included:

- A dedicated webpage that provides information on the WPS site, plans for the BESS, site updates and an opportunity to lodge submissions on-line
- A dedicated contact number and Project email address to provide a central point of contact for community enquiries
- Facebook and LinkedIn profiles set up to offer the community access to information and updates on the WPS site and the Project
- A community newsletter uploaded in February 2021 onto the Greenspot website and associated social media pages. This was distributed throughout the Wallerawang area to local businesses and property owners. The community newsletter contained information on the Project, Project timeline and methods for submitting enquiries. This was also mailed and/or provided to the Wallerawang community
- Newspaper articles published in the Village Voice (Lithgow local newspaper), the Lithgow Mercury, ABC and The Sydney Morning Herald regarding plans for the Project and the WPS site
- Door-knocking of neighbouring businesses and local property owners to receive direct feedback and provide information on plans for the WPS site and an overview of the Project

Face-to-face community information sessions were envisaged but were not undertaken due to COVID-19 risks and restrictions. Two information nights were held on 31 March 2022 and 7 April 2022 to update the community regarding Greenspot's vision for the WPS site and to present an indicative concept plan for the WPS site (including the Project as one of the early enablers of the development as a whole). This provided the opportunity for the community to ask questions and engage in discussions.

## 2.2 Public exhibition consultation

The EIS for the Project was placed on exhibition between 9 February 2022 and 8 March 2022 in accordance with Schedule 1, Division 2, Section 9 of the EP&A Act.

In December 2021, Greenspot published a LinkedIn post noting the Project details and exhibition of the EIS. The LinkedIn post provides a link to an online article detailing the Projects application for development.

## 2.3 Next steps

As provided in Section 2.7 of the *State Environmental Planning Policy (Planning Systems) 2021*, the criteria for an SSD to be determined by the Independent Planning Commission (IPC) is based on the following:

- More than 50 members of the public having made a submission objecting to the application
- The Council for the area objects to the application
- A political donation disclosure statement has been lodged with the application (i.e. a political donation has been made by the Applicant).

During the exhibition of the EIS a total of 10 public submissions (public and organisation) were received, with all submissions in support of the Project, therefore determination of the IPC does not apply.

# 3. Overview of submissions

This section provides an overview of submissions received during the exhibition period of the Project. Submissions received were from both government agencies, community and including organisations within the community.

An overview of the submissions received is shown Figure 3-1 and a summary of the process for responding to submissions is provided below.

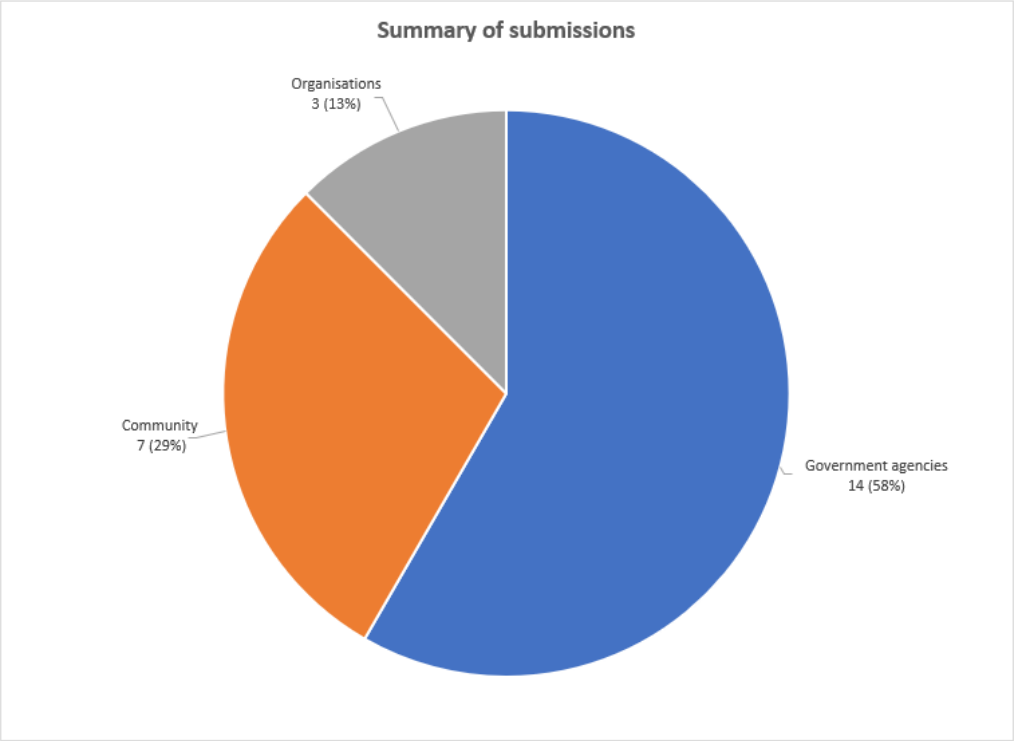



*Figure 3-1: Summary of submissions received*

## 3.1 Submissions received

### 3.1.1 Government agencies

Submissions were received from a total of 14 government agencies, as follows:

- NSW EPA
- DPE including:
  - BCS
  - NRAR Water Knowledge Office
- Water NSW
- LCC
- TfNSW
- Forestry Corporation of NSW
- Heritage NSW (as delegate of Heritage Council of NSW)
- DPE Crown Lands

- Department of Primary Industries (DPI) Agricultural Land Use
- DPI Fisheries
- Fire and Rescue NSW (FRNSW)
- Geological Survey of NSW - Mining, Exploration and Geoscience
- NSW Rural Fire Service (NSW RFS).

## 3.2 Community and organisations

A total of seven submissions were received from community stakeholders, and three organisational submissions during exhibition. These were all generally in support of the Project.

### 3.2.1 Community

Of the seven submissions, three were from residents who reside in the Lithgow LGA. Two submissions were from Bathurst LGA and two submissions were from Sydney.

### 3.2.2 Organisations

Three organisations provided submissions for the Project. These organisations include:

- Bathurst Community Climate Action Network
- Lithgow Environment Group Inc
- TransGrid.

## 3.3 Submission response methodology

### 3.3.1 Technical specialist input

Government agency, organisation and public submissions were provided to the environmental impact assessment specialists (Arcadis). Submissions were reviewed and summarised by Arcadis and technical specialist input sought to ensure that this RtS adequately captures and responds to all issues raised in the submissions.

Where required, the technical specialist prepared technical responses to key issues and other issues raised by the government agency, organisation or community submissions.

A summary of technical specialists engaged for the preparation of this report is provided below in Table 3-1.

*Table 3-1: Technical specialist input summary*

| Aspect | Company | Appendix |
|---|---|---|
| Noise and vibration | Resonate | Appendix A |
| Traffic and transport | Arcadis | Appendix B |
| Biodiversity | Arcadis | Appendix C |
| Visual amenity | Arcadis | Appendix D |

| Aspect | Company | Appendix |
|---|---|---|
| Structural Report - Sandstone heritage culvert integrity | Arcadis | Appendix E |
| Cross-section drawings | Arcadis | Appendix F |

Technical specialists utilised information provided within the EIS, undertook additional assessment and consulted with the relevant government agencies to ensure the submissions were adequately addressed. These technical specialist's reports have been appended to this RtS.

The information pertaining to relevant responses has been referenced and addressed in the response tables in Sections 4 to 6 of this RtS. The submissions ranged in content and complexity.

### 3.3.2 Government agency submissions

A total of 14 government agencies provided submissions. Each submission varied in terms of the number and type of items raised for consideration, with some agencies, depending on their function/responsibility, raising more issues than others.

The submissions were provided to the Applicant's environmental assessment specialists (Arcadis) for consideration and preparation of a response. Technical specialists were engaged as required, to address the technical submissions raised. The comments provided within these agency submissions are responded to individually in Section 4.

### 3.3.3 Community and organisation submissions

Ten submissions were received from members of the public and organisations. The submissions were assessed and the key points extracted and made clear and concise while maintaining the privacy of the member of the public.

# 4. Response to government agency submissions

As noted in Section 3.1.1 of this RtS, submissions were received from a total of 14 government agencies. These submissions have been responded to in Section 4.1 to Section 4.15.

## 4.1 Department of Planning and Environment

*Table 4-1: Response to Government agency submission - DPE*

| No. | Comment | Response | Reference |
|---|---|---|---|
| A1.1 a | Provide further information in the Preliminary Hazard Analysis for the Department to verify the separation distances between battery sub-units (containers, enclosures, etc.) are sufficient to ensure a fire does not propagate between the individual sub-units including:<br>• Verification that the BESS would be accommodated within the area designated for the BESS, accounting for separation between BESS sub-units to prevent fire propagation; and | Based on the indicative design shown in Figure 4-1 of the EIS, the total Project Site area would cover up to 18 hectares (ha) (including BESS, switchyard, ancillary development and buffer) and 3.6 ha for the overhead transmission line corridor. The indicative design has estimated an area of 10 ha to accommodate the BESS layout, which would comprise prefabricated battery enclosures arranged into groups and fixed into place on concrete footings.<br>Since the submission of the EIS, the Project has been refined (Section 7 and Figure 7-1 of the RtS). In this layout, is estimated that there would be around 270 enclosures, split up into five groups. Indicatively, each enclosure is estimated to be around 2.5 m high, 2 m wide and up to 7 m long, and would be separated from the adjacent enclosure by about 2.5 m. Each row of enclosures with the group would be separated from the adjacent row of units by around 15 m. The indicative layout provided in Figure 7-1 also allows for a separation distance of 20 m between each group of enclosures. | Figure 4-1 and Table 4-1 of the EIS (Arcadis, January 2022)<br>Sections 4, 4.2.1 and 15.3.2 of the EIS (Arcadis, January 2022)<br><br>Consultation with DPE on 19 April 2022 and 26 April 2022 |

| No. | Comment | Response | Reference |
|---|---|---|---|
| | | This would provide appropriate separation distances to manage fire risks and would also provide room for crane access and for ongoing maintenance.<br><br>Based on these assumed dimensions, the digitised battery configuration area is 4.75 ha, indicating that the 10-ha available for the 500 MW layout would be sufficient to accommodate the estimated number of enclosures and the separation distances required to minimise fire prorogation.<br><br>The BESS would meet fire and safety codes and standards (for example NFPA 855, UL9540, and UL 9540A). In addition, emergency response plans would be prepared for the Project and operational procedures would be in place to detail the appropriate responses in the event that smoke or fire are observed.<br><br>Greenspot provided the DPE with additional information (commercial in confidence) on 19 April 2022. The DPE responded on 26 April 2022 and stated that the information provided demonstrates that the proposed development area has sufficient space to accommodate the batteries within the area designated for the battery enclosures and for the energy storage capacity proposed. Sufficient space is also available within the area of the Project Site allocated to the battery enclosures to minimise the risk of fire propagation between battery enclosures. The information provided also demonstrated that the fire risks from batteries complies with *HIPAP No.4.*<br><br>Note that these dimensions of the enclosures and the clearances between the enclosures are dependent on the final choice of supplier and on the final detailed design. Regardless | |

| No. | Comment | Response | Reference |
|---|---|---|---|
| | | of the supplier selected and the dimensions of any enclosures, the BESS layout will be spaced appropriately to ensure that the fire risk is manageable, and the risk of fire prorogation is minimised and the controls and features of the specific battery type will be consistent with the current guideline and standards. This has been acknowledged by Greenspot. | |
| A1.1 b | • Demonstrating that the fire risks from the BESS can comply with the Department's Hazardous Industry Advisory Paper No. 4, '*Risk Criteria for Land Use Safety Planning*'; | A Preliminary Hazard Analysis (PHA) was prepared for the EIS (Appendix I). The PHA was prepared in accordance with the requirements of and guidance from:<br>• Hazardous Industry Planning Advisory Paper (HIPAP) No. 6 *Hazard Analysis*<br>• HIPAP No. 4 *Risk Criteria for Land Use Safety Planning*<br>Section 5 of the PHA details the qualitative risk criteria concerning the land use safety acceptability of a development.<br>Table 7.1 provides an assessment against the HIPAP No. 4 qualitative risk criteria.<br>The assessment concluded that there are no events with the potential for significant off-site impact associated with the operation of the BESS and the BESS meets the HIPAP No.4 qualitative risk criteria.<br>The PHA however did recommend that any relevant findings from the Energy Safe Victoria and Tesla investigations into the fire at the Victorian Big Battery (VBB) be implemented. This will be adapted, where necessary.<br>As detailed in the response above, DPE acknowledges that the information provided in the memo of 19 April 2022 also | Section 5.2 and Section 7, Table 7.1 of the PHA (Sherpa Consulting, November 2021) (Appendix I of the EIS, January 2022)<br><br>Consultation with DPE on 19 April 2022 and 26 April 2022 |

| No. | Comment | Response | Reference |
|---|---|---|---|
| | | demonstrated that the fire risks from batteries complies with *HIPAP No.4.* | |
| A1.2a | Provide further information and clarification in the visual assessment, including:<br>• A table listing the viewpoints, visual sensitivity, magnitude to visual change, distances and elevation differences; | A revised Visual Impact Assessment has been provided in Appendix D of the RtS. This includes the addition of a summary table listing viewpoints, distances to the Project, visual sensitivity, magnitude of change and visual impact details and updated viewpoints. Elevation changes are not included as elevation change is not directly relevant to visibility – it is the presence of intervening vegetation, buildings and terrain that is most relevant and these are largely independent of the elevation change between the viewpoint and the Project. | Visual Impact Assessment (Appendix D of this RtS) |
| A1.2b | • Consideration of the combined visual impact of the proposed works with changes to ground levels and proposed 5 m+ high noise barriers; | The visual impacts of the proposed 8 m noise barriers (as described in the revised Noise Assessment) and the proposed changes to ground levels, has been considered for all viewpoints in the revised Visual Impact Assessment (Appendix D). This has been supported by incorporating the modified terrain and the noise barriers into a 3D GIS model to verify the assessment. | Visual Impact Assessment (Appendix D of this RtS) |
| A1.2c | • Images of the proposed Project layout from Viewpoints 1 and 2; and | GIS based visualisations for the Project from Viewpoints 1 and 2 are included in the Visual Impact Assessment (Appendix D). | Visual Impact Assessment (Appendix D of this RtS) |
| A1.2d | • The selection of Viewpoint 4 as the most representative of residential properties in Wallerawang and consider provision of an additional viewpoint from the eastern boundary of the residential area, including an analysis of visual impacts in the event of the future removal of the interceding pine plantation. | An additional viewpoint was assessed in the revised Visual Impact Assessment (Viewpoint 7 – from Blaxland Street, Wallerawang). This has considered the harvesting of pine plantations that currently dominate the view from this location. While the harvesting of the pine plantations may allow some elements of the Project to become visible, there | Visual Impact Assessment (Appendix D of this RtS) |

| No. | Comment | Response | Reference |
|---|---|---|---|
| | | will still be substantial intervening vegetation (mature Eucalypts) between the viewpoint and the Project which will limit the Project's visual impact from this location. Any views to the Project Site following harvesting of the pine plantations would be in the context of increased visibility of a range of other existing electrical infrastructure including a number of high voltage transmission lines and the TransGrid 330 kV Substation. | |
| A1.3 | Ensure all site layout plans are consistent, including the EIS site layout plan, the indicative battery layout plan in the Noise and Vibration Assessment and the post-development layout plan in Appendix B of the Water Quality Assessment. | The EIS was based on a preliminary indicative design, while the Noise and Vibration Assessment was based on a layout aimed to show that compliance with the *Noise Policy for Industry (NPfI)* and how the adopted noise criteria could be achieved.<br>As part of this RtS process, the layout has been refined as a result of further noise modelling was undertaken to address the submissions raised by the EPA. The layout shown in Figure 4 of the revised Noise and Vibration Assessment and reproduced in Figure 7-1 of this RtS, has been prepared based on additional information obtained from a potential battery supplier through the tender process. This layout is similar to what was proposed in the EIS. This is further discussed in Section 7.<br>The layout used in the Water Quality Assessment (Appendix J of the EIS) was the original layout proposed prior to refinement of the construction footprint to avoid the heritage items (i.e. Wallerawang BESS AFT + PAD 01 (AHIMS ID# 45-1-2844) and the sandstone culvert running beneath the former railway alignment. This assessment assumed the BESS facility was 10 ha, the switchyard was 4 ha, and is likely to be a worst-case scenario for the layout. | Figure 4 of the revised NVIA (Appendix A of this RtS)<br><br>Table 3-6 (Appendix J of the EIS, January 2022) |

| No. | Comment | Response | Reference |
|---|---|---|---|
| | | The assessment concluded that the proposed stormwater mitigation measures for the proposed development would involve the use of grassed swales for all paved access roads to the proposed development and that installation of a treatment train of Humegard gross pollutant trap and bioretention basin to treat stormwater runoff from the BESS facility, switchyard, office/carpark and the majority of the access road, an area that is likely to be larger than what would occur following detailed design.<br>Detailed design would ensure that the required NorBE criteria in relation to stormwater management as set by Water NSW is achieved. | |
| A1.4 | Provide cross-section drawings (including Reduced Levels) illustrating proposed areas of cut and fill and proposed construction works, including noise barriers; | Cross sections showing cut and fill with the proposed design are included in Appendix F. These drawings include north-south and west-east cross-sections for the proposed site levels with proposed vegetation and BESS facility. | Cut and fill cross sections (Appendix F of this RtS) |
| A1.5 | Details of the rehabilitation of areas of the site located outside the development footprint | As detailed in Section 4.3.2 of the EIS, the final stages of construction would include the removal of construction equipment and materials and rehabilitation of construction areas (where applicable). This will apply in particular to the areas outside of the operational BESS and would include the rehabilitation of the laydown area to a condition that is equal or better that the current condition which is largely paddock.<br>The rest of the areas outside of the construction footprint would be rehabilitated in accordance with a Landscape Plan which will be prepared during detailed design to help the Project blend into the surrounding landscape and provide screening where appropriate. | Section 4.3.2 of the EIS (Arcadis, January 2022)<br>Table 17-5 Mitigation Measure V4 (Arcadis, January 2022)<br>Visual Impact Assessment (Appendix D of this RtS) |

| No. | Comment | Response | Reference |
|---|---|---|---|
| | | An indicative Landscape Plan with indicative planting is included in Visual Impact Assessment in Appendix D. | Table 8-1 Mitigation Measure<br>• V4 |
| A1.6 | Provide further clarification of the historical use of the site regarding potential contamination | Based on findings in Section 10.2.2 of the EIS (Arcadis, January 2022), the Project Site was historically used for grazing paddocks, railway and power station infrastructure from the 1820's to 1950's and as a pine plantation from the 1980's.<br>In accordance with SEPP55 and the *Managing Land Contamination Planning Guidelines* (DUAP, EPA, 1998), the Project Site is not considered to be a contaminated land area due to known historical use of the site and that it has been largely unused for the past 100 years. | Section 10.2.2 of the EIS (Arcadis, January 2022) |
| A1.7 | Confirm the length of the proposed electricity transmission line and the size of the development footprint. | As outlined in Table 4-1 of the EIS (Arcadis, January 2022), the length of the transmission line corridor would be approximately 600 m from the TransGrid Wallerawang 330 kV Substation to the BESS switchyard.<br>The total footprint of the Project Site is approximately 22 ha, with the transmission line corridor covering approximately 3.6 ha. As detailed in item A1.1, the refined layout is estimated to have around 270 enclosures, split up into five groups. Each of the groups is estimated to require a concrete pad of 0.437 ha, therefore a total of 2.2 ha is estimated for the five groups of enclosures. The inverter pad is estimated to be 0.82 ha.<br>The battery facility (including battery enclosures, inverter switchyard and noise barriers) is estimated to be 4.75 ha, which also included the spaces between the battery groups for maintenance and access and spaced between the enclosures | Table 4-1 of the EIS (Arcadis, January 2022)<br><br>Section 7.1 and Table 7-1 of this RtS |

| No. | Comment | Response | Reference |
|---|---|---|---|
| | | and the noise walls. The refined layout is further detailed in Section 7.1 and dimensions included in Table 7-1.<br>Note that final development footprint will be dependent on the final choice of supplier and on the final detailed design. | |
| A1.8 | As discussed, could you please request your noise consultant to also provide:<br>• setback distances to sensitive receivers and consideration of any historical operational noise data from the Wallerawang Power Station; | Noise levels at noise sensitive receivers of relevance to the Wallerawang BESS was not available. Historical data of noise levels closer to and on the power station site was available.<br>Three noise sensitive receivers are located within 500 metres of the Project (Figure 7-2). The other nearest noise sensitive receivers are located at the following approximate setback distances from the Project footprint boundary:<br>• North (Main Street, Wallerawang):<br>– 520 m from the Wallerawang 330kV substation<br>– 920 m from the main BESS site boundary.<br>• South (Rocky Waterhole Drive, Wallerawang):<br>– 1,500 m from the main BESS site boundary<br>• West (Blaxland Street, Wallerawang):<br>– 530 m from the Wallerawang 330kV Substation<br>– 1,100 m from the main BESS site boundary.<br>• East (Millers Lane):<br>– 130 m from the site access road<br>520 m from the main BESS site boundary.<br>This is further discussed in Section 7.2. | Table 4-1 of the EIS (Arcadis, January 2022)<br><br>Figure 7-2 of this RtS |

| No. | Comment | Response | Reference |
|---|---|---|---|
| A1.8b | • confirmation that tonal modifying factor is included for the two mitigated scenarios; | Section 7.5.1 of the NVIA has been updated to include a review of factor corrections. It was concluded that no corrections for tonality, dominant low-frequency or intermittent noise are required. | Section 7.5.1 of the revised NVIA (Appendix A of this RtS) |
| A1.8c | • an assessment of meteorological conditions and how this will influence the fan cycle duty; and | Section 7.4 of the NVIA has been updated to address the thermal impact on the indicative battery solution HVAC system.<br>A conservative thermal analysis indicated that HVAC fan duty is not expected to exceed during the daytime, evening or night-time periods. It is expected that 20% fan duty would occur during the night-time period for the majority of the time.<br>Section 7.7 of the NVIA presents predicted noise levels for the 20% and 40% fan duty scenarios. Compliance with the NPfI criteria is predicted at all noise sensitive receiver locations for both scenarios.<br>Sound power level data for the indicative battery solution was provided as commercial in confidence by a battery solution supplier. The data provided by the supplier was based on measured battery noise emissions for varying duty points of the internal HVAC system which is the predominant noise source from the battery enclosures. | Section 7.4 and Section 7.7 of the revised NVIA (Appendix A of this RtS) |
| A1.8d | • whether the noise level increase of fans running at 40% duty should be 5 dB rather than 6 dB (Table 16). | Sound power level data for the indicative battery solution was provided as commercial in confidence by a battery solution supplier. The data provided by the supplier was based on measured battery noise emissions for varying duty points of the internal HVAC system which is the predominant noise source from the battery units. | Section 7.2 of the NVIA (Appendix A of this RtS) |

## 4.2 Environment Protection Authority

A formal submission comprising a letter (dated 8 March 2021) was received from Environment Protection Authority (EPA). Comments have been summarised in the table below.

*Table 4-2: Response to Government agency submission – EPA*

| No. | Comment | Response | Reference |
|---|---|---|---|
| **Noise** | | | |
| A2 | **Matters to be addressed prior to determination**<br>**Noise Impact Assessment**<br>The EPA considers that the Noise Impact Assessment (NIA) does not currently satisfy the requirements set out in the SEARs and does not provide sufficient information and assessment of operational and construction noise in accordance with the Noise Policy for Industry (NPfI), and *Interim Construction Noise Guideline* (ICNG) respectively. This makes understanding the risk of noise impacts from the proposal unclear based on the assessment and information currently in the NIA. As such, the EPA is not able to assess the NIA associated with the proposal.<br>The EPA requires clarification, further information or potential amendment regarding the following matters: | The NVIA has been revised to provide more information and assessment of operational and construction noise in accordance with the NPfI (EPA, 2017), and *Interim Construction Noise Guideline* (ICNG) (DECC, 2009). | Revised NVIA (Appendix A of this RtS) |
| A2a | **Receiver Identification and Organisation**<br>Reviewing the tables of receivers in the NIA appendices, it's not clear how the usage of receivers has been determined. For example, the receiver at 9 Springvale Lane has been classed as "Rural/Primary Production", however satellite imagery clearly indicates the presence of a residential dwelling. It's not clear if receivers with these classifications have been considered in the | Land use is based on inputs from Geoscape (government database) (2022), site visit and aerial photography. If there was doubt in relation to the land use (and there was potential for a particular location to be residential), then residential land use was assumed. | Appendix B and Appendix F of the revised NVIA (Appendix A of this RtS) |

| No. | Comment | Response | Reference |
|---|---|---|---|
| | assessment as residential dwellings under a Noise Policy for Industry (NPfI) assessment. | | |
| A2a | Receivers in the tables in the NIA appendices and the noise maps have been assigned an ID number, however they appear to have been assigned the number in an arbitrary manner. The tables in the appendices also do not appear to order receivers in a logical way (for example, by location, street, NCA, ID number etc) and in conjunction with the apparent arbitrary ID numbering make it difficult to locate receivers and their neighbours.<br>**Recommendation**:<br>The proponent must clarify the receiver type according to the NPfI and Clarify ID numbers and the layout of tables. | Receiver ID allocation has been updated in the NVIA, such that each Receiver ID includes the Noise Catchment Areas (NCA) allocation, land-use type and unique identifying number. Please refer to Appendix A, Appendix B and Appendix F of the NVIA. . | Appendices A, B and F of the revised NVIA (Appendix A of this RtS) |
| A2b | **Background Noise Monitoring**<br>The address of monitoring location L1 (4 Millers Road, Marrangaroo) is around 100m from the Castlereagh Highway and appears to be the nearest residential receiver to the proposed battery enclosures.<br>NIA Figure 2 has defined Noise Catchment Area (NCA) 2 as essentially all receivers not within the Wallerawang township. NIA Figure 2 used measurements at L1 to define the Rating Background Level (RBL) for the whole of NCA 2. However, as location L1 is relatively close to the highway and would be significantly influenced by passing and distant vehicles, it appears inappropriate to use these measurements to be representative of RBLs at distances further from the highway. For potentially affected receivers that are further than L1 from the highway, additional data could be supplied, or a | The Rating Background Levels (RBL) located near Castlereagh Highway were marginally higher than locations remote from Castlereagh Highway. The NCAs in the revised NVIA were updated to reflect this difference. Please refer to Figure 2 of the NVIA in Appendix A, which describes the revised NCA arrangement.<br>It should be noted that compliance with the Intrusiveness Criteria based on the minimum assumed NPfI RBLs was achieved at all existing residential receiver locations based on the revised indicative site layout and operational noise mitigation strategy. | Figure 2 of the revised NVIA (Appendix A of this RtS) |

| No. | Comment | Response | Reference |
|---|---|---|---|
| | conservative approach used such as the minimum values from the NPfI.<br>**Recommendation**:<br>The NIA must be amended to include appropriate RBLs to represent potentially affected receivers.<br>The EPA does not support use of measurement location L1 to represent RBLs across the whole of NCA2 and recommends that the NCA and RBLs are amended to be more representative of potentially affected receivers. Additional data or a sufficiently justified alternative approach should be used in the amendment. | | |
| **A2c** | **Assigned Rating Background Levels and Project Noise Trigger Levels**<br>There appears to be inconsistency between the allocation of RBL data from locations L1 and L2 to NCAs 1 and 2. For example:<br>• NIA Figure 2, L2 is assigned to NCA 1 and L1 is assigned to NCA 2.<br>• NIA Table 1, L1 is listed as 4 Millers Road, Wallerawang which appears to be in NCA 2 and L2 is listed as 2 Blaxland St, Wallerawang which appears to be in NCA 1.<br>• NIA Table 4 lists NCA 1 with L2 (2 Blaxland St) and NCA2 as L1 (4 Millers Rd).<br>• NIA Table 6, Table 8 and the Appendices appear to have assigned RBLs and PNTLs from L1 to NCA 1 and L2 to NCA 2. | Please refer to response above.<br><br>RBLs, Project Noise Trigger Level (PNTL) and Construction Noise Management Levels (NML) have been revised based on the revised NCA arrangement in the NVIA. Please refer to Table 4 of the NVIA for construction NMLs and Table 8 of the NVIA for operational PNTLs. | Tables 4 and 8 of the revised NVIA (Appendix A of this RtS) |

| No. | Comment | Response | Reference |
|---|---|---|---|
| | **Recommendation:**<br>The EPA recommends that the inconsistencies in the assignment of RBLs are clarified and the NIA amended accordingly, including taking into account the appropriateness of the RBLs based on the other concerns raised within this advice. A full assessment of the NIA cannot occur until RBLs, noise management levels and Project Noise Trigger Levels (PNTLs) have been confirmed. | | |
| **A2d** | **Operational Noise Assessment**<br>The operational noise assessment and mitigation may need to be revised following clarification of the PNTLs. At present, there is inconsistency between RBLs assigned to NCAs. Therefore, if the incorrect RBL has been assigned to receivers, this may change the PNTL and therefore also mitigation outcomes such the site layout and barriers.<br>However, regardless of the potential inconsistency with the RBLs, additional matters were identified that should be addressed as follows: | Sound power level data for the indicative battery solution was provided as commercial in confidence by a battery solution supplier. The data provided by the supplier was based on measured battery noise emissions for varying duty points of the internal HVAC system which is the predominant noise source from the battery enclosures .<br>Section 7.2 of the NVIA has been updated to show that the noise source data was provided from a reliable battery provider. | Section 7.2 of the revised NVIA (Appendix A of this RtS) |
| A2d (i) | ***Reduction of fan sound power levels***<br>NIA Table 16 appears to imply that the difference in sound power level per fan unit is around a 9 dB reduction between 80% to 40% fan duty, and around a 14 dB reduction from 80% to 20% fan duty. However, it's not explained how this reduction has been achieved, calculated or what assumptions or information has been used to generate these levels.<br>**Recommendation:**<br>Evidence must be provided in the NIA for the claimed sound power level difference between fan duty scenarios. | As above, sound power level data has been provided by a potential battery supplier as provided through the tender process. The potential battery supplier has numerous significant systems installed across Australia which are currently operational. | Section 7.2 of the revised NVIA (Appendix A of this RtS) |

| No. | Comment | Response | Reference |
|---|---|---|---|
| A2d (ii) | ***Noise Sources***<br>NIA Table 16 shows that the NIA has only considered noise from 33kV transformers and battery unit fans. However other noise assessments for BESS proposals in NSW have considered noise from other sources such as routine battery maintenance activities and inverters.<br>**Recommendation:**<br>The NIA be amended to include clarification of the noise sources with potential to impact at receivers. | An operational maintenance scenario has been included in Section 7.8 of the NVIA. The expected extent of operational maintenance activities is not significant and compliance with the NPfI criteria is predicted for this scenario at all noise sensitive receivers. | Section 7.8 of the revised NVIA (Appendix A of this RtS) |
| A2d (iii) | ***NPfI Fact Sheet C Assessment***<br>The NIA has not addressed all potential annoying characteristics as per NPfI Fact Sheet C which requires consideration of low frequency noise, tonality, and intermittency among others. Whilst the NIA has applied a tonality correction, the NIA does not appear to have addressed the other characteristics required under NPfI Fact Sheet C. Additional guidance on the assessment of low frequency noise was published in Acoustics Australia vol 48 No. 2 (https://doi.org/10.1007/s40857-020-00199-x).<br>**Recommendation:**<br>The NIA must also provide an assessment of low frequency noise and intermittency, particularly as it appears there is potential for fans and other similar plant to turn on and off periodically during the night period. | Section 7.5.1 of the revised NVIA has been updated to include a review of factor corrections indicating whether they are applicable and why.<br>No modifying factors were required. | Section 7.5.1 of the revised NVIA (Appendix A of this RtS) |
| A2d (iv) | ***Assessment, mitigation, and residual impacts***<br>NIA Chapter 7.7 has predicted noise levels above the PNTLs at multiple receivers during the day, evening, and night period for | Section 7.4 of the revised NVIA has been updated to address the thermal impact on the indicative battery solution HVAC system. | Section 7.4 and 7.7 of the revised NVIA |

| No. | Comment | Response | Reference |
|---|---|---|---|
| | the 40% fan duty scenario. A separate prediction of a 20% fan duty scenario predicted no exceedances of the PNTLs.<br>The NIA states that during the night, the proposal will operate at 20% fan duty for greater than 99% of the time. However, it is not clear how often it will need to operate at 40% or higher during the evening and day period. Under the 40% and 80% duty scenarios, exceedances of the PNTLs are predicted in the day and evening periods, however the NIA has not provided sufficient evidence that all reasonable and feasible mitigation has been investigated. Chapter 3.4 of the NPfI states:<br>*"When determining whether noise mitigation is 'feasible and reasonable', the starting point is identifying mitigation measures that would result in achieving the relevant project noise trigger levels, and then identifying why particular measures may not be either feasible or reasonable."*<br>Therefore, the NIA should present the scenario where PNTLs are satisfied for all periods and then provide an analysis of reasonable and feasible measures (an example is provided in NPfI Table 3.1).<br>Where noise levels are predicted to be above the PNTLs, the NPfI has a clear and established process to be followed; mitigation to reduce noise levels at or below the PNTL is to be investigated and applied where reasonable and feasible. If after all reasonable and feasible mitigation has been exhausted, levels remain above PNTLs, a residual impact assessment in accordance with NPfI Section 4 is to be conducted.<br>From the NIA it's not clear what the proposed mitigation is, what if any residual impacts there will be and how they will be | A conservative thermal analysis indicated that HVAC fan duty is not expected to exceed 40% fan duty during the daytime, evening or night-time periods. It is expected that 20% fan duty would occur during the night-time period for the majority of the time.<br>Section 7.7 of the NVIA presents predicted noise levels for the 20% and 40% fan duty scenarios. Compliance with the NPfI criteria is predicted at all noise sensitive receiver locations for both scenarios.<br>The reasonable and feasible assessment of noise mitigation measures included:<br>• Refinement of the site layout<br>• Reducing noise source levels based on a thermal impact analysis of the indicative battery solution<br>• Implementation of noise barriers. A cost benefit analysis of the conceptual noise barrier arrangement was conducted based on input from a market provider to confirm feasibility of the noise barrier extent and heights.<br>Compliance with the NPfI criteria was predicted at all locations and therefore no further consideration of residual impacts is required. However, this aspect is acknowledged for consideration in future design stages if required. | (Appendix A of this RtS) |

| No. | Comment | Response | Reference |
|---|---|---|---|
| | managed and if they have been assessed in accordance with the NPfI. The conclusion of the NIA in Chapter 8 appears to suggest that issues regarding noise levels being above the PNTLs can be resolved after approval. However, based on the information and assessment currently in the NIA, the EPA is not confident in this conclusion and considers that these matters need to be resolved further prior to a determination being made on the proposal.<br>**Recommendation:**<br>• The NIA clarifies the proposed operating conditions/ configuration of the premises for the day, evening, and night period;<br>• Clarifies the predicted impacts under the proposed operating conditions in each period;<br>• Presents a scenario where the PNTLs can be satisfied in each period;<br>• Provides an adequate assessment of reasonable and feasible mitigation (guidance can be found in Chapter 3 of the NPfI) and a final recommendation for mitigation and management; and<br>• Residual impacts are considered in the NIA according to Chapter 4 of the NPfI | | |
| **A2e**<br>A2e (i) | **Construction Noise Assessment**<br>***Sound power levels and usage factors***<br>NIA Table 13 sets out the equipment proposed to be used for each assessed construction scenario. It includes two different sound power level totals for each scenario, defined in NIA Chapter 6.1.2 as follows: | Section 6.1.2 of the revised NVIA has been updated to provide an explanation in relation to the application of duty factors for construction plant items. | Section 6.1.2 and Table 13 of the revised NVIA (Appendix A of this RtS) |

| No. | Comment | Response | Reference |
|---|---|---|---|
| | *"The total activity sound power level is calculated as a logarithmic sum incorporating indicative operation time in a 15-minute period for impulsive equipment and the total number of plant items required within a 15-minute period."* Page 5<br>This appears to imply that some sort of time correction has been applied to the sound power levels. However, this time correction is not stated in the report and no justification or evidence has been provided that it is appropriate. Therefore, from the information in the report it is impossible to understand how the total sound power levels were calculated.<br>It's also not clear if any penalties have been added to specific equipment with annoying characteristics as suggested by Chapter 4.5 of the Interim Construction Noise Guideline (ICNG).<br>In general, the EPA does not support the use of time corrections for noise sources unless it can be demonstrated that they would continually only be used at that utilisation. Construction scenarios should include a reasonable worst-case equipment configuration and sound power levels reported should be representative of that scenario.<br>**Recommendation**:<br>The NIA transparently reports all assumptions and inputs used in the assessment and the construction scenarios are amended accordingly. The NIA should provide a justification and evidence that any time correction applied is appropriate. | The assumed duty factors are based on consultation with the Applicant and Resonate's experience and observations based on similar construction activities.<br>Table 13 of the NVIA includes the assumed duty factor for each plant item. | |
| A2e (ii) | ***Consistency of scenarios assessed between EIS and NIA***<br>EIS Chapter 4.3.1 details the activities required for site preparation. Whilst tree harvesting is not included in this | Section 6.1.2 of the revised NVIA has been updated to clarify that harvesting of the trees (not stumps) within the forestry area would be undertaken prior to commencement of the construction works for the Project and would be under a | Section 6.1.2 of the revised |

| No. | Comment | Response | Reference |
|---|---|---|---|
| | proposal, the clearing of vegetation and grubbing to remove tree stumps does appear to be included. However, from NIA Table 13 it's not clear if this construction activity has been adequately considered.<br>**Recommendation:**<br>The proponent clarifies the proposed construction activities and amends the NIA accordingly to include consideration of all proposed construction activities. | separate approval, as required. Therefore, harvesting of trees is not assessed in the NVIA. | NVIA (Appendix A of this RtS) |
| A2e (iii) | ***Activity based sound power levels***<br>NIA Table 13 lists the sound power levels for construction plant and equipment, however it's not clear if these sound power levels consider the noise from the activity, and not simply the engine/exhausts of the equipment carrying out the activity. If a sound power level does not adequately consider noise from the activity (and not just the equipment), it may underestimate noise emissions.<br>**Recommendation:**<br>The proponent clarifies if the sound power levels adequately consider the construction activity. If equipment only sound power levels are used, the potential for additional noise created by the equipment carrying out an activity should be accounted for in the assessment. | Section 6.1.2 of the revised NVIA has been updated to confirm the source of sound power levels used in the construction noise assessment. These include the RMS CNVG (2016) and *TfNSW Construction Noise and Vibration Strategy* (CNVS) (2018) as well as Resonate's previous on-site observations. The activity sound power levels are representative of noise levels from active construction sites.<br>The modelling approach is conservative in that it assumes all plant for a given activity are operational simultaneously and assuming a worst-case source to receiver relationship. | Section 6.1.2 of the revised NVIA (Appendix A of this RtS) |
| A2e (iv) | ***Access roads used for construction***<br>It's not clear how the NIA has considered vehicle movements from construction related vehicles on the access roads both to the BESS compound and the Wallerawang 330 kV substation and transmission line path. | Section 6.7 of the revised NVIA describes construction traffic assessment. The on-site construction noise assessment considers vehicles, plant and equipment across the entire proposal construction footprint including the access roads to the BESS and between the BESS and the Wallerawang 330 kV Substation. | Section 6.7 of the revised NVIA (Appendix A of this RtS) |

| No. | Comment | Response | Reference |
|---|---|---|---|
| | **Recommendation:**<br>The proponent clarifies how the NIA has considered construction related vehicles on the access roads and amends the NIA accordingly. | | |
| A2e (v) | ***Construction management and mitigation***<br>NIA Table 14 predicts that at least 928 residential properties have the potential to be affected above the noise management levels during the construction of the proposal. The ICNG requires that all reasonable and feasible mitigation is applied to minimise noise impacts. However, the NIA appears to have failed to provide adequate consideration of potential mitigation to reduce and minimise impacts from the construction phase of the proposal. It is not clear if the list of generic measures in NIA Chapter 6.6 is appropriate or relevant to the proposal.<br>The NIA should demonstrate that as a minimum an investigation or assessment has been done that considers how to reduce noise impacts, instead of providing a list of generic measures.<br>As a minimum this should consider the equipment and activities that create the highest impacts and impacts above the noise management levels, what measures exists to minimise their impact, the potential effectiveness of the measures and the factors that affect their ability to be implemented. Impact should be considered in terms of noise level, duration, time of day and community expectations. TANU understands that all details about the construction may not be known at this stage, however conceptual measures can be used to inform the assessment. | Section 6.8.5 of the revised NVIA has been updated to include additional activity-based discussion of potential mitigation measures.<br>The discussion of mitigation measures has considered the anticipated intensity of construction noise levels from each construction activity. | Section 6.8.5 of the revised NVIA (Appendix A of this RtS) |

| No. | Comment | Response | Reference |
|---|---|---|---|
| | **Recommendation:**<br>The NIA is amended to include adequate description, and consideration of potential mitigation measures to reduce construction noise impacts. | | |
| A2e (vi) | ***SEARs requirements for construction noise assessment***<br>Under the Key Issues - Noise in the SEARs, its states the following:<br>*"a draft noise management plan if the assessment shows construction noise is likely to exceed applicable criteria*". The EPA is unable to identify if this requirement has been fulfilled.<br>**Recommendation:**<br>The Proponent must clarify if the SEARs relevant to noise have been met. | Section 6.8 of the NVIA has been updated to include more detailed guidance on the application of construction mitigation that efficiently implemented into a noise management plan. It is considered that this meets the intent of the SEARs requirement.<br>The future contractor will be required to prepare a detailed Construction Noise and Vibration Management Plan (CNMVP) prior to commencement of construction based on a finalised construction methodology. | Section 6.8 of the revised NVIA (Appendix A of this RtS) |
| A2f | **Heating, Ventilation and Air Conditioning Units**<br>The EPA understands that the Project will be comprised of approximately "2013 battery enclosures housing lithium-ion type battery cells, associated control systems and HVAC (heating, ventilation and air conditioning) units, and up to 372 power inverters".<br>**Recommendation:**<br>The EPA requests information regarding the HVAC system being, Will the proposal utilise any synthetic or natural cooling liquids or other, and if so, will the liquids require treatment and/or disposal? | Typical lithium-ion battery systems include a fully integrated, closed loop thermal management system that is liquid based, and which comprises a 50% ethylene glycol and 50% water mixture. A refrigerant is also used in the thermal system to absorb environmental heat and provide cool air once it runs through compressors and evaporators. Around 350 L of the mixture are used per enclosure and is typically refilled during the 10-year maintenance interval for enclosure products.<br>If any liquid waste is generated through maintenance activities, these liquids would be appropriately managed and disposed of in accordance with the EPA guidelines and at an appropriately licenced facility that can accept liquid waste. | Section 7 of this RtS<br><br>Table 8-1 New Mitigation Measure<br>• W9 |

| No. | Comment | Response | Reference |
|---|---|---|---|
| **A2g** | **Cumulative Impact Assessment**<br>Section 23 Cumulative Impact Assessment – of the EIS includes at page 6-3 the following statement, "the Cumulative Impact Assessment includes the discussion of all cumulative impacts of Neoen's Great Western Battery based on the currently available information". In reviewing the technical assessment at Appendix D – Construction and Operational Noise and Vibration Assessment, it is not evident that the cumulative impact assessment was undertaken as part of the technical noise assessment.<br>**Recommendation:**<br>The EPA requests further clarification on the cumulative impact assessment and if this was undertaken as part of the technical noise assessment. | A cumulative impact assessment has been included in Section 7.9 of the NVIA to address the proposed Great Western Battery project. The assessment considers the most potentially affected sensitive receiver relative to both projects and shows that the cumulative noise levels would not result in exceedances of NPfI criteria. | Section 7.9 of the revised NVIA (Appendix A of this RtS) |
| **A2h** | **Clarification of Nearest Receivers, Identification and Organisation**<br>Reference is made to the proposal to be constructed nearby, Great Western Battery (GWB), and the nearest receivers being 'unlikely' to be impacted as they are located about 3.5 kilometres south-east of the GWB proposal, which appears to be a vague description of nearest receivers.<br>**Recommendation:**<br>The EPA is seeking clarification on:<br>1. How the distance of 3.5 kilometres was determined, as the EPA understands the nearest sensitive receivers to be closer than 3.5 kilometres, and<br>2. If the statement is referring to the GWB or the Project. | Following the submission from EPA an updated detailed cumulative impact assessment was undertaken and it was determined that the most appropriate residences to be assessed are located at 173 Brays Lane, Wallerawang and 121 – 123 Main Street, Wallerawang. These residences are most likely to be considered most likely to be impacted by both projects. | Section 7.9 of the revised NVIA (Appendix A of this RtS) |

## 4.3 Department of Planning and Environment (Biodiversity, Conservation and Science)

A formal submission comprising a letter (dated 7 March 2022) was received from BCS. Comments have been summarised in the table below.

*Table 4-3: Response to Government agency submission – Biodiversity Conservation and Science*

| No. | Comment | Response | Reference |
|---|---|---|---|
| A3.1 | BCS concur with the biodiversity credits calculated and recommend that credits presented in Tables 10-1 and 10-2 of the BDAR are included in the consent conditions. BCS note that the Forestry area consists of planted Radiata Pine and is managed by Forestry Corporation of NSW and scheduled for clearing in 2022 under a Pine Plantation Deed. This area is therefore not subject to calculations and assessment in the BDAR.<br>In regards flooding, the Project Site is located over a flood prone area next to the Cox's River. The flooding assessment has been prepared based on the latest NSW Government's flood-prone land package and considered the recommended full range of flood events, including the 1% Annual Exceedance Probability (AEP) and the Probable Maximum Flood (PMF). Using 2D flood modelling, the assessment showed negligible change in the existing floodplain under 1% AEP conditions and a minimal overland sheet flow of 100 mm for the PMF event. The Project therefore satisfies the current NSW flood prone policies. | The biodiversity offsets as proposed by the BDAR Appendix E of the EIS, January 2022, will be implemented following construction in consultation with BCS.<br>No further action is required for the RtS Report. | Table 10-1 and Table 10-2 of the BDAR (Appendix E of the EIS, January 2022) |

## 4.4 Department of Planning and Environment - Natural Resources Access Regulator (Water Knowledge Office)

A formal submission comprising a letter (dated 2 March 2022) was received from DPE NRAR. Comments have been summarised in the table below.

*Table 4-4: Response to Government agency submission – DPE NRAR*

| No. | Comment | Response | Reference |
|---|---|---|---|
| A4.1 | DPE Water and NRAR have reviewed the EIS and have concerns regarding riparian corridor characteristics and assessment, compliance of the bioretention basin and construction water take requirements. | Note - see below | See below |
| A4.2a | **Riparian Corridor Characteristics and Assessment (Prior to determination)**<br>The proponent should provide further information on the aquatic and riparian corridor characteristics and values within the Project site, and the impact due to the proposed piping. It is recommended an option of realigning the watercourse be assessed with the intent to maintain a vegetated riparian corridor.<br>Inadequate information has been provided to understand the characteristics and values of the watercourses that are to be removed within the Project site, and the resultant impact both within the site, and on upstream and downstream connectivity. The EIS has focused on water quality and hydrology assessments of the watercourses but there is a lack of information on aquatic and riparian corridor characteristics. The complete removal of the watercourse is considered by NRAR to be a significant impact to any riparian values at this site with no proposal for diversion or reinstatement. | On the 31 March 2022, ecologists conducted a site walk-over of the Project Site. The site assessment examined the ephemeral creek running through the Project Site to determine its ecological values and characteristics, reported in the Biodiversity Memorandum (Appendix C). Further assessment of the riparian corridor was also conducted to determine the ecological impact of piping the existing watercourse to accommodate for the BESS.<br>The condition of the ephemeral creek within the forestry area is degraded with a high cover of weeds and an absence of native aquatic vegetation and limited fish habitat. The culverts upstream of the forestry area are barriers to fish movement, and the Blackberry infestation is likely reducing the habitat value of the watercourse and limiting other aquatic fauna such as birds or turtles from inhabiting the waterway. It should also be noted that the forestry is currently being harvested and will be fully harvested prior to the construction of the Wallerawang BESS commencing. It is | Biodiversity Memorandum (Appendix C of this RtS) |

| No. | Comment | Response | Reference |
|---|---|---|---|
| | **Recommendation**<br>• It is recommended further information be provided on the characteristics and values of watercourses at the site | also possible that this activity will also have some impact on the condition of the ephemeral creek.<br>Due to the lack of habitat, it is unlikely the Project will impact fish populations in the area. Furthermore, as the creek is ephemeral, impacts are confined to periods of higher rainfall when water is flowing. | |
| A4.2b | • to consider the ability to realign the watercourse and maintain a vegetated riparian corridor. This is to protect and enhance water flow, stream ecology and riparian functioning which is consistent with the *Guidelines for Controlled Activities on Waterfront Land (NRAR 2018).* | The retention of a vegetated riparian corridor through the Project Site is not considered feasible based on the proposed layout of the BESS facility. Any redesign that would facilitate this is not considered warranted given the minimal ecological values associated with the watercourse. The focus of the drainage strategy is instead on minimising the impacts to the water quality entering the Coxs River from this watercourse. | Biodiversity Memorandum (Appendix C of this RtS) |
| A4.3 | **Construction Water Take Requirements (Prior to determination)**<br>The proponent should quantify the water volumes required for construction and confirm viable sources are available to meet these demands.<br>Inadequate information has been provided to quantify the water volumes required to meet the construction demands for the Project and to confirm a viable authorised supply is available. | As detailed in Section 16.3.2 of the EIS, construction of the Project would have a limited water demand. Water use is summarised below:<br>• The majority of water used would be for dust suppression<br>• Some smaller quantities of water would also be used for the construction site office facilities (e.g. for showers and kitchen use)<br>• Drinking water during construction could be made available using water dispensers<br>• Pre-mixed concrete would be used during construction and some small quantities may be required during concrete pouring.<br>There is no potable water supply at the Project Site. Where possible water would be provided by harvested rainwater or imported from Lithgow on water trucks. | Section 16.3.2 of the EIS (Arcadis, January 2022) |

| No. | Comment | Response | Reference |
|---|---|---|---|
| | | Water could be provided from within the existing power station water allocation, however, the water required for dust suppression would more than likely be transported in from Lithgow via water trucks and recovered from construction sediment basins.<br>**Dust suppression**<br>Water usage for dust suppression is seasonal, with highest usage rates occurring in summer, and lowest rates occurring in winter. Seasonal variability is driven largely by changes in ambient temperature and evaporation rates. Water usage is also lower during periods of rainfall.<br>The warm season in the Lithgow area lasts around three months (December to March), with an average daily high temperature above 22°C and the hottest month being January (average high of 25°C). This time period also coincides with the wetter season which occurs between October and March. with a greater than 23% chance of a given day being wet. The cold season is between May and August with an average daily high temperature below 13°C. This period generally falls outside of the wetter months[2].<br>Dust suppression at construction sites could range from 4 litres per square metre (L/m$^2$/day)[3] per day on a hot dusty day in the Pilbara (>35°C) to 0.5 L/m$^2$/day in a cooler environment. To estimate the water usage for dust suppression, a range of 0.5 L/m$^2$/day to 1.5 L/m$^2$/day has been used to cover a range of cooler summer days and the hotter January days. This is a | |

[2] https://weatherspark.com/y/144502/Average-Weather-in-Lithgow-Australia-Year-Round
[3] Australian Mining (15 September 2010)

| No. | Comment | Response | Reference |
|---|---|---|---|
| | | conservative estimate as the daily weather would dictate the need for dust suppression. Using these estimates, water for dust suppression could range 0.1 ML to 0.2 ML per day based on a 22 ha construction area.<br>Water would be transported in from Lithgow via water truck, which range from 10,000 or 20,000 L. For the purposes of this assessment, a 17,000 L water truck has been used, therefore between 6 and 12 water trucks a day may be required.<br>**Other water usage**<br>Water for the construction site office facilities (e.g. for showers and kitchen use) is estimated to be around 5 L/day per employee. During peak construction with 100 staff, the worst-case water usage is 500 L/day. Where possible this water would be harvested rainwater or imported from Lithgow on water trucks and stored in temporary water tanks.<br>It is also proposed to have 3,000 L tanks available on site for fire fighting if required. | |
| A4.4<br><br><br>A4.4 (1) | **Bioretention basin (Prior to determination)**<br>The proponent should review the bioretention basin to ensure either;<br><br>its capacity is within the Maximum Harvestable Rights Dam Capacity for the property | Bioretention basins are water quality treatment devices where stormwater filters through vegetation and material by gravity before discharging downstream. The basins are used only for water quality treatment. The basins are not used to store water or reuse water. Therefore, there is no water storage capacity relevant to the Maximum Harvestable Rights Capacity for the property. | N/A |

| No. | Comment | Response | Reference |
|---|---|---|---|
| A4.4 (2) | that it satisfies a relevant exemption in Schedule 1, Water Management (General) Regulation 2018. | The bioretention basin is exempt under Item 3 of Schedule 1 of the *Water Management (General) Regulation 2018*.<br>Collected stormwater run-off from the Project Site areas only is collected and conveyed to the basin for treatment to reduce pollutants discharging downstream.<br>The basin is located off-line from the existing ephemeral creek passing through the Project Site. | N/A |
| A4.5 | **Recommendation – Post approval**<br>The stormwater management design should consider separation of clean and dirty water runoff.<br>• The proposed bioretention basin will capture run-off from the development site and potentially from clean runoff areas. Separation of clean and dirty water should be incorporated into the stormwater management design. | The separation of "clean" and "dirty" water will be incorporated into the stormwater management design during the detailed design of the Project. | Section 16.4 of the EIS (Arcadis, January 2022)<br>Table 8-1 Mitigation Measures<br>• SC1<br>• SC4 |
| A4.5 | • The proponent should prepare a Soil and Water Management Plan to address stormwater management and sediment and erosion control. The plan is to address the requirements of the guideline *Managing Urban Stormwater: Soils and Construction (Landcom 2004)* and the *Guidelines for Controlled Activities on Waterfront Land (NRAR 2018)*. | As detailed in Section 16.4 and Table 16-2 of the EIS (Arcadis, January 2022), a Soil and Water Management Plan (SWMP) and Erosion and Sediment Control Plan (ESCP) would be prepared and implemented as part of the Project Construction Environmental Management Plan (CEMP). These plans would be prepared and designed in accordance with:<br>• *Managing Urban Stormwater – Soils and Construction, Volume 2D* (Landcom, 2004)<br>• *Guidelines for Controlled Activities on Waterfront Land (NRAR 2018)*<br>• *Post Approval Guidance Environmental Management Plan Guidelines (April 2020)* | Section 16.4 and Table 16-2 of the EIS (Arcadis, January 2022)<br>Table 8-1 Mitigation Measures<br>• WQF1<br>• WQF2 |

| No. | Comment | Response | Reference |
|---|---|---|---|
| A4.5 | • Should groundwater be intercepted a Water Access Licence (WAL) under the *Water Management Act 2000* must be obtained unless the take is less than or equal to 3ML of water per year for any aquifer interference activities listed in Clause 7 of Schedule 4 of the *Water Management (General) Regulation 2018.*<br>For more information visit https://www.dpie.nsw.gov.au/nrar/how-to-apply/water-licences/Groundwater | As described in Section 16.3 of the EIS (Arcadis, January 2022), footings for the transmission towers would extend up to 10 m deep and would have the potential to encounter groundwater. Excavation for transmission tower footings would be short term and minimised where possible.<br>It is proposed that any groundwater which is evident in excavations will be either recharged into the groundwater aquifer at the same location or collected and taken off-site for disposal / treatment.<br>It is considered unlikely that more than 3 ML of groundwater will be extracted during construction activities. However, in the event that extraction of more than 3 ML per year of groundwater is required, a relevant water access license in accordance with the *Water Management Act 2000* would be obtained. | Section 16.4 of the EIS (Arcadis, January 2022)<br>Table 8-1 Mitigation Measures<br>• SC1<br>• SC4 |

## 4.5 Water NSW

A formal submission comprising a letter (dated 8 March 2022) was received from Water NSW. Comments have been summarised in the table below.

*Table 4-5: Response to Government agency submission – Water NSW*

| No. | Comment | Response | Reference |
|---|---|---|---|
| A5.1 | WaterNSW notes that the Water Quality Assessment – NorBE Report and associated MUSIC stormwater quality modelling demonstrate a Neutral or Beneficial Effects (NorBE) on water quality.<br>However, WaterNSW considers that the proposed stormwater management measures may not be sustainable for long-term maintenance and management for such a large asset.<br>WaterNSW suggests that stormwater management measures specific to land use and development shall be considered during the detailed design stage in consultation with WaterNSW. | The proposed stormwater management measures are considered appropriate and sustainable for a development of this scale. The strategy will however be reviewed during detailed design and refined where appropriate. | Section 16.4 of the EIS (Arcadis, January 2022)<br>Table 8-1 Mitigation Measure<br>• SC1 |
| A5.1 | WaterNSW requests the following documents are prepared in consultation with Water NSW:<br>• detailed stormwater management plan for a long-term sustainable stormwater management | A detailed stormwater management plan for a long-term sustainable stormwater management will be prepared during detailed design of the Project.<br>The detailed stormwater management plan would be prepared in accordance with the relevant legislation and guidelines. | Section 16.4 of the EIS (Arcadis, January 2022)<br>Table 8-1 Mitigation Measure<br>• SC4 |

| No. | Comment | Response | Reference |
|---|---|---|---|
| A5.1 | • management and maintenance of the stormwater management measures as a part of the Operational Environmental Management Plan (OEMP), and | As detailed in Section 4.4.3 of the EIS (Arcadis, January 2022), an Operational Environmental Management Plan (OEMP) would be prepared to provide the overarching framework for the management of all potential environmental impacts resulting from the operation of the Project. The OEMP would incorporate the stormwater management plan, discussed above. | Section 4.4.3 of the EIS (Arcadis, January 2022)<br>Table 8-1 Mitigation Measures<br>• SC1<br>• SC4<br>• WQF1<br>• WQF2 |
| A5.1 | • Conceptual Soil and Water Management Plan(s) for the Construction Phase of the Project. | As detailed in Section 16.4 and Table 16-2 of the EIS (Arcadis, January 2022) a SWMP and ESCP will be prepared and implemented as part of the Project Construction Environmental Management Plan (CEMP). The SWMP and the ESCP will be prepared and designed in accordance with:<br>• *Managing Urban Stormwater – Soils and Construction, Volume 2D* (Landcom, 2004)<br>• *Guidelines for Controlled Activities on Waterfront Land (NRAR 2018)*<br>• *Post Approval Guidance Environmental Management Plan Guidelines (April 2020)* | Section 16.4 and Table 16-2 of the EIS (Arcadis, January 2022)<br>Table 8-1 Mitigation Measure<br>• WQF1 |
| A5.1 | Water NSW also requests to remain as a stakeholder in any further assessment and consultation on this Project. | This comment has been acknowledged and the Applicant will continue to consult Water NSW during the development of this Project. | N/A |

## 4.6 Lithgow City Council

A formal submission comprising a letter (dated 7 March 2022) was received from LCC. Comments have been summarised in the table below.

*Table 4-6: Response to Government agency submission – Lithgow City Council*

| No. | Comment | Response | Reference |
|---|---|---|---|
| A6.1 | Council has no objection to the proposed development subject to the following recommended conditions be placed on the consent should the application be approved:<br>The mitigation measures for the key environmental issues identified within the Environmental Impact Statement are to be implemented with the additional plans submitted to Council for approval prior to commencement of work. These plans include:<br>• Construction and Operational Traffic Management Plan,<br>• Construction Noise and Vibration Management Plan,<br>• Erosion and Sediment Control Plan,<br>• Construction Flora and Fauna Management Plan,<br>• Landscape Plan, and<br>• Air Quality Management Plan. | As detailed in Section 4.3.9 of the EIS (Arcadis, January 2022), a CEMP would be developed that details environmental management systems and processes for construction of the Project. The CEMP would provide the framework for the management of all potential environmental impacts resulting from the construction activities. This would include:<br>• Construction and Operational Traffic Management Plan<br>• CNVMP<br>• ESCP<br>• Construction Flora and Fauna Management Plan (CFFMP)<br>• Landscape Plan<br>• Air Quality Management Plan (AQMP).<br>The CEMP would be prepared based on the mitigation and management measures identified in the EIS and updated in Table 8-1 of this RtS.<br>The specified documentation would be required to be prepared and approved prior to the commencement of works and adhered to for the duration of construction. | Section 4.3.9 of the EIS (Arcadis, January 2022)<br>Table 8-1 Mitigation Measures<br>• TA6<br>• NV3<br>• SC1<br>• B1<br>• V4<br>• AQ1-AQ8 |

| No. | Comment | Response | Reference |
|---|---|---|---|
| A6.2 | Prior to commencing any construction works, the following provisions of the *Environmental Planning and Assessment Act 1979* are to be complied with:<br>a. A Construction Certificate is to be obtained in accordance with Section 81A(2)(a) of the Act, and<br>b. a Principal Certifying Authority is to be appointed and Council is to be notified of the appointment in accordance with Section 81A(2)(b) of the Act and Form 7 of the Regulations, and<br>c. Council is to be notified at least two days prior of the intention to commence building works, in accordance with Section 81A(2)(c) of the Act in Form 7 of Schedule 1 of the Regulations. | Greenspot acknowledges that:<br>• In accordance with the Section 81A(2)(a) of the EP&A Act, the necessary construction certification would be obtained prior to construction commencing.<br>• LCC will be notified of the appointment of the Principal Certifying Authority in accordance with Section 81A(2)(b) of the EP&A Act and Form 7 of the EP&A Regulations.<br>• LCC will be notified at least two days prior of the intention to commence building works in accordance with Section 81A(2)(c) of the EP&A Act and in Form 7 of Schedule 1 of the EP&A Regulations. | N/A |
| A6.3 | Council would like the opportunity to enter into a Voluntary Planning Agreement (VPA) for community/public facilities and/or infrastructure for this Project. In accordance with the *Environmental Planning and Assessment Act 1979*, Council's Section 94A Contributions Plan imposes a 1% Contribution on all development over $200,000.<br>However, Council acknowledges that such a contribution may be inappropriate for projects of the type proposed by Greenspot. | Greenspot met with the General Manager of LCC on 15 March 2022 and commenced discussions regarding the potential for a VPA as contemplated in LCC's submission.<br>Greenspot has:<br>• Exchanged emails with the General Manager on 11 April 2022<br>• Discussed the matter with LCC's Director of Economic Development & Environment on 20 April 2022<br>• Had a follow up discussion with, and sent an email to, LCC's Director of Economic Development & Environment on 29 April 2022 regarding the elements of a potential VPA and next steps in negotiations. | N/A |

| No. | Comment | Response | Reference |
|---|---|---|---|
| | | The discussions are ongoing and Greenspot's current objective is to agree the terms of a VPA with LCC prior to the Determination date for the Project. | |

## 4.7 Transport for New South Wales

A formal submission comprising a letter (dated 18 March 2022) was received from TfNSW. Comments have been summarised in the table below.

*Table 4-7: Response to Government agency submission – TfNSW*

| No. | Comment | Response | Reference |
|---|---|---|---|
| A7.1 | **Safe Intersection Sight Distance**<br>Following a site visit TfNSW raises concern regarding available sight distance approaching the site from the south. Scaled plans are required to demonstrate sight distance is available at the proposed access to the Castlereagh Highway, a design speed of 110km/h needs to be adopted (refer to Table 3.2 of Austroads Guide to Road Design Part 4A).<br>Sight distance diagrams need to be provided using an eye height of 1.1m and a vehicle height of 1.25m showing the sight distance available both horizontally and vertically in accordance with Fig 3.2 Austroads Guide to Road Design Part 4A.<br>Where landscaping and/or fencing is proposed along the property boundary, the plan must demonstrate the landscaping and/or fencing will not compromise sight distance. | Arcadis has undertaken a Safe Intersection Sight Distance (SISD) assessment for the Project Site's proposed access point. The SISD assessment was based on the provisions of *Austroads Guide to Road Design - Part 4A: Unsignalised and Signalised Intersections.*<br>Figure 4-5 of the revised TIA shows the concept through which the SISD was calculated, using an eye height of 1.1 m and a vehicle height of 1.25 m.<br>Table 4-25 of the revised TIA details the calculated minimum SISD in both directions which is 309 m to the proposed access from the south and 280 m to the proposed access from the north. Based on a desktop assessment and as described in Section 4.1.3.6 of the revised TIA, it was concluded that sufficient SISD was available for the north to south movement along the Castlereagh Highway but that vegetation clearance would be required for the south to north approach along the Castlereagh Highway to achieve the minimum sight distance requirements for the SISD. The extent of vegetation clearance or maintenance would be determined during detailed design.<br>Plant Community Type (PCT) 677 *(Black Gum grassy woodland of damp flats and drainage lines of the eastern Southern Tablelands; South Eastern Highlands Bioregion*) (PCT 677_moderate) was only recorded within the proposed EIS construction footprint for the temporary intersection. The | Table 4-25 of the revised TIA (Appendix B of this RtS)<br>Section 4.1.3.6 of the revised TIA (Appendix B of this RtS)<br>Figure 4-5 of the revised TIA (Appendix B of this RtS)<br>Section 7.3 of this RtS |

| No. | Comment | Response | Reference |
|---|---|---|---|
| | | proposed 2D strategic intersection design (Figure 7-3) would result in a reduction from 0.24 ha to 0.01 ha of this vegetation type. The comparison of vegetation clearance required for the EIS and the 2D strategic intersection design is provided in Figure 7-4 and Table 7-2). An additional 0.09 ha of cleared exotic grassland and 0.01 ha of native/exotic roadside vegetation would be removed to accommodate the 2D strategic intersection design. This vegetation was assessed in the BDAR. This is further detailed in Section 7.3 of this RtS. | |
| A7.2 | **Traffic Impact Assessment**<br>Section 3.2.7 suggests that most of the construction traffic will arrive from the south from Lithgow and Sydney. Construction movements are anticipated to include 200 light vehicle trips per day, up to 40 heavy vehicle trips per day and up to 36 OSOM movements across the construction period which is expected to take 12-24 months to complete.<br>Section 3.4.1 suggests all construction movements will be outside of the AM/PM peak for Castlereagh Highway. There is minimal detail as to how this will be managed and enforced.<br>TfNSW requires a worst-case scenario to be provided in terms of traffic impacts on the surrounding road network. | Arcadis has undertaken a sensitivity analysis, using the peak hours between 6am and 7am provided by TfNSW. The workforce required for the construction stages would be drawn from the surrounding population including Wallerawang, Lidsdale, Cullen Bullen, Capertee in the north, Bathurst in the west and Lithgow in the south. It is envisaged that the bulk (95%) of the workforce will come from the south and west and 5% from the north consistent with population distribution. Table 3-2 of the TIA shows assumptions for the origins and destinations of the construction traffic generated.<br>As detailed in the TIA (Appendix B), to minimise the impact of construction traffic at the access intersection during the 6am to 7am period all traffic entering the site will be mandated to come from the south (i.e. northbound on the Castlereagh Highway). To achieve this, it is proposed that these vehicles would travel via Main Street and Barton Avenue through the town of Wallerawang, to access the site (refer to Figure 5-10). This results in a total of 100 trips per hour coming from the south to the access intersection. A maximum additional travel time of 10 minutes is expected with the proposed alternative | Section 5.1.5 of the revised TIA (Appendix B of this RtS)<br>Table 3-2 of the revised TIA (Appendix B of this RtS)<br>Table 8-1 Mitigation measure<br>• NEW TA2 |

| No. | Comment | Response | Reference |
|---|---|---|---|
| | | travel route for workers from the north which is not a significant impost.<br>The mandate will be enforceable with heavy disciplinary penalties, right turn camera monitoring and emphasised at Toolbox sessions with workers. | |
| A7.3 | Section 2.7.3 utilises the traffic volume viewer station (99084) for the background traffic. The traffic data from this station is from the year 2008 to 2012. The TIA suggests that a 3.7% growth rate has been adopted since the 2012 volume of 4988. Applying a 3.7% annual traffic growth rate since 2012 would equate to a 2021 AADT of 6918, this doesn't appear to be reflected within the TIA. | Arcadis acknowledges TfNSW's peak hour volume calculations of 554 to 692 vehicles per hour (based on the proposed 3.7% annual increase since 2012 AADT of 4988). Arcadis suggests that peak hour base volumes calculated from traffic counts conducted on the 30 March 2021 may provide a more accurate representation of peak hour volumes along the Castlereagh Highway.<br>Since 2012, when the baseline data for peak hour volumes was calculated, the Wallerawang Power Station has been decommissioned. It is likely that the presence of the workforce in 2012 would have been a key contributor to increased peak hour traffic volumes. The 2021 counts are also relatively unimpacted by the COVID-19 pandemic as surveys were not undertaken during a lockdown period. | Section 2.7.3 of the revised TIA (Appendix B of this RtS) |
| A7.4 | If peak hour volumes were adopted as per Austroads Guide to Traffic Management Part 6: Intersections, Interchanges and Crossings Management 'where peak hour volumes are not available, assume that the design peak hour volume equals 8-10% of AADT', the peak hour volumes would equate to between 554-692 vehicles per hour (based on the proposed 3.7% annual increase since 2012 AADT of 4988). The peak hour base volumes shown in the TIA (Tables 4.1 and 4.2) are based on the traffic counts conducted on 30th March 2021. | Arcadis acknowledges TfNSW's peak hour volume calculations of 554 to 692 vehicles per hour (based on the proposed 3.7% annual increase since 2012 AADT of 4988). Arcadis suggests that peak hour base volumes calculated from traffic counts conducted on the 30 March 2021 may provide a more accurate representation of peak hour volumes along the Castlereagh Highway.<br>Since 2012, when the baseline data for peak hour volumes was calculated, the Wallerawang Power Station has been decommissioned. It is likely that the presence of the workforce | Section 2.7.3 of the revised TIA (Appendix B of this RtS) |

| No. | Comment | Response | Reference |
|---|---|---|---|
| | | in 2012 would have been a key contributor to increased peak hour traffic volumes. The 2021 counts are also relatively unimpacted by the COVID-19 pandemic as surveys were not undertaken during a lockdown period. | |
| A7.5 | Consideration should be given to the timing and impacts of the works occurring as a part of the demolition of the Wallerawang Power Station on the proposed scheduling of the works proposed of the Wallerawang BESS. | Demolition of the Wallerawang Power Station is unlikely to coincide with the construction period of the Wallerawang BESS.<br>Demolition will be substantially completed within the next six months. | Section 23.2.2 and Table 23-1 of the EIS (Arcadis, January 2022) |
| A7.6 | The turn warrant assessment shown in Section 4.1.3.1 need to be updated with amended traffic volumes and demonstrating a worst-case scenario as per the above comments. Refer to Austroads Guide to Road Design (AGTRD) Part 6: Intersections, Interchanges and Crossings Management (Figure 3.25).<br>Notes:<br>• A strategic design for the determined access treatments/upgrades needs to be prepared to clarify the scope of works, demonstrate a compliant design can be constructed within the road reserve and allow the consent authority to consider any environmental impacts of the works. These impacts include traffic and road safety impacts as well as other impacts such noise, flora and fauna, heritage and impact to community.<br>• Swept paths are required that demonstrates the design vehicle can complete the left and right turn manoeuvre from the Castlereagh Highway into the unformed road, without impeding through traffic. | Section 4.1.3.1 of the revised TIA shows the updated turn warrant assessment, taking into account amended traffic volumes and demonstrating a worst-case scenario.<br>The turn lane warrant assessment was carried out for the following scenarios:<br>• Construction Year 2022 6am to 7am traffic conditions<br>• Construction Year 2023 6am to 7am traffic conditions<br>• Construction Year 2024 6am to 7am traffic conditions<br>Based on the expected peak hour traffic volumes in the period from 6am to 7am, the turn warrants assessment shows that an auxiliary left turn lane (AUL) treatment and basic right turn (BAR) treatment would be sufficient for the access to accommodate the construction stage turn movement volumes. An AUL(S) (short left-turn treatment AUL) has been adopted to avoid impact to the neighbouring intersection south of the access intersection. Predominantly, light vehicles will be accessing the intersection and the provided storage of 85m (excluding the taper) is more than adequate to cater for the expected demand from 6am to 7am. | Section 4.1.3.1 of the revised TIA (Appendix B of this RtS)<br>Figure 4-3 and Figure 4-4 of the revised TIA (Appendix B of this RtS) |

| No. | Comment | Response | Reference |
|---|---|---|---|
| | • Details of any ancillary works are to be provided including (but not limited to) line marking, intersection and road name signage, drainage transitions, batter slopes, vegetation removal, services relocation, and road reserve widening acquisition. Existing line markings and signage (such as the transverse yield lines) may need to be renewed as part of the works.<br>• The determined treatment will need to be designed for the 110km/h speed environment and is required to be designed in accordance with relevant Austroads Guide to Road Design, relevant technical directions and supplements. | A 2D strategic intersection design is appended to the revised TIA in Appendix E. No additional environmental impacts are anticipated with the strategic intersection design as the construction footprint for the EIS encompasses the strategic intersection design. Section 7.3 details information of the extent of vegetation impacted by the construction of the Project.<br>Updated swept paths for the intersection are provided in the TIA (Appendix B). Figure 4-3 shows the swept path assessment for the largest regular design vehicle (B-double – 26 m). Figure 4-4 shows the swept path assessment for OSOM vehicle (a-double – 36.2 m). The proposed layout is sufficient to accommodate for both B-doubles and the OSOM vehicles. | |

## 4.8 Forestry Corporation of NSW

A formal submission comprising a letter (dated 9 March 2022) was received from Forestry Corporation of NSW. Comments have been summarised in the table below.

*Table 4-8: Response to Government agency submission – Forestry Corporation of NSW*

| No. | Comment | Response | Reference |
|---|---|---|---|
| A8.1 | Thank you for the opportunity to comment on the above Project. Forestry Corporation of NSW has no comment to provide in relation to the EIS. Correspondence with Greenspot regarding potential impacts to State Forest are satisfactory and ongoing. | No further action is required for the RtS.<br>Greenspot would continue to consult with Forestry Corporation of NSW prior to construction and as required once the Project is operational. | N/A |

# 4.9 Heritage NSW (as delegate of Heritage Council of NSW)

Two formal submissions comprising two letters (dated 13 February 2022 and 25 February 2022) were received from Heritage NSW. Comments have been summarised in the table below.

*Table 4-9: Response to Government agency submission – Heritage NSW*

| No. | Comment | Response | Reference |
|---|---|---|---|
| A9.1 | The proposed SSD site is in the vicinity of State Heritage Register item Wallerawang rail bridges over Cox's River (SHR no. 01064).<br>The following reports were considered in our assessment:<br>• Historical Archaeology Assessment and Statement of Heritage Impact Wallerawang BESS- Greenspot by NGH Consulting dated October 2021 | Noted | N/A |
| A9.1a | • As delegate of the Heritage Council of NSW, I provide the following comments:<br>  • The identified sandstone culvert assessed as having local level significance in the SOHI may potentially have higher level significance therefore it is vital that any impact on the culvert is avoided. | As described in Section 13.3.1 of the EIS (Arcadis, January 2022), part of the railway embankment and sandstone culvert will be preserved during construction.<br>A new mitigation measure (NAH5) in Table 8-1 has been included and requires that the area around the culvert be demarcated as an environmentally sensitive zone prior to construction commencing. | Section 13.3.1 of the EIS (Arcadis, January 2022)<br>Table 8-1 Mitigation Measure<br>• NAH5 |
| A9.1b | • Recommendation 1 of the SOHI should be implemented to ensure there is no impact during construction works, including vibrations. | Mitigation measure NAH 3 has been modified on the basis of an evaluation carried out by a structural engineer during preparation of this RtS. The modified mitigation measure sets out a process to ensure that impact to the culvert is avoided. | Table 8-1 Mitigation Measure<br>• NAH3<br>Structural Report – Sandstone Culvert Integrity (Appendix E of this RtS) |

| No. | Comment | Response | Reference |
|---|---|---|---|
| A9.1c | • A structural engineer should be consulted in early stages of Project planning, prior to approval, to assess risks and advise on measures to avoid impact. | Heritage NSW has been contacted and has agreed to a desktop assessment of the sandstone culvert undertaken by a structural engineer.<br>A structural engineer has been engaged to assess the condition of the culvert and propose the necessary mitigation measures to minimise potential impacts to its integrity.<br>Mitigation measure NAH 3 has been modified on the basis of an evaluation carried out by a structural engineer during preparation of this RtS. The modified mitigation measure sets out a process to ensure that impact to the culvert is avoided. These mitigation measures would be included in the CEMP and OEMP. | Table 8-1 Revised Mitigation Measure<br>• NAH3<br>Structural Report – Sandstone Culvert Integrity (Appendix E of this RtS) |
| A9.1d | • Recommendations (2, 3 & 4) of the SOHI should also be implemented to manage impact. | Both the CEMP and OEMP would include mitigation measures and procedures for the management of unexpected archaeological / heritage finds.<br>Additionally as identified in Table 8-1 an additional Mitigation Measure NAH5, has been included to demarcate the culvert as an environmentally sensitive zone during construction and operation. | Table 8-1 Mitigation Measures<br>• NAH5 |
| A9.1e | • As local heritage items are affected by the proposal, advice should be sought from the relevant local council, including potential for listing of culvert on the LEP. | Consultation is currently in progress with LCC to include the sandstone culvert (Lot 3 DP1018958) in the Lithgow LEP.<br>The Statement of Heritage Impact (SOHI) (Appendix G of the EIS) and details about the sandstone culvert was submitted to LCC on 28 April 2022. Council will determine the significance of the heritage item and listing status. | N/A |

| No. | Comment | Response | Reference |
|---|---|---|---|
| A9.2 | Heritage NSW has reviewed the Wallerawang Battery Energy Storage System (SSD14540514) (Lithgow City) - Environmental Impact Statement (EIS) - with respect to Aboriginal cultural heritage (ACH). Heritage NSW has reviewed - Appendix F - Aboriginal Cultural Heritage Assessment Report – Wallerawang Battery Energy Storage System (SSD-14540514) (Lithgow City) prepared by NGH, October 2021, as requested. Please note that in future, NGH needs to supply an accessible copy of the ACHAR - due to limited recourses and tight timeframes requested by DPE, accessible documents are a necessity for timely responses to be provided. Due to this issue, I am only providing an email in response to the EIS.<br>Heritage NSW considers the assessment provided in the ACHAR as adequate, and as such, concurs with the recommendations provided. Heritage NSW has no additional comments or concerns in relation to this Project and does not require any future referrals in relation to additional stages of the assessment process in relation to Aboriginal cultural heritage. Please contact me directly should you require any additional information. | As described in Section 12.3.1 of the EIS (Arcadis, January 2022), The proposed construction footprint has been refined to avoid identified PAD's and to preserve and conserve landforms with *in-situ* archaeological potential.<br>The potential for impacts to Aboriginal heritage within the refined construction area footprint are considered very low given the history of extensive ground disturbance and that no artefacts were identified within the construction footprint.<br>Regardless, both the CEMP and OEMP would include mitigation measures and procedures for the management of unexpected archaeological finds. Additionally, as identified in Table 8-1 Mitigation Measure AH2, where areas are to be avoided, they would be demarcated as an environmentally sensitive zone during construction phases and during future use of the site. | Section 12.3.1 of the EIS (Arcadis, January 2022)<br>Table 8-1 Mitigation Measures<br>• AH1-AH5 |

## 4.10 DPE Crown Lands

A formal submission comprising a letter (dated 7 March 2022) was received from DPE Crown Lands. Comments have been summarised in the table below.

*Table 4-10: Response to Government agency submission – Heritage NSW*

| No. | Comment | Response | Reference |
|---|---|---|---|
| A10.1 | As no Crown land, roads or waterways are in the vicinity of the proposal/are affected by the proposal, Crown Lands has no comments at this time. | The comment has been acknowledged and no further action is required for the RtS. | N/A |

## 4.11 Department of Primary Industries - Agricultural Land Use

A formal submission comprising a letter (dated 28 February 2022) was received from DPI – Agricultural Land Use. Comments have been summarised in the table below.

*Table 4-11: Response to Government agency submission – DPI Agricultural Land Use*

| No. | Comment | Response | Reference |
|---|---|---|---|
| A11.1 | The NSW Department of primary Industries (DPI) Agriculture is committed to the protection and growth of agricultural industries, and the land and resources upon which these industries depend. In this case the development will not impact agricultural land so there is no comment<br>Our notification of the weed management issue at the SEARS level has been addressed as part of biodiversity management on the site.<br>We compliment the land use conflict risk assessment used at a very different scenario not related to agricultural land use! | The comment has been acknowledged and no further action is required for the RtS.<br>As discussed in Section 4.3.9 and Section 4.4.3 of the EIS (Arcadis, January 2022), a CEMP and OEMP would be prepared for the construction and operation of the Project. A CFFMP would be prepared as a sub-plan of the CEMP and would include measures to manage weeds. | Section 4.3.9 and Section 4.4.3 of the EIS (Arcadis, January 2022)<br>Table 8-1 Mitigation Measures<br>• B1 |

# 4.12 DPI Fisheries

A formal submission comprising a letter (dated 10 February 2022) was received from DPI Fisheries. Comments have been summarised in the table below.

*Table 4-12: Response to Government agency submission – DPI Fisheries*

| No. | Comment | Response | Reference |
|---|---|---|---|
| A12.1 | **Riparian Buffer Zones**<br>DPI Fisheries policy advocates the use of terrestrial buffer zones as per the Policy and Guidelines for Fish Habitat Conservation and Management (Update 2013) available on the Department's website at http://www.dpi.nsw.gov.au/fisheries/habitat/publications/policies,-guidelines-and-manuals/fish-habitat-conservation which states that *"NSW DPI will generally require riparian buffer zones to be established and maintained for developments or activities in or adjacent to TYPE 1 or 2 habitats or CLASS 1-3 waterways."*<br>The footprint of this development maintains adequate terrestrial buffers to both Lake Wallace and the Coxs River. | The comment has been acknowledged and no further action is required for this RtS. | N/A |

# 4.13 Fire and Rescue NSW

A formal submission comprising a letter (dated 7 March 2022) was received from FRNSW. Comments have been summarised in the table below.

*Table 4-13: Response to Government agency submission – Fire and Rescue NSW*

| No. | Comment | Response | Reference |
|---|---|---|---|
| A13.1 | Due to the unique challenges of combating a BESS fire in a regional location FRNSW make the following recommendations:<br>1. To ensure that the fire prevention, detection, protection and firefighting measures are appropriate to the specific fire hazards and adequate to meet the extent of potential fires, a comprehensive Fire Safety Study (FSS) is recommended to be undertaken.<br>2. That the FSS is developed in accordance with the requirements of Hazardous Industry Planning Advisory Paper No.2 (HIPAP No.2).<br>3. That the FSS is required to be developed to the satisfaction of the operational requirements of FRNSW. FRNSW recommend that the development of a FSS be a condition of consent.<br>4. That the development of the FSS considers the operational capability of local fire agencies and the need for the facility to achieve an adequate level of on-site fire and life safety independence. | The conditioning of a Fire Safety Study will be a matter for DPE. It is requested that consideration is given to the content of the proposed Emergency Response Plan (ERP) and any overlap is avoided. | N/A |
| A13.2 | Should a fire or hazardous material incident occur, it is important that first responders have ready access to information which enables effective hazard control measures to be quickly implemented. Without limiting the scope of the Emergency | Table 15-4 of the EIS identifies that an ERP will be prepared as part of the OEMP. This will include firefighting assistance (FRNSW & RFS) from nearby fire stations (i.e. Wallerawang, Lithgow, Lithgow West). | Table 15-4 and Section 14.3.1 of the EIS (Arcadis, January 2022) |

| No. | Comment | Response | Reference |
|---|---|---|---|
| | Response Plan (ERP), the following matters are recommended to be addressed:<br>1. That a comprehensive ERP is developed for the site. That the ERP specifically addresses foreseeable on-site and off-site fire events and other emergency incidents, (e.g. fires involving the BESS or solar panels, bushfires in the immediate vicinity or potential hazardous material incidents).<br>2. That the ERP detail the appropriate risk control measures that would need to be implemented in order to safely mitigate potential risks to the health and safety of firefighters and other first responders (including electrical hazards). Such measures would include the level of personal protective clothing required to be worn, the minimum level of respiratory protection required, decontamination procedures, minimum evacuation zone distances and a safe method of shutting down and isolating the BESS (either in its entirety or partially, as determined by risk assessment).<br>3. Other risk control measures that may need to be implemented in a fire emergency due to any unique hazards specific to the site should also be included in the ERP.<br>4. That two copies of the ERP are stored in a prominent 'Emergency Information Cabinet' which is located in a position directly adjacent to the site's main entry point/s.<br>5. An Emergency Services Information Package be prepared and located in the Emergency Information Cabinet.1 | Section 14.3.1 examines the use of Asset Protection Zones (APZ) on the Project Site. The APZ will provide an area from which to back burn or to conduct hazard reductions while also providing firefighters and first responders a relatively safe area to defend the property against fire.<br>The ERP will be further conditioned in the detailed design phase. | |

# 4.14 Geological Survey of NSW – Mining, Exploration and Geoscience

A formal submission comprising a letter (dated 14 February 2022) was received from Geological Survey of NSW – Mining, Exploration and Geoscience (MEG-GSNSW). Comments have been summarised in the table below.

*Table 4-14: Response to Government agency submission – MEG-GSNSW*

| No. | Comment | Response | Reference |
|---|---|---|---|
| A14.1 | MEG-GSNSW has reviewed the Environmental Impact Statement for Wallerawang Battery Energy Storage System and makes the following comment regarding:<br>Section 11.3.1 – Direct construction impacts states biodiversity credits are required to offset the impacts of the development. Retirement of credits may be achieved through contribution to the Biodiversity Conservation Fund (BCF).<br>MEG-GSNSW request to be consulted in relation to the proposed location of any biodiversity offset areas (should they be required) or any supplementary biodiversity measures to ensure there is no consequent reduction in access to prospective land for mineral exploration, or potential for sterilisation of mineral or extractive resources. | As required, MEG-GSNSW will be consulted in relation to the proposed location of any biodiversity offset areas selected by the Proponent | N/A |

# 4.15 NSW Rural Fire Service

A formal submission comprising a letter (dated 4 March 2022) was received from NSW RFS. Comments have been summarised in the table below.

*Table 4-15: Response to Government agency submission – NSW Rural Fire Service*

| No. | Comment | Response | Reference |
|---|---|---|---|
| A15.1 | The proposed development must comply with the bush fire report prepared by Bushfire Consulting Services Pty Ltd, ref. 21/0264, dated 8 July 2021. | Table 14-3 of the EIS identifies the extent of the Project APZ as to the boundary of the proposed BESS facility footprint or 100 m, whichever is the greater distance. An Inner Protection Area (IPA) of 20 m surrounding the associated infrastructure will be incorporated. Appropriate APZ's and IPA's will be agreed and implemented following the detailed design phase. | Table 14-3 Summary of Bushfire Mitigation Measures of the EIS (Arcadis, January 2022) |
| A15.2 | Any proposed Asset Protection Zones on an adjoining land for the proposed Battery Energy Storage System (BESS), switchyard, transmission line corridor and office must comply with the requirements under sections 3.2.5 or 3.2.6 of Planning for Bush Fire Protection 2019. | Table 14-3 of the EIS (Arcadis, January 2022) identifies that the curtilage surrounding the BESS shall be managed as an IPA and APZ for the life of the development. The extent of these zones will be to the boundary of the proposed BESS facility footprint or 100 m, whichever is greater. The Wallerawang Switchyard, 330 kV transmission line corridor and associated structures, and the office and carpark shall have a proposed IPA AND APZ of at least 20 m.<br>Appropriate APZ's and IPA's will be agreed and implemented following the detailed design phase. | Table 14-3 Summary of Bushfire Mitigation Measures of the EIS (Arcadis, January 2022) |

| No. | Comment | Response | Reference |
|---|---|---|---|
| A15.3 | A Fire Management Plan (FMP) must be prepared in consultation with NSW RFS Chifley/Lithgow Fire Control Centre. The FMP must include:<br>• Property Incident Plan (PIP)<br>• 24 hour emergency contact details including alternative telephone contact;<br>• Site infrastructure plan;<br>• Fire fighting water supply plan;<br>• Site access and internal road plan;<br>• Construction of Asset Protection Zones (APZ) and their continued maintenance;<br>• Location of hazards (Physical, Chemical and Electrical) that will impact on fire fighting operations and procedures to manage identified hazards during fire fighting operations;<br>• Such additional matters as required by the NSW RFS District Office (FMP review and updates). | Section 14.3.2 of the EIS (Arcadis, January 2022) states that a CEMP and OEMP would be prepared for the construction and operation of the Project. It identifies that a Bushfire Management Plan (BMP) and Emergency Evacuation Plan (EEP) would be prepared as part of the CEMP and OEMP. | Section 14.3.2 of the EIS (Arcadis, January 2022) |

# 5. Response to community submissions

Submissions were received from a total of seven community stakeholders as noted in Section 3.2.1 of this RtS. Submissions received from community stakeholders have been responded to in Table 5-1.

All submissions were in support of the Project, with positive feedback relating to the incorporation of renewables infrastructure and employment and economic opportunities relating to the Project.

*Table 5-1: Community submission responses*

| No. | Comment | Response | Reference |
|---|---|---|---|
| P1 | I am delighted to hear that a project like this is being planned in the Lithgow area. The closure of the coal-fired power station at Wallerawang no doubt had a negative effect on employment for the local community, so projects such as this are essential to restore local confidence and boost employment opportunities in the region. Whether people like it or not, the mining and processing of fossil fuels is dying out, and any projects related to the development of renewable energy is the way of the future. This is an opportunity for the Lithgow region to capitalise on this type of industry and promote the region as a hub for renewable energy. I very much hope that this Project receives approval and progresses quickly. | The comment has been acknowledged and no further action is required for the RtS. | N/A |
| P2 | Make Lithgow the leading example the rest of Australia needs to follow. | The comment has been acknowledged and no further action is required for the RtS. | N/A |
| P3 | I really think that battery storage is the way of the future because it supports renewable energy production. This provides jobs for our region that have a future also and will unite the community towards a common purpose. I would like to support this Project and hope there are more renewable energy projects in Lithgow Shire in the future. | The comment has been acknowledged and no further action is required for the RtS. | N/A |

| No. | Comment | Response | Reference |
|---|---|---|---|
| P4 | I would like to support this Project. As part of the Lithgow Shire community, who has lived here for nearly 50 years, this is the sort of project that we have been asking for - so that we can transition from fossil fuels and maintain employment in the district. It is important to maintain employment for our children and grandchildren so that the community doesn't die. We look forward to more projects which can support a renewable energy industry in Lithgow Shire. Thank you | The comment has been acknowledged and no further action is required for the RtS. | N/A |
| P5 | I am in favour of this Project as it is finally an indication that we are heading in the right direction & moving towards a more sustainable future, where we must move away from fossil fuels & embrace a combination of Renewables & this requires significant battery storage of power. An excellent initiative! | The comment has been acknowledged and no further action is required for the RtS. | N/A |
| P6 | This is an important Project for the region as it makes the transition away from coal power. This Project will assist to kickstart the transition and could help to attract other industries and other renewable energy projects to the area. As a nearby resident it is my observation that Greenspot have done a good job at keeping the community informed and involved in the Project. | The comment has been acknowledged and no further action is required for the RtS. | N/A |
| P7a | Dear Commission,<br>I'm a resident of Lithgow (Kanimbla Valley) and although our house has off-grid electricity supply with solar PV panels, I am in general support of transitioning all of Australia's electricity supply away from fossil fuels towards renewable energy. Climate change is an urgent and over-riding problem that needs to be addressed as soon as | The comment has been acknowledged and no further action is required for the RtS. | N/A |

| No. | Comment | Response | Reference |
|---|---|---|---|
| | possible. The Battery Energy Storage System (BESS) at Wallerawang will help to stabilise electricity supply by buffering intermittency from renewable energy. I'm fully supportive of this system being installed on the former site of a coal-power station and in a community dependent on providing energy services. Projects like these will help transitioning away from coal mining and securing employment in the region. | | |
| P7b | I do have on concern over safety, however. BESS like these can catch fire under certain operational or external circumstances. Bushfires can also occur in this area. | The comment has been acknowledged and no further action is required for the RtS.<br>In Section 14.1.2 of the EIS (Arcadis, January 2022), the LCC bushfire prone land map and Section 10.3 of the EP&A Act identified the Project Site as bushfire-prone.<br>As discussed in Section 14.3.2 of the EIS (Arcadis, January 2022), a CEMP and OEMP would be prepared for the construction and operation of the Project. A BMP and EEP would be prepared as part of the CEMP and OEMP.<br>Table 15-2 and Table 15-4 of the EIS (Arcadis, January 2022) details an ERP to be incorporated in the OEMP. Based on the controls the highest likelihood of events related to fire and/or explosions is rated as 'Very Unlikely'.<br>As discussed in Table 4-1 (item A1.1), the proposed energy storage capacity can be located within the area of the Project Site allocated to the battery units and the risk of fire propagation between battery units can be minimised through appropriate spacings. The information provided to DPE also demonstrated that the fire risks from batteries complies with *HIPAP No.4.* | Section 14.1.2 and Section 14.3.2 of the EIS (Arcadis, January 2022)<br><br>Table 15-2 and Table 15-4 Hazards and Risk Mitigation Measures<br>H&R10<br>Table 4-1 of this RtS |

| No. | Comment | Response | Reference |
|---|---|---|---|
| | | The battery units will also have controls and features of that are in compliance with the current guideline and standards (i.e. NFPA 855, UL9540, and UL 9540A). | |
| P7c | I request the operators and owner of the system to ensure that sufficient contingency measures are in place to avoid any potentially hazardous substances to escape from the system in case of a fire, neither into air, nor into soil or adjacent waterways (Cox River).<br>In particular the river must be protected from pollution, not just in normal operating mode but in extreme situations as well. | A detailed stormwater management plan for a long-term sustainable stormwater management will be prepared during detailed design of the Project. This would include details around the separation of clean and dirty water.<br>The detailed stormwater management plan will be prepared in accordance with the relevant legislation and guidelines and will be prepared in consultation with DPE NRAR and Water NSW.<br>Additionally, as detailed in Section 16.4 and Table 16-2 of the EIS (Arcadis, January 2022) a SWMP and ESCP will be prepared and implemented as part of the Project CEMP. The OEMP would also include measures to ensure that the operational stormwater management infrastructure would be appropriately managed and maintained to minimise any potential impacts during operation of the Project.<br>The SWMP and the ESCP will be prepared and designed in accordance with:<br>• *Managing Urban Stormwater – Soils and Construction, Volume 2D* (Landcom, 2004)<br>• *Guidelines for Controlled Activities on Waterfront Land (NRAR 2018)*<br>• *Post Approval Guidance Environmental Management Plan Guidelines (April 2020).* | Section 16.4 of the EIS (Arcadis, January 2022)<br>Table 8-1 Mitigation Measures<br>• SC1<br>• SC4<br>• WQF1<br>• WQF2 |

# 6. Response to organisation submissions

Three submissions were received from organisations regarding the Project, including the following:

- Bathurst Community Climate Action Network (BCCAN)
- Lithgow Environment Group Inc
- TransGrid

Responses to the issues raised in these submissions are included in Table 6-1 to Table 6-3.

*Table 6-1: Response to Organisations – Lithgow Environment Group Inc*

| No. | Comment | Response | Reference |
|---|---|---|---|
| O1 | We would like to express our support for the Development Consent of the above Project for the following reasons:<br>The proposed battery storage of electricity forms a vital part of the development of renewable energy.<br>It will provide some jobs in Lithgow's transition away from coal<br>It will form a first step in the transformation of the former Wallerawang coal power station to the exiting 'Greenspot 2845 Activity Hub'. We encourage the Department to approve application SSD-14540514 | The comment has been acknowledged and no further action is required for the RtS report. | N/A |

*Table 6-2: Response to Organisations – Bathurst Community Climate Action Network*

| No. | Comment | Response | Reference |
|---|---|---|---|
| O2 | Bathurst Community Climate Action Network is a network of organisations and individuals working together to promote action on climate change and sustainable and equitable development. BCCAN's members live across the region and some live quite close to the proposed battery Project at Wallerawang.<br>Without expertise to respond to specific details of Greenspot's Project, BCCAN strongly supports the Project in principle. As NSW, and the world in general, makes the urgently needed transition from fossil fuels to renewable energy, this Project utilises industrial land previously used to generate climate-endangering coal power and makes use of the existing electricity network infrastructure to advance the transition to a sustainable energy future. The uptake of rooftop solar and increasing establishment of wind and solar farms, while generating welcome cheap, non-polluting energy does create challenges for the electricity network. Battery storage domestically and industrially together with pumped hydro projects like Snowy 2 should enable the grid to better cope with fluctuations in supply and demand. Because of its siting on the apron of the existing power station, the Project, even in its construction phase, makes few additional demands on infrastructure and is not a threat to agricultural land, water supply or environmental values. The provision of energy storage so close to Sydney should incentivise the take-up of further domestic and commercial renewable energy investment across our region. | Table 24-1 from the EIS details the mitigation measures (B6) for the removal of hollow-bearing trees:<br>A two-stage approach to clearing will be undertaken which will include the following steps<br>• Remove non-hollow-bearing trees at least 48 hours before habitat trees are removed<br>• Hollow-bearing trees are to be knocked with an excavator bucket or other machinery to encourage fauna to evacuate the tree immediately prior to felling<br>• Felled trees must be left for a short period of time on the ground to give any fauna trapped in the trees an opportunity to escape before further processing of the trees<br>• Felled hollow-bearing trees must be inspected by an ecologist as soon as possible (no longer than two hours after felling). | Table 24-1 of the EIS (Arcadis, January 2022)<br>Table 8-1 Mitigation Measure<br>• B6 |

| No. | Comment | Response | Reference |
|---|---|---|---|
| | The EIS notes that the clearing of the site will require the levelling of 1.15 hectares of Black gum grassy woodland containing 6 trees with nesting hollows. It is important that this clearing should be undertaken without endangering any of the wildlife nesting in the trees and that a substantial additional replanting on other parts of the site should take place.<br>With this reservation, we wish Greenspot well with the Project. | | |

*Table 6-3: Response to Organisations - TransGrid*

| No. | Comment | Response | Reference |
|---|---|---|---|
| A16 | Although this is not actually a customer Project at present – the customer does not have a Project with TransGrid to develop the offer to connect, although they have advised they intend to do so. | Landowner consent has been provided in relation to TransGrid's Wallerawang 330kV Substation and TransGrid has advised Greenspot to follow TransGrid's usual processes in relation to applying for and entering into a connection agreement.<br>The final transmission line design and connection to the TransGrid Wallerawang 330 kV Substation will be undertaken in accordance with TransGrid's requirements and guidelines. | N/A |

# 7. Refinements

## 7.1 BESS design

The Noise and Vibration assessment included in Appendix D of the EIS (Arcadis, January 2022) was based on an indicative layout aimed to show that compliance with the *Noise Policy for Industry (NPfI)* and adopted noise criteria could be achieved. Through the during the response to submission process, further noise modelling was undertaken to address the submission raised by the EPA. This resulted in design refinements, including the installation of noise walls, which demonstrate that acceptable noise outcomes and compliance with the NPfI could realistically be achieved at sensitive receivers during operation. The modelling and design refinements are detailed in the revised NVIA (Appendix A). The refined operational layout as modelled in the NVIA is provided in Figure 7-1 of this RtS.

The refined layout is estimated to have around 270 enclosures, split up into five groups (i.e. 54 enclosures per group), with each group estimated to be 89 metres by 47 metres (0.437 ha). Indicatively, each enclosure would be 2.5 metres high, two metres wide and up to seven metres long. Each row of enclosures within the group would be separated from the adjacent row of units by around 15 metres. Each group is separated by 20 metres to provide sufficient space to undertake maintenance activities. The refined BESS design also includes a noise barrier surrounding the battery enclosures and inverter switchyard area.

The EIS originally proposed an area of 10-ha for the BESS and the refined layout can be accommodated within this area. No environmental impacts additional to what was assessed in the EIS are anticipated with this refined layout (refer to Appendix A - Revised Noise and Vibration Assessment and Appendix D– revised Visual Impact Assessment).

The areas for each component of the refined layout are summarised in Table 7-1. The five groups of battery enclosures are anticipated to require a total area of 2.2 ha in area, while the total area including spacing for maintenance purposes, battery enclosures, inverter switchyard and noise barriers is estimated to be 4.75 ha. The Wallerawang switchyard has decreased to 2.22 ha, while the areas required for the overhead transmission line and access road, office and amenities have not changed.

*Table 7-1: Refined indicative BESS design*

| Battery Component | EIS indicative BESS design (ha) | Refined indicative BESS design (ha) |
|---|---|---|
| Battery facility (including battery enclosures, inverter switchyard and noise barriers) | 10 | 4.75 |
| • Battery enclosures concrete pad | - | 5 x 0.44 = 2.2 |
| • Inverter switchyard | - | 0.82 |
| Wallerawang switchyard | 3.6 | 2.22 |
| Overhead transmission line corridor | 3.6 | 3.6 |
| Access road to BESS facility, office and amenities | 0.5 | 0.5 |

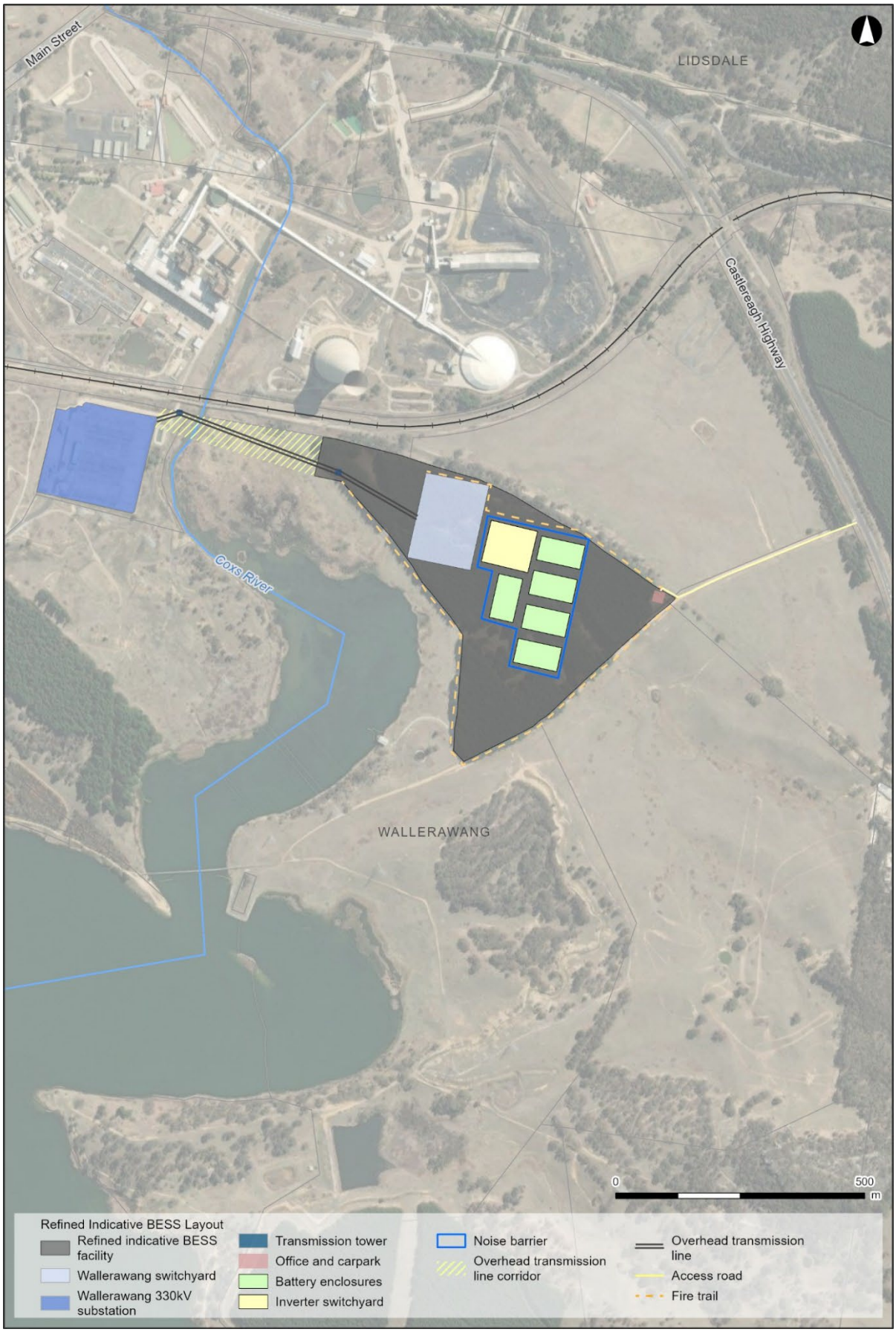



*Figure 7-1: Refined operational overview of the Project*

## 7.2 Sensitive receivers

Figure 7-2 displays a 500 m buffer surrounding the Project Site. Three sensitive receivers are located within 500 metres of the Project. This includes residences at Millers Lane, south-east of the Project Site. These receivers are most likely subject to noise impacts from the Project.

The other nearest noise sensitive receivers are located at the following approximate setback distances from the Project footprint boundary. These residents are mostly located in the residential area of Wallerawang:

- North (Main Street, Wallerawang):
  - 520 m from the Wallerawang 330kV substation
  - 920 m from the main BESS site boundary.
- South (Rocky Waterhole Drive, Wallerawang):
  - 1,500 m from the main BESS site boundary
- West (Blaxland Street, Wallerawang):
  - 530 m from the Wallerawang 330kV Substation
  - 1,100 m from the main BESS site boundary.
- East (Millers Lane):
  - 130 m from the site access road
  - 520 m from the main BESS site boundary.

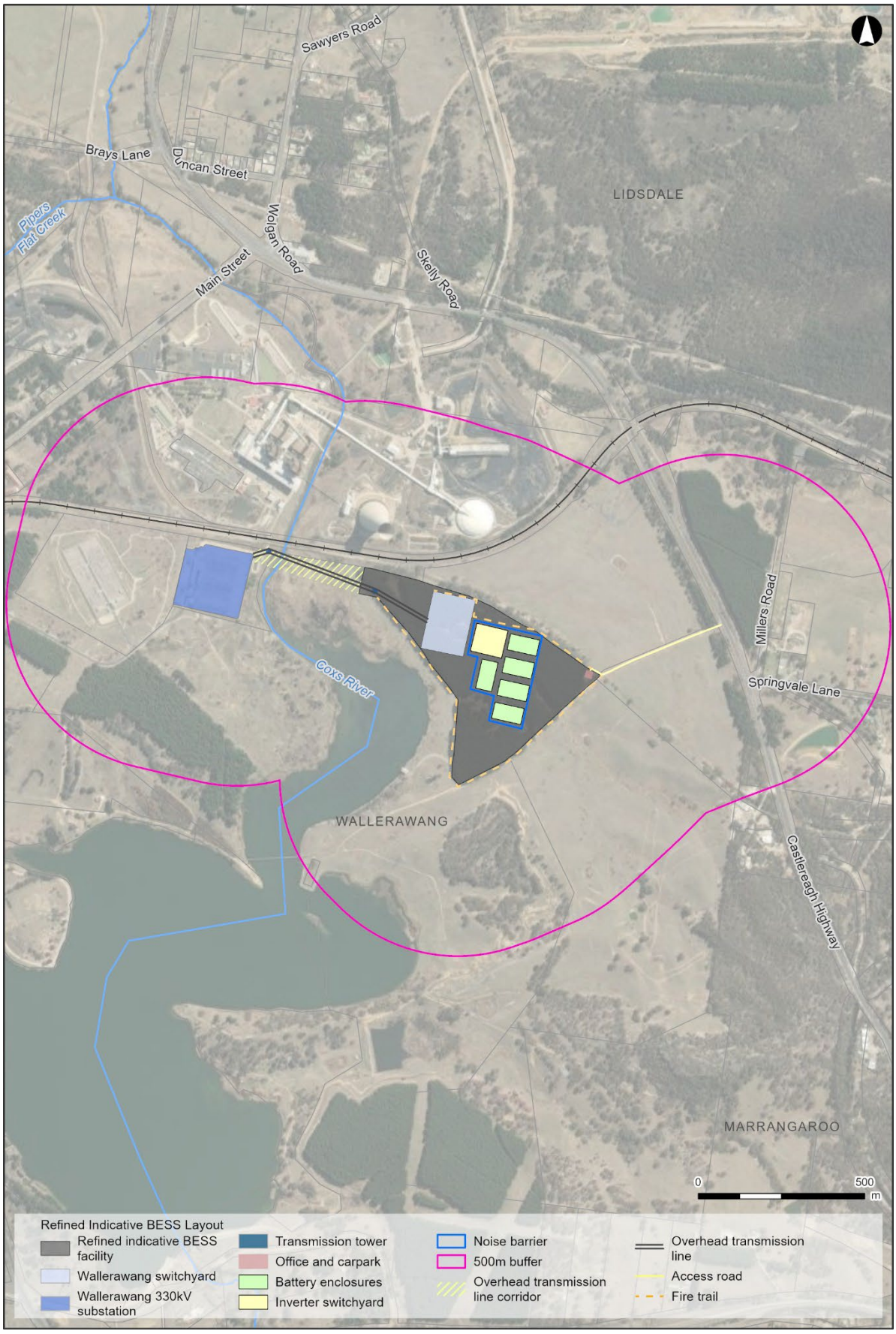



*Figure 7-2: 500 m buffer surrounding the Project Site*

## 7.3 Intersection design

At the time of preparing the EIS, it was determined that dedicated turn lanes on Castlereagh Highway for access to the Project Site during the construction phase was not required, but the intersection would be formalised to accommodate for the largest design vehicle (i.e. B-Double).

Following consultation with TfNSW during the response to submission phase, it was agreed that further sensitivity testing would be undertaken to examine the required intersection treatment for the worst-case scenario. This testing identified that an auxiliary left turn lane (AUL) treatment and basic right turn (BAR) treatment was required for the worst-case scenario during the construction phase. A vehicle swept path assessment for a B-Double truck was undertaken and demonstrated that the turning movements can be contained in the traffic lanes.

The indicative 2D strategic intersection design for the access treatment and swept path analysis has been provided in Appendix E of the revised Traffic Impact Assessment (Appendix B). The indicative 2D strategic intersection design is also included as Figure 7-3 of this RtS.

The strategic intersection design has also considered potential environmental impacts. All other environmental impacts including biodiversity, Aboriginal and non-Aboriginal heritage and socio-economic impacts within the formalised temporary access arrangement area (as show in Figure 1-2) were assessed within the EIS. No additional impacts, other than those assessed during the EIS, are anticipated with the proposed strategic intersection design.

The revised Traffic Impact Assessment (Appendix B) indicates that vegetation clearance would be required for the south to north approach along the Castlereagh Highway to achieve the minimum sight distance requirements. This would require vegetation clearance 309 metres south to north approach along the Castlereagh Highway to allow for the AUL into the Project Site. The extent of vegetation clearance or maintenance would be determined during detailed design. However, sufficient SISD was available for the north to south movement along the Castlereagh Highway.

Figure 7-4 shows the proposed vegetation clearance required at the intersection for the EIS design (shown by the black line) against the refined 2D strategic intersection design (shown as the purple line). The vegetation identified within the intersection footprint includes:

- Plant Community Type 677 (*Black Gum grassy woodland of damp flats and drainage lines of the eastern Southern Tablelands; South Eastern Highlands Bioregion)* (referred to as PCT 677_moderate)
- Cleared exotic grassland
- Native/exotic roadside vegetation

The BDAR estimated that 0.24 ha of PCT 677_moderate would be cleared for construction of the Project, noting that PCT 677_moderate was only recorded within the construction footprint of the intersection. With the refined strategic intersection design, the removal of PCT 677_moderate has been reduced from 0.24 ha to 0.01 ha. However, an additional 0.09 ha of cleared exotic grassland and 0.01 ha of native/exotic roadside vegetation would be removed to accommodate the intersection design. A summary of the vegetation clearance associated with the intersection design is provided in Table 7-2.

All vegetation present within the proposed intersection was assessed in the BDAR and will not impact vegetation removal calculations or off-sets detailed in the BDAR (refer to Table 8-1 and Table 10-1 of the BDAR provided in Appendix E of the EIS).

*Table 7-2: Comparison of vegetation removal for the EIS and RtS intersection design*

| Vegetation Type | EIS intersection design (ha) | Refined RtS design (ha) | Total refined RtS design (ha) | Difference |
|---|---|---|---|---|
| PCT 677_moderate | 0.24 | 0.01 | 0.01 | **-0.23** |
| Cleared exotic grassland | 0.37 | 0.09 | 0.379 | +0.09 |
| Native/exotic roadside vegetation | - | 0.01 | 0.01 | +0.01 |


*Figure 7-3: Proposed 2D strategic intersection design for construction*

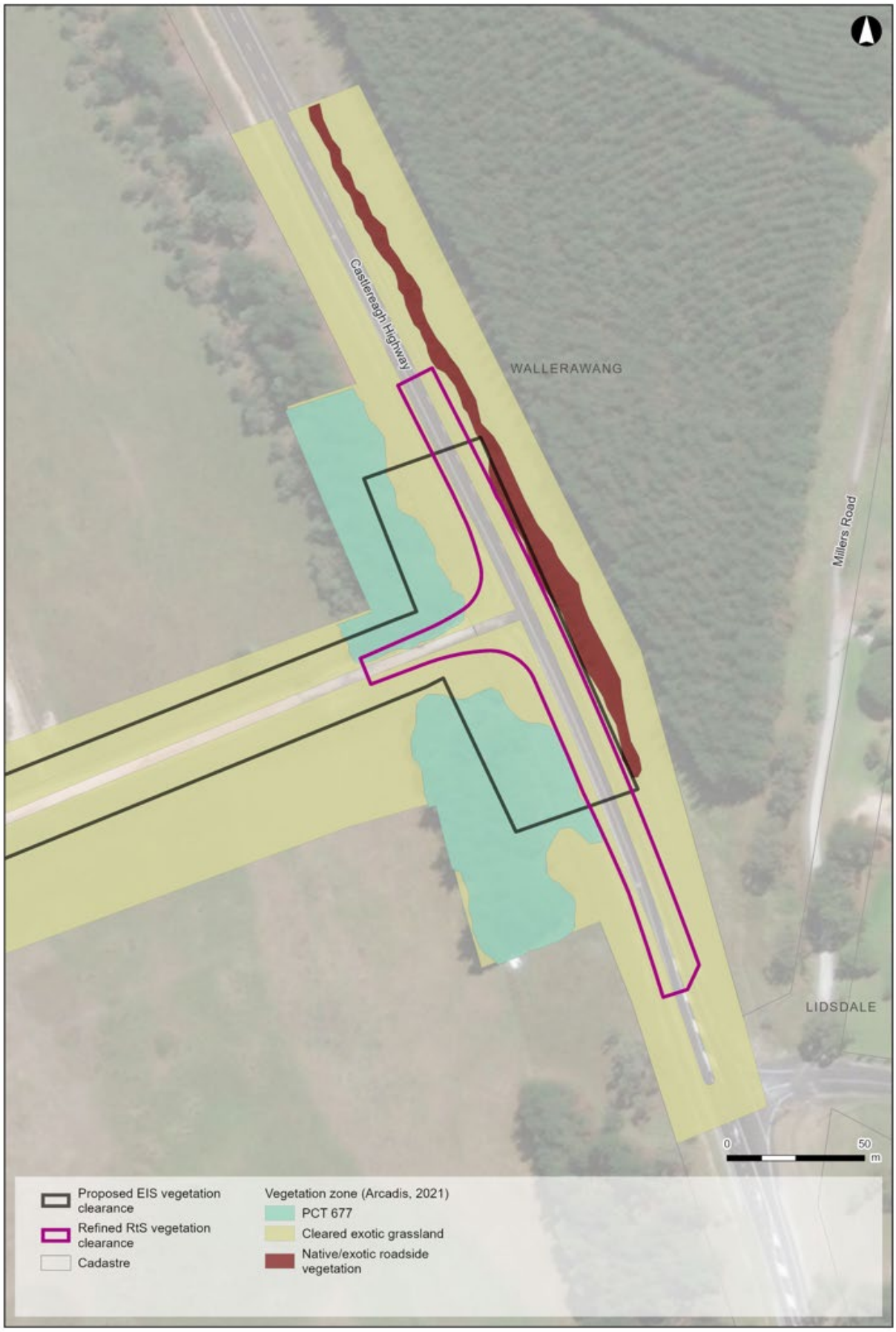



*Figure 7-4: Proposed EIS vegetation clearance and the refined RtS vegetation clearance*

# 8. Mitigation measures

## 8.1 Traffic and transport

In response to submissions regarding the EIS, Arcadis was required to provide a revised TIA (Appendix B) addressing issues of concern and clarifying risk mitigation measures (Table 4-7 of this RtS).

To ensure SISD compliance with Austroads *Guide to Road Design Part 4A*, Greenspot will undertake vegetation clearance to the south of the Project Site entrance. This ensures that the minimum SISD is achieved to the north and south of the Project Site entrance. This was considered within the construction footprint for the EIS. Approximately, 0.01 ha of PCT 677 (*Black Gum grassy woodland of damp flats and drainage lines of the eastern Southern Tablelands; South Eastern Highlands Bioregion*) would be impacted.

Sensitivity analysis using the provided 6am to 7am peaks was undertaken with risk mitigation measures in place to increase the safety of the workforce and community (Table 4-7 of the RtS). Updated turn warrant assessments were also completed, concluding that an AUL treatment and BAR treatment would be sufficient for the access to accommodate the construction stage turn movement volumes (Table 4-7 of this RtS).

Additionally, based on the workforce population distribution, it is estimated that 95 trips per hour will come from the south (left turn) and 5 trips per hour will come from the north (right turn). However, to minimise the impact of construction traffic at the access intersection during the 6am to 7am peak period, workers from the north will be mandated to come from the south (i.e., via Main Street and Barton Avenue through the town of Wallerawang) to access the site. This results in a total of 100 trips per hour coming from the south with all trips undertaking a left hand turn to the access intersection. This would be mandated and would be monitored through the installation of a camera at the intersection, enforceable with heavy penalties and emphasised at Toolbox sessions with workers.

In response to some potential ambiguity, mitigation measure TA1 (which relates to repair of road damage from construction activities) has been modified to provide more precise wording, the intent remains the same.

## 8.2 Noise and Vibration

In response to submission from the EPA, a revised NVIA was provided (Appendix A) in accordance with NPfI and ICNG, aligning with recommendations made by the EPA (Table 4-2). An operational noise assessment and mitigation measures were provided, based on data from a potential battery supplier with numerous significant systems in operation across Australia. This provided sufficient evidence for the NPL fan duty cycle readings at 20, 40 and 80 percent. In the event noise levels are unable to be reduced during detailed design, the Proponent will construct noise barriers surrounding the Project Site, ensuring no exceedance of PNTLs.

## 8.3 Biodiversity

The mitigation measures outlined in the EIS were found to be suitable to mitigate potential impacts associated with the Project. The BCS is satisfied with the biodiversity credits to be implemented in accordance with the BDAR, Appendix E of the EIS. The proposed location of the biodiversity credits will be determined through consultation with MEG-GSNSW.

A Biodiversity Memorandum (Appendix C) was provided by an Arcadis Ecology Team following a site walk-over. The assessment concluded that due to existing barriers to fish movement, the ephemeral nature of the creek and being significantly overgrown with weeds that impacts to the ephemeral creek from the Project were unlikely to affect aquatic fauna (Table 4-4). Furthermore, the harvesting of the forestry will potentially impact the ephemeral creek. The potential risk to fauna nesting in hollow-bearing trees will be mitigated through measures outlined in Table 6-2.

## 8.4 Water quality, hydrology and flooding

As outlined in the EIS, mitigation measures have been implemented to reduce the risks associated with water quality, hydrology and flooding. A Stormwater Management Plan will be prepared during detailed design in accordance with DPE NRAR and Water NSW (Table 4-5). Table 4-4 identifies the use of bioretention basins to mitigate the impacts of runoff contamination events. Impacts to the immediate and surrounding areas will be mitigated through the implementation of a SWMP and ESCP as part of the CEMP. The OEMP also ensures that maintenance of stormwater management infrastructure continues. Section 16.3 of the EIS outlines the potential for groundwater encounters when excavating transmission tower footings. These encounters are likely to be short-term, with any exceedance of 3 ML extraction of groundwater requiring the acquisition of the appropriate Water Access License (Table 4-4), if required a licence will be obtained.

## 8.5 Updated compilation of mitigation measures

The compilation of mitigation measures provided in Table 8-1 represent the final mitigation measures for the Project to be incorporated into the conditions of consent for the approval of the Project. Changes to mitigation measures from those presented in Table 24-1 of the EIS have been marked in bold.

*Table 8-1: Compilation of mitigation measures*

| ID | Mitigation | Timing |
|---|---|---|
| **Traffic and access** | | |
| TA1 | **A visual pavement condition assessment and dilapidation survey of Castlereagh Highway will be undertaken prior to construction and post final stage of construction activities to identify any damage caused by construction traffic to local roads. Any damage identified as a result of the project would be remedied, if necessary.** ~~Following completion of construction, the pavement condition of the Castlereagh Highway will be returned to the same or better, than that identified during the initial visual pavement condition assessment.~~ | Construction |
| ~~TA2~~ | ~~A reduction in speed limit on the Castlereagh Highway (in the vicinity of the Project) during construction from 100 km/h to 80 km/h.~~ | ~~Construction~~ |
| **NEW TA2** | **During the 6am to 7am period, construction traffic will access intersection from the south only. This will be mandated and monitored through the installation of a camera at the intersection, enforceable with heavy penalties and emphasised at Toolbox sessions.** | **Construction** |
| TA3 | Advanced truck turning signage during construction will be installed to warn road users that heavy vehicles may be turning in and out of the Project Site access. | Construction |
| TA4 | All temporary road works at the Project Site access road, including diversion and signage, will be constructed in accordance with relevant road design and road sign manuals. | Construction |
| TA5 | Construction activities and vehicle movements will be minimised where reasonable and during background peak hours. | Construction |
| TA6 | A Construction Traffic Management Plan (CTMP) will be developed prior to construction as part of the CEMP for the Project. The CTMP will include details on:<br>• Road safety measures including speed restrictions, driver fatigue, in-vehicle communications, signage, demarcations, maintenance, safety checks, and interaction with public transport, transport of hazardous and dangerous goods and emergency response and disaster management.<br>• Details of a travel demand management (TDM) campaign to inform the public on works and their effect on network operations<br>• Hours of work and deliveries, staff transport and staff parking | Construction |

| ID | Mitigation | Timing |
|---|---|---|
| | • A process for ongoing consultation with relevant authorities<br>• A process for developing specific traffic management plans for special events developed in conjunction with the relevant stakeholders<br>• A process for managing OSOM deliveries<br>• Secondary alternative construction route activities for use in the event of the primary route is blocked off by an emergency<br>• Signage that would be established within and surrounding the Project site | |
| TA7 | An Operational Traffic Management Plan (OTMP) will be developed as part of the OEMP for the Project. | Operation |
| **Noise and vibration** | | |
| NV1 | Detailed design will aim to ensure compliance with the Project specific noise criteria. If and where required, this will include adjustments to the choice of equipment, refinements to the facility layout, or mitigation that does not introduce additional environmental impact. If full compliance is unable to be achieved in detailed design optimisation, management measure NV8 will apply. | Detailed design |
| NV2 | The community consultation developed and implemented for the Project would include a procedure for notifying noise-sensitive receivers about the works and their expected duration. | Pre-construction and construction |
| NV3 | Prepare and implement a Construction Noise and Vibration Management Plan (CNVMP) as part of the CEMP that identifies feasible and reasonable approaches to reduce noise and vibration impacts during construction of the Project. | Pre-construction |
| NV4 | Implement a 24-hour hotline and complaints management procedure for noise and other construction related complaints | Pre-construction and construction |
| NV5 | Works will be programmed to occur during standard working hours only. These hours are:<br>• 7 am to 6 pm, Monday to Friday<br>• 8 am to 1 pm, Saturday<br>• No work on Sundays or public holidays.<br>If works must occur out of hours for justified reasons (e.g. worker safety or reduction of impact on traffic), preference should be given to day and/or evening time works (i.e. between 7 am and 10 pm). | Construction |

| ID | Mitigation | Timing |
|---|---|---|
| | Out of Hours works would be separately assessed with appropriate noise mitigation and community consultation implemented as necessary based on the level of predicted impact. | |
| NV6 | Worksite induction training and 'toolbox talks' will include education for workers on noise issues related to the site (e.g. workers will be advised to avoid shouting or whistling on-site near sensitive receivers). | Construction |
| NV7 | The OEMP will include measures and processes for managing noise resulting from the operation of the Project, including a process for managing complaints. | Operation |
| NV8 | If compliance with the Project specific noise criteria is unable to be achieved through detailed design, the facility will be operated with limitations on fan duty to ensure full compliance. | Operation |
| **Soil and contamination** | | |
| SC1 | A detailed ESCP as part of the CEMP, in accordance with *Managing Urban Stormwater – Soils and Construction, Volume 2D* (Landcom, 2004). | Construction |
| SC2 | An Unexpected Finds Protocol will be included in the CEMP to manage any disturbance of material that is odorous, stained or containing anthropogenic materials, in the event these are encountered during construction | Construction |
| SC4 | The OEMP prepared for the Project will include measures to manage any spills that occur during operation. | Operation |
| **Biodiversity** | | |
| B1 | A CFFMP would be prepared. Clearing of native vegetation and threatened species habitat within the Project Site would not occur until the CFFMP is approved. This CFFMP would include the following:<br>1) Plans showing areas to be cleared and areas to be protected, including exclusion zones, protected habitat features and revegetation areas<br>2) Pre-clearing survey requirements<br>3) Procedures for unexpected threatened species finds and fauna handling<br>4) Protocols to manage weeds and pathogens. | Construction |
| B2 | Pre-clearing surveys would be undertaken to identify any breeding or nesting activities by native fauna in hollow-bearing trees and native vegetation. No breeding attempts or active nests should be disrupted, as far as practical. | Construction |

| ID | Mitigation | Timing |
|---|---|---|
| B3 | Site inductions for construction staff will include a briefing on the potential presence of threatened species and their habitat adjacent to the development site, their significance and locations and extents of no-go zones. | Construction |
| B4 | Clearance of native vegetation would be minimised as far as is practicable. | Construction |
| B5 | The limits of vegetation clearing would be marked on plans and on-site with signed fencing so that clearing activities are constrained to approved areas only. | Construction |
| B6 | A two-stage approach to clearing will be undertaken which will include the following steps:<br>1) Remove non-hollow-bearing trees at least 48 hours before habitat trees are removed<br>2) Hollow-bearing trees are to be knocked with an excavator bucket or other machinery to encourage fauna to evacuate the tree immediately prior to felling<br>3) Felled trees must be left for a short period of time on the ground to give any fauna trapped in the trees an opportunity to escape before further processing of the trees<br>4) Felled hollow-bearing trees must be inspected by an ecologist as soon as possible (no longer than two hours after felling). | Construction |
| B7 | A pre-start-up check for sheltering native fauna of all infrastructure, plant and equipment and/or during relocation of stored construction materials would be undertaken. | Construction |
| B8 | If any pits/trenches are to remain open overnight adjacent to native vegetation, they would be securely covered, if possible. Alternatively, fauna ramps (logs or wooden planks) would be installed to provide an escape for trapped fauna. | Construction |
| B9 | Appropriate sediment and erosion controls would be installed prior to the commencement of earthworks and construction, around the impact area, to reduce run-off into adjoining vegetation and downstream to the Coxs River and Lake Wallace. | Construction |
| B10 | Where possible, earthworks would be undertaken during dry weather conditions. Clearing of vegetation should be avoided during overland flow events. | Construction |
| **Aboriginal heritage** | | |
| AH1 | No ground disturbing activities are to take place within a 5 m buffer of the marked PAD boundaries of Wallerawang BESS AFT + PAD 01 (AHIMS ID# 45-1-2844) and Wallerawang BESS IF + PAD 02 (AHIMS ID# 45-1-2843). | Construction |

| ID | Mitigation | Timing |
|---|---|---|
| AH2 | The boundary of Wallerawang BESS AFT + PAD 01 (AHIMS ID# 45-1-2844) and Wallerawang BESS IF+ PAD 02 (AHIMS ID# 45-1-2843) will be demarcated as an environmentally sensitive zone during construction phases and future use of the site. | Construction |
| AH3 | In the unlikely event that human remains are discovered during the development, all work will cease in the immediate vicinity. The discovery will be reported to Enviroline, Heritage NSW, the local police and the RAPs. Further assessment will be undertaken to determine if the remains were Aboriginal or non-Aboriginal. | Construction |
| AH4 | Further archaeological assessment will be required if the Project activity extends beyond the construction footprint. This will include consultation with the RAPs and may include further assessment of impacts and mitigation measures and archaeological subsurface investigation. | Construction |
| AH5 | Construction teams and operations staff will receive cultural training to ensure they understand the cultural values of these sites and their connection to the surrounding landscape and the Local Wiradjuri Aboriginal community that continue to care for country. | Construction |
| AH6 | If unexpected heritage items are identified during construction, operation and maintenance, the Unexpected Finds Protocol (included in the CEMP and the OEMP) will be followed in line with the *NSW National Parks and Wildlife Act 1974*. | Throughout |
| **Non-Aboriginal heritage** | | |
| NAH1 | An archival recording of the railway embankment and culvert should be completed both before and after the proposed works. | Pre-Construction / Post-Construction |
| NAH2 | In the event of an unexpected archaeological/heritage item find during construction, works within the area should cease and a suitably qualified heritage professional be engaged to assess the significance and management of the finds. | Construction |
| NAH3 | Construction works are unlikely to cause secondary impacts on the culvert through vibrational impacts, ~~a structural engineer may be consulted to consider how vibration risks to the culvert can be minimised and avoided~~. However, **a geotechnical and acoustic engineer** would be engaged to assess the integrity of culvert during detailed design and would provide mitigation measures to minimise any impacts during construction and vibration. | Construction |
| **NAH5** | **The location of the culvert will be demarcated as an environmentally sensitive zone prior to construction commencing future use of the site.** | **Construction** |

| ID | Mitigation | Timing |
|---|---|---|
| NAH4 | It is possible that unexpected heritage items may be identified during operation and maintenance works. In this case, the Unexpected Finds Protocol (included in the OEMP) will be followed. | Operation |
| **Bushfire** | | |
| BR1 | At the commencement of the development, and for the life of the development the curtilage surrounding the proposed BESS shall be managed as an IPA and APZ in all directions for a distance of at least 100 m and otherwise to the boundary of the proposed BESS facility footprint whichever is the greater distance. | Construction / Operation |
| BR2 | The curtilage surrounding the proposed Wallerawang Switchyard, the 330 kV overhead transmission line corridor and associated structures, and the office and carpark shall be managed as an IPA and APZ from the proposed buildings in all directions for a distance of at least 20 m. | Operation |
| BR3 | Water supply will comply with the relevant requirement of Planning for Bushfire Protection 2019 Table 7.4a. | Operation |
| BR4 | A static water supply of two 20,000 L water tanks will be made available for fire suppression activities, with multiple tanks being provided as required. | Operation |
| BR5 | A connection for firefighting purposes is to be located within the IPA or non-hazard side and away from the structure | Operation |
| BR6 | Property access road will be two-wheel drive, all weather roads, with a minimum 4 m carriageway width | Construction / Operation |
| BR7 | Suitable access for a Category 1 fire appliances will be available to within 4 m of the static water supply | Construction / Operation |
| BR8 | Access to the site will comply with the relevant requirements of the PBP 2019 (Tables 7.4a and 5.3b) | Construction / Operation |
| BR9 | Vegetation within the overhead transmission line corridor will be managed in accordance with the ISSC3 *Guideline for Management Vegetation near Power Lines (November 2016)* | Operation |
| BR10 | A BMP will be prepared as part of the CEMP and the OEMP | Construction / Operation |

| ID | Mitigation | Timing |
|---|---|---|
| BR11 | An EEP will be prepared as part of the CEMP and the OEMP | Construction / Operation |
| **Hazard and risk** | | |
| H&R1 | Equipment and systems will be designed and tested to comply with relevant international and/or Australian standards (e.g. AS 5139) and guidelines. | Design |
| H&R2 | All staff working on-site will undertake a site induction/substation training (i.e. HV areas) appropriate to the work activities. | Operation |
| H&R3 | Installation and maintenance activities will be undertaken by trained personnel and by reputable contractors | Operation |
| H&R4 | All Decisive Voltage Classification (DVC) will be followed, and equipment marked accordingly. | Operation |
| H&R5 | An electrical switch-in and switch-out and BMS fault detection and safety shut-off protocol will be developed | Operation |
| H&R6 | Warning signs (e.g. electrical hazards, arc flash) will be installed on-site (as required) | Operation |
| H&R7 | Earthing will be installed as per manufacturer and standards requirements | Operation |
| H&R8 | Appropriate PPE for flash hazard within the arc flash boundary will be used by all staff working in this environment. Conductive items will not be worn while working on or near energised or live conductive parts (e.g. rings, jewellery). | Operation |
| H&R9 | Rescue kits (i.e. insulated hooks) will be available on-site | Operation |
| H&R10 | An ERP will be prepared as part of the OEMP, which will include firefighting assistance (FRNSW & RFS) from nearby fire stations (i.e. Wallerawang, Lithgow, Lithgow West) | Operation |
| H&R11 | The OEMP prepared for the Project will include procedures and measures for managing accidental spills during operation. | Operation |
| H&R12 | The site will be fenced off with appropriate security measures (e.g. locked gates, CCTV) and will also include hazard/danger signage. | Operation |
| **Water quality and flooding** | | |
| WQF1 | Prepare and implement a SWMP and ESCPs as part of the CEMP and in accordance with *Managing Urban Stormwater – Soils and Construction, Volume 2D* (Landcom, 2004). | Pre-Construction / Construction |

| ID | Mitigation | Timing |
|---|---|---|
| WQF2 | The OEMP, for the Project will include a management, maintenance and cleaning schedule to ensure that stormwater management system devices are regularly inspected and maintained. | Operation |
| **Visual amenity** | | |
| V1 | The design of the proposed BESS facility will consider the use of materials that integrate with the surrounding landscape. | Operation |
| V2 | Cut off and direct light fittings (or similar technologies) would be used where appropriate to minimise glare and light spill onto private property. | Operation |
| V3 | Reflective and glare materials and surfaces will be minimised, where possible. | Operation |
| V4 | ~~A Landscape Plan will help to integrate the Project into the surrounding landscape.~~<br>**In accordance with the preliminary landscape plan, establish perimeter screen planting around the BESS facility.** | Construction and Operation |
| **Air quality** | | |
| AQ1 | Reasonable and feasible dust suppression will be implemented during construction activities including the use of water tanks and/or carts, sprinklers, site exit controls (e.g. wheel washing systems and rumble grids) to minimise fugitive dust emissions. | Construction |
| AQ2 | Exposed areas or stockpiles will be stabilised and progressive rehabilitation undertaken where feasible | Construction |
| AQ3 | All vehicles transporting materials to and from the Project Site will be covered and secured | Construction |
| AQ4 | Speed limits (20 km/h) on the site will be established and enforced during construction | Construction |
| AQ5 | All plant and equipment will be inspected before it is used on-site and maintained in accordance with manufacturers specifications and would comply with relevant vehicle emission standards, where applicable. | Construction |
| AQ6 | All plant and equipment will be switched off when not in use for extended periods | Construction |
| AQ7 | An AQMP will be prepared as part of the CEMP to minimise the potential air quality issues associated with the construction activities | Construction |
| AQ8 | Dust and air quality complaints will be managed in accordance with the overarching complaints handling process for the Project. Appropriate corrective actions; if required, will be taken to reduce emissions in a timely manner. | Construction |

| ID | Mitigation | Timing |
|---|---|---|
| **Waste management** | | |
| W1 | All materials requiring removal from the Project Site will need to be classified in accordance with the NSW EPA (2014) *Waste Classification Guidelines*. This material should only be transported from the Project Site to an appropriately licensed landfill for disposal or to an appropriately licenced recycling facility which is licenced to receive this material. | Construction |
| W2 | The resource management hierarchy principles established under the WARR Act of avoid / reduce / reuse / recycle / dispose will be applied were feasible. | Construction |
| W3 | A Waste Management Plan will be prepared as part of the CEMP, detailing appropriate procedures for waste management in accordance with the waste management hierarchy. | Construction |
| W4 | Wastes will be appropriately transported, stored and handled in accordance with NSW EPA waste classification and in a manner that prevents pollution of the surrounding environment | Construction |
| W5 | The handling and management of special wastes will be carried out in accordance with relevant legislation, codes of practice and Australian standards | Construction |
| W6 | A Waste Register will be maintained for the duration of construction. The register will detail the type of waste, volume/quantity of waste and recycle/disposal option. | Construction |
| W7 | Working areas will be maintained, kept free of rubbish and cleaned up at the end of each working shift. | Construction |
| W8 | Waste will be managed and disposed of in accordance with the relevant applicable legislation, policies and guidelines, including the WARR Act and the *NSW Waste Avoidance and Resource Recovery Strategy 2014-21* (NSW EPA, 2014). | Operation |
| **W9** | **Any liquid waste generated through maintenance of the BESS, will be managed in accordance with the relevant applicable legislation, and guidelines and will be disposed of at an appropriately licenced facility that can accept liquid waste.** | **Operation** |
| **Climate change** | | |
| CC1 | Detailed design of the Project will consider:<br>• Including measures which reduce the velocity and volume of stormwater flows to reduce the potential for scouring to occur | Design |

| ID | Mitigation | Timing |
|---|---|---|
| | • A fire suppression system and appropriate access for fire fighters during bushfires<br>• A safety mechanism to shutdown BESS units during increased temperature days<br>• Materials able to effectively withstand excessive heat. | |
| CC2 | Management and mitigation measures identified in other EIS chapters and relevant technical papers that are relevant to the management of climate change impacts include:<br>Chapter 10 (Soils and contamination), specifically measures to manage impacts associated with stormwater runoff and drainage design of the Project<br>Chapter 14 and Appendix H (Bushfire Risk Assessment), specifically relating to the management of bushfire risks for the Project.<br>Chapter 15 and Appendix (Hazards and Risk)<br>Chapter 16, Appendix J (water quality) and Appendix K (flooding), specifically measures relating to the mitigation and management of flooding impacts to the Project during operation | Construction |
| CC3 | Management and mitigation measures identified in the EIS will be relevant for the duration of operation. | Operation |
| **Socio-economic** | | |
| SE1 | A Complaints contact number and email will be established for the duration of construction and a community complaints register will be maintained. Any complaints received from the community or other stakeholders will be appropriately investigated and if required, additional measures put in place to minimise further impacts. Feedback to complainants will be provided as soon as possible following the investigation. A complaints management process will be included in the CEMP. | Construction |
| SE2 | The OEMP will include measures to engage with stakeholders and to manage and respond to feedback received during the operation. | Construction |

# 9. Conclusion

Greenspot (the Applicant) is seeking approval for the construction and operation of a BESS located on the buffer lands of the decommissioned WPS (Project site). The Project would incorporate a BESS of up to 500 MW, providing up to 1,000 MWh of battery storage (two hours of storage at maximum discharge rate).

The EIS for the Project was publicly exhibited between 9 February 2022 and 8 March 2022. This RtS has been prepared to address comments raised by both government agencies and the community and organisations during the public exhibition of the EIS, as well as further clarification with agencies. This RtS provides further information and justification for the Project in order to respond to, and address, submissions received.

The EIS and supplementary assessments discussed in this RtS assessed the potential environmental impacts associated with the Project and identified additional mitigation measures. In response to potential traffic impacts, Greenspot proposes that all construction workers enter the Project Site from the south during the 6am to 7am peak, eliminating the need to perform a right-hand turn into the site. This would be mandated through the installation of cameras at the intersection, enforcing heavy penalties and providing emphasis on this during Toolbox sessions (Section 4.7).

Detailed in Section 4.9, the sandstone culvert identified within the Project Site would be subject to an exclusion zone to minimise the impacts associated with the construction phase, including from equipment and debris. Vibrational impacts of construction will be assessed and appropriate mitigation measures applied if necessary (vibration dampening, bearing pads and foundation isolation).

Maintenance of the BESS would require the appropriate treatment of any liquid waste generated. Detailed in section 4.2, any liquid waste generated would be adequately disposed of in accordance with the EPA guidelines at an appropriately licenced facility that can accept liquid waste.

The implementation of previous and additional mitigation measures will minimise the impact of the Project on the surrounding environment.

## 9.1 Overview of submissions and consultation

During the public exhibition period of the Project (9 February 2022 to 8 March 2022), submissions were invited from all stakeholders including members of the community and government stakeholders. A total of 10 public submissions (public and organisation) were received, with all submissions in support of the Project. 14 submissions from government agencies were also received.

This RtS includes consideration to all comments raised by stakeholders and provides additional information, where necessary, to respond to and close out all concerns raised.

## 9.2 Next steps

DPE will, on behalf of the NSW Minister for Planning, review and assess the EIS and this RtS. Once DPE has completed its assessment, a draft assessment report will be prepared for the Secretary of the DPE, which may include recommended conditions of approval.

Due to the number of submissions in support of the Project, IPC determination does not apply to the SSD Application.

Final conditions of approval and the Secretary's report will be published on the DPE's website immediately after determination (together with a copy of this RtS and all other relevant information).

Greenspot is committed to continuing to consult with stakeholders, including the community throughout the planning of the Project and future stages of development.

# 10. References

Arcadis (2022), *Wallerawang Battery Energy Storage System Environmental Impact Statement*, January 2022

Australian Mining (2010), *Wasting water on dust control*, https://www.australianmining.com.au/features/wasting-water-on-dust-control/

Department of the Environment (2014), *Environmental Management Plan Guidelines*

Department of Environment and Climate Change NSW (2009) *Interim Construction Noise Guideline*

Environment Protection Authority (2017), *Noise Policy for Industry*

Landcom (2004), *Managing Urban Stormwater: Soils and construction – Volume 1*

Natural Resources Access Regulator (2018), *Guideline for controlled activities on waterfront land*

NSW Government (2018), *Water Management (General) Regulation 2018*

Roads and Maritime Services (2016), *Construction Noise and Vibration Guideline*

Transport for NSW (2019), *Construction Noise and Vibration Strategy*

Weather Spark (ND), *Climate and Average Weather Year Round in Lithgow Australia*, https://weatherspark.com/y/144502/Average-Weather-in-Lithgow-Australia-Year-Round

# APPENDIX A REVISED NOISE AND VIBRATION IMPACT ASSESSMENT

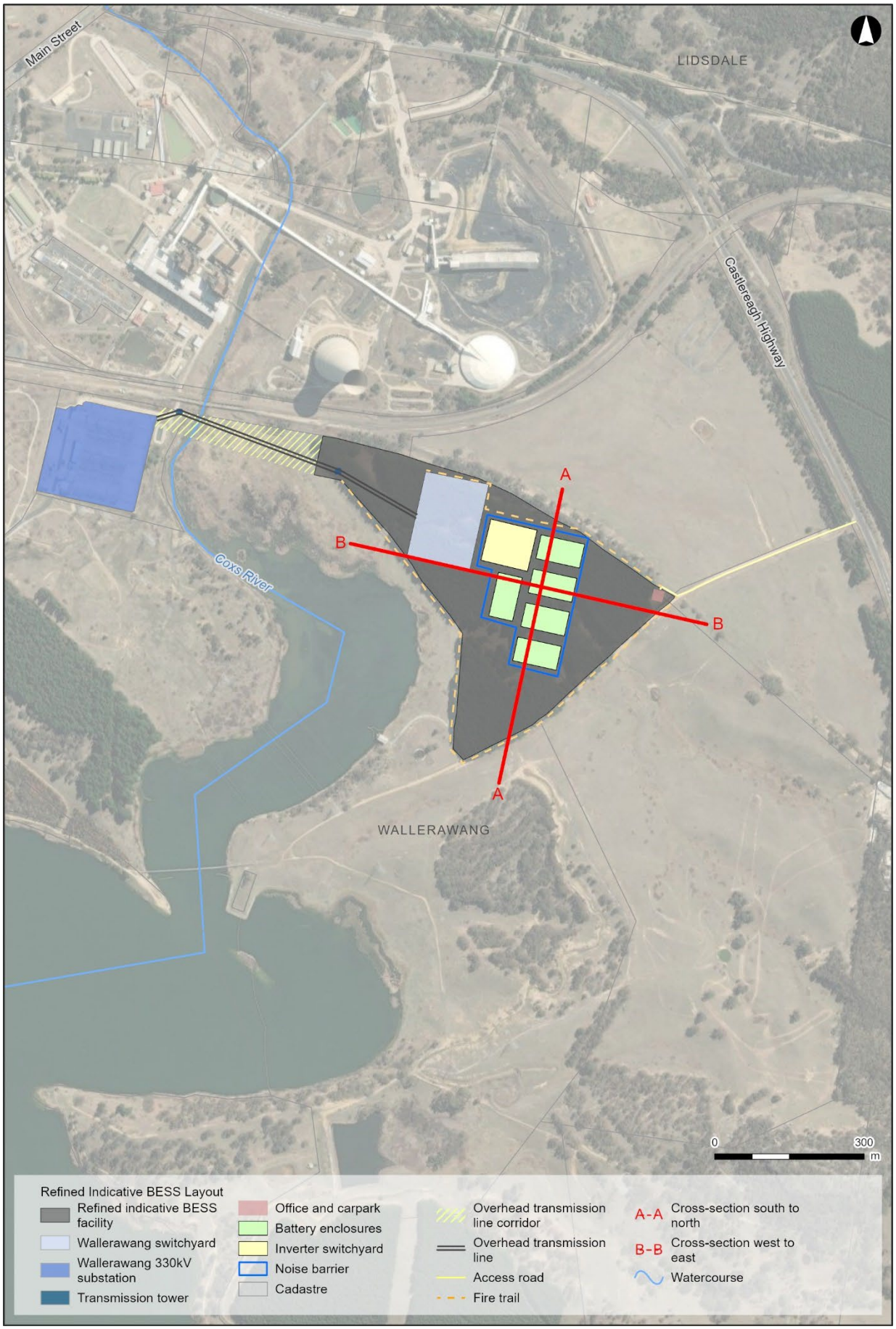
# APPENDIX B REVISED TRAFFIC IMPACT ASSESSMENT

# APPENDIX C BIODIVERSITY MEMORANDUM

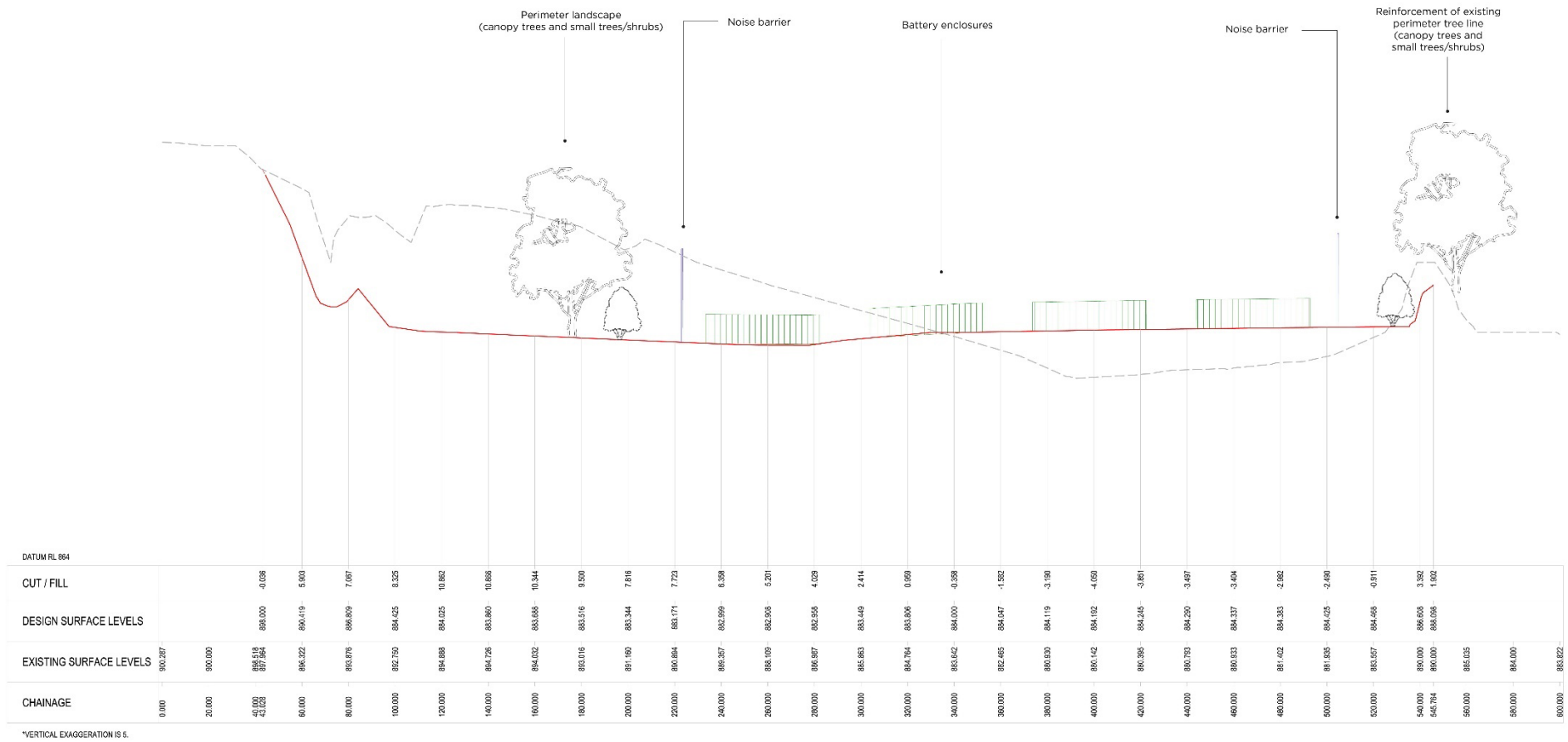
# APPENDIX D REVISED VISUAL IMPACT ASSESSMENT

# APPENDIX E STRUCTURAL REPORT – SANDSTONE CULVERT INTEGRITY

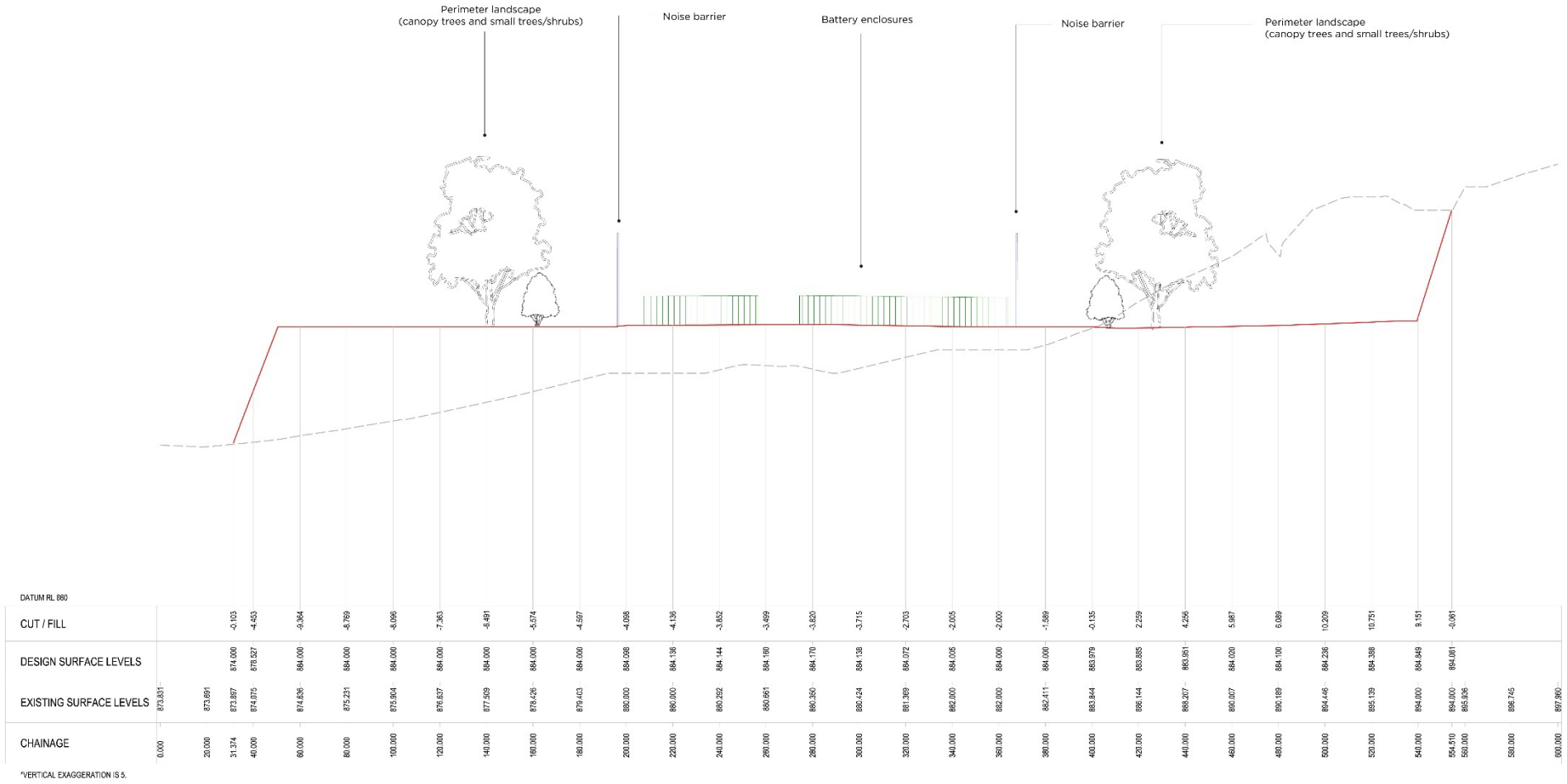
# APPENDIX F CROSS-SECTION DRAWINGS




*Cross-section overview*




*Cross-section A-A (south to north)*




*Cross-section B-B (west to east)*