Amendment Report

Calala Battery Energy Storage System
SSD-52786213

PREPARED FOR

EQUIS ENERGY (AUSTRALIA) PROJECTS (NGUMI 4) PTY LTD AS TRUSTEE FOR EQUIS ENERGY (AUSTRALIA) NGUMI 4 HOLDING TRUST PTY LTD

MAY 2024

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REVISION	REVISION DATE	STATUS	AUTHORISED: NAME & SIGNATURE
A	15 May 2024	Final	Adam Coburn 
B	24 May 2024	Final	Adam Coburn 

* This document is for discussion purposes only unless signed and dated by the persons identified.
This document has been reviewed by the Project Director.

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Executive Summary

This Amendment Report has been prepared on behalf of Equis Energy (Australia) Projects (Ngumi 4) Pty Ltd as trustee for the Equis Energy (Australia) Holding Trust for the amendment of a State Significant Development application (SSDA) (SSD-52786213) for a standalone battery energy storage system (BESS) and underground transmission cable connecting to the existing Tamworth substation. The land to which this project applies has not changed. The primary project address is 474 Calala Lane, Calala (Lot 17 DP629969) with ancillary works included on portions of Lot 16 DP629969, Lot 3 DP244399, Lot 4 DP244399, and Lot 6 DP219993 (the site).

The Calala BESS Environmental Impact Statement (EIS) and application were prepared in accordance with the Secretary's Environmental Assessment Requirements (SEARs), issued on 30 January 2023. The EIS was placed on public exhibition from 16 November 2023 to 13 December 2023. Responses were received from 12 agencies, Tamworth Regional Council (TRC), three (3) stakeholder groups and 24 individual objectors. Each of the submissions and concerns raised are addressed in the Submissions Report submitted separate to this Amendment Report.

In response to the submissions, the BESS has been reduced in scale with design improvements made to reduce any potential amenity impacts to surrounding sensitive receivers and the locality in general. The original application sought consent for a standalone battery energy storage system (BESS) with a storage capacity of up to 300MW and 1200MWh discharge capacity. The amendments proposed include the following:

- A reduced number of battery enclosures from 900 to 164.
- A reduced battery capacity from 300MW / 1200MWh to 300MW / 600MWh.
- The removal of the noise barrier from the northern elevation.
- The removal of the 4m tall nearfield HV transformer noise barriers.
- The provision of a landscaped mound along the northwestern interface approximately 130m long and 5m high.
- Retention of existing vegetation along the southern boundary.
- Provision of additional landscaping along the southern, western, and northern boundaries of the BESS.
- Minor realignment of the underground transmission cable at 474 Calala Lane, Calala.
- Minor benching and augmentation work at the existing Tamworth Substation located at 707 Burgmanns Lane, Calala.
- Use of the existing dwelling on site for the purposes of a temporary site office during construction.
- Widening of the site access point.
- Nomination of a larger temporary laydown, storage and parking area during construction.
- Minor reconfiguration of the high voltage connection asset.

Updated specialist documentation was commissioned to accurately reflect the amendments, including the following:

- Biodiversity Development Assessment Report prepared by Biosis
- Aboriginal Heritage Cultural Assessment and Historical Archaeological Impact Assessment Addendum prepared by Biosis.
- Bushfire Assessment Report prepared by Building Code & Bushfire Hazard Solutions
- Landscape Character and Visual Impact Assessment (LCVIA) Addendum prepared by Envisage
- Preliminary Hazard Analysis prepared by Sherpa Consulting.
- Transport Impact Addendum prepared by Stantec.
- Supplementary Environmental Noise Assessment prepared by Sonus.
- Social Impact Assessment (SIA) Addendum prepared by Urbis.

The updated specialist documentation is summarised in and accompanies this report. The amended project has been designed to respond to the site context and community expectations.

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The impact of the BESS on the locality has been reduced as a result of the scaled-back proposal, offering improved visual impact outcomes and removing the need for certain noise attenuation walls. Additionally, the traffic generation estimates during construction result in reduced traffic generation during the peak construction periods, and the construction vehicle access route has been amended to reduce the impact on the Calala township. Overall, the amended project results in an improved outcome for the locality with fewer environmental impacts.

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1 Introduction

This Amendment Report relates to the standalone battery energy storage system (BESS) proposed under SSD-52786213 with storage capacity of up to 300MW and 600MWh discharge capacity, and connection to the existing Tamworth substation via underground transmission cable, and ancillary works at 474 Calala Lane, Calala (the site) and has been prepared on behalf of Equis Energy (Australia) Projects (Ngumi 4) Pty Ltd as trustee for the Equis Energy (Australia) Holding Trust (the Applicant). This Amendment Report has been prepared following minor amendments and refinements made to the project in response to matters raised by the Department of Planning, Housing and Infrastructure (DPHI), and in submissions from public agencies, Council, and objectors.

The State Significant Development Application (SSDA) was lodged with the Department of Planning, Housing and Infrastructure (former DPE) in November 2023 (SSD-52786213). The SSDA was placed on public exhibition for 28 days between 16 November and 13 December 2023. Responses were received from 12 agencies, Tamworth Regional Council (TRC), three (3) stakeholder groups and 24 individual objectors. Each of the submissions and concerns raised are addressed in the Submissions Report submitted separate to this Amendment Report.

The original application sought consent for a standalone battery energy storage system (BESS) with storage capacity of up to 300MW and 1200MWh discharge capacity. The amendments proposed include the following:

- A reduced number of battery enclosures from 900 to 164.
- A reduced battery capacity from 300MW / 1200MWh to 300MW / 600MWh.
- The removal of the noise barrier from the northern elevation.
- The removal of the 4m tall nearfield HV transformer noise barriers.
- The provision of a landscaped mound along the northwestern interface approximately 130m long and 5m high.
- Retention of existing vegetation along the southern boundary.
- Provision of additional landscaping along the southern, western, and northern boundaries of the BESS.
- Minor realignment of the underground transmission cable at 474 Calala Lane, Calala.
- Minor benching and augmentation work at the existing Tamworth Substation located at 707 Burgmanns Lane, Calala.
- Use of the existing dwelling on site for the purposes of a temporary site office during construction.
- Widening of the site access point.
- Nomination of larger temporary laydown, storage and parking area during construction.
- Minor reconfiguration of the high voltage connection asset.

This Amendment Report has been prepared in accordance with the *State significant development guidelines – preparing an amendment report* (Appendix D) October 2022.

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2 Strategic Context

The strategic context remains unchanged since lodgement of the application. The project maintains alignment with the energy transition goals of the State in accordance with all relevant policies and strategies. The project is justified by the need for battery storage to support renewable energy sources, making them reliable and responsive to consumer demand. This alignment is demonstrated through:

NSW Electricity Infrastructure Roadmap: The BESS project aligns with the Roadmap's five foundational pillars by:

- Driving over $30 million investment in Regional NSW, creating significant employment opportunities and ensuring compatibility with the rural context.
- Enhancing energy storage infrastructure to firm the volatile nature of renewable energy, thus improving the electricity system's reliability.
- Supporting the New England Renewable Energy Zone (REZ) by its proximity, enhancing the integration of renewable energy into the grid.
- Contributing to grid security and reliability by providing up to 300MW of storage capacity, addressing future storage capacity requirements.
- Attracting businesses and fostering new industries through access to reliable and clean energy, underscoring the project's role in transitioning to a low-carbon future.

NSW Electricity Strategy: The project directly facilitates new energy generation sources to reduce electricity prices and protect the environment, aligning with the transition from coal to renewables. The BESS facilitates renewable energy firming, supporting the shift to a modern energy system and aligning with the principle of reducing electricity prices while ensuring reliability and environmental protection.

AEMO 2022 Integrated System Plan: The project is recognised for its role in providing medium storage capacity to support the variability of renewable energy supply and meet peak energy demands, contributing to the national goal of tripling generation and storage capacity by 2050.

Other Relevant Plans and Policies: The BESS aligns with international, Commonwealth, and NSW policies by contributing to emission reduction targets, supporting renewable energy through the Large Scale Renewable Energy Target, and aiding in achieving net-zero emissions as outlined in Australia’s Long-Term Emissions Reduction Plan and the NSW Climate Change Policy Framework. The BESS also aligns with the New England North West Regional Plan and the Tamworth Regional Local Strategic Planning Statement, demonstrating the project's compatibility with regional growth, resilience, and sustainability objectives. The BESS supports economic growth and community resiliencewithout adversely impacting cultural or heritage values. It represents a significant infrastructure upgrade, increasing electricity security and reliability for the region. The BESS’ alignment with state and local policies, alongside the project's contribution to the energy transition and sustainability goals of NSW, demonstrates its strategic alignment.

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3 Description of Amendments

In response to community feedback and further consultation with construction and delivery partners, the applicant has refined the project to better respond to matters raised while continuing to deliver a development that facilitates the energy transition and provides firming capacity for the electrical grid. The amended project summary is included in Appendix A. However, an overview of the changes proposed is outlined below.

3.1 Description of Amendments

3.1.1 Project Scale and Footprint Reduction

The development's revised design reduces the number of battery modules from approximately 960 battery enclosures, 120 inverters and transforms and 6 Ring Main Units (RMU) and auxiliary transformers, to 164 battery enclosures, 82 transformers and 16 RMU. This adjustment decreases the physical footprint while maintaining the 300MW capacity and reducing the discharge capability from 1,200MWh to 600MWh. This amendment provides a fully integrated product with a smaller footprint and fewer battery enclosures, no need for auxiliary distribution infrastructure, and provides proven grid-forming services beneficial to the NSW energy transition. Additionally, the BESS has increased the setback from the western and southern boundaries. An amended concept plan is provided in **Figure 1** that shows the scaled-back BESS, and a site comparison plan is shown in **Figure 2**.

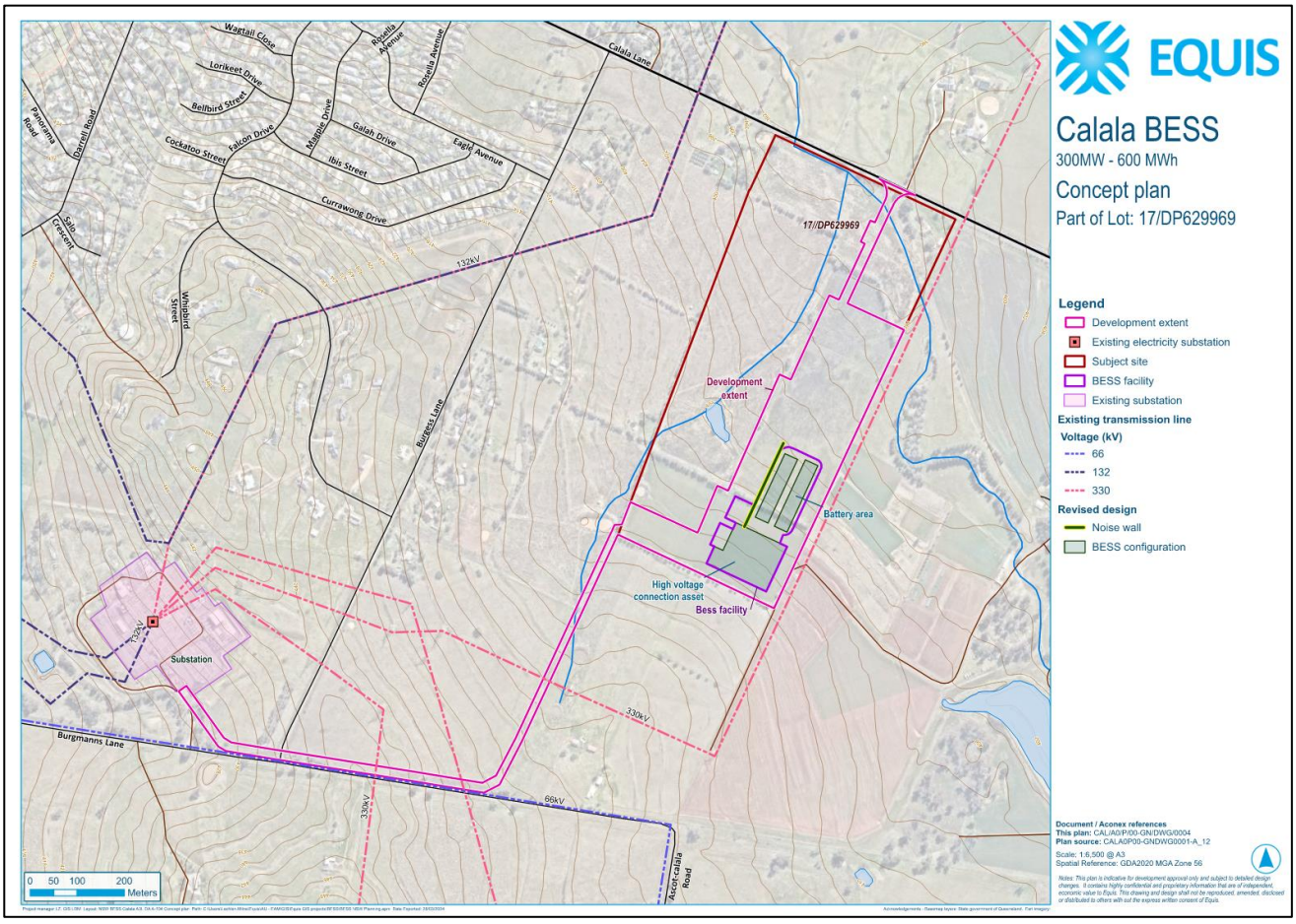

FIGURE 1 – AMENDED CONCEPT PLAN

Source: Equis

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The size of the battery enclosures with the new make and model has been reduced from being 2.8m tall and 3.2m wide to 2.8m tall and 1.6m wide. The enclosures were previously proposed to be coloured matte grey or a similar rural landscape colour in finish, which is now amended to be white with pre-fabricated cladding material.

The auxiliary transformers described in the EIS were 9 metres tall, with the amended auxiliary transformers being approximately 3 metres tall.

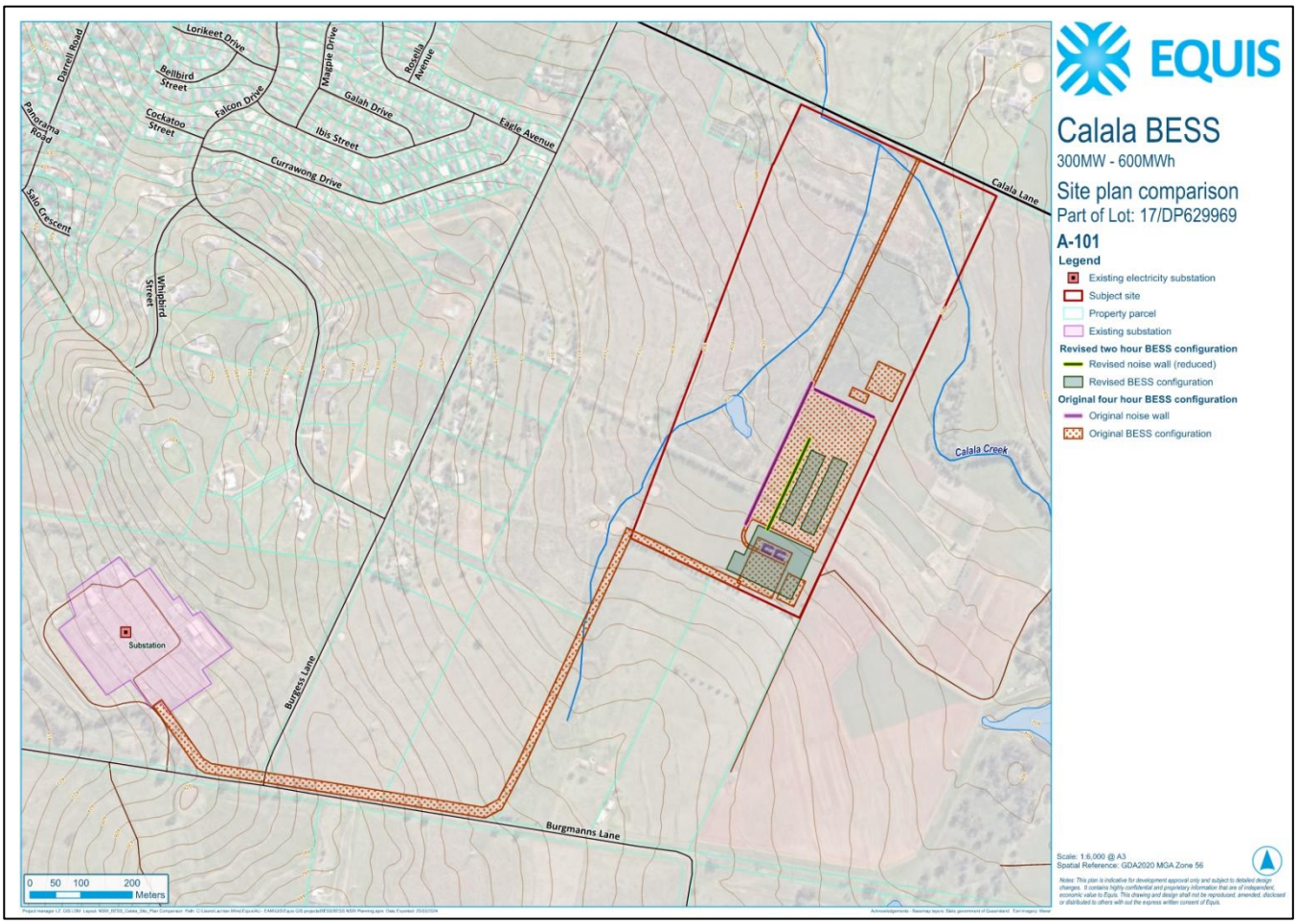

FIGURE 2 – SITE COMPARISION PLAN

Source: Equis

3.1.2 On-Site Substation, Transmission, and Tamworth Substation

The on-site substation has been redesigned to align with the specifications required by the Transmission Network Service Provider (TNSP). The project now also includes details of the connection to Tamworth substation at 707 Burgmanns Lane, Calala which forms part of the project site. The works at Tamworth substation are necessary to ensure the BESS's integration into the electrical grid and include minor benching, earthworks, and internal modifications.

The proposed transmission line along the southern boundary of Lot 17 (BESS site) has been relocated 33 metres from the boundary. This change allows for the introduction of additional landscaping between the boundary and the transmission line to reduce the visual impact of the BESS and improve landscape screening opportunities.

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3.1.3 Noise Attenuation Wall

A 5-metre-high noise attenuation wall, coloured multi-shade dark grey in line with the LCVIA recommendations, will be erected along the western elevation and removed from the northern elevation. This change reflects a reduction in the noise impact due to the scaled-back project, eliminating the need for the northern wall and nearfield HV transformer noise barriers. Refer to the western elevation shown in **Figure 3**.

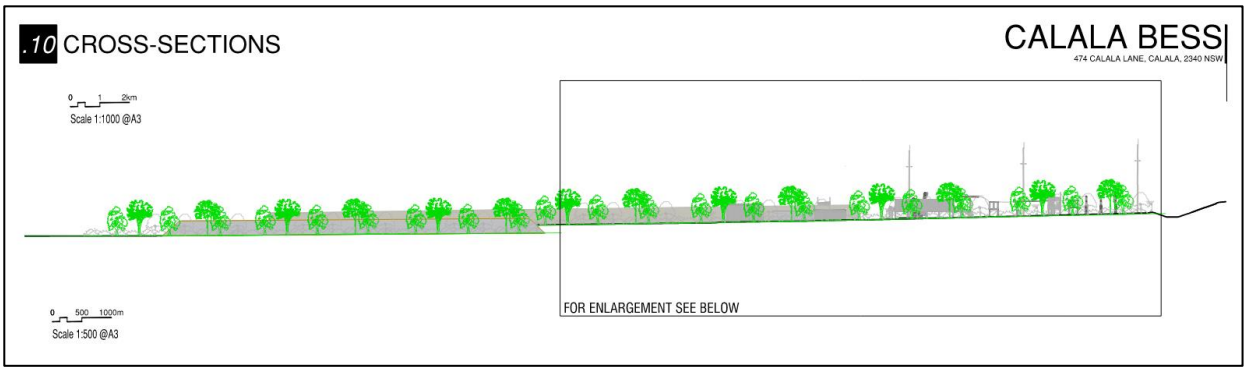

FIGURE 3 – WESTERN ELEVATION

Source: Equis

3.1.4 Construction and Delivery

Adjustments are made to construction and delivery schedules, aiming to mitigate peak traffic impacts and distribute deliveries more evenly throughout the year. The proposal initially estimated 4 Over Size Over Mass (OSOM) vehicle trips to the site, with the amended proposal now resulting in 7 OSOM vehicle trips to the site.

The site's existing dwelling will be repurposed as a temporary office during construction, with additional areas designated for temporary construction laydown, storage, and parking. To address peak traffic impacts, construction and OSOM delivery schedules have been optimised. The proposed heavy vehicle access route to the site has been revised to exclude the Calala township located west of Burgess Lane. The access and departure route comprises New England Highway, Nundle Road, O'Briens Lane and Calala Lane and has gained in-principle support from both Tamworth Regional Council (TRC) and Transport for NSW (TfNSW).

3.1.5 Civil Works and Site Access

The proposed construction laydown area has been refined as part of the amendments, with a repositioned, temporary stockpile area shown on the plans submitted with this amendment report. As noted in Table 1, all excess material will now be retained on site to form part of the proposed grassed earth mound discussed below.

Adjustments to the site entrance from Calala Lane have been made to ensure adequate access is provided for all vehicles accessing the site. The access road has been shifted slightly east and the access point at Calala Lane has been widened to provide suitable access for OSOM vehicles. Internal roads and on-site car parking will be designed in accordance with the relevant work specification, industry standards, Safety in Design (SiD) and the Australian Standards to the extent they are relevant to the nature of the project.

The proposed culvert crossing over Calala Creek will be designed to demonstrate consistency with the Guidelines for Controlled Activities on Waterfront Land, with the hydraulic assessment and calculations subject to detailed design.

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3.1.6 Landscaping

The amended proposal now includes a large 5 metre landscape strip along the southern boundary of the BESS which will be planted with new vegetation for screening. The existing vegetation along this boundary will be retained, but further enhanced with additional screen planting. The original proposal included no additional landscaping along this boundary.

In addition, the proposal now also includes construction of a grassed earth mound to the west of the noise wall with excess spoil to be retained on site, as described in Section 3.2.5. The mound will be approximately 130 metres long and up to 5 metres in height, which will further enhance the landscape screening and reduce the visual impact of the development.

3.1.7 Hours of Construction

The amended proposal nominates minor variations to the hours of construction. The initial proposed hours of construction comprised of Monday to Friday – 7am to 6pm, Saturday – 8am to 1pm and no work on Sundays or Public Holidays. These hours remain the proposed hours of construction, with the following flexibility incorporated for efficiency and compliance with network requirements:

1. Works associated with outages on the Electrical Transmission Network that are subject to network constraints may be undertaken outside of these standard hours.

2. Low noise generating construction and testing/commissioning activities that do not affect the nearest receivers may be undertaken outside of these hours such as minor civil works, electrical works, testing and commissioning.

3. If noise generating construction activities are to be undertaken outside of the standard hours, the potentially affected residents will be notified and an out of hours work protocol will be followed to ensure impacts are mitigated.

3.1.8 Staging

The proposed development described in the EIS was to be undertaken as a single stage development. The amended proposal seeks to incorporate opportunities for the use and construction of the development to be staged including the preparation of plans, strategy or programs as required by consent. A strategy, plan or program required by development consent therefore may be provided on a staged basis subject to the approval of the Planning Secretary.

3.1.9 Amended Assessment

The accompanying documentation has been updated to account for the amended project scope, including:

- An expanded assessment area and further targeted surveys for the Biodiversity Development Assessment Report.
- An expanded assessment area for the Aboriginal Heritage Cultural Assessment and Historical Archaeological Impact Assessment Addendum that encompasses the entire allotment that accommodates the BESS footprint, underground transmission cables, and additional areas around the Tamworth substation.
- The Bushfire Assessment Report is updated to amend the Asset Protection Zones (APZs).
- A revised Landscape Character and Visual Impact Assessment (LCVIA) taking into account the reduced visual impact as a result of the scaled-back project and additional landscaping.

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- The supplementary ENA, including a response to concerns from neighbouring properties, confirms the minimised and compliant acoustic impacts of the scaled-back project.
- In light of the revised battery make and model, a revised Preliminary Hazard Analysis (PHA) accompanies the amendment report to reflect these changes with updated safety procedures.
- A letter accompanying the Transport Impact Assessment taking into account the reduced construction traffic volumes, extended construction timeline, and the relevant vehicle routes.
- The Social Impact Assessment (SIA) to account for the scaled-back proposal, reduced environmental impact and a Voluntary Planning Agreement proposed with the Tamworth Council.

3.2 Supporting Documents

The following documents have been prepared to support the additional information and amendments in response to the submissions received.

TABLE 1 – SUMMARY OF AMENDED DOCUMENTS AND PLANS

Attachment	Document	Author
Appendix A	Amended Project Description	Mecone
Appendix B	Statutory Compliance Table	Mecone
Appendix C	Mitigation Measures Table	Mecone
Appendix D	Biodiversity Development Assessment Report	Biosis
Appendix E	Aboriginal Heritage Cultural Assessment and Historical Archaeological Impact Assessment Addendum	Biosis
Appendix F	Bushfire Assessment Report	Building Code & Hazard Solutions
Appendix G	Landscape Character and Visual Impact Assessment Addendum	Envisage
Appendix H	Preliminary Hazard Analysis	Sherpa Consulting
Appendix I	Transport Impact Addendum	Stantec
Appendix J	Supplementary Environmental Noise Assessment	Sonus
Appendix K	Social Impact Assessment Addendum	Urbis

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4 Statutory Context

The statutory context of the Proposal remains consistent with Section 4 of the originally submitted Environmental Impact Statement (Mecone, 2023). There have been no relevant changes to the following Acts and legislative instruments that affect this application:

- *Environmental Planning and Assessment Act 1979*
- *Biodiversity Conservation Act 2016*
- *Tamworth Regional Local Environmental Plan 2010*
- *State Environmental Planning Policy (Resilience and Hazards) 2021*
- *State Environmental Planning Policy (Transport and Infrastructure) 2021*
- *State Environmental Planning Policy (Biodiversity and Conservation) 2021*
- *State Environmental Planning Policy (Biodiversity and Conservation) 2021*

An updated statutory compliance for the amended project is included in **Appendix B** of this report.

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5 Engagement

The amendments to the proposal were primarily driven by feedback provided during the exhibition period. Refer to the accompanying Submissions Report for detailed responses to the matter raised. **Table 2** demonstrates how the amended project responds to the issues raised in submissions.

TABLE 2 – SUMMARY OF AMENDED DOCUMENTS AND PLANS

Concern	Response
Scale and Impact on Lifestyle	The proposed amended project represents a scaled-back BESS with a significant increase in vegetation screening along the northern, western, and southern boundaries, in addition to the incorporation of specific colour palette choices for structures based on the recommendations of the LCVIA. Additionally, a landscaped grassed mound is proposed along the western portion of the BESS to visually obscure the proposed structures. The implementation of these mitigation measures is anticipated to allow the project to integrate into the existing rural community with minimal impact on the residents' 'way of life'.
Visual Impact	The Amended Project has a smaller battery footprint therefore reducing the extent of BESS units potentially in view, allowing greater retention of existing trees which provide an important screening function, and providing for additional landscape screening which would increase screening and reduce visibility over time. The Amended Project results in a reduced visual impact from one viewpoint (R9) which has now received a reduced impact rating from Moderate to Moderate-low.
Acoustic Impact	The acoustic impact from the project is predicted to be compliant with the relevant noise criteria set under the Noise Policy for Industry (NPfI) with the inclusion of a 5m high noise attenuation wall along the western elevation under all modelled operating conditions at all times. The acoustic assessment states "With the proposed noise wall in place, the noise from each of the scenarios is predicted to comply with the relevant noise criteria."
Fire Risk	Whilst the original application appropriately managed fire risk, the amended project results in a scaled-back BESS being set back further from the southern and eastern boundaries. A Preliminary Hazard Analysis accompanies this report for the amended project and considers the risk of significant off-site impacts as a result of fire within the BESS, transformer / HV connection asset, and bushfire. In all instances, the risk rating is 'very low' and there are no identified off-site impacts.

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6 Assessment of Impacts

6.1 Biodiversity

The amended project footprint requires an update to the originally submitted Biodiversity Development Assessment Report (BDAR), which is provided in Appendix D, and continues to address the requirements of the SEARs. The assessment area has been expanded slightly to account for works required within the Tamworth Substation and further targeted surveys have been undertaken to confirm the presence or absence of threatened species that were previously assumed to be present.

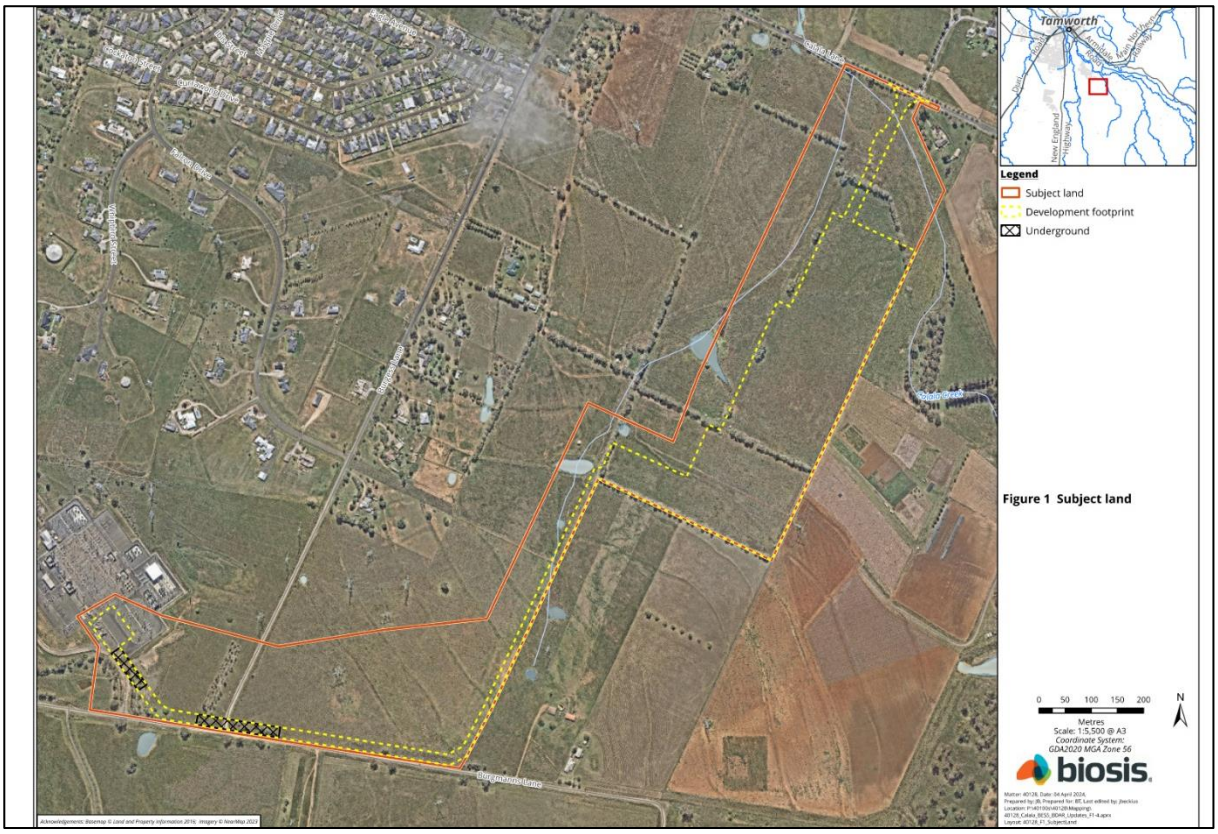

FIGURE 4 – SITE MAP

Source: Biosis

Further field investigations were undertaken in accordance with the Biodiversity Assessment Method and recorded 14.2 hectares of native vegetation within the subject site. The native vegetation comprises two plant community types (PCT) and two threatened ecological communities (TECs) identified as follows:

- 1.1ha of PCT 84: River Oak – Rough-barked Apple - red gum - box riparian tall woodland (wetland) of the Brigalow Belt South Bioregion and Nandewar Bioregion
- 13.1ha of PCT 599: Blakely's Red Gum - Yellow Box grassy tall woodland on flats and hills in the Brigalow Belt South Bioregion and Nandewar Bioregion.
    - Listed under the *Biodiversity Conservation Act 2016* as White Box – Yellow Box – Blakely's Red Gum Grassy Woodland and Derived Native Grassland in the NSW North Coast, New England Tableland, Nandewar, Brigalow Belt South, Sydney Basin, South Eastern Highlands, NSW South Western Slopes, South East Corner and Riverina Bioregions

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- Listed under the *Environment Protection and Biodiversity Conservation Act 1999* as 13.1ha of White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland

The impacts have been constrained primarily through avoidance, with unavoidable impacts being:

- 0.16 hectares of PCT 84.
- 1.63 hectares of PCT 599 (including 1.63 hectares of BC Act listed TEC and 1.31 hectares of associated EPBC Act listed TEC).

In accordance with the BAM, offsets are required to be secured for the Project for impacts to PCTs 84 and 599 as follows:

- PCT 84 – 2 credits.
- PCT 599 – 33 credits.

The amended project will not be referred to the Commonwealth Minister of Climate Change, Energy, the Environment and Water under the EPBC Act, as the amended project is not considered likely to result in a significant impact to any protected matters or listed threatened species or communities.

Mitigation and management measures set out in the EIS remain relevant to address direct, indirect, and prescribed impacts. Further detail regarding impact mitigation is provided in Appendix C and the accompanying amended BDAR.

6.2 Aboriginal Heritage and Archaeology

An addendum to the Aboriginal Cultural Heritage Assessment (ACHA) and Historical Archaeological Impact Statement (HAIS) has been prepared by Biosis in support of the amendment report, and to ensure consistent assessment in alignment with the SEARS requirements.

The original study area consists of parts of several allotments as follows:

- Lot 17 DP 629969
- Lot 16 DP 629969
- Lot 3 DP 244399
- Lot 4 DP 244399
- Lot 6 DP 219993

The amended study area now considers additional land in Lot 17 DP 629969 and Lot 6 DP 219993 as shown in **Figure 5**.

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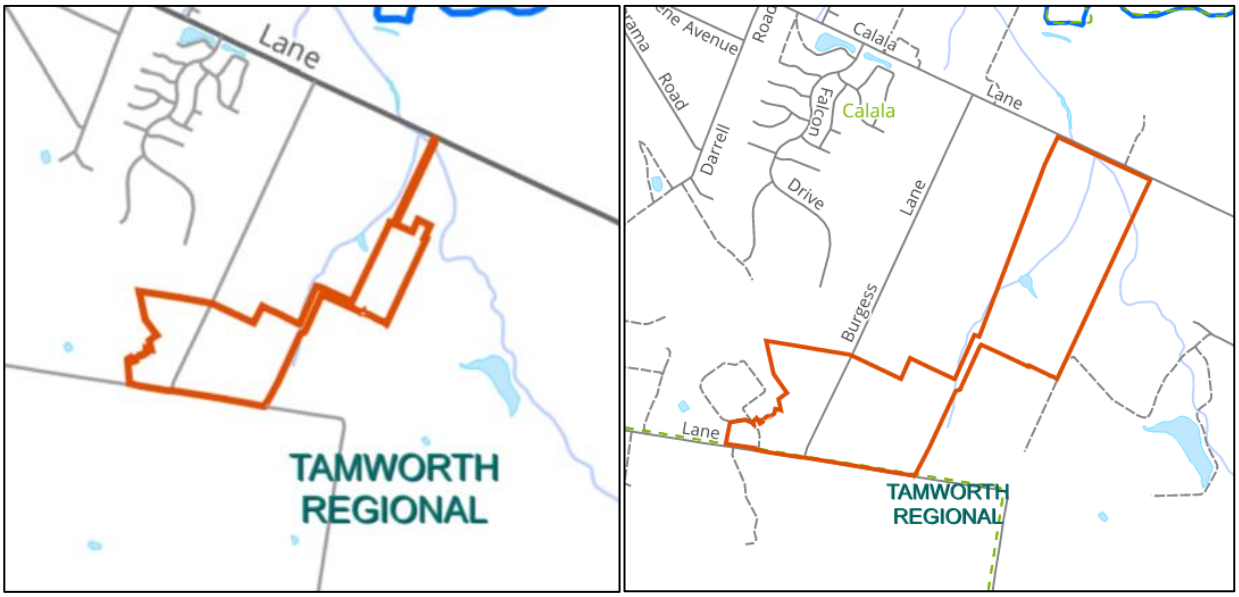

FIGURE 5 – ORIGINAL PROJECT STUDY AREA (LEFT) AND AMENDED PROJECT STUDY AREA (RIGHT)

Source: Biosis

With regard to the new study area and the associated archaeological surveys, Tamworth Local Aboriginal Land Council were invited to attend the survey, but due to the short notice, they were unable to attend. Furthermore, Registered Aboriginal Parties (RAPs) were provided with the addendum to the ACHA for review, and the responses are provided in Appendix 3 of the addendum.

The additional project area and the associated investigation did not reveal the presence of any heritage items, AHIMS sites, or archaeological sites. The addendum letter concludes that the recommendations of the ACHA and the HAIS submitted with the original project remain relevant to the amended project.

6.3 Noise

A supplementary Environmental Noise Assessment has been prepared by Sonus to assess and predict noise from the new battery make and model and to ensure compliance with the NSW EPA Noise Policy for Industry (NPfI) and other relevant noise requirements. The report prepared by Sonus is to be read in conjunction with the addendum letter prepared by Marshall Day Acoustics (MDA) submitted in conjunction with the Submissions Report and the original Noise Impact Assessment for the Facility prepared by MDA.

The new equipment modelled in this Assessment is the Tesla Megapack 2XL (the Megapack) units and associated infrastructure including:

- 164x Tesla Megapack 2XL (2-hour duration)
- 82x 4.6MVA Medium Voltage (MV) transformers
- 2x 180MVA High Voltage (HV) transformers.

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The acoustic impact of the BESS is primarily attributed to fans designed to cool the batteries. As such, meteorological conditions impact the speed of fans. The battery management systems are designed such that the fans can operate at the highest feasible temperature, which would in turn result in greater acoustic impact. However, it is rare that the fans will operate at 100% capacity, particularly during evenings and nights.

The project noise trigger levels have been determined on the expert advice of Sonus, maintaining the NSW EPA Noise Policy for Industry (NPfI) triggers for normal operation:

- 40 dB(A) during the day.
- 35 dB(A) during the evening.
- 35 dB(A) during the night.

The NPfI includes consideration of Significant Meteorological Effects and effectively defines these as occurring for at least 30% of a time period (day, evening or night) in any season. For most noise sources, these significant meteorological effects relate to the increased propagation of noise associated with temperature inversions and/or downwind conditions. Where the occurrences of these does not occur for 30% (or more) of a time period in any season, the assessment of typical conditions does not need to include these effects. These worst case effects are however considered in a supplementary “worst case assessment” with noise criteria relaxed by 5 dB(A).

The Supplementary ENA assessed typical meteorological conditions , as well as periods based on the hottest time of the year to consider “worst case ” conditions that account for the highest noise emission that would occur within any 15 minutes based on a 12 month period of Tamworth Airport Bureau of Meteorology data, and the noise criteria determined by Sonus for this scenario is:

- 45 dB(A) during the day.
- 40 dB(A) during the evening.
- 40 dB(A) during the night.

The analysis considered six operational scenarios, comprising typical and worst-case operations for day, evening, and night. These scenarios account for the varying operation of the Megapack units' fans. It is assumed that the 4.6 MVA MV transformers (76 dB(A) sound power level (SWL)) and the 180 MVA HV transformers (92 dB(A) SWL) operate continuously with the full SWLs. The predicted noise levels include the proposed 5m noise attenuation wall along the western elevation.

The ENA considers the impact of the BESS on non-associated receivers, consistent with the approach taken under the original project. A summary of the results is provided in Table 3 and noise contours are provided in **Figure 6** demonstrating compliance with the relevant noise criteria (of 35dB) at all noise-sensitive receivers during a typical night modelling scenario.

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TABLE 3 – SUMMARY OF NOISE MODELLING RESULTS

Source: Sonus

Time	Scenario	Assumptions	Compliance with Criteria
Day	Typical	• Overall Megapack 2XL sound power level of 85.5 dB(A).	Yes
Day	Worst Case	• Overall Megapack 2XL sound power level of 98.1 dB(A).	Yes
Evening	Typical	• Overall Megapack 2XL SWL of 85.5 dB(A).	Yes
Evening	Worst Case	• Overall Megapack 2XL SWL of 85.5 dB(A).	Yes
Night	Typical	• Overall Megapack 2XL SWL of 83.4 dB(A).	Yes
Night	Worst Case	• Overall Megapack 2XL SWL of 87.9 dB(A)	Yes

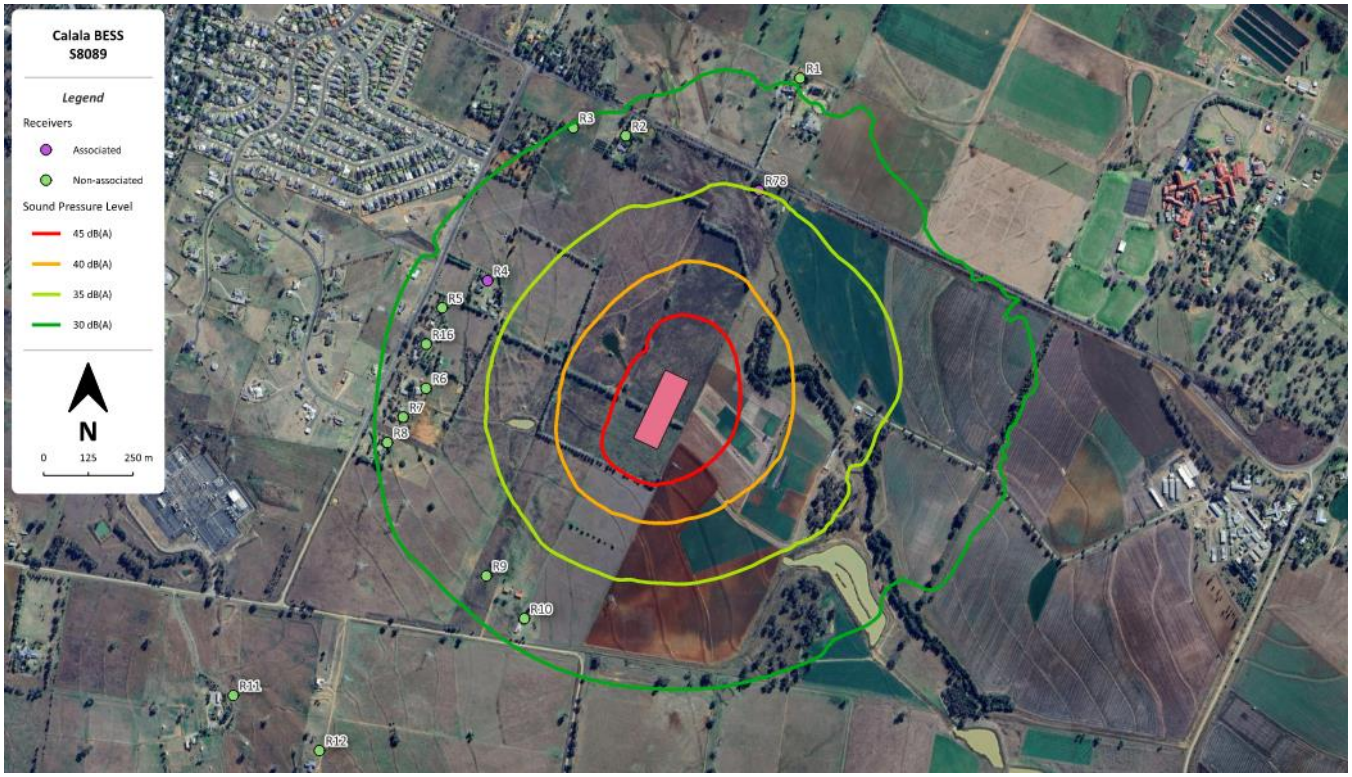

FIGURE 6 – TYPICAL NIGHT OPERATION

Source: Sonus

6.4 Transport

An addendum to the Transport Impact Assessment (TIA) prepared by Stantec addressing the amended project is provided in Appendix I. The TIA in conjunction with the addendum has been prepared to support the proposed development and outline the strategic context of the site, existing conditions, parking, traffic generation, design, and construction traffic management to meet the requirements of the SEARs. It is noted that as part of the addendum, additional data was sourced from the *Traffic Impact Assessment for Dungowan Dam and Pipeline EIS* dated 2022, and further traffic surveys were undertaken to comprehensively represent the existing and proposed traffic conditions. Furthermore, Stantec has engaged with the local Council as well as Transport for NSW (TfNSW) to discuss the matters raised in the following correspondence:

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- Transport for NSW letter to Council, reference WST23/00182/01 | SF2023/217600, dated 14 December 2023.

- Tamworth Regional Council letter to Department of Planning and Environment, dated 4 January 2024.

The TIA addendum addresses the matters raised in the above correspondence. Further engagement was undertaken with regard to the heavy construction vehicle arrangements outlined as follows:

- A meeting was held with Tamworth Regional Council on 23 April 2024, with subsequent email correspondence and confirmation that there are no in-principle issues with the revised arrangements proposed.

- A meeting was held with Transport for NSW on 19 April 2024, with no concerns raised regarding the revised arrangements proposed. Comments regarding assessing intersection turning treatments and clearly identifying the maximum construction vehicle size (26-metre B-double) have been addressed in this letter.

Operation

The amended project proposed relocating the vehicular site access to Calala Lane approximately 15m to the east. The new driveway is suitable from a traffic safety perspective. Calala Lane sight lines in both directions exceed all relevant Austroads and Australian Standards requirements.

No change is proposed to the operation of the BESS; hence, the traffic and parking impacts and mitigation measures are consistent with those documented in the TIA for the original project.

Construction

The key amendments to the construction traffic include an extended construction time frame of 18 months, reduced construction traffic volume estimates, and an amended construction vehicle route determined in consultation with Council and TfNSW.

Heavy Vehicle Route

The proposed heavy vehicle route under the original TIA has been revised following consultation with Council and TfNSW. A revised route with greater ability to accommodate heavy vehicles has been identified, beginning from the State road network at New England Highway north of the site and consisting of Nundle Road, O'Briens Lane and Calala Lane (all local roads) as shown in **Figure 7**. The route assists in minimising the heavy vehicle traffic impacts to the Calala township. The largest heavy vehicle to be used during construction is a 26-metre B-Double; the route can accommodate the swept path of this vehicle.

It is noted a permit is required from Tamworth Council for travel on O'Briens Lane, and that the lane can accommodate heavy vehicles with loads over 25 tonnes subject to dry weather and dilapidation/corrective works as required. O'Briens Lane may be subject to flooding during heavy rainfall as portions of the lane are subject to a 1-in-20-year flooding event. As Tamworth is near the top of the catchment area, flooding is expected to last less than one day, or 1-2 days during major rain events. If flooding affects any route roads, heavy vehicle access will be postponed until flooding subsides and the roads are usable again.

Council had initially proposed a heavy vehicle route to travel from Goonoo Goonoo Road to the site. However, this route was not selected as there are stretches of unsealed roads as well as multiple instances of rutting and potholes.

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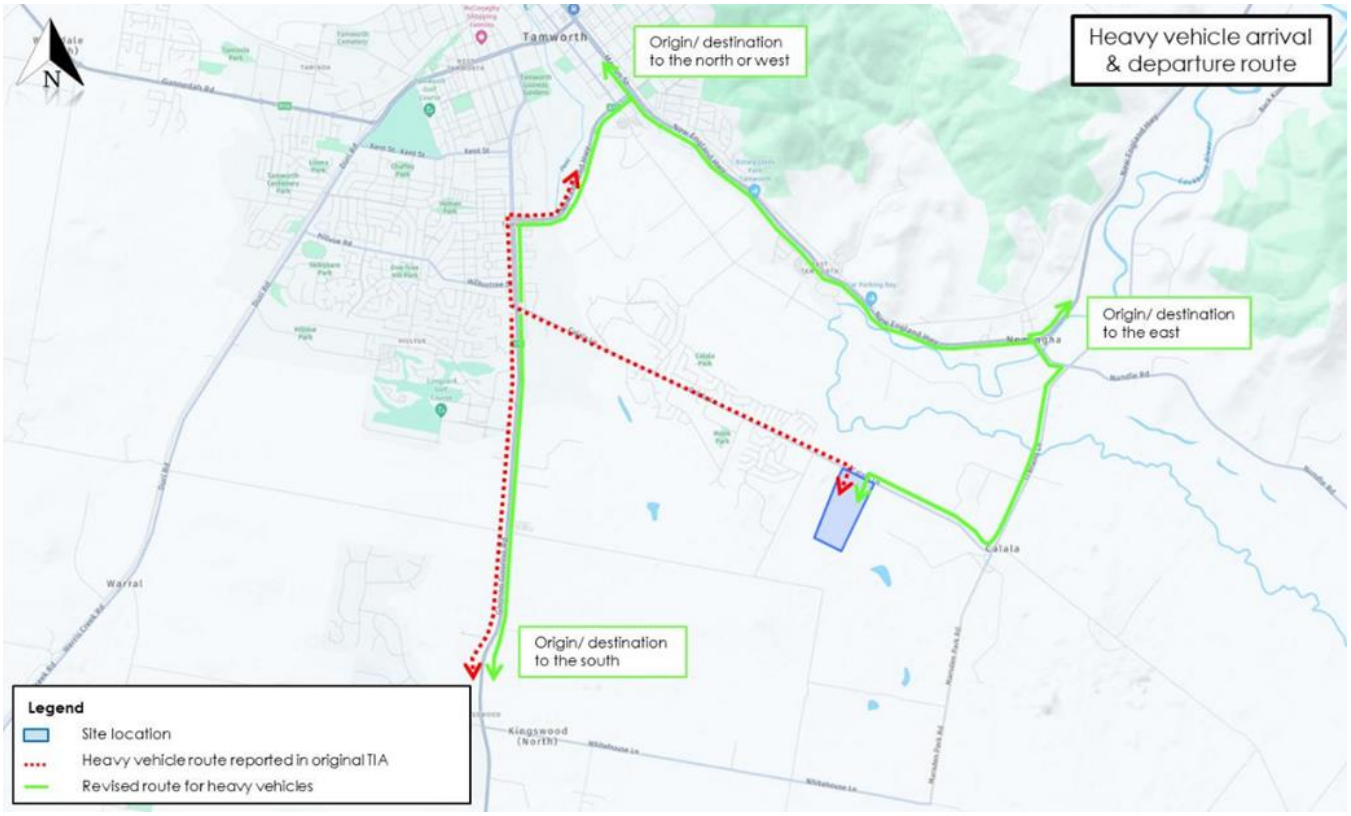

FIGURE 7 – COMPARISON BETWEEN ORIGINAL AND PROPOSED HEAVY VEHICLE ROUTE

Source: Stantec

Over Size Over Mass Vehicles

Seven (7) Over Size Over Mass (OSOM) vehicles will be required to transport two (2) Power Transformers, two (2) Switchgrear Buildings, one (1) Control Building, one (1) ASB Building, and one (1) Operations and Maintenance Building. This is an increase in OSOM vehicles by three (3) compared to the original project, which is considered to be a minor increase in the context of other renewable infrastructure projects.

The same OSOM vehicle route proposed in the original TIA is proposed, and given the low quantum of OSOM vehicles over the construction period, it is considered that it will have only a minor impact on the locality. Standard traffic management measures are required for OSOM vehicles navigating roundabouts on Calala Lane as described in the TIA addendum.

Construction Traffic Impact

Under the original TIA with a construction period of 15 months, up to 465 vehicles were expected to be generated per day during the peak construction period. The extended construction timeframe reduces the peak construction traffic generation to a daily maximum of 220, representing an improvement to the construction traffic impact.

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TABLE 4 – REVISED DAILY CONSTRUCTION TRAFFIC VOLUMES

Source: Stantec

Type of Vehicle	Average traffic generation (vehicles per day) Initial 10 to 12 month period (Civil Works)	Peak Traffic Generation (vehicles per day) 2 month period (during Civil Works)	Average traffic generation (vehicles per day) Remaining duration of the project (around 4 to 6 months)
Light Vehicles	70	100	70
Heavy Vehicles	80	120	50
Total Vehicles	**150**	**220**	**120**

Source: Stantec

The addendum concludes that the construction heavy vehicle traffic volumes are not anticipated to have an adverse impact on the function or safety of the road networks. Furthermore, there is no anticipated impact to the existing road capacity and midblock level of service of the road network during peak traffic generation periods. Additionally, no road upgrades or modifications are required to accommodate the heavy vehicle volumes associated with construction. As such, the mitigation measures submitted with the SSDA are recommended for approval.

6.5 Bushfire

A revised Bushfire Assessment Report prepared by Building Code and Bushfire Hazard Solutions is prepared to support the amended project and to meet the requirements of the SEARs.

Asset Protection Zones (APZ)

The applicable APZ requirements have not changed, being identified in the bushfire report as a minimum of 10 metres in accordance with section 8.3.5 of the Planning for Bushfire Protection 2019 (PBP 2019). However, due to detailed design considerations and a scaled-back proposal, the amended project reduces the proposed APZs from 37 metres to the north, 26 metres to the east, 10 metres to the south, and 22 metres to the west, to 10 metres to the north, 25 metres to the east, 20 metres to the south, and 10 metres to the west.

Static Water Source

The original project included a water storage capacity of 200,000 litres of water across two steel water tanks. The amended project increases the water storage capacity by providing one steel water tank with the capacity to store approximately 300,000 litres of water. The proposed water supply is considered adequate for the replenishment of attending fire services.

Compliance with PBP 2019

The revised Bushfire Assessment Report concludes that the amended project maintains compliance with the aims and objectives of PBP 2019. As such, the mitigation measures identified in the EIS remain relevant to the amended project.

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6.6 Hazards

A revised Preliminary Hazard Analysis (PHA) has been prepared by Sherpa Consulting to address the amended project in response to the SEARS requirements. It is noted that the amended project is not considered to be 'potentially hazardous' because:

- The storage and transport of hazardous materials for the project will not exceed the relevant risk screening threshold.
- There are no other risk factors identified that could result in significant off-site impacts.
- The project is not considered as 'potentially hazardous' with respect to DG storage and transportation and does not require a PHA.

Nonetheless, an updated PHA was prepared to address the requirements of the SEARs. The hazards and associated events considered were informed by AS/NZA 5139, are unchanged compared to the original project and are summarised in Table 5.

Table 5 – Identified Hazards and Events
Source: Sherpa Consulting

HAZARD	EVENT
Electrical	Exposure to voltage
Arc flash	Release of energy
Fire	Infrastructure fire
Chemical	Release of hazardous materials
Explosive gas	Generation of explosive gas
Reaction	Battery thermal runaway
EMF	Exposure to Electric and Magnetic Fields (EMF)
External factors	Unauthorised access/trespasser. Lightning storm, water ingress (rain and flood)

The control measures identified in the updated PHA Hazard Identification (HAZID) Register are consistent with the controls specified in the PHA prepared for the original project. It is noted that the battery model relied upon in the updated Pfuture use of the land surroundiHA contains refrigerant R134a, which is flammable under specific conditions. However, this chemical risk is controlled and mitigated through the BESS' in-built battery monitoring protection systems that alert the operator faults; this control measure was also included in the original project. As such, the controls identified in the EIS are largely consistent with the amended project.

The PHA concluded that "for all identified events the resulting consequences are not expected to have significant off-site impacts (serious injury and/or fatality to the public or off-site population)" because the project is situated in a rural area and the nearest sensitive receptor is approximately 475m from the BESS. The risk assessment for the identified hazards and events remains consistent with the PHA for the original project, and there is no change to the risk ratings for the hazards considered.

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6.7 Landscape Character and Visual Assessment

An addendum to the Landscape Character and Visual Impact Assessment (LCVIA) was prepared by Envisage Consulting in support of the amended project to address the SEARS. The primary visual changes associated with the amended project compared to the original project are:

- The area designated for the battery has been reduced by approximately 60%, resulting in a more compact BESS footprint, although the overall project footprint has not significantly changed.
- The BESS units will adopt a light colour scheme, a shift from the previously envisioned darker hues.
- Structural changes involve the elimination of the 5 m high noise barrier wall on the northern periphery and within the proposed substation, coupled with the adjustment of the retained 5m high noise wall to the west.
- Preservation of the existing trees along the southern boundary.
- Infrastructure within the BESS boundary is setback from the southern boundary, providing space for the introduction of new landscaping to bolster screening.
- Implementation of a 5-metre high grassed landscape mound along the western side of the project area, integrated into the landscaping to enhance visual screening.

The Landscape Character Visual Impact Assessment (LCVIA) for the original project considered 12 potential viewpoints (refer to **Figure 8**), which included four private residences (R1, R8, R9, and R12), three representative viewpoints of residential clusters, and five public or institutional vantage points encompassing local roads, Flagstaff Mountain, and several institutional facilities to the east. Re-evaluation of these points for the Amended Project and its revised landscaping plan has been assessed in the addendum. The revised assessment concludes the following:

- **Sensitivity**: There has been no change in the sensitivity ratings from the VIA for any of the viewpoints.
- **Magnitude**: For viewpoint R9, the Amended Project incurs a decrease in magnitude of impact from moderate to low, attributable to the project's greater setback, the preservation of trees, and enhanced landscaping along the southern boundary. The magnitude for all other viewpoints remains unchanged, maintaining a low rating as initially assessed.
- **Visual Impact**: A reduction in visual impact for R9 from moderate to moderate-low is noted. Other viewpoints maintain their original visual impact ratings.
- **Residual Impact**: This newly introduced metric in the addendum captures the enduring visual impact post-construction and landscape plan maturation, estimated over a 5-7 year period. It suggests that all viewpoints will experience a low level of residual visual impact. As the landscaping matures, especially along the northern, western, and southern boundaries, the visibility of the amended project is expected to further diminish.
- **Lighting Impact**: The impact from lighting associated with the amended project compared to the original project remains unchanged.

- **Other Impact**: Other changes associated with the amended project (such as the removal of the northern noise wall, removal of the noise wall within the substation, and repositioning of the western noise wall), would have minimal visual effect. A comparison of the visual impact resulting from the original project to the amended provide is summarised in Table 6.

TABLE 6 – SUMMARY OF IMPACT TO VIEWPOINTS

Source: Envisage

VIEWPOINT	ASSESSED VISUAL IMPACT		Residential Impact of Amended Project (5-7 Years Following Construction)
	Original Project	Amended Project	
R1: Private residence (Calala Lane)	Moderate-low	Moderate-low	Low
R8: Private residence (Burgess Lane eastern side)	Moderate-low	Moderate-low	Low
R9: Private residence (Burgmanns Lane northern side)	Moderate	**Reduced to Moderate-low**	Low
R12: Private residence (Burgmanns Lane southern side)	Moderate-low	Moderate-low	Low
General Residential Zone	Low	Low	Low
Large Lot Residential Zone	Low	Low	Low
Nemingha / East Tamworth	Low	Low	Low
Calala Lane	Low	Low	Low
Burgess Lane	Low	Low	Low
Burgmanns Lane	Low	Low	Low
Institutional Facilities	Low	Low	Low
Flagstaff Mountain Lookout	Low	Low	Low

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FIGURE 8 – ASSESSED VIEWPOINTS

Source: Envisage

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6.8 Water

No change to the proposed water management strategy is proposed, aside from the reposition of the basin which result in no impact. The site flows into Calala Creek, which flows into the Calala Anabranch (approximately 5.8km downstream of the site), and which flows into the Peel River 2.2km further downstream. The primary impact of the BESS during construction and operation is stormwater runoff management. For construction, appropriate sediment and erosion controls measures are identified in the accompanying civil engineering concept plans. The operation of the BESS will manage the impacts of sediment, primarily generated by the unsealed gravel access roads. The basin installed during the construction phase will be cleaned and modified for operational use and is anticipated to effectively remove most of the sediment that would otherwise enter the waterways. The overflow from the basins will then enter a swale or level spreader which would further remove sedimentation before the runoff enters the waterways.

In the unlikely event of ruptured batteries, the contents of the batteries may be exposed to water runoff as a result of firefighting efforts. Should this occur, the contents of the battery (including heavy metals) are likely to leak out and be flushed out with the water used for firefighting, which would then enter the basin. If this situation were to occur, the removal of the contents of the basin would occur and would be treated as a contamination incident.

No effluent will be generated onside and as such no effluent management system is proposed. Water used for construction or operation will be trucked in. A culvert crossing is proposed over Calala creek demonstrating consistency with the Guidelines for Controlled Activities on Waterfront Land.

6.9 Economic impact

The BESS will continue to result in an intensified economic outcome for the region, with the net increase in economic activity supported by 170 jobs during construction, a total net increase of 7 ongoing jobs as a result of the operation of the BESS, and the various multiplier effects and indirect economic stimulation as a result of the overall development.

6.10 Waste

The management of waste is consistent with the original project. Various types of standard construction waste will be generated during the construction of the project, such as concrete, excavated materials, green waste, metals, and general waste. Additionally, during the commissioning of the BESS, there is a potential that some of the batteries fail. In this case, batteries will be returned to the supplier and not directed to local waste facilities. During operation, waste will be avoided wherever possible. Where waste cannot be avoided, it will be removed by maintenance workers daily and sorted off-site for recyclable materials. No ongoing waste collection from the site by a waste contractor is required. Compliance with the waste management procedures for both construction and operation will consist of appropriate training, monitoring, and corrective actions to ensure that construction waste is appropriately disposed of.

6.11 Social Impact

A Social Impact Assessment addendum has been prepared by Urbis in support of the amended project to address the requirements of the SEARs. A summary of the social impacts comparing the original and amended project is provided in Table 7. This demonstrates that the amended project results in the same or improved social impact across all considerations.

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TABLE 7 – SUMMARY OF SOCIAL IMPACT (ORIGINAL VS AMENDED PROJECT)

Source: Urbis

SIA Impact	SIA (2023) Mitigated Assessment	Addendum (2024) Mitigated Assessment
Amenity impacts relating to visual disruption	Low negative (unlikely likelihood, minor magnitude)	Low negative (reduced to unlikely likelihood, minimal magnitude)
Impact to local character	Low negative (possible likelihood, minor magnitude)	Low negative (reduced to possible likelihood, minimal magnitude)
Distribution of impacts and benefits and its effect on community cohesion and resilience	High positive (likely likelihood, moderate magnitude)	No change, remains high positive (likely, moderate).
Traffic impacts relating to congestion during construction	Low negative (unlikely likelihood, minor magnitude)	No change, remains low negative (unlikely, minor).
Potential disruption to sites of Aboriginal significance	Low negative (very unlikely likelihood, moderate magnitude)	No change, remains low negative (very unlikely, moderate).
Amenity impacts relating to noise	Low negative (unlikely likelihood, minor magnitude)	No change, remains low negative (unlikely, minor).

6.12 Cumulative Impact

The cumulative impact of the amended project does not present any additional considerations not assessed in the original EIS. The project maintains alignment with the state and federal strategic context regarding enhancing renewable energy infrastructure and reducing greenhouse gas emissions. The development is designed to support Australia's commitments under the Paris Agreement and the Climate Change Act 2022 by contributing to emission reduction targets through renewable energy storage solutions. It is strategically positioned to bolster the national and regional energy grids' transition away from fossil fuels, as detailed in policies like the Australian Government RET and the NSW Climate Change Policy Framework.

Regionally, the proposal is integrated within the New England North West Regional Plan 2041, promoting renewable energy and environmental resilience. It supports local strategic plans such as the Blueprint 100 – Our Community Plan and Tamworth Tomorrow – Economic Development and Investment Strategy, which focus on sustainable development and diversification of energy sources to boost local economic growth and environmental stewardship.

As discussed in the EIS, the two proposed BESS projects in proximity of the site to the New England Renewable Energy Zone are the Tamworth BESS located at 696 Burgmanns Lane, Calala and the Kingswood BESS located at 744 Burgmanns Lane, Kingswood. The status of both the Tamworth and Kingswood BESS on the Major Projects Portal remains 'Prepare EIS' with the Scoping Report relied upon to inform the potential cumulative impact assessment. Noise may represent a cumulative impact during construction and operation of the proposed BESS project, with the proposed facilities likely operating 24 hours a day, seven days a week, Traffic by workers vehicles and deliveries/trucks during construction may also create a cumulative impact if there is overlap in the

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construction period. Visual impact may also result in a cumulative impact due to the presence of additional BESS infrastructure in the locality. The cumulative impacts on biodiversity and agricultural land are also considered in the original EIS.

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7 Justification of amended project

This section of the Amendment Report provides an updated evaluation of the social, environmental and economic impacts. In addressing and responding to the submissions and considering the amendments proposed, the project has been amended to reduce the scale and impact of the project on the locality while maintaining consistency with the strategic context. As such, the justification of the project is largely consistent with that provided as part of the EIS.

7.1 Design of project

The proposed development is for a BESS at 474 Calala Lane, Calala. The proposal includes the following:

- The construction and operation of a large-scale Battery Energy Storage System (BESS) with a capacity of up to 300 Megawatts (MW) and up to 600 Megawatt hours (MWh) of battery storage capacity or up to 2 hours of storage duration.
- Installation of battery enclosures,, DC and AC combiner boxes, transformers and auxiliary components.
- 33/330 kV switchyard.
- Underground transmission cable connection between the BESS and the nearby TransGrid Tamworth 330 kV substation.
- Tamworth substation augmentation and ancillary works.
- Ancillary elements including site access from Calala Lane, internal access roads and parking, control room and staff amenities, warehouse, stormwater and fire management infrastructure, utilities, signage, fencing, security systems, noise attenuation walls and landscaping.

The proposed development has been designed to meet the relevant planning provisions and guidelines.

7.2 Consistency with strategic context

The proposed development is suitable for the subject site and is located on a large, vacant property within close proximity to a substation. The site is located in the New England region in the northwest which is identified as being a suitable location for renewable energy projects, particularly noting the proximity of the site to the New England Renewable Energy Zone.

The assessment of the proposal against relevant strategies has been addressed in Section 2 of this amendment report. The amended Project remains consistent and contributes to the planning objectives outlined in the relevant district and region plans, and Tamworth Local Strategic Planning Statement.

7.3 Compliance with relevant statutory provisions

The proposed development remains permissible with consent and complies with the requirements of the relevant statutory planning controls. The detailed assessment of all relevant state and local environmental planning instruments are outlined in Sections 2 and 4 of the EIS. The assessment concludes as follows:

- The development has been addressed in accordance with the relevant objectives of the *Environmental Planning and Assessment Act 1979*.
- The EIS has been prepared in accordance with the issued SEARs required by Part 8 of the EP&A Regulations.

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- The proposal is consistent with the principles of ecological sustainable development specified in Clause 193 of the *Environmental Planning and Assessment Regulation 2021* and will support delivery of an ecologically sustainable development.
- The proposed development is categorised as SSD under the Planning Systems SEPP 2021.
- The site is zoned RU4 Primary Production Small Lots under the Tamworth Regional LEP 2010, and the proposed development is permissible in the prescribed zone and is consistent with the zone objectives.
- The *Biodiversity Conservation Act 2016* has been considered and the application is accompanied by a Biodiversity Development Assessment Report accordingly.

Based on the above, the proposal remains consistent with the relevant statutory provisions.

7.4 Economic, social, environmental and cumulative impacts

The following potential social, economic and environmental impacts remain as part of the amended proposed development.

Social impacts

- The proposed development includes opportunities for employment for Calala residents and the broader Tamworth LGA.
- The proposed development contributes to employment diversity within the Tamworth LGA through provision of renewable energy infrastructure as an emerging theme within the rural areas of NSW.
- The development may result in impacts on local character, traffic, aboriginal heritage, health and safety in the event of a hazard, noise and the perceived impact on property values. Each of these have been addressed through implementation of the recommended mitigation measures in the SIA provided with the EIS, the amendment report, and the additional information submitted in response to the submissions received from agencies, Council and the public.

Economic impacts

- The proposed development will provide significant benefits including jobs throughout the construction and operation of the BESS.
- The proposal will contribute to the provision of renewable energy resources and infrastructure in a suitable location.
- Cheaper household electricity costs.
- Total economic investment exceeding $30m
- Generates 170 total jobs during construction.
- Generates 7 permanent jobs during operation.
- Direct and indirect purchases in the local economy.

Environmental impacts

- Impacts on biodiversity have been avoided and minimised wherever possible, with appropriate management and mitigation measures adopted to further minimise any adverse impacts. The additional information provided within this amendment report confirms the project is not likely to result in a significant impact to species or communities listed under the *Environment Protection and Biodiversity Conservation Act 1999*, and as such a referral to the Commonwealth Minister of Climate Change, Energy, the Environment and Water is not deemed necessary.

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- The proposed development will not result in any adverse impacts on Aboriginal or European heritage.
- The proposed development incorporates appropriate mitigation measures to ensure the development complies with the relevant noise criteria to minimise any adverse impacts on nearby sensitive receivers, including the sensitive receives identified in submissions and the livestock and works on the adjoining Tamworth Agricultural Institute east of the subject site.
- The proposed development complies with the requirements of Planning for Bush Fire Protection 2019 through the implementation of the recommendations in the Bushfire Assessment Report submitted with the SSDA. The proposal will also not result in any increase in risk of fire on nearby residential properties.

7.5 Compliance monitoring and communication

Compliance of the development with the key statutory controls and conditions of consent will be monitored and communicated with all project staff by the development and project managers. The various management and mitigation measures outlined throughout the EIS ensure appropriate monitoring and communication is maintained throughout the construction and operational phases of the project.

7.6 Key uncertainties

The various components of the proposed development and the consultant reports provided to support this amendment report result in no uncertainties associated with the project.

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APPENDIX A

Updated project description

Element	Original Project	Amended Project
Project Area		
Project footprint	Approximately 12.3ha	Approximately 11.4ha Reduction of 0.9ha
Excavation depth (BESS)	2.0m	2.0m No change
Amended property details		
	57 Burgess Lane, Calala, also known as 474 Calala Lane (Lot 17 DP629969)	474 Calala Lane, Calala* (Lot 17 DP629969) **It is noted that this allotment remains the same, however, the street address has changed since the the EIS was prepared..*
	57 Burgess Lane, Calala (Lot 16 DP629969)	57 Burgess Lane, Calala (Lot 16 DP629969)
	Burgmanns Lane, Calala (Lot 3 DP244399)	Burgmanns Lane, Calala (Lot 3 DP244399)
	Burgess Lane, Calala (Lot 4 DP244399)	Burgess Lane, Calala (Lot 4 DP244399)
	707 Burgmanns Lane, Calala (Lot 6 DP219993)	707 Burgmanns Lane, Calala (Lot 6 DP219993)
Physical layout and design		
Building height	Various structures generally up to approximately 9.5m in height, except for a 25m high lighting masts.	Various structures generally up to approximately 9.5m in height, except for a 25m high lighting masts. No change in heights
Gross floor area	Not applicable	Not applicable
Site access	Calala Lane	Calala Lane
Parking Spaces	Dedicated parking bays are provided next to the control room	Dedicated parking bays are provided next to the control room No change

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Element	Original Project	Amended Project
Key uses and activities		
Land use	Standalone battery energy storage system and underground transmission line.	Standalone battery energy storage system and underground transmission line. No change
Annual waste generated	All waste is to be removed from site as it is generated given the site is unmanned and attended on a needs basis only.. As such, the development will not generate waste as a result of operation.	All waste is to be removed from site as it is generated given the site is unmanned and attended on a needs basis only. As such, the development will not generate waste as a result of operation. No change.
Spoil exported	None anticipated. If any excess material, it is to be exported off-site.	Any cut or soil excavated will be retained and reused on-site. Spoil will be retained and not exported off site
Related development		
Road works	Driveway crossover to Calala Lane	Driveway crossover to Calala Lane No change.
Project sequencing		
	Construction of BESS facility and transmission line to be concurrent.	Construction of BESS facility and transmission underground cable to be concurrent. No change at this point in time.
Project Detail		
Battery Type	Wartsila and SMA battery technology	Tesla Megapack 2XL
Battery enclosures and associated equipment	960 battery storage enclosures	164 battery enclosures, 82 transformers, 16 Ring Main Units (RMU) Significant reduction in the amount of equipment needed.
	120 inverters and transformers	
	6 Ring Main Units (RMU) and auxiliary transformers	

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Element	Original Project	Amended Project
	Auxiliary transformer described as 9m tall at Section	Auxiliary Transformers are approx. 3m tall. Reduction in height
Output rated capacity	300 MW	300 MW No change
Storage Duration	4-hour battery	2-hour battery A reduced storage duration
Maximum Amount of Stored energy	1,200 MWh	600 MWh A reduced storage and discharging capacity
Noise Attenuation	4m tall northern noise barrier	Deletion of northern noise barrier. Structure at this elevation is no longer proposed
	4m tall nearfield HV transformer noise barriers	Deletion of nearfield HV transformer noise barriers. Structure at this elevation is no longer proposed
Setbacks and Screening	Southern boundary trees retained but no additional landscaping or screening	5m landscape strip along southern boundary planted with new vegetation screening. Provision of additional screening
	No earth mound. Greater visibility of noise wall.	Grassed earth mound approx. 130 long and up to 5m tall, located west side of western noise wall. Management of spoil and screening considered
	Transmission underground cable along southern boundary (Lot 17 - BESS site)	Transmission cable setback 33m from southern boundary Realignment of works considered to provide visual screening
	Asset Protection Zones (APZ) North – 37m East – 26m South – 10m West – 22m	**Asset Protection Zones Minimum setbacks for APZ maintained** North – 10m East – 25m South – 20m West – 10m

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<table>
<tr><th>Element</th><th>Original Project</th><th>Amended Project</th></tr>
<tr><td>Tamworth substation connection</td><td>Underground cable connection to existing Tamworth Substation</td><td>Connection to Tamworth substation includes associated substation augmentation and minor switchyard extension works. Considered minor works within Tamworth substation</td></tr>
<tr><td rowspan="3">Civil Construction laydown areas</td><td>Construction laydown in 2 separate locations</td><td>Construction laydown area combined and repositioned, temporary stockpile area added. Temporary construction laydown and stockpile areas are considered in more detail.</td></tr>
<tr><td>Increased amount of benching. Excess soil disposed offsite.</td><td>Benching reduced and soil retained onsite. .Improved construction outcomes</td></tr>
<tr><td>Existing dwelling on site to remain vacant</td><td>Existing dwelling on site to be used as a temporary site office during construction, and thereafter be vacated. Sought opportunity to use the existing building as a construction office during construction.</td></tr>
<tr><td>Access Road</td><td>EIS Section 6.7.3: Car park layout and internal road network will be designed in accordance with the Australian Standard for Off Street CarParking (AS/NZS2890.1:2004, AS2890.2:2018 and AS/NZS2890.6:2009) or Tamworth Regional Council Development Control Plan 2010.</td><td>Internal roads and on-site car parking will be designed in accordance with the relevant Work Specification, Industry Standards, Safety in Design (SiD) and the Australian Standards to the extent they are relevant to the nature of the project.
Culvert crossing over Calala creek to demonstrate consistency with the Guidelines for Controlled Activities on Waterfront Land. Design improvements considered</td></tr>
<tr><td>Vehicle Movements</td><td>Refer EIS Table 34</td><td>Table 2.1: Revised daily construction traffic volumes<table><tr><th rowspan="2">Type of Vehicle</th><th>Average traffic generation (vehicles per day)</th><th>Peak Traffic Generation (vehicles per day)</th><th>Average traffic generation (vehicles per day)</th></tr><tr><th>Initial 10 to 12 month period (Civil Works)</th><th>2 month period (during Civil Works)</th><th>Remaining duration of the project (around 4 months)</th></tr><tr><td>Light Vehicles</td><td>70</td><td>100</td><td>70</td></tr><tr><td>Heavy Vehicles</td><td>80</td><td>120</td><td>50</td></tr><tr><td>Total Vehicles</td><td>150</td><td>220</td><td>120</td></tr></table></td></tr>
<tr><td>OSOM</td><td>4 OSOM vehicle trips</td><td>7 OSOM vehicle trips an additional three (3) OSOM vehicle trips</td></tr>
</table>

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Element	Original Project	Amended Project
Construction Access	Construction vehicle access via Calala Lane to Goonoo Goonoo Road	A preferred heavy vehicle route via Calala Lane, O'Briens Lane,Nundle Road, to New England Highway is proposed with an alternative route via Whitehouse Lane, Ascot-Calala Road and / or Burgmanns Lane to Calala Lane
Construction Hours	Monday to Friday: 7:00am to 6:00pm Saturday: 8:00am to 1:00pm Sundays and Public Holidays: No work	Equis proposes to add the following to the proposed construction hours: 1. Works associated with outages on the Electrical Transmission Network that are subject to network constraints may be undertaken outside of these standard hours 2. Low noise generating construction and testing/commissioning activities that do not affect the nearest receivers may be undertaken outside of these hours such as minor civil works, electrical works, testing and commissioning 3. If noise generating construction activities are to be undertaken outside of the standard hours, the potentially affected residents will be notified and an Out of hours work protocol will be followed to ensure impacts are mitigated.
Staged Development	Construction Hours	Potential for the development to be staged including the preparation of plans, strategy or programs as required by consent.

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APPENDIX B

Updated statutory compliance table

STATUTORY DOCUMENT	REFERENCE	REQUIREMENT	SECTION IN EIS	SECTION IN AMENDMENT REPORT
SW Acts				
Environmental Planning and Assessment Act 1979 (EP&A Act)	Section 4.15(1)	Relevant EPIs	Section 4.5 and 4.6	Section 4
		Relevant proposed EPIs	N/A	N/A
		Relevant planning agreement or draft planning agreement	N/A	N/A
		DCPs	Section 4.7	N/A
		Likely impacts of the development, including environmental on both the natural and built environments, and social and economic impacts in the locality	Section 6	Section 6
		Suitability of the site of the development	Section 7.10	N/A
		The public interest	Section 7.9	N/A
Biodiversity Conservation Act 2016	Section 7.9	BDAR required for SSD unless the Planning Agency Head and Environment Agency Head determine the development is not likely to have any significant impact on biodiversity values.	Section 4.4.1 Section 6.1 Appendix H	Section 6.1 Appendix C

STATUTORY DOCUMENT	REFERENCE	REQUIREMENT	SECTION IN EIS	SECTION IN AMENDMENT REPORT
Environmental planning instruments				
State Environmental Planning Policy (Resilience and Hazards) 2021	Section 3.7	Consideration must be given to guidelines published by the Department of Planning in determining whether a development is a hazardous or offensive storage establishment or industry.	Section 4.5.4	Section 6.6 Appendix H
	Section 3.12	Consent authority must consider: • relevant guidelines published by the Department of Planning; • whether any public authority should be consulted; • in the case of development for the purpose of a potentially hazardous industry—a preliminary hazard analysis • any feasible alternatives to carrying out the development and the reasons for choosing the development; and • any likely future use of the land surrounding the development.	Section 4.5.4	Section 6.6 Appendix H
	Section 4.6	Consent authority must be satisfied the land is suitable in its contaminated state, or will be suitable after remediation, for the	Section 4.5.4	N/A

STATUTORY DOCUMENT	REFERENCE	REQUIREMENT	SECTION IN EIS	SECTION IN AMENDMENT REPORT
		purpose for which development is proposed to be carried out.		
State Environmental Planning Policy (Transport and Infrastructure) 2021	Section 2.42	Development within a regional city for the purpose of electricity generating works must not be granted unless it is located to avoid significant land use conflict and is unlikely to have a significant impact on the city's capacity for growth for scenic quality and landscape character.	Section 4.5.3	Section 6.4 Appendix I
	Section 2.48	For development within or adjacent to an electricity easement or adjacent to a substation, the consent authority must give written notice to the electricity supply authority and take into consideration their response.	N/A	N/A
State Environmental Planning Policy (Biodiversity and Conservation) 2021	Section 4.9	This section requires consideration of the development's impact on koalas/koala habitat.	Section 4.5.2	N/A
Tamworth Regional Local Environmental Plan 2010	Clause 2.3	Land use table specifies zone objectives, development that may be carried out with or without development consent, and development that is prohibited. The consent authority must have regard to the zone objectives.	Sections 4.2 & 4.6	N/A

STATUTORY DOCUMENT	REFERENCE	REQUIREMENT	SECTION IN EIS	SECTION IN AMENDMENT REPORT
	Clause 5.21	Development consent must not be granted to development on land within the flood planning area unless the consent authority is satisfied as to certain matters relating to flood risk and impacts.	Section 4.6	N/A
	Clause 7.1	Consent authority must consider certain matters relating to earthworks.	Section 4.6	N/A

APPENDIX C

Updated mitigation measures table

ENVIRONMENTAL IMPACT	MITIGATION MEASURES	WHERE ADDRESSED IN EIS	WHERE ADDRESSED IN AMENDMENT REPORT

Biodiversity	Mitigation measures are recommended in accordance with Section 7 of the Biodiversity Development Assessment Report (BDAR) and include the following:
	• Preparation of CEMP that provides mitigation measures for potential construction impacts on retained native vegetation and habitats to manage:
	  ○ Displacement of resident fauna.
	  ○ Indirect impacts on native vegetation and habitat.
	  ○ Permitted clearing and impacts on water quality.
	  ○ Spread of weeds and pathogens to and from the site from adjacent areas.
	  ○ Impacts on biodiversity values via adaptive management strategies proposed to monitor and respond tot uncertainties.
		Section 6.1
		Appendix H
			Section 6.1
			Appendix D

Aboriginal Cultural Heritage	*Heritage induction* Heritage inductions and the inclusion of an unexpected finds procedure should be prepared. These should be provided to all site workers and contractors in order to prevent any unintentional harm to unexpected finds and Aboriginal sites located outside of the study area. This includes the following items: • Relevant legislation. • Location of identified Aboriginal heritage sites, areas of archaeological potential, and areas of archaeological sensitivity. • Basic identification skills for Aboriginal and non-Aboriginal artefacts and human remains.	Section 6.2 Appendix I Appendix K	Section 6.2 Appendix E

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	• Procedure to follow in the event of an unexpected heritage item find during construction works. • Procedure to follow in the event of discovery of human remains during construction works. • Penalties and non-compliance. *Continued consultation with the RAPs* As per the consultation requirements, it is recommended that the proponent provides a copy of this report to the RAPs. It is also recommended that the proponent should continue to inform RAPs about the management of Aboriginal cultural heritage sites within the study area throughout the life of the project. *Discovery of unanticipated Aboriginal objects* All Aboriginal objects and Places are protected under the NPW Act. It is an offence to disturb an Aboriginal site without a consent permit issued by Heritage NSW. Should any unanticipated Aboriginal objects be encountered during works associated with this proposal, works must cease in the vicinity and the find should not be moved until assessed by a qualified archaeologist. If the find is determined to be an Aboriginal object the archaeologist will provide further recommendations. These may include notifying Heritage NSW and Aboriginal stakeholders. *Discovery of unanticipated historical relics* Relics are historical archaeological resources of local or State significance and are protected in NSW under the Heritage Act. Relics cannot be disturbed except with a permit or exception notification. Should unanticipated relics be discovered during the course of the project, work in the vicinity must cease and an archaeologist contacted to make a preliminary assessment of the find. The Heritage Council will require notification if the find is assessed as a relic. *Discovery of human remains* If any suspected human remains are discovered during any activity you must:		

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	• Immediately cease all work at that location and not further move or disturb the remains. • Notify the NSW Police and Heritage NSW Environmental Line on 131 555 as soon as practicable and provide details of the remains and their location. • Not recommence work at that location unless authorised in writing by Heritage NSW.		
Heritage	*The proposed works may proceed with caution* There are no listed items, or items of heritage significance, within or adjacent to the study area. Works can proceed in the study area with caution as it has been assessed as possessing low archaeological potential. Should unexpected archaeological remains be uncovered during the course of the proposed works, the below mitigation measure should be implemented. *Discovery of unanticipated historical relics* Relics are historical archaeological resources of local or State significance and are protected in NSW under the Heritage Act. Relics cannot be disturbed except with a permit or exception/exemption notification. Should unanticipated historical archaeology be discovered during the course of the project, work in the vicinity must cease and an archaeologist contacted to make a preliminary assessment of the find. Heritage NSW will require notification if the find is assessed as a relic.	Section 6.3 Appendix J Appendix K	Section 6.2 Section 6.8.2 Appendix E
Visual Impact	The following management and mitigation measures are recommended to address visual impact: • Avoid night sky impacts, • Reduce visibility and contrast of the Project in the landscape, • Minimise impact to existing landscape character and retain existing screening vegetation, and	Section 6.5 Appendix N	Section 6.7 Appendix G

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	• Enhance screening of the project. Each of the above are discussed in further detail in the relevant sections of the EIS and LCVIA.		
Noise and Vibration	<u>Operational Noise Mitigation</u> • Installation of noise control measures, including the noise barrier to meet the relevant noise criteria. • In the event alternative equipment is selected, additional noise modelling should be conducted for any finalised Project design and equipment selections to establish continued compliance with Noise Policy for Industry criteria and determine noise control measures specific to that design.	Section 6.6 Appendix O	Section 6.3 Appendix J

	<u>Construction Noise and Vibration Mitigation</u>
	
	• Preparation of a detailed Construction Noise and Vibration Management Plan (CNVMP) once a more detailed schedule of equipment and plant items, construction method and work areas are known. The CNVMP should include site and process specific noise management work practices designed to mitigate the impact of construction noise activities.
	
	• Consultation with the community and affected residents identified in Table 14 of the NVIA should be undertaken during the preparation of the CNVMP.
	
	• Inclusion of the following practices from the Interim Construction Noise Guideline during the preparation of the CNVMP:
	
	  ○ Universal work practices;
	
	  ○ Consultation and notification;
	
	  ○ Plant and equipment;
	
	  ○ On-site controls;
	
	  ○ Work scheduling; and
	
	  ○ Transmission path and at-receiver considerations.		

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	• Undertake works during the hours of construction outlined in the Interim Construction Noise Guideline and Section 3.1 of the NVIA. • Arrange OSOM deliveries to be undertaken during the daytime where possible. Where this is not possible, residents close to the Project should be notified.		
Traffic, Transport and Accessibility	The TIA provides management and mitigation measures related to the following: • Permits/ Consent/ Licences • Haulage • Access point requirements • Consultation • Traffic control plans • Delays to traffic • Safety of road users and construction staff • Driver's code of conduct • School Bus Routes Each of the above are discussed in detail in the relevant sections of the EIS and TIA.	Section 6.7 Appendix P	Section 6.4 Appendix I
Ecologically Sustainable Development	No mitigation measures are identified for ecologically sustainable development.	N/A	No change
Ground and Water Conditions	Prepare a Stormwater Management Plan that includes details on the following: • Collection and conveyance systems • Wet basin with staged throttled outlet above the permanent water level, and mechanism for closing off the lower-level piped outlet for contaminant removal.	Section 6.9 Section 6.10.4 Appendix Q Appendix T	No change

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	• Vegetated swale • Soil and Water Management measures consistent with the Blue Book • Erosion and sediment control plan • Rehabilitation Plan •		
Bushfire Risk	*Asset Protection Zones* • That at the commencement of construction and in perpetuity, all grounds Calala BESS Extent shall be maintained as an Inner Protection Area as detailed in the NSW Rural Fire Service's document 'Standards for Asset Protection Zones' and Appendix 4 of Planning for Bush Fire Protection 2019. *Emergency Management* • That prior to occupation a bushfire emergency management and operations plan is prepared consistent with the NSW Rural Fire Service Guide to developing a Bush Fire Emergency Management and Evacuation Plan. This assessment shall also include the additional detail required within s8.3.5 of Planning for *Bush Fire Protection 2019.* *Services – Water* • That the static water supplies shall comply with the following requirements of Planning for Bush Fire Protection 2019; • a connection for firefighting purposes is located within the IPA or non-hazard side and away from the structure; 65mm Storz outlet with a ball valve is fitted to the outlet; • ball valve and pipes are adequate for water flow and are metal; • supply pipes from tank to ball valve have the same bore size to ensure flow volume;	Section 6.8 Appendix S	Section 6.5 Appendix F

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	• underground tanks have an access hole of 200mm to allow tankers to refill direct from the tank;
	• a hardened ground surface for truck access is supplied within 4m;
	• above-ground tanks are manufactured from metal;
	• raised tanks have their stands constructed from non-combustible material or bush fire-resisting timber (see Appendix F of AS 3959);
	• unobstructed access can be provided at all times;
	• underground tanks are clearly marked;
	• tanks on the hazard side of a building are provided with adequate shielding for the protection of firefighters;
	• all exposed water pipes external to the building are metal, including any fittings;
	Services – Electricity
	• *Any new electrical services must comply with Planning for Bush Fire Protection 2019, specifically:*
	• *where practicable, electrical transmission lines are underground.*
	• *where overhead electrical transmission lines are proposed:*
	  • *lines are installed with short pole spacing (30 metres), unless crossing gullies, gorges or riparian areas; and no part of a tree is closer to a power line than the distance set out in ISSC3 Guideline for Management Vegetation Near Power Lines.*
	Bushfire Emergency Management and Operations Plan
	• Preparation of a Bushfire Emergency Management and Operations Plan including the following:
	  ○ detailed measures to prevent or mitigate fires igniting;		

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<table>
<tr><td></td><td>work that should not be carried out during total fire bans;
availability of fire-suppression equipment, access and water;
storage and maintenance of fuels and other flammable materials;
notification of the local NSW RFS Fire Control Centre for any works that have the potential to ignite surrounding vegetation, proposed to be carried out during a bush-fire fire danger period to ensure weather conditions are appropriate; and
appropriate bush fire emergency management planning.</td><td></td><td></td></tr>
<tr><td>Water Management</td><td>Implementation of the requirements outlined in the Water Management Report by Northrop will satisfy the relevant requirements related to water management for the site and proposed development. The following management and mitigation measures are discussed in further detail in Section 6.9.3 of the EIS and Section 4 of the Water Management Report:
Runoff controls,
Flooding and riparian,
Dust suppression, and
Sewage management.</td><td>Section 6.9
Appendix Q</td><td>No change</td></tr>
<tr><td>Flooding Risk</td><td>Implementation of the requirements outlined in the Water Management Report by Northrop will satisfy the relevant requirements related to water management for the site and proposed development.</td><td>Section 6.9
Appendix Q</td><td>No change</td></tr>
<tr><td>Hazards and Risks</td><td>The identified hazards and risks associated with the project are summarised in the table below:<table><tr><th>HAZARD</th><th>MITIGATION MEASURE</th></tr><tr><td>Electrical</td><td>Design and Compliance to Standards, Decisive Voltage Classification (DVC) and Signage, Trained Personnel and Contractors, Site Induction and Training, Fault Detection</td></tr></table></td><td>Section 6.10
Appendix R
Appendix T</td><td>Section 6.6
Appendix H</td></tr>
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		and Safety Measures, Earthing Study and Implementation, Physical Barriers and Emergency Response and Personal Protective Equipment (PPE) and Rescue Kits		
	Arc flash (energy)	Design and Compliance to Standards, Warning Signs, Trained Personnel and Contractors, Site Induction and Training, Preventative Maintenance, BESS Configurations and Fault Detection, Fire and Explosion Protection System, Emergency Response and Personal Protective Equipment (PPE) and Rescue Kits		
	Fire	Design and Compliance to Standards, Procurement from Reputable Suppliers, Trained Personnel and Contractors, Compliance with TransGrid's Requirements, BESS Configuration and Clearance, Preventative Maintenance, Fault Detection and Shut-off Function, Fire and Explosion Protection System and Fire Management and Emergency Response Plans.		
	Chemical	Design and Compliance to Standards, Procurement from Reputable Suppliers, Trained Personnel and Contractors, Encasement of Battery Cells and Modules, Spill Cleanup Protocols, BESS Configuration and Clearance, Fault Detection and Shut-off Function, Fire and Explosion Protection System and Fire Management and Emergency Response Plans.		
	Explosive gas	Design and Compliance to Standards, Procurement from Reputable Suppliers, Independent Owner's Engineer Endorsement, Trained Personnel and Contractors, BESS Configuration, Ventilation, Fault Detection and Shut-off Function, Fire and Explosion Protection System and Fire Management and Emergency Response Plans.		
	Reaction	Design and Compliance to Standards, Procurement from Reputable Suppliers, Independent Owner's Engineer Endorsement, Trained Personnel and Contractors, BESS Configuration and Clearance, Fault Detection and Shut-off Function, Fire and Explosion Protection System and Fire Management and Emergency Response Plans.		

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<tr>
<td></td>
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<table>
<tr><td>EMF</td><td>Location, Orientation, Conductor Spacing, Balancing Phases and Minimising Residual Current, Incidental shielding, Design and Compliance to Standards, Short Duration Exposure, Warning Signs, and Compliance with ICNIRP Occupational Exposure Limits.</td></tr>
<tr><td>External factors (water ingress)</td><td>Location, Use of IP 55 Rated Enclosures, Compliance with Standards for HV Connection Asset, Drainage System, Preventative Maintenance, BESS Configuration and Clearance, Fault Detection and Shut-off Function, Fire and Explosion Protection System and Fire Management and Emergency Response Plans.</td></tr>
<tr><td>External factors (vandalism)</td><td>Location, Secure Fencing and Area Protection, Warning Signs Deployment and Security Cameras Installation.</td></tr>
<tr><td>External factors (lightning strikes)</td><td>Lightning Protection Mast and Surge Protection Devices, Earthing Compliance, BESS Configuration and Clearance, Fault Detection and Shut-off Function, Fire and Explosion Protection System and Fire Management and Emergency Response Plans.</td></tr>
</table>
A detailed breakdown of each of the above mitigation measures is provided within the EIS and the PHA.
</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Contamination and Remediation</td>
<td>The mitigation measure for contamination is as follows:

• As part of the preparation of a Construction Environmental Management Plan, an Unexpected Finds Protocol (UFP) should be prepared in the event that unexpected finds are identified at the site during excavation works. The contamination unexpected finds protocol would define processes and responsibilities in the event that unanticipated contamination is identified. It is also intended to provide guidance to workers at the site in recognising potentially unacceptable material including:
o Visually contaminated or odorous soil and/or groundwater</td>
<td>Section 6.10.4

Appendix T</td>
<td>N/A</td>
</tr>
</table>

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	○ Asbestos-containing material (ACMs) buried infrastructures such as old asbestos pipes sheeting, or tile, with fibres observable along breaks in material.		
Social Impact	Implementation of the mitigation measures identified in Table 39 of the EIS as summarised from Table 21 in the Social Impact Assessment prepared by Urbis in Appendix U.	Section 6.11 Appendix U	Section 6.11 Appendix K
Waste Management	<u>During site preparation and construction</u> *Training and Awareness* Staff present on site during the construction stage of the project will be required to undertake induction and awareness training inclusive of the WMP and site-specific waste management. This includes: • Induction to the waste management hierarchy and use across the site; and • Details of responsibilities for waste management and key personnel; • Site specific waste management practices relevant to the project stage such as: ○ Waste storage and stockpiling locations; ○ Waste disposal requirements; ○ Hazardous or special wastes; ○ Record of waste disposal details and receipts; and • Knowledge of emergency response procedures and contacts; and • Asbestos Awareness Training. Signage will be provided on site to ensure waste management measures are communicated across the subject site, particularly for contractors and visitors who are not regularly on site. Signage will highlight correct procedures for separating wastes where required, locations of bins and waste storage areas,	Section 6.13 Appendix V	No change

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	labelling of designated bins, potential hazards associated with the waste streams and handling, and contact details should any issues be encountered. Signage will be prepared and located on site in accordance with the Australian Standard (AS 1319) for safety signs, and the NSW EPA and Australian Standard for recycling signage. *Monitoring and Reporting* The following activities will be undertaken to inform future onsite waste management and to determine the success of the WMP: • Ensure waste quantities generated are recorded, including tracking of receipts from waste recycling or disposal via the appointed waste contractor; • Record waste classification and testing results; • Review the WMP in light of any changes to construction activities or further information which may alter waste management practices; • Undertake auditing of waste management across the site as a component of broader environmental site audits; • Undertake visual inspections daily to ensure waste management controls are implemented and maintained across site; and • Undertake final review of the WMP upon project completion to ensure information accurately reflects site activities, and to assist future waste management. Outcomes of audits and waste tracking will be reported to the client or the Principal Contractor, potentially through weekly or monthly reporting to ensure waste management objectives are adhered to. *Corrective Action* Where formal auditing, daily visual inspections or incident reporting identify incorrect storage or disposal procedures, or maintenance or waste		

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	management issues, observations will be promptly reported to the Construction Site Manager and recorded. The Construction Site Manager will determine appropriate measures to rectify the issues in a timely manner in consultation with the Environmental Management Representative and Health and Safety Manager where required.		
	<u>During operation</u> *Avoidance and Reduction of Waste* The ongoing site users (operational staff and contractors) will be required to minimise waste generation, and endeavour to reuse waste where available. Waste should be avoided through strategic selection of materials during purchasing which takes into account options which may reduce waste generation during ongoing operation of the site. This includes considering procurement of materials which use minimal packaging and are suitable for reuse. Selection of operational materials will also consider the use of recycled items where practicable. Opportunities to avoid waste generated by operation include: • Develop a procurement policy which considers waste avoidance measures such as: ○ Order site specific or prefabricated items where practicable to minimise surplus material. ○ Consider packaging material provided by suppliers during purchasing and reduce this requirement where possible or consider returnable packaging. ○ Material selection to consider recycled items. *Reuse and Recycling* Measures to separate waste streams should be implemented off site to maximise re-use and recycling.		No Change

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	Procedures to manage the reuse and recycling of waste materials during operation include: • Incorporate waste management into site management procedures to promote reuse and/or recycling of materials. • Consider opportunities for materials reuse and/or recycling where practicable. *Treatment and Disposal* Operational wastes may require treatment to stabilise them for appropriate disposal to reduce the risk of harm to human health or the environment (for example chemicals). These materials may not be suitable for reuse or recycling and will be segregated and disposed of via a suitably qualified contractor off site. Waste will only be sent to landfill or disposal facilities where the prioritised management methods in the hierarchy cannot be implemented in a cost effective or practical manner. Measures to manage the treatment and disposal of waste materials during operation include: • Ensure waste which cannot be reused or recycled and require disposal are clearly segregated from those which have the potential to be reused. • Maintenance staff to be inducted into site waste management practices. • Hazardous materials to be disposed of in accordance with the handling and disposal requirements of SafeWork NSW and NSW EPA. • General wastes to be disposed of in accordance with local council requirements. *Roles and Responsibilities*		

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	It is expected that all personnel attending the site (operational staff and contractors) will commit to the WMP and be responsible for their own actions in adhering to the waste management objectives. Operation of the BESS will not require any staff to be a constant presence at the BESS location. As the site will be largely unattended, implementation of the WMP will be managed by the site asset managers.
	
	Training and Awareness
	
	All staff and contractors will undertake awareness training of the WMP and site-specific waste management. This includes:
	• Induction to the waste management hierarchy and use across the site.
	• Details of responsibilities for waste management and key personnel.
	• Site specific waste management practices such as:
	  ○ Waste disposal requirements;
	  ○ Hazardous or special wastes; and
	  ○ Record of waste disposal details and receipts.
	• Knowledge of emergency response procedures and contacts.
	
	Monitoring and Reporting
	
	The following activities will be undertaken to inform future onsite waste management and to improve the efficiency in achieving the outcomes of the WMP:
	• Review the WMP in light of any changes to operational activities or further information which may alter waste management practices.
	• Undertake auditing of waste management across the site as a component of broader environmental site audits.
	• Undertake visual inspections to ensure waste management controls are implemented and maintained across site.		

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	• Undertake annual review of the WMP to ensure information accurately reflects site activities, and to assist future waste management. Where formal auditing, general inspections or incident reporting identify incorrect storage or disposal procedures, or maintenance or waste management issues, observations will be promptly reported to Equis management and recorded. Equis management will determine appropriate measures to rectify the issues in a timely manner.		

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