



CALALA BESS SOCIAL IMPACT ASSESSMENT

Prepared for
EQUIS ENERGY
9 August 2023



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We acknowledge, in each of our offices, the Traditional Owners on whose land we stand.

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1. EXECUTIVE SUMMARY

Urbis Pty Ltd (Urbis) was commissioned by Equis Energy (Australia) Projects (NGUMI4) Pty Ltd. As trustee for the Equis Energy (Australia) Ngumi 4 Asset Trust to prepare a Social Impact Assessment (SIA) to accompany an SSD application to the Department of Planning and Environment (DPE) for the Calala Battery Energy Storage System (BESS) (the Project).

1.1. METHODOLOGY

A SIA is a specialist technical study which identifies and analyses the potential social impacts and benefits associated with a proposal. Social impacts and benefits are the consequences that people experience when a new project brings change.

The potential impacts and benefits of the proposal are assessed by comparing the magnitude of impact (minimal to transformational) against the likelihood of the impact occurring (very unlikely to almost certain). This risk assessment methodology has been applied from the NSW Department of Planning and Environment (DPE) SIA Guideline: Technical Supplement (2023) and is outlined in Section 6.

The assessment of the social impacts considered a range of complex factors and often competing interests. The impact assessment is reflective of this and has:

- Assessed some aspects of the Project as both negative and positive as they relate to different groups of people
- Included negative impacts on local communities while documenting the benefits to the broader region
- Identified management strategies to maximise identified benefits and mitigate and minimise negative impacts
- Considered the impacts on vulnerable groups and provided management strategies to ensure that any existing disadvantages are not exacerbated, and
- Considered each community's access to critical resources, such as education, housing and health care, and how this affects their resilience.

Urbis conducted a social impact workshop on 30th June 2023 attended by Urbis Social Scientists and Social Planners. The purpose of the social impact workshop was to assess impacts using a social risk framework based on a combination of consequence and likelihood. The social risk assessment is informed by the data collected from the SIA field study, project and environmental impact assessment (EIS) engagement activities, literature review, and social baseline study.

1.2. EXISTING ENVIRONMENT

The proposed site for the Calala BESS project is 474 Calala Lane, Calala, Lot 17 DP 629969, located within Tamworth Regional LGA, New South Wales (NSW). The total site area is approximately 36 hectares, however the footprint of the proposed facility will cover a total area of 8.9 hectares.

The site is located within close proximity to the existing Transgrid Tamworth 330kV substation, residences in the Calala township, as well as the nearby Farrer Memorial Agricultural High School. The surrounding area is agricultural zoned Primary Production, and the site is currently used for cropping and grazing.

1.3. POTENTIAL SOCIAL IMPACTS AND BENEFITS

A summary of the key potential social impacts and benefits identified are provided in Table ES1. The full assessment of impacts and benefits are provided in Section 7. of impacts and benefits are provided in Section 6.

Table ES1

Theme	Impact / Benefit	Summary of impact	Mitigated/Enhanced Rating
Way of life	Impact to local character	There is an anticipated impact on the local character of the area due to the perception that the industrial nature of the BESS facility will contrast with the rural aspect of Calala, and as a result of potential amenity impacts (such as visual).	Low(-ve)
Community	Distribution of impacts and benefits and its affect on community cohesion and resilience	The Calala BESS will generate Project impacts to the local community, mainly related to construction and visual impact, however it will also deliver social, environmental and economic benefits by increasing local job opportunities and allowing for increased solar and wind energy to be integrated into the grid to help meet NSW's future electricity demand and lower the cost of electricity.	High(+ve)
Accessibility	Traffic impacts relating to congestion	As a result of Project activities during construction and operation, there is a potential risk of increased congestion which will impact the accessibility of nearby residents. This includes the traffic disruption from increased traffic, increased heavy vehicles, temporary access and route detours, and slower travel speeds. However, the Traffic Assessment found that the construction traffic will not adversely affect the safety or function of the surrounding road network.	Low(-ve)
Culture	Potential disruption to sites of Aboriginal significance	There is a potential risk for the Project to cause disruption to any sites of Aboriginal significance in the study area. However, the ACHAR determined that there is a low potential for Aboriginal sites to be present within the study area.	Low(-ve)
Health and wellbeing	Health and safety in the event of a hazard	There is a perception that the Project may exacerbate the risk of hazards occurring in the local area, such as bushfires and flooding. This potential increased risk would impact the health and safety of the nearby community, as well as the mental wellbeing of nearby residents. However, the Bushfire Risk Assessment, Water Management Report and Preliminary Hazard Analysis found there to be low risk of flooding, bush fire and other hazards.	Low(-ve)

Surroundings	Benefit to the environment via reduced emissions	The Calala BESS will contribute to a net positive benefit to the environment via the reduction in emissions which would have been otherwise produced, contributing to a flow on benefit to the environmental values of the regional community.	High(+ve)
Surroundings	Amenity impacts relating to noise	Given the proximity of several residences within 500m of the Project site, there is an anticipated impact to the amenity due to noise disruption. With noise mitigations, including a noise barrier, the Project will achieve compliance with the Project noise trigger levels.	Low(-ve)
Surroundings	Amenity impacts relating to visual disruption	The BESS facility is expected to cause visual disturbance to the amenity of the local area, specifically for nearby residents. Using mitigations, the Project will avoid night sky impact, reduce visibility and contrast to the landscape, minimise the impact to landscape character, and retain and enhance the screening of the Project.	Low(-ve)
Livelihoods	Provision of jobs and economic opportunities	The Project will require 170 full time staff during construction, and 7 operational staff throughout the lifespan of the BESS. This will provide a net benefit of employment to the local workforce, as well as corresponding economic opportunities.	High(+ve)
Livelihoods	Provision of a secure source of energy	The Calala BESS facility will provide a secure source of energy to the Tamworth region, and hence provide a social benefit to the climate resilience of the region.	Medium(+ve)
Livelihoods	Perceived impact to property values	As a result of amenity impacts from noise and visual disruption, as well as an impacted local character, there is a perception that the property values of nearby residents will decrease.	Low(-ve)
Livelihoods	Strengthened connections with industry	In line with the region's emerging renewables industry, the Calala BESS facility has opportunities to strengthen industry connections with local businesses and organisations. These include partnerships with local schools to deliver enhanced learning pathways.	High(+ve)
Decision-making systems	Community unrest relating to transparency	As a result of heightened anxieties surrounding the Project, there is potential for community unrest to stem from a perceived lack of transparency and communication with nearby stakeholders.	Medium(-ve)

		This should be addressed with enhanced and continued communication and clarify.	
Cumulative	Cumulative impacts relating to the Project's location nearby the New England Renewable Energy Zone	As the Project is located nearby the New England Renewable Energy Zone, there is a potential risk that other renewables projects will be built nearby, hence further impacting the local community in Calala. This Project, and future projects, should abide by their designated management plans and approval pathways in order to anticipate, and mitigate, any additional impacts.	Low(-ve)

1.4. PROPOSED MITIGATION

To mitigate and/or enhance potential impacts and/or benefits arising from the proposal and identified in the table above, a consolidated list of mitigation and enhancement measures are provided in Section 7 of this report. Where this SIA has further recommendations to mitigate and/or enhance identified impacts and/or benefits, this is also outlined in the consolidated list of recommendations in Section 7 of this report.

2. INTRODUCTION

Urbis Pty Ltd (Urbis) was commissioned by Equis Energy (Australia) Projects (NGUMI4) Pty Ltd. As trustee for the Equis Energy(Australia) Ngumi 4 Asset Trust to prepare a Social Impact Assessment (SIA) to accompany an SSD application to the Department of Planning and Environment (DPE) for the Calala Battery Energy Storage System (BESS) (the Project).

2.1. PROJECT LOCATION

The proposed site for the Calala BESS project is 57 Burgess Lane, Calala, also known as 474 Calala Lane, Calala, Lot 17 DP 629969, located within Tamworth Regional LGA, New South Wales (NSW). The total site area is approximately 36 hectares, however the footprint of the proposed facility will cover a total area of 8.9 hectares.

The site is located within close proximity to the existing Transgrid Tamworth 330kV substation, residences in the Calala township, as well as the nearby Farrer Memorial Agricultural High School. The surrounding area is agricultural zoned Primary Production, and the site is currently used for cropping and grazing.

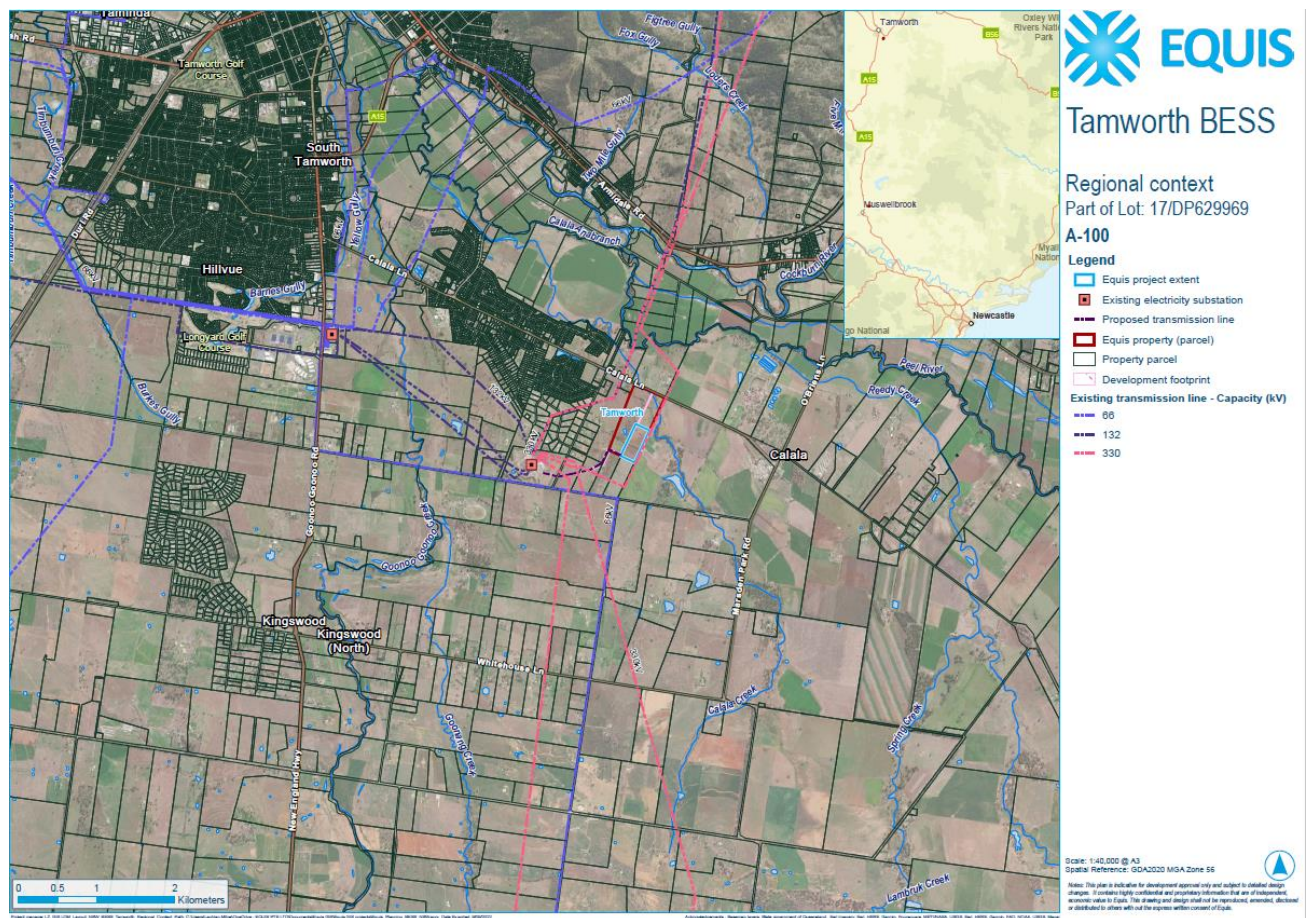


Figure 1 Site location – Regional context

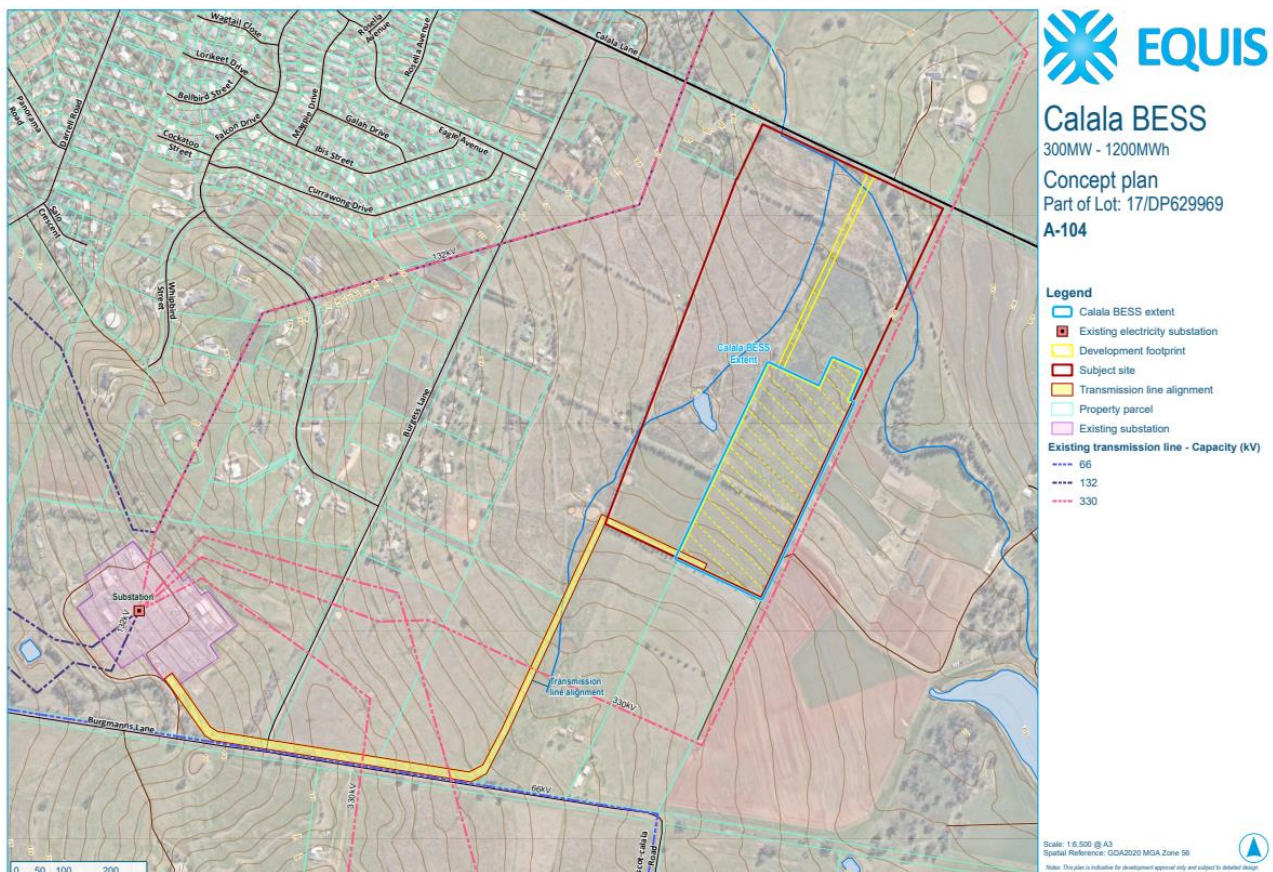


Figure 2 Site location – Local context

2.2. PROJECT OVERVIEW

The Project involves the construction and operation of a large-scale Battery Energy Storage System (BESS) at Calala, NSW. The BESS will have a capacity up to 300 Megawatts (MW) and would provide up to 1200 Megawatt hours (MWh) of battery storage capacity or up to 4 hours of storage duration. The proposal will comprise the following:

- Large-scale BESS including battery enclosures, inverters, DC and AC combiner boxes, transformers and auxiliary components.
- 33/330 kV switchyard
- Underground transmission line connection between the BESS and the nearby TransGrid Tamworth 330 kV substation
- 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, 4 and 5m high noise attenuation walls and landscaping.

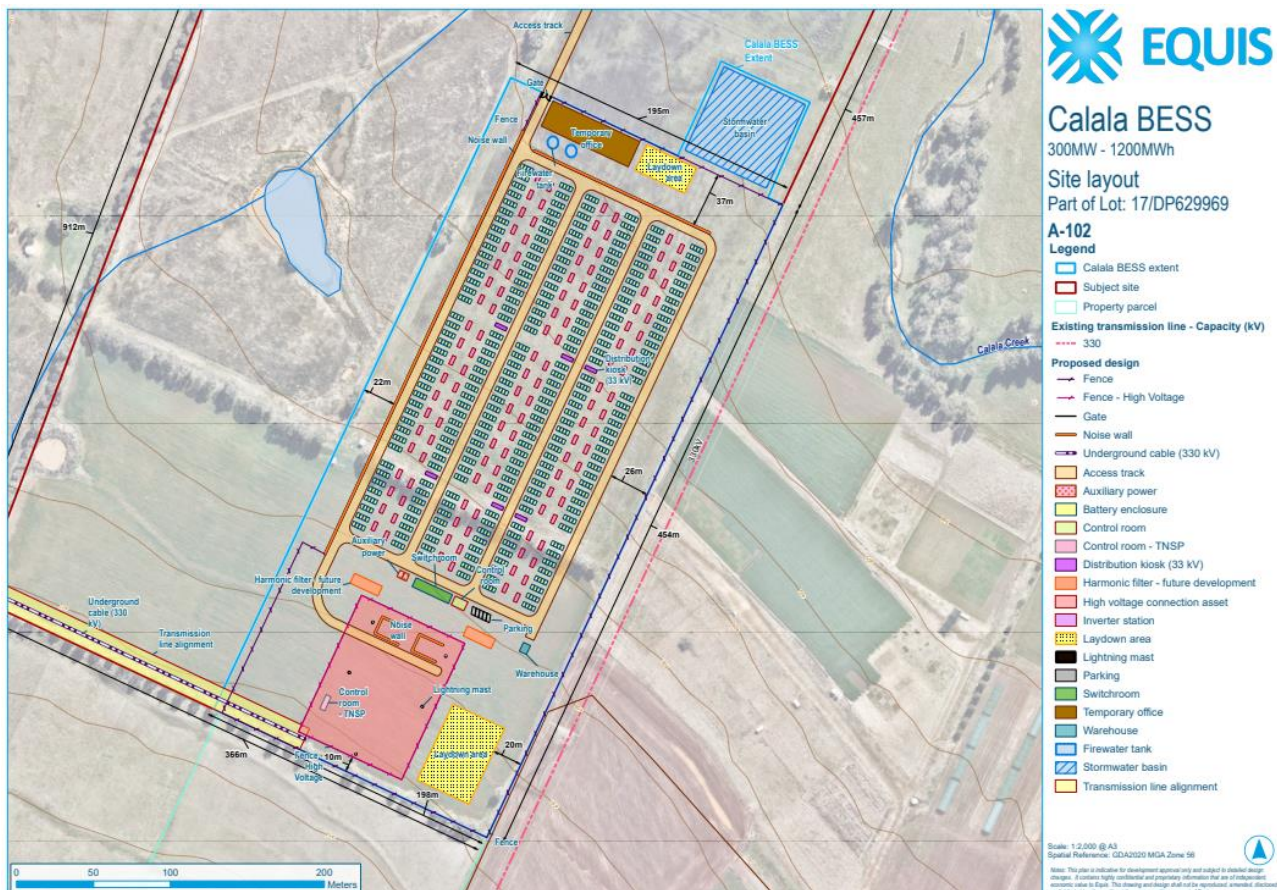


Figure 3 Project site layout

2.3. REPORT PURPOSE AND SCOPE

Urbis Pty Ltd has been commissioned by Equis Energy to prepare a SIA as part of an Environmental Impact Statement (EIS) to support SSD-52786213 application for the Project under Section 4.12(8) of the Environmental Planning and Assessment Act 1979 (EP&A Act). to the Department of Planning and Environment (DPE) for the (the Project).

This SIA document outlines the assessment methods and results, the principles built into the project design to avoid and minimise associated impacts to the local community, and the mitigation and management measures proposed to address any residual impacts not able to be avoided. This SIA also summarises the potential to provide benefits to the community, and the recommended methods by which these benefits can be enhanced to maximise their positive effect.

The specific objectives of this assessment are to:

- Describe the existing social conditions, services and demographic profile
- Identify and assess the extent and nature of potential social risks
- Evaluate the significance of the social impacts and benefits arising from the project
- Provide mitigation measures to reduce the negative social impacts and enhancement measures for the benefits
- Develop a monitoring and management framework.

2.4. SIA GUIDELINE REQUIREMENTS

This SIA report has been prepared in accordance with relevant government assessment requirements, guidelines, and policies; in particular, the methods outlined in the draft SIA Guideline (DPIE 2023) and the SEARs for the Project, issued on 30/01/2023. To inform preparation of the SEARs, the DPE invited relevant

government agencies to advise on matters to be addressed in the EIS. These matters were considered by the Secretary for the DPE when preparing the SEARs.

The individual SEARs relevant to this SIA states:

Social Impact – including an assessment of the social impacts in accordance with Social Impact Assessment Guideline (DPIE, 2021).

2.5. AUTHORSHIP AND SIA DECLARATION

The authorship SIA Declarations for this report are provided in the following sections.

2.5.1. Authors

This report has been prepared by a suitably qualified and experienced lead author and reviewed and approved by a suitably qualified and experienced co-author, who hold appropriate qualifications and have relevant experience to carry out the SIA for this Project. The following introduces each author:

Tate Crofts (lead author)

- Bachelor of Arts, The University of Queensland
- Bachelor of Social Science, The University of Queensland
- Experience with the completion of SIAs according to the NSW SIA Guidelines and best practice social research, evaluation and impact measurement.

Les Hems (co- author, review and quality assurance)

- BA(Hons) Human Geography, University College of Wales, Aberystwyth
- Member of the Australian Evaluation Society and founding member of the Social Impact Measurement Network of Australia
- Experience of reviewing and quality assurance of SIA reports in the context of the NSW SIA guidelines and best practice in social research, evaluation, and social impact measurement

Isabelle Best (co- author, review and quality assurance)

- Bachelor of City Planning (Hons), University of New South Wales, Kensington
- Full member, Planning Institute of Australia (PIA)
- Experience in writing SIA reports for a range of projects in the context of the NSW SIA Guidelines and best practice social research, evaluation and impact measurement.

2.5.2. Declaration

The authors declare that this SIA report:

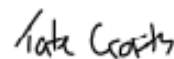
- Was completed on 3 August 2023
- Has been prepared in accordance with the EIA process under the EP&A Act
- Has been prepared in alignment with the DPE's (2023) Draft SIA Guideline
- Contains all reasonably available Project information relevant to the SIA
- As far as Urbis Pty Ltd is aware, contains information that is neither false nor misleading.



Isabelle Best
Associate Director
9 August 2023



Les Hems
Director
9 August 2023



Tate Crofts
Consultant
12 July 2023

2.6. SIA GUIDELINE REVIEW QUESTIONS AND RESPONSES

The review questions outlined by the SIA Guideline (2023) are designed in order to confirm that the requirements of the SIA Guideline have been fulfilled when considering the scale of social impacts of the project. A table responding to the review questions is provided in Appendix A.

Table 1 SIA Guideline review questions and responses

SIA Review questions	Addressed by report (yes/no), relevant section
Does the lead author meet the qualification and experience requirements?	Yes – Section 2.5
Has the lead author provided a signed declaration?	Yes – Section 2.5.2
Would a reasonable person judge the SIA report to be impartial, transparent and suitably rigorous given the nature of the project?	Yes – Section 3, 5
Project's social locality and social baseline	
Does the SIA report identify and describe all the different social groups that may be affected by the project?	Yes – Section 3.1, 3.2
Does the SIA report identify and describe all the built or natural features that have value or importance for people, and explain why people value those features?	Yes – Section 2.1, 4.1-4.4
Does the SIA report identify and describe historical, current, and expected social trends or social changes for people in the locality, including their experiences with this project and other major development projects?	Yes – Section 4 (4.2), 5, 6
Does the social baseline study include appropriate justification for each element, and provide evidence that the elements reflect both relevant literature and the diversity of view and likely experiences?	Yes – Section 4
Does the social baseline study demonstrate social-science research methods and explain any significant methodological data or limitations?	Yes – Section 3, 4
Identification and description of social impacts	
Does the SIA report adequately describe likely social impacts from the perspectives of how people may experience them, and explain the research used to identify them? When undertaken as a part of SIA scoping and initial assessment, has the plan for the SIA report been detailed?	Yes – Section 5, 6
Does the SIA report apply the precautionary principle to identifying social impacts, and consider how they may be experienced differently by different people and groups?	Yes – Section 4.3.6, 4.4, 5, 6
Does the SIA report describe how the preliminary analysis influenced project design and EIS engagement strategy?	Yes – Section 5, 6
Community engagement	

SIA Review questions	Addressed by report (yes/no), relevant section
Were the extent and nature of engagement activities appropriate and sufficient or canvass all relevant views, including those of vulnerable or marginalised groups?	Yes – Section 5
How have the views, concerns and insights of affected and interested people influenced both the project design and each element of the SIA report?	Yes – Section 4.4, 5, 6
Predicting and analysing social impacts	
Does the SIA report impartially focus on the most important social impacts to people at all stages of the project, without any omissions or misrepresentations?	Yes – Section 6
Does the SIA report analyse the distribution of both positive and negative social impacts, and identify who will benefit and who will lose from the project?	Yes – Section 6
Does the SIA report identify its assumptions, and include sensitivity analysis and alternate scenarios? (including ‘worst-case’ and ‘no project’ scenarios where relevant?)	No alternate scenarios were considered for this SIA
Evaluating significance	
Do the evaluations of significance of social impacts impartially represent how people in each identified social group can expect to experience the project, including any cumulative effects?	Yes – Section 6
Are the evaluations of significance disaggregated to consider the likely different experiences for different people or groups, especially vulnerable groups?	Yes – Section 6
Responses, monitoring and management	
Does the SIA report propose responses that are tangible, deliverable, likely to be durably effective, directly related to the respective impact(s) and adequately delegated and resourced?	Yes – Section 6, 7
Does the SIA report demonstrate how people can be confident that social impacts will be monitored and reported in ways that are reliable, effective and trustworthy?	Yes – Section 7
Does the SIA report demonstrated how the proponent will adaptively manage social impacts and respond to unanticipated events, breaches, grievances and non-compliance?	Yes – Section 7

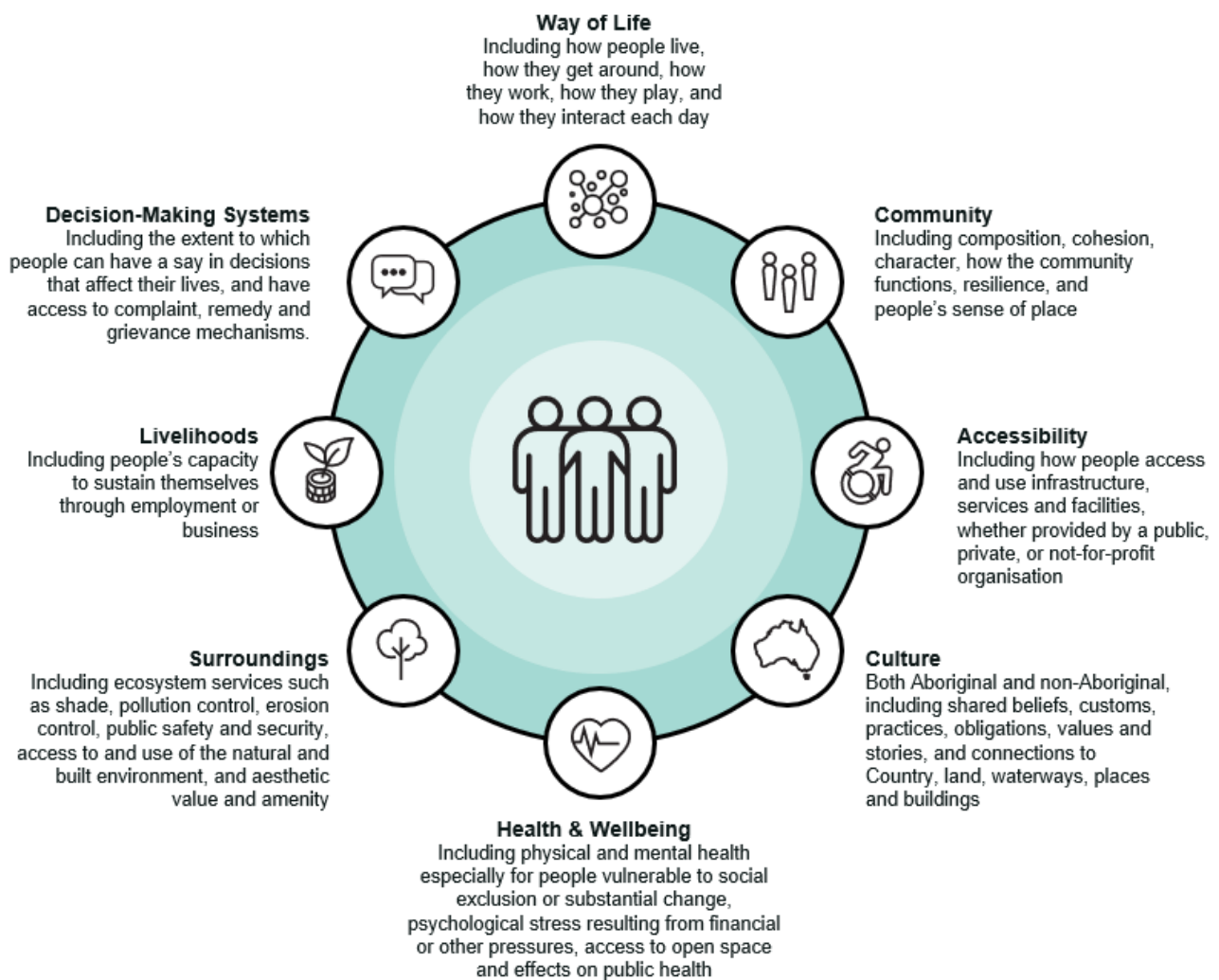
3. METHODOLOGY

The scope of this SIA has been developed in accordance with the:

- SEARs for the Project
- SIA Guideline (DPE 2023)
- The social characterises and community values of the local area and Tamworth Regional LGA

According to the DPE SIA Guideline (2023, p7), social impacts are the “consequences that people experience when a new project brings change”. For the purposes of an SIA, ‘people’ can be individuals, households, groups, communities, businesses or organisations.

Social impacts can be considered in eight categories, as illustrated, and defined in Figure 4.



Source: DPE 2023 Social Impact Assessment Guideline, p 19

Figure 4 Social impact categories

This SIA has been informed by best practice guidance and standards set out by the International Association for Impact Assessment (IAIA) and International Finance Corporation (IFC).

This SIA refers to consequences of the Project that affect the community negatively as social impacts and those that have a positive consequence as social benefits.

3.1. DEFINING THE SOCIAL LOCALITY AND AREA OF INFLUENCE

This SIA addresses the social impacts and benefits of the Project to the local area, the region, and to the State. It considers whether the Project causes direct impacts on local communities and services, as well as whether the Project may increase the demand for regional community infrastructure and services, hence also contributing to indirect impacts across a broader area.

This SIA, including determination of the social locality and area of influence, has been prepared in accordance with the SIA Guideline (DPE 2023).

The area of social locality and influence is described in Section 4.1. In identifying the social locality and area of influence, the connections between Calala and the broader Tamworth region, including supply chains and worker movements, were considered. Other considerations include:

- The scale and nature of the Project and its associated activities;
- Those that may be affected by the Project (see Section 3.2);
- Potentially affected built or natural features located identified as having social value or importance;
- Relevant social trends and social change processes being experienced by local communities; and
- The history and background of the Project and how local communities have experienced the Project and other similar developments to date.

3.2. POTENTIALLY AFFECTED COMMUNITIES

This section describes potentially affected communities in the local and regional areas which may be impacted or benefited by the Project.

The key consideration for identifying potentially affected communities is the risk of social impacts and benefits as a result of the Project. Factors considered in defining potentially affected communities include:

- Proximity of properties and communities to the Project and its access routes;
- Vulnerabilities that increase risk, and/or magnitude of potential impacts on communities or groups
- The role, culture and identity of communities in the region;
- Availability, and capacity of, housing and other social infrastructure to attract and support potential growth;
- Availability of skilled workforce and experienced personnel, or ability of residents to gain the skills required for the mining industry;
- Native title rights and other interests held by Aboriginal and/or Torres Strait Islander groups;
- Location of businesses who could supply the Project;
- Communities and vulnerable groups potentially affected by other projects within the region; and
- Likelihood of social impacts and benefits for the local and regional communities.

Members of the local community and stakeholders with the potential to benefit or be impacted by the Project include:

- residents of Calala;
- residents in Tamworth Regional LGA;
- local businesses and industries (such as nearby schools); and
- current and/or future employees of the operation.

3.3. ASSESSMENT METHODOLOGY

The following methodology, informed by the 2023 SIA Guideline and Technical Supplement, was undertaken to prepare this SIA.



Figure 5 SIA Methodology Phases

The following methods were used to collect and assess the data which informed the SIA.

Stage	Activities
1. Social Baseline study	- Undertake a detailed desktop analysis of the site and surrounding context will be undertaken using up to date aerial and street view photography. - Review relevant State and local policies to understand the strategic context of the site and identify potential social impacts. - Analyse relevant data sets, including Australian Bureau of Statistics Census data and, social infrastructure and services data and information, to understand the existing social conditions and any potential vulnerabilities and risk factors or benefits associated with the proposal.
2. Field Study	- Hold a videoconference with Tamworth Regional Council social planner, or equivalent position, to confirm any potential impacts from Council's perspective. - Prepare a questionnaire tailored to nearby neighbours to understand their potential direct impacts and benefits. To be administered/circulated by Equis Energy and data provided to Urbis for inclusion in SIA. - Develop and administer a social impact survey (community, businesses, and services) to identify the broad impacts and benefits of the project. Delivered on-line and available for 1 week.
3. Data analysis and review	- Review relevant technical reports to identify potential social impacts and management measures. - Data analysis of all data collected during field study. - Review of findings from the socioeconomic data collection and EIS engagement activities will be used to identify the potential changes against the social baseline as a consequence of the project to determine the potential impacts for assessment.
4. Social impact identification	- Identify and describe other economic impacts that are likely to be created by the proposed development that may be difficult to quantify. - A briefing of the identified potential socioeconomic impacts and benefits will be provided to the client with a request for feedback, including proposed methods for mitigation and enhancement.
5. Social risk assessment	An internal socioeconomic impact-benefit assessment workshop will be conducted to determine the likelihood and consequence of each identified impact and benefit in accordance with the DPE's SIA Guideline2021.
6. Social impact management	A socioeconomic impact management framework will be developed that incorporates the mitigation measures proposed by the client and any additional recommendations that would benefit the client and community outcomes.
7. SIA Reporting	Development of this SIA and internal peer review was conducted by Social Planners and Social Scientist's with experience in application of social science methodologies to determine social impacts and in accordance with the SIA Guideline (DPE 2023).

4. SOCIAL BASELINE

This chapter provides a summary of the baseline information and key social conditions in the study area for the Project that contribute to the identified social impacts and benefits.

4.1. SOCIAL LOCALITY AND AREA OF INFLUENCE

The site is located in the NSW suburb of Calala, where most of the immediate impacts and benefits will be experienced. However, due to the nature and scale of the project, there will also be impacts and benefits felt more broadly across the Tamworth Regional LGA, including those related to supply chains, transport networks, and employment opportunities.

Study area	Geographic area	ABS data category	Referred to in report as:
Social locality	Calala suburb	SSC	Local area
Regional area	Tamworth Regional Council	LGA	Regional area
State of New South Wales	State of New South Wales	New South Wales STE	NSW

4.2. POLITICAL AND PLANNING CONTEXT

This section provides a summary of the relevant plans and strategies across the social locality (local and regional areas) that inform the social risk assessment and mitigation and management strategies related to the social locality and area of influence.

The local government has regional and strategic plans that articulate their vision for the future of their community. The reviewed plans include:

- New England North West Regional Plan 2041.
- Tamworth Regional Council, Blueprint 100: Our Community Plan 2023-2033.
- Tamworth Regional Council, Blueprint 100: Local Strategic Planning Statement 2020.
- Tamworth Regional Council, Tamworth Tomorrow: Economic Development and Investment Strategy.

These are summarised in Table 4.

Table 2 Regional planning context

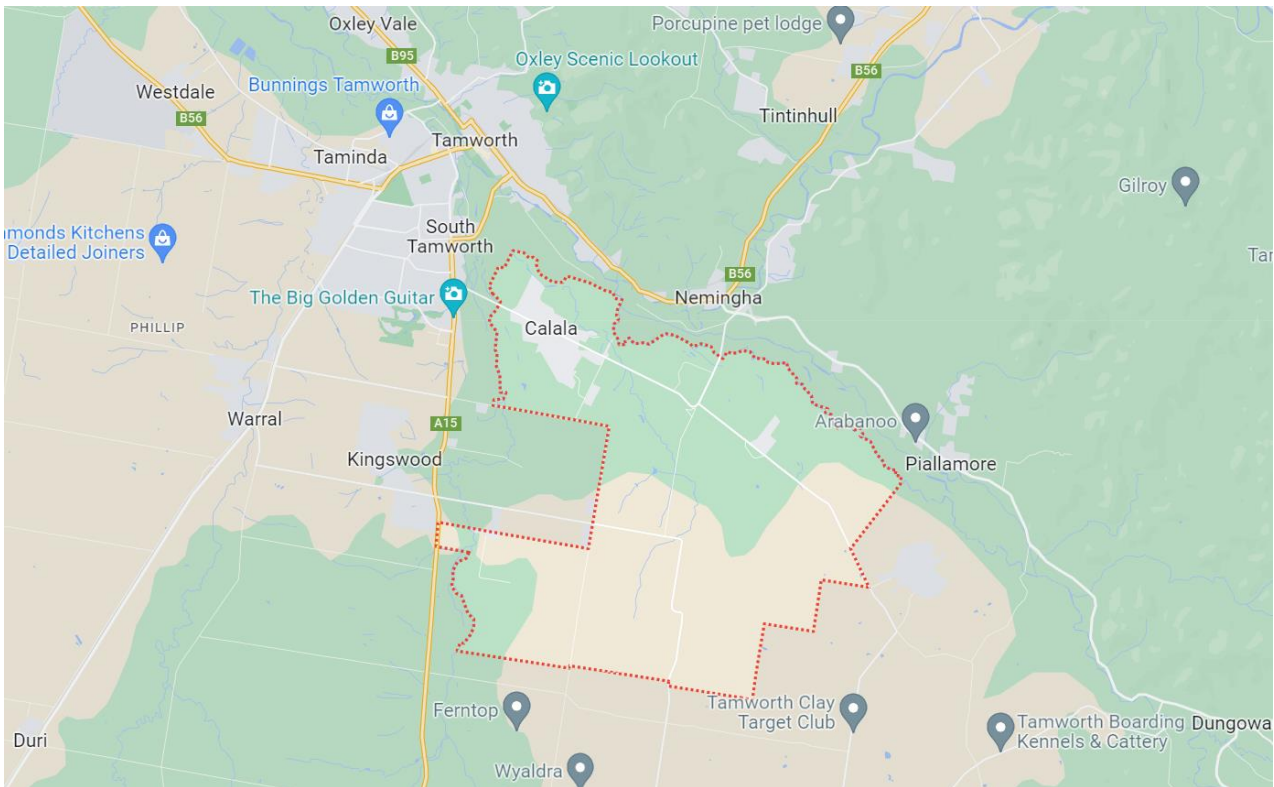
	Theme	Summary
	Connectivity as a regional hub	▪ The Local Strategic Planning Statement outlines a key goal of the region to maintain strong infrastructure and transport networks for a connected future, especially in order to accommodate Tamworth's employment and residential growth. ▪ The region's location between Sydney and Brisbane provides it with ready access to both domestic and international markets via high-quality transport networks, such as the expanding inland rail network.
	Planning for a growth precinct	▪ There is major growth in both population and employment planned for regional cities and strategic centres, including the nearby New England Renewable Energy Zone (REZ). ▪ In addition to agriculture, the region is home to a strong education sector based around the University of New England and TAFE NSW, as well as an emerging healthcare sector which is predicted to accompany an aging population over the next 20 years.

	Theme	Summary
		▪ To accommodate this growth, Tamworth's economic priorities include productivity and stability, housing, transport and infrastructure, as well as digital connectivity and future industry. ▪ There is also high value placed on opportunities to diversify the local economy.
	Core agricultural land use and character	▪ The New England and North West Region produces around a fifth of NSW's agricultural output, is home to 16% of all farm businesses in NSW, and employs more than 13,000 people (14% of the region's workforce). ▪ This agricultural land use is a central value of the community, who value the rural aspect of their homes and have a strong sense of respect for country.
	Emerging renewables industry and green economy	▪ Renewable energy and the broader 'green economy' are two of the fastest growing sectors which present a how of new economic and sustainability opportunities for the Tamworth region. ▪ The establishment of the New England Renewable Energy Zone (REZ) has marked the region for targeted renewable energy infrastructure as part of a broader strategic and integrated approach to renewable energy targets, such as achieving net zero emissions by 2050.
	Priority on disaster recovery and resilience	▪ A key priority of Tamworth's 'Blueprint 100' Community Strategic Plan is improving and maintaining water supply and security. ▪ Infrastructure should be able to maintain its functionality and serviceability or be restored promptly in the event of a disaster. ▪ To accommodate the expected growth in the region, there is a high demand for resilient infrastructure to transform communities, lower emissions, underpin water security, and power homes and industry.

4.3. DEMOGRAPHIC PROFILE

A demographic profile identifies the demographic and social characteristics of a proposal's likely area of social influence. This is an important tool in understanding how a community currently lives and that community's potential capacity to adapt to changes arising from a proposal.

A demographic profile has been developed for Calala SSC based on demographic data from the Australian Bureau of Statistics (2021) Census of Population and Housing and DPE (2019) population projections. The demographic characteristics of Tamworth Regional LGA and NSW have been used, where relevant, to provide a comparison.



Picture 1 Suburb of Calala

4.3.1. Population and age

- In 2021, there were **3,930 people** living in Calala, representing 6.2% of the residents in Tamworth LGA. This population is **forecast to grow to 6,274 people by 2041**, comprising an additional 2,236 people.
- There is a **high proportion of working aged people** (25-54 years), comprising 40.0% of the total population, compared to Tamworth (36.13%) and NSW (40.5%). There is also a **high proportion of children aged 5-14 years** in Calala (15.8%) compared to Tamworth (14.1%) and NSW (12.4%).
- There is a **low proportion of people aged over 65**, comprising 14.6% of the population compared to 19.9% in Tamworth. However, the population projections indicate that Calala will see an **increase in older age groups by 2031**, with a 21.1% increase in retirement age population.

4.3.2. Cultural and diversity

- Of Calala's total population, **425 people (10.8%) identified as being Aboriginal and/or Torres Strait Islander**, a proportion comparable to that of Tamworth (12.7%).
- Calala is **slightly less culturally and linguistically diverse** than Tamworth, with 6.9% of the total population born outside of Australia (compared to 8.4% in Tamworth), and 4.4% of Calala residents speaking a language other than English at home (compared to 5.8% across Tamworth).

4.3.3. Workforce and employment

- There is a **greater proportion of people in the labour force** in Calala (67.9%) than across Tamworth (59.5%). This corresponds with a **low level of unemployment** (2.8% compared to Tamworth's 4.5%).
- In 2021, **the top occupation in Calala was professionals** (comprising 20.6%), followed by technicians and trade workers (15.0%) and community and personal service workers (14.0%).
- The top three industries of employment were **secondary education** (4.8%), **hospitals** (4.4%), and **other social assistance services** (3.8%). This was reflective of Tamworth's key industries, with the highest being hospitals (5.6%), followed by secondary education (3.0%) and other social assistance services (3.1%).

- Calala also has relatively **low levels of educational attainment**, with 18.5% of residents holding a Bachelor's degree or above, compared to NSW (27.8%). However, Calala does have higher proportion of Bachelor's degree holders compared to Tamworth (15.0%), and a **higher proportion of people who completed year 12 or equivalent** (38.2%) compared to Tamworth (31.7%).

4.3.4. Housing and income

- Calala has **high personal and family income rates**, with a median weekly total personal income of \$914 (compared to \$755 across Tamworth), and a median weekly family income of \$2,112 (compared to \$1,821 in Tamworth).
- There is a **smaller proportion of people who own their home outright**, with 28.0% of Calala residents owning their home outright, compared to Tamworth's 33.6%, and 31.5% across NSW. Instead, there is a **high proportion of people who own with a mortgage** (42.9%) compared to Tamworth (31.3%) and NSW (32.5%).
- The **majority of Calala residents live in separate houses**, comprising 95.6% of the population. This is a higher proportion than across Tamworth (88.1%) and NSW (65.6%).

4.3.5. Health and wellbeing

- There is a **comparable proportion of people in Calala with long term health conditions** (44.2%) than across Tamworth (47.0%), though it is higher than the proportion across NSW (39.0%).
- There is a **high rate of asthma** in both Calala (11.1%) and Tamworth (11.2%) compared to NSW (7.8%). There is also **higher rates of mental health conditions** in Calala (11.1%) and Tamworth (10.7%) compared to across NSW (8.0%).
- Across the remainder of long-term health conditions (including arthritis, cancer, dementia, diabetes, heart disease, kidney disease, and strokes), Calala has **lower rates of other long-term health conditions** compared to Tamworth.

4.3.6. Vulnerable groups

There are numerous vulnerable groups within the study area community including the socio-economically disadvantaged groups, elderly and persons with a disability (need for assistance), children with neurodevelopmental and neurobehavioral disorders (such as autism and attention deficit hyperactivity disorder, and overweight/obese children).

4.3.6.1. SEIFA

According to the 2016 SEIFA, there is some variation in terms of socio-economic advantage and disadvantage between communities within the local area and regional area.

- **Calala experiences relatively high levels of socio-economic advantage**, ranking in the top 30% of suburbs for the Index of Relative Socio-Economic Disadvantage and for the Index of Relative Socio-economic Advantage and Disadvantage. Calala also ranks in the top 40% for the Index of Economic Resources and the Index of Education and Occupation.
- **In Tamworth there are lower levels of socio-economic advantage**, with the LGA ranking in the top 50% across all indices.

4.3.6.2. Disability

- There is a **lower proportion of people who identified as having a need for assistance** due to disability, old age, or long-term health condition in Calala (5.5%), compared to Tamworth (6.7%).
- In Calala, there were **402 people (10.2%) who provided unpaid assistance to someone with an identified need for assistance**, a proportion comparable to across Tamworth (12.8%).

4.3.6.3. Homelessness

Data on the estimated levels of homelessness is sources according to the ABS 2021 Estimating Homelessness: Census, and for this assessment has been gathered at LGA level (Tamworth Regional).

- In 2021, there were **3 people in Tamworth living in improvised dwellings**, tents, or sleeping out.

- There were **56 people residing in supported accommodation for the homeless**, and **42 people temporarily residing with another household**.
- Further, there was **112 people living in crowded dwellings**, and **36 people living in ‘severely’ crowded dwellings**.

4.3.7. Crime and safety

As part of the demographic profile, data from the NSW Bureau of Crime Statistics and Research was also analysed to understand the crime and safety context around the site. This data is accurate as of 20 June 2023. Crime data from the BOSCAR indicates that **Calala generally has lower rates of crime** compared to Tamworth and NSW averages. However, there were some crime types where Calala had higher rates of crime per 100,000 people than the NSW averages, including:

- Break and enter dwelling: 561.3 (compared to 234.0 in NSW)
- Motor vehicle theft: 323.8 (compared to 158.6 in NSW)
- Steal from motor vehicle: 928.3 (compared to 338.4 in NSW)
- Trespass: 259.1 (compared to 136.2 in NSW)

As such, this crime profile indicates that the suburb may be more susceptible to opportunistic and theft crimes relating to residences and motor vehicles.

4.4. COMMUNITY VALUES, STRENGTHS AND VULNERABILITIES

A summary of the identified strengths or vulnerabilities of the community based on the existing social conditions in the study area is provided in Table 3.

Table 3 Social baseline identified values, strengths, and vulnerabilities.

Values	Strengths	Vulnerabilities
▪ Value on the ‘closeness to everything’	▪ Strong connection to the broader region via industry and transport	▪ Poor local road conditions
▪ Water security, and climate resilience	▪ Lead agricultural producer in the region	▪ Water supply and security
▪ Strong sense of community, and distinct community identity	▪ High personal and family incomes	▪ Need for more community facilities and recreational opportunities
▪ Strong value on the natural environment and need for sustainable economic development	▪ Support for growth of the renewables industry	▪ High rates of theft-related crimes
▪ Value of the rural lifestyle	▪ High levels of socio-economic advantage	▪ High rates of long-term health conditions including asthma and mental health
	▪ Strong labour force participation	

5. SIA FIELD STUDY

Several methods were used by Equis to engage and consult the community and key stakeholders regarding the Project, including a letterbox drop, community information sessions, interviews with landholders and key organisations, and the establishment of an ongoing engagement platform.

In addition to the engagement provided by Equis, Urbis conducted an independent community survey tailored to gather information specific to this SIA, and one in-depth stakeholder interview. The methods of engagement and consultation with community and key stakeholders and details of participation are provided in Table 6.

Table 4 Community and stakeholder participation

Method	Administered	Timeframes	Invited	Participated
Letterbox drop	By Equis	Sent on 29 September 2022	All residents within 1.2km of the project	15 homes
Interviews with landholders (via doorknock)	By Equis, in person	10-13 October 2022, and 1 March, 2023	Landholders within 750m of the site	7 homes answered; met with 9 homes; left information with 12 homes
Interviews with key organisations	By Equis, in person	10-14 October 2022	Identified relevant organisations	8 organisations
Community information session	By Equis, in person	3-7pm 14 December, 2022	All residents within 500m of the project were invited personally by phone, email, and via the eHub engagement portal	28 total
eHub engagement platform	By Equis, online	December 2022	All relevant stakeholders	n/a
Community Survey	By Urbis, online	23 June – 10 July 2023	All local community – advertised on the Equis Energy eHub portal, and emailed to community members that have registered as living within 1km.	4 responses
Additional stakeholder interview	By Urbis, via phone	30 July 2023	Resident within 500m of the site	2 people

5.1. IN-DEPTH INTERVIEWS: SUMMARY OF FINDINGS

During the consultation led by Equis, landowners expressed several concerns and comments regarding the Project. One of the most prominent concerns was that the BESS would conflict with the rural aspect of their properties and may have an impact on the **local character** which is highly valued by residents. This was closely tied to concerns about the **visual impact** of the project, which would change the surrounding landscape.

Another main concern pertained to the noise disruption to resident's **amenity**, resulting from both construction and operational noise. As a result of this impacted amenity, and their close proximity to the site, some landholders also felt that the project may have a resultant negative impact on their **land values**.

The **health and safety** of the local community in the event of a hazard was also frequently raised, as the project was perceived to increase the possibility of pollution, chemical contamination, bushfires and flooding. Flooding in particular was raised as both a safety concern but also in relation to accessibility, as local road conditions may be worsened by additional **traffic** and/or increased risk of flooding.

Equis also undertook interviews with key organisations, including the Tamworth Regional Council, Tamworth Mountain Bike User Group (TAMBUG), NSW Indigenous Chamber of Commerce (NSWICC), Farrer Memorial Agricultural High School, Tamworth RFS, Tamworth Agricultural Institute, Tamworth Chamber of Commerce, and the Carinya Christian High School. These organisations raised a number of potential benefits and opportunities relating to the Project's community benefit initiatives. Through consultation activities to date with community and stakeholders, partnership opportunities and associated initiatives are being explored. The Calala BESS community benefit initiative objectives, potential partnerships and initiatives are described in Section 6.1 of this report.

In addition to the in-depth interviews undertaken by Equis and key findings, the in-depth interview undertaken by Urbis raised similar concerns regarding the potential impacts and benefits of the Project. The most prominent concern was **noise**, in relation to an anticipated negative impact to the amenity, local character, and property values of nearby houses. There was also a perceived **lack of transparency** from the Project, which resulted in feelings of worry, uncertainty, and mistrust towards the Project.

5.2. COMMUNITY SURVEY: SUMMARY OF FINDINGS

The Community Survey was distributed on the Equis eHub engagement portal and was emailed to registered residents within 1km of the site. The survey was live from 27 June – 10 July 2023, and received a total of 4 responses. This low response rate can be attributed to the effects of 'consultation fatigue', wherein participants can experience exhaustion and stress as a result of repeated engagement activities, as involvement can drain their energy levels as well as time and financial resources (Attree et al. 2011). Attree et al (2011) found that lack of continuity in engagement opportunities and the failure to embed projects into community organisations were often courses of disappointment for several participants, and could act as a disincentive for future engagement.

All four respondents live within 500m of the Project, and identified nearby residents in the 'immediate vicinity' of the site as the most vulnerable to experiencing potential impacts. Two respondents (50%) believed the Calala BESS will impact the community in mainly negative ways, while one (25%) believed it would be mainly positive, and one (25%) believed it would be both positive and negative.

In response to the question *What makes Calala a great place to live?*, all four respondents identified the quiet, tranquil, and rural atmosphere, as well as the proximity of Calala to key amenities such as local shops. When asked if there were any challenges preventing Calala from being a better place to live, three residents raised the 'encroachment of industry' and the 'potential developments' in the area as cause to 'deter future residential development of the area and will seriously reduce the value of existing properties'. The other respondent raised road access as a current challenge, stating that 'Calala is growing and Calala Lane is already too busy at peak traffic times'.

Using a matrix to identify the range of potential positive and negative effects on key themes, respondents identified health and wellbeing and decision-making systems as the most negatively affected (ranked between 1.5 and 2, with 1 being the most negative), and identified accessibility as the most positive (averagely ranked at 3).

When asked to expand on the impacts they are most aware and/or concerned about, all four respondents raised impacted property values as a prime concern, with the causes mainly stemming from noise and visual disturbance, as one resident mentioned the 'noise and visual impact on my home including re-sale value

when I sell'. Residents also perceived that property values would 'plummet' due to the 'encroachment of industry on residential area', as one resident noted how significant the visual change will be, stating 'no one will want to live near 960 humming two story container sized batteries where there used to be peaceful outlook with grazing livestock'.

Regarding potential benefits, one resident identified potential positive impacts in the form of employment and renewable energy. Similarly, when asked to describe any potential benefits, one respondent believed that the Project will 're-invest in the local community' and could bring 'enormous benefits' over the life of the BESS.

5.3. SUMMARY OF SIA FIELD STUDY FINDINGS

This section outlines the key social impacts identified by participants throughout the community engagement. All consultation sought to understand how participants viewed their community, and to identify how the Project may impact their community. Participants identified values, strengths, and vulnerabilities which offer an understanding of the community surrounding the Project site, shown in Table 7.

Table 5 Community identified values, strengths and vulnerabilities

Values	Strengths	Vulnerabilities
Rural landscape, local character	Nearby schools	Poor road conditions
Quality of life	Close to amenities	Traffic at peak times
Property values	Attraction to the area	Prone to flooding
Safety	Agricultural use	Nearby elderly residents
Quiet, tranquil atmosphere		

During the SIA Field Study, participants also identified the key impacts, benefits, and opportunities for the community relating to the Project. These are summarised in Table 8.

Table 6 Community identified impacts, benefits, and opportunities

Impacts	Benefits	Opportunities
Conflict with rural local character	Local employment	Information day with regional businesses
Visual impacts	Contributions to renewable energy transition	Partnership opportunities with local schools regarding educational programs
Noise disturbance		Funding towards Indigenous arts programs
Impacted property value		Partnerships with NSW Rural Fire Service
Increased risk of hazards (especially fire)		

6. SOCIAL IMPACT AND BENEFIT ASSESSMENT

This chapter starts by providing an overview of community benefit initiatives Equis' is exploring. The chapter then provides a ranking of the identified social impacts and benefits of the Project. The following assessment outlines the social impacts and benefits as a consequence of the changes to the current social or changes experienced by the community resulting from the Project.

To prioritise the identified social impacts and benefits, a risk-based framework, provided Table 7 has been adopted in the assessment of social impacts and benefits.

Table 7 Significance matrix

		Magnitude level				
		1	2	3	4	5
Likelihood		Minimal	Minor	Moderate	Major	Transformational
A	Almost Certain	Low	Medium	High	Very High	Very High
B	Likely	Low	Medium	High	High	Very High
C	Possible	Low	Medium	Medium	High	High
D	Unlikely	Low	Low	Medium	Medium	High
E	Very Unlikely	Low	Low	Low	Medium	Medium

Source: DPIE, 2021, SIA Guideline for State Significant Projects: Technical Supplement, p. 13

The framework is applied using a likelihood (Table 8) and magnitude (Table 7.2 and Table 7.3) levels to determine a ranking of each of the identified social impacts and benefits.

Table 8 Likelihood levels

Level	Definition
Almost certain	Definite or almost definitely expected (e.g. has happened before on similar project).
Likely	High probability
Possible	Medium probability
Unlikely	Low probability
Very unlikely	Improbable or remote probability

Source: DPIE, 2021, SIA Guideline for State Significant Projects: Technical Supplement, p. 12

Table 9 Dimensions of social impact magnitude

Dimensions		
Magnitude	Extent	Who specifically is expected to be affected (directly, indirectly, and/or cumulatively), including any vulnerable people? Which location(s) and people are affected? (e.g., near neighbours, local, regional, future generations).
	Duration	When is the social impact expected to occur? Will it be time-limited (e.g., over particular project phases) or permanent?
	Intensity or scale	What is the likely scale or degree of change? (e.g., mild, moderate, severe)

Dimensions		
	Sensitivity or importance	How sensitive/vulnerable (or how adaptable/resilient) are affected people to the impact, or (for positive impacts) how important is it to them? This might depend on the value they attach to the matter; whether it is rare/unique or replaceable; the extent to which it is tied to their identity; and their capacity to cope with or adapt to change.
	Level of concern / interest	How concerned/interested are people? Sometimes, concerns may be disproportionate to findings from technical assessments of likelihood, duration and/or intensity.

Source: DPIE, 2021, SIA Guideline for State Significant Projects: Technical Supplement, p. 12

Table 10 Magnitude levels

Magnitude level	Meaning
Transformational	Substantial change experienced in community wellbeing, livelihood, infrastructure, services, health, and/or heritage values; permanent displacement or addition of at least 20% of a community.
Major	Substantial deterioration/improvement to something that people value highly, either lasting for an indefinite time, or affecting many people in a widespread area.
Moderate	Noticeable deterioration/improvement to something that people value highly, either lasting for an extensive time, or affecting a group of people.
Minor	Mild deterioration/improvement, for a reasonably short time, for a small number of people who are generally adaptable and not vulnerable.
Minimal	Little noticeable change experienced by people in the locality.

Source: DPIE, 2021, SIA Guideline for State Significant Projects: Technical Supplement, p. 13

6.1. CALALA BESS COMMUNITY BENEFIT INITIATIVES

Equis are exploring various community benefit initiatives. The objectives of the community benefit initiatives are to:

- Developing positive and direct relationships with the community
- Establishing the ability for the Project to contribute towards achieving local plans and goals
- Increasing local support for the project and building social license to operate.

Following SSD approval, Equis are exploring opportunities to:

1. Adopt a procurement process that includes a Local Jobs First Program, Social Procurement Framework, and Social Impact Guidelines; and
2. Support local initiatives.

As described in Section 5.1 initial discussions have been undertaken between Equis, the community and key stakeholders. Potential initiatives/opportunities developed to date through this consultation are described in Table 11 below. Importantly, the initiatives described are still being worked through. The partnerships represent a long term relationships with key stakeholders which will continue to evolve and change over time. At this stage of the Project, the initiatives are not finalised, but exemplify the types of activities Equis will explore with partners post DA approval.

Table 11 Potential community benefit opportunities

Initiative descriptions	
Initiative 1	<u>Partnership with Farrer Memorial Agricultural High School</u> Opportunities include: ▪ Expanding Farrer's curriculum to include education, training, and skill development in the renewable energy sectors. ▪ Support the schools' Indigenous students and expand cultural awareness. ▪ Funding to support the high school to build sustainable infrastructure (solar, BESS and dams), to increase the school's environmental and financial sustainability. ▪ Allow the School to farm the agricultural lands that surround the Calala BESS (circa 29 acres), where the students can run sheep and other livestock.
Initiative 2	<u>Support tourism through events funding</u> Opportunities include: ▪ Funding to support the Tamworth Regional Heritage Festival ▪ Partner with multicultural and Indigenous agencies to create opportunities for members of those communities to share and celebrate their cultures (eg. Funding for the Fiesta La Peel festival)
Initiative 3	<u>Supporting the NSW Rural Fire Service</u> Opportunities include: ▪ Funding to support the Farmers Partnership Program to help train and involve local farmers with regional firefighting efforts and build regional resilience ▪ Funding to support the Girls on Fire program to train, mentor and engage women to volunteer in the RFS ▪ Funding to support the RFS Indigenous arts and educational program
Initiative 4	TAMBUG Cycling pathway (Co-fund with Council) ▪ Opportunity to provide funding to support Tamworth Regional Council to build physically safe barriers on the road, designated for cyclists.

6.2. WAY OF LIFE

This section provides a detailed assessment, unmitigated and mitigated and unenhanced and enhanced, of the matters that significantly impact the way of life as a consequence of the Project. The matters assessed include:

- Impact to local character.

Table 12 Summary of impacts and benefits related to Way of life

Impact Category	Matter	Affected stakeholders	Duration	Extent	Unmitigated/unenhanced	Mitigated/enhanced
Way of life	Impact to local character	Local community, nearby residents	Construction, operation	Local area	Medium	Low

6.2.1. Impact to local character – unmitigated

Due to the perception that the industrial nature of the BESS facility will contrast with the rural aspect of Calala, there is an anticipated impact on the local character. This change would particularly impact the local community, including nearby residents.

As revealed in the Political and Planning Context (Section 4.2), there is a strong sense of community and community identity centred around the rural nature of life in Calala, and in Tamworth more broadly. The rural lifestyle, quiet and tranquil atmosphere, and quality of life experienced by local residents were all raised as core values during the SIA field study (Section 5.3).

During consultation, three residents expressed concerns that the BESS was not consistent with the agriculture typical of the surrounding area. Some expressed confusion as to how it was allowed by current planning zones and policies or believed that it was hypocritical given the restrictions faced by residents wanting to build things on their own properties. Some also viewed the change as 'invasive to their lifestyle', as it would contrast with the 'quiet and rural' character which they currently get 'personal enjoyment' from.

When asked about what makes Calala a great place to live, all four survey respondents raised the quiet and rural atmosphere, described as a 'country feel despite urban environment' and 'just out of town and quiet'. In contrast, three respondents raised the 'encroachment of industry' and 'potential developments' in the area as current challenges preventing Calala from being a better place to live. One respondent claimed that 'the encroachment of industry will mean the proposed BESS will inhibit any future desire for family housing'.

The Landscape Character and Visual Impact Assessment (LCVIA) also notes several community concerns about specific visual impacts, raised by 5 of 14 neighbouring properties. According to the LCVIA, residents noted that the existing rural residential character and peaceful outlook made Calala a great place to live, and they did not want their rural outlook to be adversely affected 'by looking at ugly batteries or cement walls' (LCVIA Section 7.2). During the SIA Field Study, concern for lighting at night was also raised as a concern by residents who believed it would impact their ability to star gaze. The LCVIA states that the BESS would not be permanently lit at night, as the outdoor security and emergency lighting are included for safety purposes only (LCVIA Section 3.3).

The LCVIA outlines the main visual features of the project in Section 3.3, including the BESS and inverters, substation and switchyard, underground transmission line, control room and warehouse, noise attenuation wall, perimeter fencing, access and lighting. These features, in addition to the removal of vegetation and trees during construction, would cause visual impacts that risk changing the local character of the area.

The LCVIA confirms that the existing regional landscape is primarily dominated by agricultural land use, and features open pastures, timber fencing, sheds, farm machinery, homesteads set back from sealed or unsealed roads, and is generally surrounded by trees (LCVIA Section 4.0). It recognises that energy infrastructure has a strong visual presence due to the numerous transmission towers and Transgrid's existing large Tamworth substation, and hence concludes that the landscape character impact is assessed as moderate-low, with a low sensitivity and a moderate magnitude of change (LCVIA Section 4.0).

Recognising the value placed on local character, and the moderate-low impact as assessed by the LCVIA, this unmitigated impact is assessed as **medium**, with a likely possibility and minor magnitude.

6.2.2. Impact to local character – mitigated

The LCVIA recommends several mitigation measures (LCVIA Section 7.3) to reduce the visual impact of the project. These include:

- Perimeter landscaping (along the northern and western boundaries);
- Colour recommendations; and
- The implementation of lighting design principles.

In accordance with these measures, the NCVIA predicts that the project can avoid night sky impact, reduce the visibility and contract of the project in the landscape, minimise the impact to the existing landscape character, retain the existing screening vegetation, and enhance the screening of the project.

As such, the mitigated assessment of this impact is **low**, with a possible likelihood and minor magnitude.

6.3. COMMUNITY

This section provides a detailed assessment, unmitigated and mitigated and unenhanced and enhanced, of the matters that significantly impact community as a consequence of the Project. The matters assessed include:

- Distribution of impacts and benefits and its effect on community cohesion and resilience

Table 13 Summary of impacts and benefits related to Community

Impact Category	Matter	Affected stakeholders	Duration	Extent	Unmitigated/unenhanced	Mitigated/enhanced
Way of life	Distribution of impacts and benefits and its effect on community cohesion and resilience	Local community, nearby residents	Operation	Local area	Medium	High

6.3.1. Distribution of impacts and benefits and its effect on community cohesion and resilience -unenhanced

Sharing the benefits of infrastructure development can enhance the social and economic outcomes for the local community (Victorian State Government, 2021), build community support for Projects and the renewable energy sector and enhance community cohesion and resilience.

As identified in Section 5.1 consultation with a number of key stakeholder groups and agencies raised a number of potential benefits and opportunities relating to the Project's potential role in community benefit initiatives. As discussed later in Section 6.9 of this report, there is some community unrest in relation to the development of the Project, which could be the result of not having a clear understanding of the benefits of the Project, as well as clear transparency on how Project impacts will be mitigated.

Identification of the communities values, strengths and vulnerabilities (Section 4.4) shows that the Calala community values its strong sense of community, the natural environment and character of the area, sustainable economic development and its rural lifestyle. Further, the identified strengths of the community is its strong connection to the broader region via industry, its role in being a lead agricultural producer in the region and general support for the renewables industry.

The Calala BESS will generate Project impacts to the local community, mainly related to construction and visual impact, however it will also deliver social, environmental and economic benefits by increasing local job opportunities and allowing for increased solar and wind energy to be integrated into the grid to help meet NSW's future electricity demand and lower the cost of electricity.

This unenhanced impact is assessed as **medium**, with a likely likelihood and moderate magnitude.

6.3.2. Distribution of impacts and benefits and its effect on community cohesion and resilience -enhanced

To enhance benefits and share the rewards of building the Calala BESS within this community, Equis is exploring several community benefit initiatives. An overview of the community benefit objectives, partnerships and potential initiatives were described above in Section 6.1 of this report.

As a summary, the objectives of the community initiatives are to develop positive and direct relationships with the community through contributing to their local plans and goals, increasing local support for the Project to build a social license to operate and enhance community understanding of the Project and the renewable energy sector more broadly. Partnerships are being explored with Farrer Agricultural High School, the NSW Rural Fire Service and Tamworth Regional Council.

The implementation of community benefit initiatives and partnerships will likely have a positive impact on contributing to community cohesion and resilience at a moderate magnitude and therefore this enhanced impact is assessed as **high**.

6.4. ACCESSIBILITY

This section provides a detailed assessment, unmitigated and mitigated and unenhanced and enhanced, of the matters that significantly impact the accessibility as a consequence of the Project. The matters assessed include:

- Traffic impacts relating to congestion.

Table 14 Summary of impacts and benefits related to Accessibility

Impact Category	Matter	Affected stakeholders	Duration	Extent	Unmitigated/unenhanced	Mitigated/enhanced
Accessibility	Traffic impacts relating to congestion	Local residents, workers	Construction	Local area	Medium	Low

6.4.1. Traffic impacts relating to congestion during construction – unmitigated

As a result of project activities during construction, there is a risk of traffic impacts relating to congestion. More specifically, the project will result in increased traffic, increased heavy vehicles, temporary access and route detours, and slower travel speeds – all of which will impact the accessibility of the local community, including residents and workers during the period of construction (approximately 12 months). There will only be 7 staff for the ongoing operation of the BESS, however no permanent on-site staff. Therefore, there are no traffic impacts relating to congestion anticipated for the operation of the BESS.

In the Political and Planning Context (Section 4.2), the existing conditions of local roads around Calala and throughout Tamworth were identified as poor and were also raised as a vulnerability of the area during consultation. This was reiterated by one survey respondent, who identified local roads as an aspect of the area which could make Calala a better place to live, stating that a current challenge was 'road access'. Calala is growing and Calala Lane is already too busy at peak traffic times.

During consultation, one resident expressed specific concern about Burgmann's Lane which is prone to flooding (flooding risk is discussed in further detail in Section 6.6).

Further, Calala's close access to key facilities and amenities was raised during the survey by all four respondents as a core value and reason that Calala is a great place to live. As such, any impacts to the accessibility of nearby services, such as additional congestion and traffic, would be strongly felt by Calala residents.

The Traffic and Transport Impact Assessment (TIA) expects that the average traffic generated during construction will result in 67 vehicles (one way) per day, comprising around 60 light vehicles and seven trucks. Peak construction is expected to result in up to 230 construction vehicles (one way) per day, comprising around 70 light vehicles and 160 trucks. The TIA found that this anticipated typical construction vehicle traffic generation is considered minor in comparison to the daily traffic volumes along Calala Lane and the State and Regional roads intended to be used to construct the project. Therefore, the TIA found that the construction traffic will not adversely affect the safety or function of the surrounding road network. As further described in the TIA, during peak construction activity, Calala Lane will continue to operate at a desirable Level of Service C during the peak weekday hour period and as such there is adequate capacity in the surrounding road network to cater for construction traffic generated by the proposal.

There is community perception that road traffic and congestion is poor in Calala, however the TIA finds that there is capacity in the surrounding road network during peak construction activity. Taking into consideration, the community perception in addition to the findings from the TIA, this impact is assessed as **medium**, with a possible likelihood and a minor magnitude.

6.4.2. Traffic impacts relating to congestion during construction – mitigated

The TIA outlines several mitigation and management measures designed to reduce the impact of the project on congestion, which will be finalised and documented in the Traffic Management Plan (TMP) by the appointed contractor post approval of the development. These include:

- The contractor will ensure that all traffic management approvals for works/traffic management arrangements along Local Roads associated with OSOM movements are obtained from the relevant Council prior to any work commencing.
- Effective on-going consultation will be undertaken with relevant stakeholders during preparation of the TMP and throughout construction.
- Liaison activities will occur with the community prior to and throughout construction.
- Construction trucks are to always follow approved routes.
- Light vehicles to always drive responsibly and consider other road users. This will be incorporated at the site induction.
- Construction truck's arrival and departure are to be planned with consideration to minimising effect to other road users during peak traffic periods.

The Project should also abide by the protocols outlined by the Construction Management Plan and Traffic Management Plan, which will be prepared prior to the commencement of works.

Following the recommendations of the TIA, this mitigated impact is assessed as **low**, with a unlikely likelihood and minor magnitude.

6.5. CULTURE

This section provides a detailed assessment, unmitigated and mitigated and unenhanced and enhanced, of the matters that significantly impact Culture as a consequence of the Project. The matters assessed include:

- Potential disruption to sites of Aboriginal significance.

Table 15 Summary of impacts and benefits related to Culture

Impact Category	Matter	Affected stakeholders	Duration	Extent	Unmitigated/unenhanced	Mitigated/enhanced
Culture	Potential disruption to sites of Aboriginal significance	Aboriginal and/or Torres Strait Islander people	Construction	Local area	Medium	Low

6.5.1. Potential disruption to sites of Aboriginal significance – unmitigated

There is a potential risk for disruption to sites of Aboriginal significance as a result of Project activities during construction. This impact would predominantly affect the Aboriginal and/or Torres Strait Islander community, whom make up 10.8% of Calala's population.

The Aboriginal and Cultural Heritage Assessment (ACHAR) identified that there are 97 Aboriginal cultural heritage sites within an 8.5km search area registered with the aboriginal Heritage Information Management System (AHIMS) register. The most common site types included artefacts and modified trees, and also identified the Peel and Cockburn rivers as sources of raw materials. No previously unrecorded Aboriginal cultural heritage sites were identified during the ACHAR's survey, and no areas of archaeological sensitivity were identified. Due to the high levels of disturbance identified in the area, the ACHAR concludes that there is low potential for Aboriginal sites to be present within the study area.

Given the large proportion of the community who identified as Aboriginal and/or Torres Strait Islander, and the ACHAR's conclusion of low potential for additional sites in the study area, the potential disruption to sites of Aboriginal significance is assessed as **medium**, with an unlikely and moderate magnitude.

6.5.2. Potential disruption to sites of Aboriginal significance – mitigated

The ACHAR determined that no further archaeological assessment is required, and outlines several mitigation measures:

- Continued consultation with Registered Aboriginal Stakeholders;
- A heritage induction should be undertaken for all site workers and contractors in order to prevent any unintentional harm to Aboriginal sites located within the study area and its surroundings;
- Plan of management for the discovery of unanticipated Aboriginal objects, and for the discovery of unanticipated historical relics; and
- A plan of management for the discovery of human remains.

Given the ACHAR's assessment as low potential, and the thoroughness of the recommended plans of management, this mitigated impact is assessed as **low**, with a very unlikely and moderate magnitude.

6.6. HEALTH AND WELLBEING

This section provides a detailed assessment, unmitigated and mitigated and unenhanced and enhanced, of the matters that significantly impact the health and wellbeing as a consequence of the Project. The matters assessed include:

- Health and safety in the event of a hazard.

Table 16 Summary of impacts and benefits related to health and wellbeing

Impact Category	Matter	Affected stakeholders	Duration	Extent	Unmitigated/unenhanced	Mitigated/enhanced
Health and wellbeing	Health and safety in the event of a hazard	Local community, workers	Construction, operation	Local area	Medium	Low

6.6.1. Health and safety in the event of a hazard – unmitigated

Some project activities may exacerbate the risk of hazards occurring in the local area, which could cause potential impacts to the health and wellbeing of the local community. This impact discusses potential hazards related to flooding, fire, chemical and explosive gas, battery reactions and exposure to Electric and Magnetic Fields (EMF).

The area has been tagged as being prone to flooding due to its proximity to the Peel River and Calala Creek, and as being ‘bushfire prone’ according to the Tamworth Regional Council’s Bushfire Prone Land Map (BPLM). As such, the project risks exacerbating the existing potential for hazards, as well as additional hazards including the risk of pollution, chemical contamination, explosions etc. These increased risks would impact vulnerable groups most severely, including those with long-term health conditions (such as asthma, comprising 11.1% of Calala’s population, and mental health conditions, comprising 11.1% of Calala’s population).

In the Planning Context (Section 4.2), Tamworth’s concern for climate and disaster resilience emerged as a clear priority for the region, including water security and supply. During consultation, residents described the existing impacts of flooding, wherein some areas, such as around Burgmann’s Lane, are prone to flooding. This existing condition is well known, and Calala is commonly known as ‘Calala Island’ during times of flooding due to its limited access when flooded as Calala Lane is the main road out of the area. This existing impact was raised out of concern that if there was a fire or emergency caused by the BESS, emergency vehicles could have limited access. For instance, during the field study (see Section 5) some respondents raised safety concerns regarding the construction and operation phases of the project, particularly regarding the type of battery which would be used and the risk of explosion. This concern was framed by previous knowledge of a battery installation in Victoria which was delayed due to a fire.

The Bushfire Risk Assessment (BRA) identifies the site as ‘bushfire prone’ land according to Tamworth Regional Council’s Bushfire Prone Land Map (BPLM) as it contains designated Category 3 Vegetation and Vegetation Buffer in the northern and western portions of the site, and to the south and east within neighbouring allotments. The BRA concludes that the proposal can satisfy all relevant specifications and requirements of Planning for Bushfire Protection 2019, if the project abides by the safety measures contained in its report (BRA Section 8).

The Water Management Report (WMR) discusses flooding in Section 2.5, and notes that the Peel River floodplain, the major determinant of flooding around Tamworth, lies north of the site. The WMR notes that the site sits outside of this floodplain, however the property that will house the Calala BESS site does overlap with the Calala Creek floodplain. According to the WMR, the Calala Creek flood extents for the 1% Annual Exceedance Probability and Probable Maximum Flood indicate that the project site will be unaffected by flooding. Further, the site will be raised by an earthworks pad, and hence is unlikely to be impacted by flooding, nor will this earthworks pad contribute to flood impact.

A Preliminary Hazard Analysis (PHA) identifies hazards and assess the risks associated with the proposed operations of the BESS. The PHA identified 13 potential hazard risks, of which all but one were considered to have a very low risk. Vandalism was considered to have a medium risk. The very low hazards included potential events related to electrical, energy, fire, chemical, explosive gas, thermal battery reaction, exposure to EMF, flooding and lighting strikes.

Though the BRA and WMR both conclude that the project can meet the relevant standards for bushfire and flooding risk, and the PHA identify most identified hazards of being very low risk, the anxiety caused by the perceived increased risk can also severely impact the health and wellbeing of the local community. Usher et al. (2019) define ‘eco-anxiety’ as a specific form of anxiety relating to stress or distress caused by environmental changes and our knowledge of them. While there is no specific diagnosis for ‘eco-anxiety’,

self reported impacts can include panic attacks, insomnia, obsessive thinking, and/or appetite changes caused by environmental concerns (p.1233). Similarly, a study by Ogunbode et al. (2022) explores the correlates of climate anxiety across 32 national contexts and found that 'eco-anxiety' was negatively linked to mental wellbeing. Further, it suggests that climate anxiety can be caused by a loss of places, activities and traditions due to climate change, or fear of the potential scope and impact of dangerous climate change. Usher et al. (2019) also found that changes to personal significant places (such as one's home, community, natural habitats, or precious ecosystems) can result in feelings of loss known as 'ecological grief'.

In response to a question about the anticipated negative impacts of the project, one survey respondent raised concern for the 'worry nearby residents may have about health'. During consultation, one resident expressed that they had experienced several health impacts including migraines and sleepless nights due to the anxiety caused by uncertainty surrounding the project, stating that 'the worst thing is the worry'. Another survey response raised that '12 months of construction noise, dust and traffic from 6.30am to 6.30pm six days a week will be seriously difficult for the nearest residents to cope with, particularly as those of use most affected are elderly and retired, hence home all day during the hours of construction'. This concern underlines the significance of anxiety and uncertainty surrounding Project activities for the mental wellbeing of nearby residents, particularly for those more vulnerable to impacts such as elderly residents.

Recognising the assessment of the BRA, WMR and PHA, as well as the significance of the anxiety caused by a perceived increase in risk, this unmitigated impact is assessed as **medium**, with an unlikely likelihood and moderate magnitude.

6.6.2. Health and safety in the event of a hazard – mitigated

The BRA outlines several recommendations for managing bushfire risk in Section 7, including:

- Establish an asset protection zone, wherein 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, wherein 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*; and
- Specific design elements for the surrounding water and electrical services required by the project, including preferred materials, locations, and access.

To address the anxiety caused by the perceived increased risk of hazards, the NSW Rural Fire Service suggested during consultation that they (and the Project) could partner with landholders to train them as an additional bushfire resource. This could provide landholders with agency should an emergency situation occur, and may reduce the anxiety surrounding the possibility of hazards. As described in Section 6.1 of this report, Equis is exploring opportunities to support the NSW Rural Fire Service in potential initiatives such as funding the Farmers Partnership Program to help train and involve local farmers with regional firefighting efforts or funding to support the Girls on Fire program to train, mentor and engage women to volunteer in the RFS.

In addition, the project should maintain clear and consistent communication with nearby landholders, including the provision of relevant technical information about the risk of hazards. These recommendations are discussed further in Section 6.8.2 (Community unrest relating to transparency).

Given the assessments of the BRA, WMR and PHA regarding the potential low risk of bushfire or flooding and their recommended mitigation measures, as well as the potential for community anxiety to be reduced via enhanced communication, this mitigated impact is assessed as **low**, with a unlikely likelihood and minor magnitude.

6.7. SURROUNDINGS

This section provides a detailed assessment, unmitigated and mitigated and unenhanced and enhanced, of the matters that significantly impact the surroundings as a consequence of the Project. The matters assessed include:

- Benefit to environment via reduced emissions;
- Amenity impacts relating to noise;

- Amenity impacts relating to visual disruption.

Table 17 Summary of impacts and benefits related to Surroundings

Impact Category	Matter	Affected stakeholders	Duration	Extent	Unmitigated/unenhanced	Mitigated/enhanced
Surroundings	Benefit to environment via reduced emissions	Regional area	Operation	Regional area	Low	High
Surroundings	Amenity impacts relating to noise	Nearby residents	Construction, operation	Local area	High	Low
Surroundings	Amenity impacts relating to visual disruption	Local community, workers	Construction, operation	Local area	Medium	Low

6.7.1. Benefit to environment via reduced emissions – unenhanced

In line with strategic planning goals outlined in the Planning Context (Section 4.2), the Calala BESS will contribute to a net positive benefit to the environment via the reduction in emissions which would have otherwise been produced. This environmental benefit will have a flow on social benefit to the environmental values held by communities across the region.

A study by Rangarajan, Foley, and Truck (2018) examined the impact of grid-scale battery storage facilities on the frequency control ancillary services (FCAS) market and concluded that grid-scale batteries can significantly lower overall FCAS costs, and which can displace more expensive fossil-fuel participation. According to the Project's eHub website, the Calala BESS will reduce up to 1,140t² of emissions.

The social element of this environmental benefit stems from the environmental values held by surrounding communities. The project is located in close proximity to the New England Renewable Energy Zone, which the Planning Context (Section 4.2) identified as contributing to an emerging renewables industry and green economy centred around Tamworth. An article by Perlaviciute et al. (2018) explores the social dimension of a transition to renewables, finding that 'energy transition is not purely a technical endeavour; it has a prominent social dimension as it impacts on citizens and requires public support in order to be successfully realised'. According to this investigation, energy projects have four types of values, including 'biospheric' values wherein people care about protecting nature and the environment. It is the regional community's 'biospheric' value which would be enhanced by the net benefit to environment via reduced emissions.

During consultation, the Farrer Memorial Agricultural High School highlighted the opportunity to build infrastructure that supports the school's energy and environmental sustainability, such as dams, solar panels, and BESS facilities. This indicates that alignment with the transition to renewables and green economy may offer regional communities a sense of pride or feeling of connection following their proximity to, or involvement with, this transition. Renewable energy was raised as a benefit of the Project by one survey respondent.

Given the net environmental benefit which will be experienced by the Tamworth region, but the limited direct benefit felt by the local community, this unenhanced benefit is assessed as **low**, with a possible and minimal magnitude.

6.7.2. Benefit to environment via reduced emissions – enhanced

To enhance the social benefit relating to a reduction in emissions and as discussed in Section 6.1 of this report, Equis is exploring the opportunity to partner with Farrer Memorial Agricultural High School to strengthen the community's perceived alignment with the transition to renewables (discussed further in Section 6.7.7. regarding strengthened connections with industry). Potential initiatives being explored with Farrer Memorial Agricultural High School include expanding the School's curriculum to include education, training and skill development in the renewable energy sectors, funding to support the high school to build sustainable infrastructure and allowing the School to farm the agricultural lands surrounding the Calala BESS.

The implementation of initiatives such as the ones described above, could deliver a **high** enhanced benefit, with a likely and moderate magnitude.

6.7.3. Amenity impacts relating to noise – unmitigated

Given the proximity of several residences within 500m of the Project site, there is a significant possibility for the Calala BESS to cause amenity impacts relating to noise disturbance. This impact would predominantly impact nearby residences and their residents, whom were identified as the group most vulnerable to project impacts by all four survey respondents.

According to the Project description, construction works will be generally undertaken during standard construction hours (Monday to Friday 7am-6pm, Saturday 8am-1pm, no Sunday or public holiday work). However, as the BESS is a continually operating facility, there will be noise emanating from the BESS 24/7. This 24/7 noise was raised as a major concern by two survey respondents.

During consultation, noise was raised as one of the primary concerns relating to the Project. In particular, residents raised the 24/7 operation of the BESS facility and how this would impact resident's daily life as well as their property values (discussed in Section 6.7.5). One resident believed that their ability to use and enjoy their 5-acre property would be compromised as a result to the noise emanating from the BESS. This concern about noise is also fuelled by a lack of available technical information and/or awareness about the reality of the sounds caused by the BESS, such as whether it would be a 'low hum' or more like a 'mosquito buzzing'.

The Noise and Vibration Impact Assessment (NVIA) shows that the predicted noise level for the 'base' project design, without additional noise controls, is up to 5dB above the evening and night project noise level trigger level of 5dB at some receivers (NVIA Section 6.3). The NVIA did not measure or quantify any cumulative noise from the nearby existing Transgrid Tamworth 330kV Substation.

Given the high proportion of residents who raised noise as a concern, and the NVIA's assessment that noise mitigations are necessary, this unmitigated impact is assessed as **high**, with an almost certain and moderate significance.

6.7.4. Amenity impacts relating to noise – mitigated

The NVIA explains that design development has been undertaken to introduce physical noise controls which can assist in demonstrating compliance with the evening and night project trigger levels (NVIA Section 6.3.1). These design changes include the inclusion of a noise attenuation wall directly adjoining the BESS to the north and west boundaries of the site and near-field barriers to the HV transformers.

Section 6.3.2 of the NVIA outlines the recommended construction materials and protocols which should be used when constructing these perimeter noise barriers. With the inclusion of suitable noise control measures, including the proposed noise attenuation wall, the NVIA concludes that the project achieves full compliance with the evening and night project noise trigger level (NVIA Section 6.5).

While residents raised noise as a concern, design changes and mitigation measures have been developed and adopted to reduce noise impacts and achieve full compliance with evening and night project noise trigger levels. Based on this, the mitigated impact is assessed as **low**, with an unlikely likelihood and minor magnitude.

6.7.5. Amenity impacts relating to visual disruption – unmitigated

Related to the impact to local character (Section 6.1.1), the presence of the Calala BESS facility is anticipated to cause a visual impact to the amenity of surrounding residences and the local community.

During consultation, residents raised questions about the use of lights by the BESS, particularly whether they would be on all night. One survey respondent connected the potential visual impact to decreased amenity, and hence decreased property values, stating that they would experience 'noise and visual impact on my home including re-sale value when I sell'.

The Landscape Character and Visual Impact Assessment (LCVIA) determined that the highest visual impact would be 'moderate' at one nearby residence (R9), and 'moderate-low' at another three residences (LCVIA Section 5). The most impacted residence, R9, is one of the closest residences (approximately 450m away), and has an elevated, and likely relatively clear view across the project site. The proposed tree removal would increase R9's exposure to the project site and likely enable direct views of the substation and BESS, noticeably changing the outlook (LCVIA Section 5.4).

Noting the unlikely visual impact to most residents, except one resident (R9) who will likely have relatively clear view across the project site, this unmitigated impact is assessed as **medium**, with a moderate magnitude.

6.7.6. Amenity impacts relating to visual disruption – mitigated

The LCVIA recommends several mitigation measures (LCVIA Section 7.3) in order to reduce the visual impact of the project. These include:

- Perimeter landscaping (along the northern and western boundaries);
- Colour recommendations; and
- The implementation of lighting design principles.

In accordance with these measures, the NCVIA predicts that the project can avoid night sky impact, reduce the visibility and contrast of the project in the landscape, minimise the impact to the existing landscape character, retain the existing screening vegetation, and enhance the screening of the project.

Following the recommendations outlined by the LCVIA, this mitigated impact is assessed as **low**, with a unlikely likelihood and minor magnitude.

6.8. LIVELIHOODS

This section provides a detailed assessment, unmitigated and mitigated and unenhanced and enhanced, of the matters that significantly impact the livelihoods as a consequence of the Project. The matters assessed include:

- Provision of jobs and educational/training opportunities;
- Provision of a secure source of energy;
- Perceived impact to property value; and
- Strengthened connections with industry.

Table 18 Summary of impacts and benefits related to Livelihoods

Impact Category	Matter	Affected stakeholders	Duration	Extent	Unmitigated/unenhanced	Mitigated/enhanced
Livelihoods	Provision of jobs and economic opportunities	Local community, regional construction workers	Construction, operation	Regional area	High	High
Livelihoods	Provision of a secure source of energy	Local residents, businesses	Operation	Regional area	Medium	Medium

Impact Category	Matter	Affected stakeholders	Duration	Extent	Unmitigated/unenhanced	Mitigated/enhanced
Livelihoods	Perceived impact to property value	Local residents	Construction, operation	Local area	Medium	Low
Livelihoods	Strengthened connections with industry	Local community	Operation	Local area	Low	High

6.8.1. Provision of jobs and economic opportunities – unenhanced

In order to meet the demands of construction and operation, the Project will require 170 full time staff during construction, and 7 staff ongoing throughout the operation of the BESS. According to the Project's FAQ document on *Creating Economic Opportunities and Community Benefits*, the Project will generate jobs such as general labourers, site managers, electricians, engineers, concrete suppliers, and landscapers.

This impact will predominantly benefit the local workforce, such as those involved in the construction industry. As revealed by the Social Baseline (Section 4.6), technicians and trade workers are the second top occupation in the local area, comprising 15% of Calala's labour force.

During consultation, it was raised as a suggestion that the Project could provide funding to traineeship or job support programs. In response to the survey question *How significant do you anticipate the provision of jobs related to the project will be to the local community?*, the average answer was 39 out of 50. One survey respondent wrote that the Project will 're-invest in the local community which will have tremendous positive impacts on the local community groups and members of the public', and also noted that the Calala BESS could bring 'enormous benefits' to the growing Calala community over the lifespan of the Project.

There may also be a small benefit to some nearby businesses, as the Project claims it will prioritise buying from local contractors, suppliers and service providers. This additional demand is unlikely to produce a need for additional employment, however it may produce a marginal net economic benefit to local businesses.

Given the certainty of 170 jobs provided during construction and 7 during operation, this unenhanced benefit is assessed as **high**, with an almost certain and moderate magnitude.

6.8.2. Provision of jobs and economic opportunities – enhanced

As outlined in Section 6.1, Equis is exploring opportunities to adopt a procurement process that includes a Local Jobs First Program, Social Procurement Framework and Social Impact Guidelines.

Assuming that the Project abides by its commitments to source employment locally, this enhanced benefit is assessed as **high**, with an almost certain and moderate magnitude.

6.8.3. Provision of a secure source of energy – unenhanced

By design and purpose, the Calala BESS facility will provide a secure source of energy to the Tamworth region, and have a corresponding social benefit to the climate resilience of the region. According to the Project's eHub, the BESS facility will store up to 300MW of energy, and will deliver 'affordable, clean, and reliable electricity' to up to 80,000 homes across NSW. This benefit will be felt regionally.

The average response to the survey question *How important do you feel that the Calala BESS's contribution to building the security, resilience and sustainability to the electricity grid will be?* was 46 out of 50. However, though survey respondents recognised the importance on a broader scale, two people also noted that they won't feel any direct benefit, as 'Tamworth will not get cheaper electricity' and 'will not pay any less'.

The Planning Context (Section 4.2) clearly outlines the priority of the Tamworth region to focus on its disaster recovery and climate resilience. The Project's Environmental FAQ document, available via the eHub, states that a BESS facility can store energy which can be quickly discharged when there is an imbalance in the electricity supply, avoiding the burning of coal from older legacy generators while reducing

carbon emissions. As the BESS should be able to bolster electricity supply when there is not enough sun or wind to generate electricity, it can provide a more secure source of energy for regional communities. As such, this enhanced benefit is assessed as **medium**, given the likely and minor magnitude.

6.8.4. Provision of a secure source of energy – enhanced

There are no enhancement recommendations for this benefit. Its assessment remains **medium**.

6.8.5. Perceived impact to property value – unmitigated

As a corresponding effect of any amenity impacts to the surrounding area, there is a perceived potential impact on property values in the local area. If it eventuates, this potential impact would predominantly impact a small number of homeowners who reside within 500m to the Project. According to the Social Baseline (Section 4), 28% of Calala's residents own their homes outright, while 42.9% own their home with a mortgage.

All four survey respondents identified decreased property prices as an anticipated impact which they are most concerned about. More specifically, during consultation, residents expressed distress surrounding the potential loss of land value as a result of the Project's impacts to amenity during both construction and operation. This was a particular concern for residents who live within 500m of the site, as some felt that the full use of their property would become compromised for future use. These residents in the 'immediate vicinity' of the site were identified by all four survey respondents as the most vulnerable to experiencing Project impacts. One survey respondent claimed that the 'desirability to move to the area will be gone' and that hence 'property values will plummet'. This impact was also raised as significant given the age of many elderly residents, whom expressed that they 'don't have the lifespan to recoup' if their property became devalued.

There were no technical studies required to assess the economic impacts of the project, hence there is no direct evidence linking the presence of a BESS with devalued properties. However, the perception that property values will decrease may have an adverse impact on the mental health of nearby residents (as discussed regarding anxiety fuelled by uncertainty, Section 6.5.1).

As such, this unmitigated impact is assessed as **medium**, given the possible and minor magnitude.

6.8.6. Perceived impact to property value – mitigated

Assuming that the Project aligns with the mitigation measures recommended by both the NVIA (discussed in Section 6.6.3) and the LCVIA (discussed in Section 6.6.5), this mitigated impact is assessed as **low**, given the unlikely and minor magnitude.

6.8.7. Strengthened connections with industry – unenhanced

In combination with the Project's alignment with the emerging renewable industry and green economy, the Calala BESS has the potential to strengthen connections between the industry and local organisations or businesses such as schools.

During consultation, there were several suggestions raised by nearby stakeholders (such as the Carinya Christian School and the Farrer Memorial Agricultural High School) regarding potential opportunities for strengthened industry connections. Both schools expressed their interest for Equis engineers to participate/support with their development and delivery of maths, physics, science and chemistry curriculums. The Farrer Memorial Agricultural High School also suggested a customised educational pathway program to provide learning opportunities for youth to train and develop skills in renewable energy technologies. At the community information night, there was also a suggestion for Equis to hold an industry information day inviting regional businesses to attend.

One survey respondent expressed that the Project will 're-invest in the local community', and will bring positive impacts to the local community groups and members of the public, particularly as the Calala community grows in future years. This showcases the support for the Project to provide a net benefit to the surrounding community.

Given the range of potential opportunities to strengthen industry connections, this unenhanced benefit is assessed as **low**, with an unlikely and minimal magnitude.

6.8.8. Strengthened connections with industry – enhanced

To strengthen industry connections with the local community, Equis is keen to partner with the Farrer Memorial Agricultural High School and are exploring several initiatives with the School discussed in Section 6.1 and 6.7.2. of this report. This includes expanding the curriculum to including education, training and skill development in the renewable energy sector and supporting the School to pursue opportunities to farm the agricultural land surrounding the Calala BESS. As discussed in Section 6.1 Equis is also exploring opportunities to support tourism in the region through events funding such as supporting the Tamworth Regional Heritage Festival.

This enhanced benefit is assessed as **high**, with a likely likelihood and moderate magnitude.

6.9. DECISION-MAKING SYSTEMS

This section provides a detailed assessment, unmitigated and mitigated and unenhanced and enhanced, of the matters that significantly impact the decision-making systems as a consequence of the Project. The matters assessed include:

- Community unrest relating to transparency.

Table 19 Summary of impacts and benefits related to Decision-making systems

Impact Category	Matter	Affected stakeholders	Duration	Extent	Unmitigated/unenhanced	Mitigated/enhanced
Decision-making systems	Community unrest relating to transparency	Local community	Planning, construction, operation	Local area	High	Medium

6.9.1. Community unrest relating to transparency – unmitigated

As a result of heightened anxieties surrounding the project, there is potential for community unrest to be fostered via a perceived lack of transparency and adequate communication with nearby neighbours.

Section 5 outlines the engagement activities which have been undertaken by Equis, including a community information night, stakeholder interviews, and the establishment of an engagement portal (Equis eHub), as well as the additional stakeholder engagement activities undertaken as a part of the SIA Field Study, including a survey.

During consultation, residents expressed disappointment regarding the community information session, as one respondent ‘did not feel it was an open sharing of information’, and instead left with ‘not a lot of belief or confidence in the process’. Residents also raised that they did not feel ‘heard’, and instead questioned ‘why are we being ignored?’. More specifically, some respondents reported that they wanted technical information about the impacts which they will experience (such as noise), which they have not yet received. This lack of available information may be contributing to the perception that there is a lack of transparency from the Project. It is noted that the purpose of the community information session was to introduce the community to the project, and at this time, technical studies were still being undertaken. Therefore, residents perception that they were not receiving information was likely due to the stage at which the project was at, rather than the project team withholding information. This impact may also be exacerbated by the site’s proximity to other developments, such as one resident who expressed dissent towards the developer of the existing Tamworth substation.

There were also comments raised during consultation about the accessibility of the Project’s eHub platform, as one resident explained that there were several elderly people residing in a close proximity to the project and expressed that ‘half the people don’t have computers, it’s hard for communications, it’s confusing’.

Given the extent and frequency of community unrest raised by nearby residents, this unmitigated impact is assessed as **high**, with an almost certain and moderate magnitude.

6.9.2. Community unrest relating to transparency – mitigated

Wiseman et al. (2010) undertook a study on how community engagement strategies could improve climate mitigation and adaptation outcomes, and in order to avoid poor experiences resulting in distrust and consultation fatigue (p.140). The study found that it was crucial to accurately represent events and activities in order to manage participants expectations, particularly when people needed to make difficult decisions about their use of time and resources (p.140). As such, Wiseman et al. (2010) conclude that a key feature of successful community engagement was overcoming difficulties in communicating complex science and future climate modelling, especially through the use of relevant local climate change impact projections (p.141).

During the door knock undertaken by Equis, all residents were asked how they would like the project team to engage with them. In response to this, some elderly neighbours opted for hard copy mail outs and others were asked for emails to be sent to their children's emails. Equis also call every immediate neighbour resident, as well as send an email and/or hard copy to their address with project updates. This mitigates the comment noted above in Section 6.8.1 around accessibility and elderly people not having access to project updates. At the door knock residents were provided with printed copies of the FAQ, which addresses Wiseman et al. (2010) findings around complex information being provided in an accurate way.

Equis will continue to contact nearby residents to keep them updated on the project, including when it has been submitted to DPE and where they can review documentation and provide comment. The exhibition phase would provide stakeholders with transparent access to the results of the technical studies and may act as a means to remedy community unrest and/or anxiety regarding a lack of information.

Further, at time of writing this report, Equis have requested that the engineering technical consultants contact the residents who have raised technical concerns and provide clarity around impacts such as noise. This action mitigates the comment noted above in Section 6.8.1 around technical consultant clarity.

In regard to the management of the eHub Equis actively monitor the engagement portal morning and night, seven days a week. Equis respond to any concerns within two days.

To further alleviate community unrest, we recommend that the Project compile a 'Summary of Impacts' document and distribute it to nearby neighbours through a letter box drop, which could contain relevant technical information addressing the prime concerns raised through consultation. Depending on the timing of this document, it could also include information on where to navigate the project, and all the technical reports, on DPE's project website once formally submitted.

Due to the nature of the project, and general fear of the 'unknown' there will still likely be a feeling of community unrest among neighbouring residents. However, recognising the range of mitigation measures that have been put in place to work towards achieving transparency with the community about the project and reduce community unrest, this mitigated impact is assessed as **medium**, with a possible likelihood and minor magnitude.

6.10. CUMULATIVE

This section provides a detailed assessment, unmitigated and mitigated and unenhanced and enhanced, of the Cumulative matters that significantly impact the community as a consequence of the Project. The matters assessed include:

- Cumulative impacts relating to the project's location nearby the New England Renewable Energy Zone.

Table 20 Summary of Cumulative impacts and benefits

Impact Category	Matter	Affected stakeholders	Duration	Extent	Unmitigated/unenhanced	Mitigated/enhanced
Cumulative	Cumulative impacts relating to the Project's location	Local community, local businesses, local workers	Construction, operation	Regional area	Medium	Low

Impact Category	Matter	Affected stakeholders	Duration	Extent	Unmitigated/unenhanced	Mitigated/enhanced
	nearby the New England Renewable Zone					

6.10.1. Cumulative impacts relating to the Project's location nearby the New England Renewable Energy Zone – unmitigated

As discussed in the Planning Context (Section 4.2), the Project is located in close proximity to the New England Renewable Energy Zone, wherein the Tamworth region has been earmarked for future renewable industry projects and development. The proximity of the Project to the existing Tamworth substation, as well as to future renewable energy developments, may contribute to cumulative impacts on the local community. These cumulative impacts may include construction related amenity and accessibility changes, such as cumulative noise or traffic impacts.

As stated by the NSW Government's EnergyCo (2023), the REZ is expected to support around 830 operational jobs and 1,250 construction jobs, and in order to achieve the New England Transmission Project, some infrastructure will need to be built outside of the REZ geographical area in order to connect the REZ to the main backbone transmission network. As such, it is possible that future expansion and development within the REZ may cause indirect impacts/benefits on the regional community.

During consultation, one resident raised the 'rumoured expansion' of the existing Tamworth substation as a potential concern, and questioned what this would mean for the proposed Project and for the Calala community in future. Two survey respondents identified the 'encroachment of industry' and the 'potential developments' in the area as current challenges preventing Calala from being a better place to live.

As the Project aligns with the regional strategy and transition towards renewables, and the community are aware of the potential for future projects within their region, this unmitigated impact is assessed as **medium**, given the likely and minor magnitude.

6.10.2. Cumulative impacts relating to the Project's location nearby the New England Renewable Energy Zone – mitigated

The Project should ensure that its Construction Management Plan and Plan of Management are continually applied to the Calala BESS, and should review its plans if any additional projects are announced nearby.

Assuming that any future developments will also undertake a similar process of assessment before approval, and assuming that the Project abides by its relevant plans and recommended mitigation measures, this mitigated impact is assessed as **low**, with a possible and minimal magnitude.

7. MITIGATION, ENHANCEMENT AND MANAGEMENT

This section provides a summary of:

- Identified social impacts and benefits
- Corresponding perceived stakeholder risk rankings, and
- Mitigated technical risk rankings.

To inform the implementation of the proposed mitigation and enhancement strategies, key potential stakeholder and/or partners have been identified. The involvement and participation of these key stakeholders and/or partners in the monitoring and management of social impacts and social benefits will improve the outcomes of the proposed mitigation and management strategies.

Note that not all potential impacts will be the responsibility of the proponent to mitigate or manage, their role may be to cooperate or inform the mitigation, provide data and information, through to direct responsibility for mitigation and management of the identified potential social impacts and the opportunity for partnerships. A summary is provided in Table 21.

Table 21 Summary of proposed mitigation, enhancement and management of social impacts and benefits

Social impact / Social Benefit	Matter	Unmitigated / Unenhanced	Mitigated / Enhanced	Responsibility	Potential partners	Proposed mitigation, enhancement and management	Further SIA recommendations
Way of life	Impact to local character	Medium(-ve)	Low(-ve)	Equis Energy	n/a	The LCVIA recommends several mitigation measures (LCVIA Section 7.3) to reduce the visual impact of the project. These include: - Perimeter landscaping (along the northern and western boundaries); - Colour recommendations; and - The implementation of lighting design principles. In accordance with these measures, the NCVIA predicts that the project can avoid night sky impact, reduce the visibility and contract of the project in the landscape, minimise the impact to the existing landscape character, retain the existing screening vegetation, and enhance the screening of the project.	No further SIA recommendations .
Community	Distribution of impacts and benefits and its affect on community cohesion and resilience	Medium(+ve)	High(+ve)	Equis Energy	Farrer Memorial Agricultural High School NSW Rural Fire Service Tamworth Regional Council	Equis is keen to explore community benefit initiatives (described in Section 6.1 of this report) The objectives of the community benefit initiatives are to develop positive and direct relationships with the community through contributing to their local plans and goals, increase local support for the Project to build a social license to operate and enhance community understanding of the Project and the renewable energy sector more broadly. Partnerships are being explored with Farrer Agricultural High School, the NSW Rural Fire Service and Tamworth Regional Council.	No further SIA recommendations.
Accessibility	Traffic impacts relating to congestion	Medium(-ve)	Low(-ve)	Equis Energy	n/a	The TIA outlines several mitigation and management measures designed to reduce the impact of the project on congestion, which will be finalised and documented in the Traffic Management Plan (TMP) by the appointed contractor post approval of the development. These include: - The contractor will ensure that all traffic management approvals for works/traffic management arrangements along Local Roads associated with OSOM movements are obtained from the relevant Council prior to any work commencing. - Effective on-going consultation will be undertaken with relevant stakeholders during preparation of the TMP and throughout construction. - Liaison activities will occur with the community prior to and throughout construction. - Construction trucks are to always follow approved routes. - Light vehicles to always drive responsibly and consider other road users. This will be incorporated at the site induction. - Construction truck's arrival and departure are to be planned with consideration to minimising effect to other road users during peak traffic periods.	The Project should also abide by the protocols outlined by the Construction Management Plan and Traffic Management Plan, which will be prepared prior to the commencement of works.
Culture	Potential disruption to sites of Aboriginal significance	Medium(-ve)	Low(-ve)	Equis Energy	Registered Aboriginal Stakeholders	The ACHAR determined that no further archaeological assessment is required, and outlines several mitigation measures: - Continued consultation with Registered Aboriginal Stakeholders; - A heritage induction should be undertaken for all site workers and contractors in order to prevent any unintentional harm to Aboriginal sites located within the study area and its surroundings;	No further SIA recommendations .

Social impact / Social Benefit	Matter	Unmitigated / Unenhanced	Mitigated / Enhanced	Responsibility	Potential partners	Proposed mitigation, enhancement and management	Further SIA recommendations
						- Plan of management for the discovery of unanticipated Aboriginal objects, and for the discovery of unanticipated historical relics; and - A plan of management for the discovery of human remains.	
Health and wellbeing	Health and safety in the event of a hazard	Medium(-ve)	Low(-ve)	Equis Energy	NSW Rural Fire Service	The BRA outlines several recommendations for managing bushfire risk in Section 7, including: - Establish an asset protection zone, wherein 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, wherein prior to occupation a bushfire emergency management and operations plan is prepared consistent with the NSW Rural Fire Service <i>Guide to Developing a Bush Fire Emergency Management and Evacuation Plan</i>; and - Specific design elements for the surrounding water and electrical services required by the project, including preferred materials, locations, and access. Equis is exploring opportunities to support the NSW Rural Fire Service in potential initiatives such as funding the Farmers Partnership Program to help train and involve local farmers with regional firefighting efforts or funding to support the Girls on Fire program to train, mentor and engage women to volunteer in the RFS.	The project should maintain clear and consistent communication with nearby landholders, including the provision of relevant technical information about the risk of hazards.
Surroundings	Benefit to the environment via reduced emissions	Low(+ve)	High(+ve)	Equis Energy	Farrer Memorial Agricultural High School	Equis is exploring opportunities to partner with the Farrer Memorial Agricultural High School to strengthen the community's perceived alignment with the transition to renewables. Potential initiatives being explored with Farrer Memorial Agricultural High School include expanding the School's curriculum to include education, training and skill development in the renewable energy sectors, funding to support the high school to build sustainable infrastructure and allowing the School to farm the agricultural lands surrounding the Calala BESS.	No further SIA recommendations .
Surroundings	Amenity impacts relating to noise	High(-ve)	Low(-ve)	Equis Energy	n/a	The NVIA explains that design development has been undertaken to introduce physical noise controls which can assist in demonstrating compliance with the evening and night project trigger levels (NVIA Section 6.3.1). These design changes include the inclusion of a noise attenuation wall directly adjoining the BESS to the north and west boundaries of the site and near-field barriers to the HV transformers. Section 6.3.2 of the NVIA outlines the recommended construction materials and protocols which should be used when constructing these perimeter noise barriers. With the inclusion of suitable noise control measures, including the proposed noise attenuation wall, the NVIA concludes that the project achieves full compliance with the evening and night project noise trigger level (NVIA Section 6.5).	No further SIA recommendations .
Surroundings	Amenity impacts relating to visual disruption	Medium(-ve)	Low(-ve)	Equis Energy	n/a	The LCVIA recommends several mitigation measures (LCVIA Section 7.3) in order to reduce the visual impact of the project. These include: - Perimeter landscaping (along the northern and western boundaries); - Colour recommendations; and - The implementation of lighting design principles. In accordance with these measures, the NCVIA predicts that the project can avoid night sky impact, reduce the visibility and contract of the project in the landscape, minimise the impact to the existing landscape character, retain the existing screening vegetation, and enhance the screening of the project.	No further SIA recommendations .

Social impact / Social Benefit	Matter	Unmitigated / Unenhanced	Mitigated / Enhanced	Responsibility	Potential partners	Proposed mitigation, enhancement and management	Further SIA recommendations
Livelihoods	Provision of jobs and economic opportunities	High(+ve)	High(+ve)	Equis Energy	NSW Government, local job agencies	Equis is exploring opportunities to adopt a procurement process that includes a Local Jobs First Program, Social Procurement Framework and Social Impact Guidelines.	No further SIA recommendations .
Livelihoods	Provision of a secure source of energy	Medium(+ve)	Medium(+ve)	Equis Energy	n/a	There are no enhancement recommendations for this benefit.	No further SIA recommendations .
Livelihoods	Perceived impact to property values	Medium(-ve)	Low(-ve)	Equis Energy	n/a	The Project should align with the mitigation measures recommended by both the NVIA (discussed in Section 6.6.3) and the LCVIA (discussed in Section 6.6.5)	No further SIA recommendations .
Livelihoods	Strengthened connections with industry	Low(+ve)	High(+ve)	Equis Energy	Farrer Memorial Agricultural High School Tamworth Regional Council	To strengthen industry connections with the local community, Equis is exploring opportunities to partner with the Farrer Memorial Agricultural High School and are exploring several initiatives with the School. This includes expanding the curriculum to including education, training and skill development in the renewable energy sector and supporting the School to pursue opportunities to farm the agricultural land surrounding the Calala BESS. Equis is also exploring opportunities to support tourism in the region through events funding such as supporting the Tamworth Regional Heritage Festival.	No further SIA recommendations .
Decision-making systems	Community unrest relating to transparency	High(-ve)	Medium(-ve)	Equis Energy	n/a	Equis will continue to contact nearby residents to keep them updated on the project, including when it has been submitted to DPE and where they can review documentation and provide comment. The exhibition phase would provide stakeholders with transparent access to the results of the technical studies and may act as a means to remedy community unrest and/or anxiety regarding a lack of information. Further, at time of writing this report, Equis have requested that the engineering technical consultants contact the residents who have raised technical concerns and provide clarity around impacts such as noise. Equis actively monitor the engagement portal morning and night, seven days a week. Equis respond to any concerns within two days.	To further alleviate community unrest, it is recommended that the Project compile a 'Summary of Impacts' document and distribute it to nearby neighbours through a letter box drop, which could contain relevant technical information addressing the prime concerns raised through consultation. Depending on the timing of this document, it could also include information on where to navigate the project, and all the technical reports, on DPE's project website once formally submitted.
Cumulative	Cumulative impacts relating to the Project's location nearby the New England Renewable Energy Zone	Medium(-ve)	Low(-ve)	Equis Energy	NSW Government	It is understood a Construction Management Plan and Plan of Management will be prepared prior to commencing works.	The Project should ensure that its Construction Management Plan and Plan of Management which are to be prepared prior to commencing works, are continually applied to the Calala BESS and should review its plans if any additional projects are announced nearby.

REFERENCES

This SIA has been informed by a range of data sources, information and technical studies. The following data sources have been used:

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