

KINGSWOOD BATTERY ENERGY STORAGE SYSTEM

Appendix L
Social and Economic Impact Assessment

June 2024
SSD-63207219



Kingswood Battery Energy Storage System

Social and Economic
Impact Assessment

Prepared for Iberdrola
Australia

June 2024

HIIPDA
CONSULTING

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Glossary of terms

Acronym	Meaning
ABS	Australian Bureau of Statistics
ACHAR	Aboriginal Cultural Heritage Assessment Report
AEMO	Australian Energy Market Operator
ASGS	Australian Statistical Geography Standard
BDAR	Biodiversity Development Assessment Report
BESS	Battery Energy Storage System
BOCSAR	NSW Bureau of Crime Statistics and Research
CNVMP	Construction Noise and Vibration Management Plan
CTMP	Construction Transport Management Plan
DA	Development Application
dB(A)	A-weighted decibels
DPHI	NSW Department of Planning, Housing and Infrastructure
DPI	NSW Department of Primary Industries
EDC	Estimated Development Cost
EMS	Environmental Management Strategy
EP&A Act	NSW Environmental Planning and Assessment Act 1979
EPA	NSW Environmental Protection Authority
GCCSA	Greater Capital City Statistical Area (as defined under ASGS)
IRSAD	Index of Relative Socio-economic Advantage and Disadvantage
IRSD	Index of Relative Socio-economic Disadvantage
LCVIA	Landscape Character and Visual Amenity report
LGA	Local Government Area
Li-ion	Lithium ion
MWh	Megawatt hours
NMP	Noise Management Plan
NVIA	Noise and Vibration Assessment
PHA	Preliminary Hazard Analysis
REZ	Renewable Energy Zone
SA1	Statistical Area Level 1 (as defined under ASGS)

Acronym	Meaning
SAL	Suburbs and Localities
SEARs	Secretary's Environmental Assessment Requirements
SEIA	Social and Economic Impact Assessment
SEIFA	Socio-Economic Indexes for Areas
SIA	Social Impact Assessment
SIA Guideline	NSW DPHI Social Impact Assessment Guideline 2023
SMP	Stakeholder Management Plan
SSD	State Significant Development
SSDA	State Significant Development Application
The Project	The Kingswood Battery Energy Storage System
The Project Site	744 Burgmanns Lane, Kingswood, NSW 2340
The Proponent	Iberdrola Australia Development Pty Limited
TIA	Transport Impact Assessment

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This document is for discussion purposes only unless signed and dated by a HillPDA project director.

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A close-up photograph of an olive branch with several small, dark olives and silvery-green leaves. The image is overlaid with a semi-transparent dark blue filter. A white rectangular border is centered on the page, enclosing the title text.

INTRODUCTION

1.0 INTRODUCTION

HillPDA has been commissioned by Arcadis to prepare a Social and Economic Impact Assessment (SEIA) to accompany State Significant Development Application (SSDA) (SSD-63207219) for a Battery Energy Storage System (BESS) at 744 Burgmanns Lane, Kingswood, NSW 2340 (the Project Site). Development approval is being sought for the construction and operation of a BESS with a capacity of up to 270 Megawatts (MW) and 1,080 Megawatt hours (MWh) of battery storage capacity, and associated infrastructure (the Project).

This SEIA has been developed to align with the NSW Department of Planning, Housing and Infrastructure (DPHI) *Social Impact Assessment Guideline 2023* (the *SIA Guideline*). This assessment includes an analysis of the existing social environment. It aims to identify both positive and negative social impacts associated with the Project, while also suggesting mitigation measures to maximise social benefits and minimise negative impacts to the community.

1.1 Secretary's Environmental Assessment Requirements

This SEIA has been prepared in accordance with the requirements of Department of Planning, Housing and Infrastructure (DPHI), which are set out in the Secretary's Environmental Assessment Requirements (SEARs) (SSD-63207219) for the Project, issued on 30 October 2023. SEARs identify matters which must be addressed in the Environmental Impact Statement (EIS).

The SEARs indicate that this SEIA must provide the following information, as outlined in Table 1. This SEIA has been prepared to align with the *SIA Guideline* to meet the SEARs for this SSDA.

Table 1: Extract from the project-specific SEARs

Description of requirement	Section of this report
Capital Investment Value and Employment	
Provide an estimate of the retained and new jobs that would be created during the construction and operational phases of the development, including details of the methodology to determine the figures provided.	- Details of impact methodology – Section 5.1 - Construction phase impacts – section 5.2 - Operational phase impacts – section 5.3 - New jobs and net impacts – section 5.2
Social and Economic	
- An assessment of the social and economic impacts in accordance with the Social Impact Assessment Guideline (DPHI, Feb 2023) - Any benefits of the project for the region and the State as a whole, including consideration of any increase in demand for community infrastructure services, consideration of construction workforce accommodation, assessment of impact on agricultural resources and agricultural production on the site and region	- Assessment of social impacts – Chapter 6. Alignment with DPHI Guideline provided at Appendix B - Construction phase economic impacts to the State – section 5.2 - Operational phase economic impacts to the State – section 5.3 - Other economic impacts to the region and State – section 5.4

1.2 SIA Guideline

DPHI published an updated *SIA Guideline* in February 2023. The *SIA Guideline* provides detailed guidance on the requirements for preparing an SIA for State Significant Development Applications. This SEIA has been prepared to satisfy the requirements of the *Guideline* as directed by the SEARs.

The methodology for this assessment, outlined in Chapter 2.0, is consistent with the requirements of the *Guideline*. The qualifications of the project team comply with the requirements of the *SIA Guideline*.

1.3 The Project

1.3.1 Project overview

Iberdrola Australia Development Pty Limited (Iberdrola) (the Proponent) is seeking development consent for the construction, operation, and maintenance of a BESS at 744 Burgmanns Lane, Kingswood, NSW. The BESS will provide up to 270 Megawatts (MW) and up to 1,080 Megawatt hours (MWh) of battery storage capacity.

The Project is considered to support the NSW Government's electricity strategy for a reliable, affordable, and sustainable electricity future that supports a growing economy. BESS facilities, such as the Project, would assist with intermittency risks associated with renewable energy generation in NSW, and is considered a key element of the transformation of the NSW energy sector.

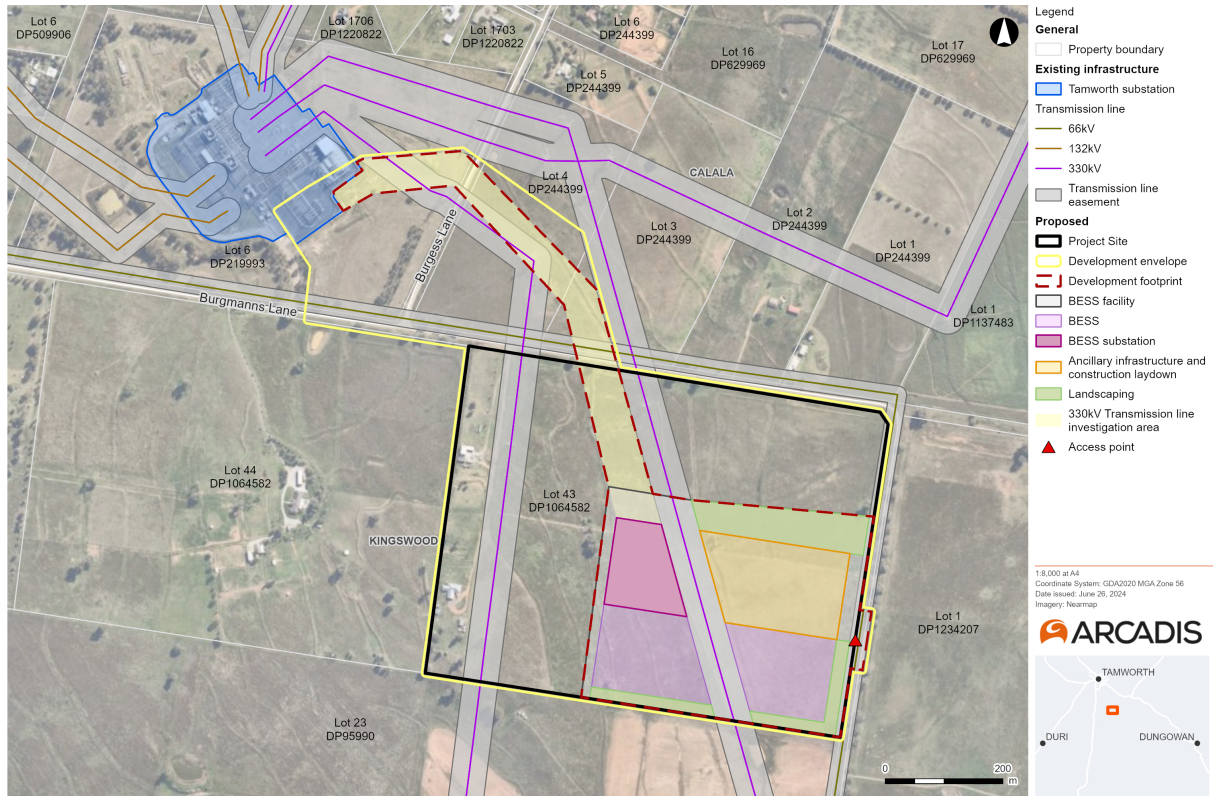
The Project would involve construction and operation of the following:

- BESS including battery enclosures, inverters, transformers, switch gear and control building
- Onsite 33/330 kV substation (BESS substation) to convert electricity between the high voltage transmission network and medium voltage BESS
- High voltage transmission connection (above ground and/or below ground) between the BESS and the Tamworth substation
- Ancillary infrastructure and mitigative features including:
- Site access to the BESS from Ascot-Calala Road
 - Internal site access road and parking
 - Permanent office and staff amenities
 - Operations and maintenance building
 - Stormwater management infrastructure
 - Services and utilities
 - Lighting, fencing and security devices
 - Noise acoustic barriers
 - Asset protection zone
 - Landscaping and screening vegetation.

The BESS will operate 24 hours a day, seven days a week and be monitored remotely, with infrastructure maintenance undertaken onsite.

A site plan of the Project is shown below in Figure 1.

Figure 1: Site plan

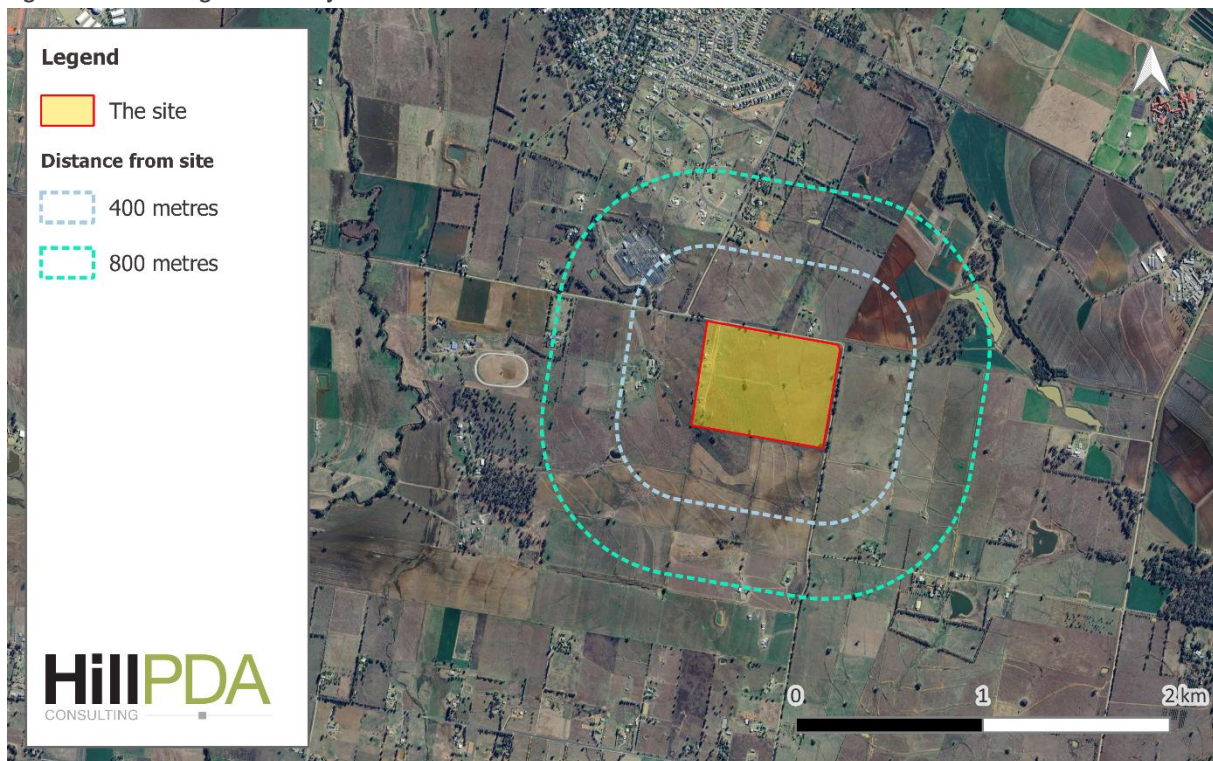


Source: Arcadis (2024)

1.3.2 Site context

The Project Site is located at 744 Burgmanns Lane, Kingswood, NSW on Lot 43 DP 1064582. The Project Site is within the Tamworth Regional Local Government Area (LGA) in the New England region of NSW, approximately 6 kilometres to the south east of the Tamworth CBD. Figure 2 displays the Project Site and its surrounds.

Figure 2: Aerial image of the Project Site and immediate surrounds



Source: HillPDA, Google (2023)

The Project Site is bounded by Ascot-Calala Road to the east and Burgmanns Lane to the north, and is situated approximately 3.2 kilometres east of the New England Highway / Goonoo Goonoo Road. The Project Site has a low gradient that slopes northeast towards Calala Creek 800 metres to the east, which feeds into the Peel River. Tamworth substation is located 400 metres northwest of the Project Site on Burgmanns Lane.

The land immediately north east of the Project Site (4 Marsden Park Road Calala) is owned by the NSW Department of Primary Industries (DPI), operating as the Tamworth Agricultural Institute. It is the DPI Agriculture's principal research institute for the cropping zone of northern inland NSW and the Centre of Excellence for Northern Farming Systems. It is dedicated to helping ensure agricultural industries and rural communities remain economically viable and sustainable.¹

The Project Site has been cleared extensively and is used for cattle grazing, as consistent with its regional setting and its immediate surrounds. A homestead occupied by the existing landowner is located within the southwest corner of the Project Site. Wire fencing also extends around the Project Site, dividing the Lot internally into three paddocks, the homestead and the stables. Two transmission lines transect the Project Site.

The nearest residential zoned land is located in Calala approximately 470 metres to the north of the Project Site, with the nearest receptors present in adjacent properties on Burgmanns Lane and Ascot-Calala Road.

¹ (NSW DPI, 2024)



METHODOLOGY

2.0 METHODOLOGY

The approach to conducting this SEIA reflects current industry best practice including the *SIA Guideline*.

The SEIA aims to scope, assess, and enhance or mitigate potential positive and negative impacts that may arise from the Project. The method for this SEIA is divided into three phases as shown in Figure 3 below.

Figure 3: SIA process



Source: HillPDA, DPHI (2023), *Social Impact Assessment Guideline*.

2.1 Defining social impacts

A social impact can be defined as the net effect of an activity on a community and the wellbeing of individuals and families. Social impacts may occur across a range of aspects of an individual's and a community's life, as shown in Figure 4.

Figure 4: Types of social impact

<i>way of life</i>	how people live, how they get around, how they work, how they play, and how they interact on a daily basis
<i>community</i>	composition, character, cohesion, function, and sense of place
<i>access</i>	how people access and use infrastructure, services and facilities, whether provided by local, state, or federal governments, or by for-profit or not-for-profit organisations or groups
<i>culture</i>	both Aboriginal and non-Aboriginal culture, including shared beliefs, customs, values, and stories, and connections to country, land, waterways, places, and buildings
<i>health and wellbeing</i>	physical and mental health, especially for those who are highly vulnerable to social exclusion or substantial change, plus wellbeing of individuals and communities
<i>surroundings</i>	access to, and use of, services that ecosystems provide, public safety and security, access to and use of the natural and built environment, and its aesthetic value and amenity
<i>livelihoods</i>	people's capacity to sustain themselves, whether they experience personal breach or disadvantage, and the distributive equity of impacts and benefits
<i>decision-making systems</i>	whether people experience procedural fairness; can make informed decisions; have power to influence decisions; and can access complaint, remedy and grievance mechanisms

Source: Adapted from DPHI (2023), *Social Impact Assessment Guideline*.

2.2 Scoping

Social impacts arising from a development may be positive, negative and cumulative. Table 2 presents the outcomes of impact scoping undertaken for the Project. The table identifies high level key impact areas for detailed investigation, that may be affected by the Project.

Table 2: Types of social impacts

Type of impact	High level scoping of issues
Negative social impacts	Negative social impacts result from changes to the physical or social fabric that make it worse (in any of the impact categories) than before the project took place. These may include:

Type of impact	High level scoping of issues
	- Increased dust or noise levels affecting health - Decreased amenity during construction - Alterations to community character through land use changes.
Positive social impacts	Positive social impacts result from changes to the physical or social fabric that make it better (in any of the impact categories) than before the project took place. These may include: - Increased access to jobs in the local area - Improved amenity through provision of open space - Stronger sense of community through provision of community space.
Cumulative social impacts	Cumulative social impacts result from changes to the physical or social fabric that occur from multiple projects or activities that need similar resources or affect similar impact categories. These may include: - Increased traffic level from construction vehicles for multiple projects in one area - A shortage of workers in an area due to multiple similar projects - Health impacts from persistent noise or dust levels due to ongoing projects.

Source: HillPDA, DPHI (2023), *Social Impact Assessment Guideline*.

2.3 Evidence base

To assess the social impacts accurately, an SEIA must also provide an accurate assessment of the social baseline of the project surrounds. This means that the existing surrounds of the Project must be considered through the collection of data to establish benchmarks against which the impacts of the Project can be assessed.

To establish this social baseline, HillPDA has conducted a desktop review of the available information provided by the proponent, as well as research conducted with a high degree of impartiality using trusted, industry-standard sources to inform our understanding of relevant demographic and social trends.

The evidence base for this SEIA includes data from sources such as:

- Australian Bureau of Statistics
- NSW Bureau of Crime Statistics and Research
- NSW Department of Planning, Housing and Infrastructure
- Relevant information provided by Council and/or the proponent
- Profile.id.

The findings of this work are outlined in Chapter 3.0.

2.4 Predicting, analysing and evaluating impacts

The impact assessment framework presented in this report identifies and evaluates changes to the social baseline due to the Project. This includes the assessment of positive, negative, and cumulative impacts as outlined in Chapter 2.1. Changes can be tangible or intangible; qualitative or quantitative; direct or indirect; and subjectively experienced.

The likelihood of social impacts arising from each matter is assessed as part of the scoping process. Matters which are identified as having potential social impacts are then assessed. Professional judgement and experience is applied on a case-by-case basis to identify the significance of impact on the social environment.

The likelihood of a potential impact is a primary element of considering each social impact and its risk rating. The criteria used to determine the likelihood of any potential impact are described in Table 3.

Table 3: Likelihood of impact

Likelihood	Description	Indicative Probability
Almost certain	Definite or almost definitely expected	Greater than 90 per cent
Likely	High probability	70 per cent

Likelihood	Description	Indicative Probability
Possible	Medium probability	50 per cent
Unlikely	Low probability	30 per cent
Very unlikely	Improbable or remote possibility	Less than 10 per cent

Source: DPHI (2023), *Social Impact Assessment Guideline*. Adapted from Esteves A.M.et. al. (2017)

The magnitude of a potential impact is a key consideration to determine a risk rating. In determining the magnitude of a potential impact there are five key characteristics that must be considered, these are shown below in Table 4.

Table 4: Dimensions of social impacts

Characteristic	Details needed to enable assessment
Extent	Who is expected to be affected? Will any vulnerable groups be impacted? Which locations and people are affected?
Duration	When is the impact expected to occur? Will it be temporary or permanent?
Intensity or scale	What is the likely scale or degree of change?
Sensitivity or importance	How sensitive/vulnerable or adaptable/resilient are affected people to the impact, or (for positive impacts) how important is it to them?
Level of concern/interest	How concerned or interested are people?

Source: DPHI (2023), *Social Impact Assessment Guideline*. Adapted from Esteves A.M.et. al. (2017)

Table 5 below identifies the overall magnitude level of impact rating.

Table 5: Magnitude of impact

Magnitude	Description
Minimal	No noticeable change experienced by people in locality.
Minor	Mild deterioration/improvement, for a reasonably short time, for a small number of people who are generally adaptable and not vulnerable.
Moderate	Noticeable deterioration/improvement to something that people value highly, either lasting for an extensive time, or affecting a group of people.
Major	Substantial deterioration/improvement to something that people value highly, either lasting for an indefinite time or affecting many people in a widespread area.
Transformational	Substantial change experienced in community wellbeing, livelihood, amenity, infrastructure, services, health and/or heritage values; permanent displacement or addition of at least 20% to a community.

Source: DPHI (2023), *Social Impact Assessment Guideline*. Adapted from Esteves A.M.et. al. (2017)

Potential impacts identified in the scoping process are analysed based on the nature of the impact and its predicted severity, and based on this, are assigned a level of significance in line with Table 6.

Table 6: Social impact significance matrix

		Magnitude				
		Minimal	Minor	Moderate	Major	Transformational
Likelihood	Almost certain	Low	Medium	High	Very high	Very high
	Likely	Low	Medium	High	High	Very high
	Possible	Low	Medium	Medium	High	High
	Unlikely	Low	Low	Medium	Medium	High
	Very unlikely	Low	Low	Low	Medium	Medium

Source: Adapted from DPHI (2023), *Social Impact Assessment Guideline*.

2.5 Social impact management

Where impacts are identified, the SEIA provides mitigation and/or enhancement measures. For potential negative impacts, measures are identified to avoid or minimise impacts by amending the project or its delivery.

For potential positive social impacts, the SEIA identifies measures to enhance the benefit of that impact. Social impact management is an ongoing process.



SOCIAL BASELINE

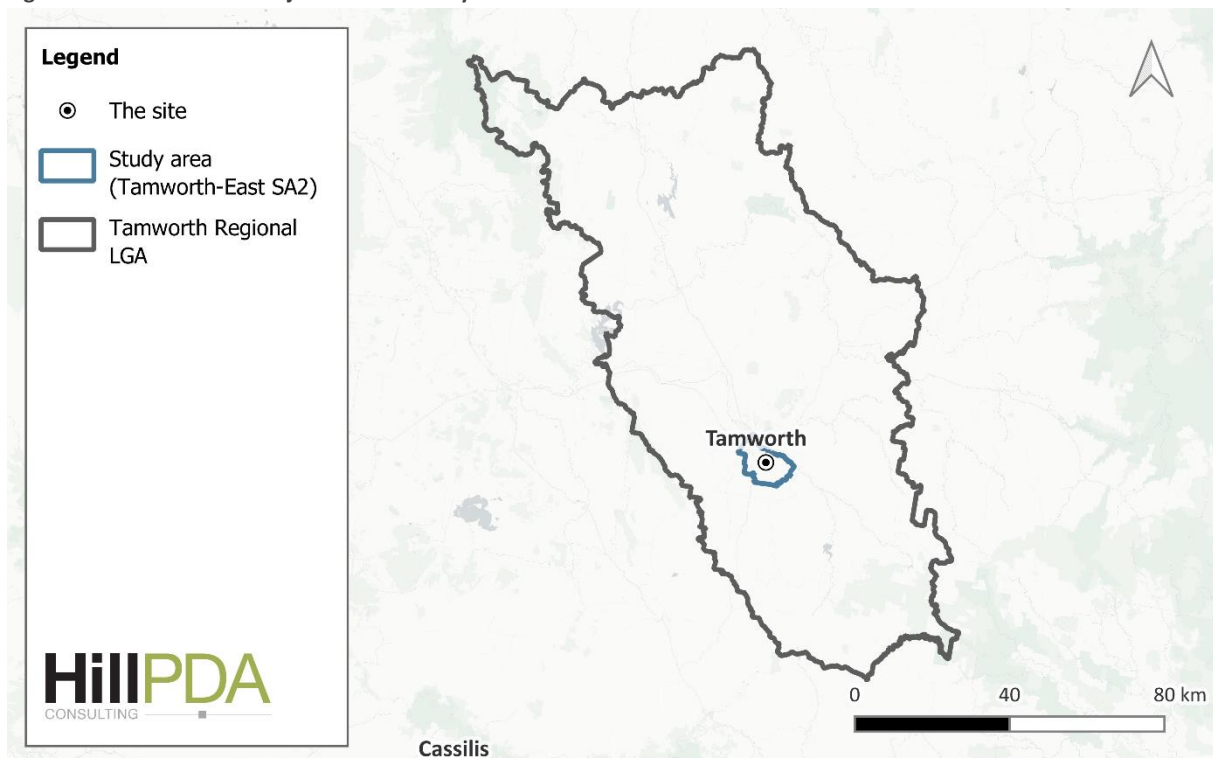
3.0 SOCIAL BASELINE

This chapter describes the socio-economic characteristics of the study area to enable the potential impacts of the Project to be considered within the local context.

3.1 Study Area

For the purposes of this SEIA, the study area has been defined under the Australian Statistical Geography Standard (ASGS) as Tamworth – East Statistical Area Level 2 (SA2). Where possible, socio-economic indicators have been benchmarked against the Rest of NSW GCCSA Greater Capital City Statistical Area (GCCSA). The study area is displayed in Figure 5 below.

Figure 5: Location of the Project Site and study area within the broader LGA



Source: HillPDA, ABS (2023)

3.2 Access

Vehicular access to the Project Site is provided via Burgmanns Lane to the north and Ascot-Calala Road to the east. Burgmanns Lane connects onto the New England Highway approximately 3.2 kilometres to the west.

There is limited public transport access to the Project Site given its location within a rural area. The nearest public transport services are provided by the following bus routes which have stops in Calala, approximately 1.5 kilometres (or 30 minutes by walk) to the north of the Project Site:

- 435 – Tamworth to Tamworth Sports Dome via South Tamworth (Loop Service)
- 436 – Tamworth to Calala via Goonoo Goonoo Rd (Loop Service)

Both the above services operate 6 days a week from Monday – Saturday, with services operating every 40 minutes – 1 hour during peak periods. However, given the infrequent nature of the bus services and the approximate 30 minute walk from the bus stops to the Project Site, it is considered unlikely workers or other personnel would travel to the Project Site via public transport.

3.3 Demographic snapshot



The Census usual resident population of the study area in 2021 was **21,360 people**, living in **9,396 dwellings** with an **average household size of approximately 2.4**. The usual resident population of the study area increased by 990 people between 2016 and 2021, representing an **increase of approximately 5 per cent** over this period.



In 2021, the **median age** of the study area was 38, lower than the Rest of NSW GCCSA (43). 19.7 per cent of the study area was aged 0-14, 62.1 per cent aged 15-64, and 18.2 per cent aged 65 years and over. This compares to 18.4, 70.9, and 10.7 per cent for the Rest of NSW GCCSA.



In 2021, only 6.8 per cent of people spoke a **language other than English** at home, slightly lower than the 8.4 per cent of households across the Rest of NSW GCCSA. In 2021, 85.2 per cent of the study area population was born in Australia, compared to 81.3 per cent in the Rest of NSW GCCSA.



At the 2021 Census, the top response for **religious affiliation** was No Religion (31.9 per cent), followed by Anglican (23.2 per cent) and Catholic (22.5 per cent). This compares to No Religion (37.4 per cent), Catholic (21.0 per cent), and Anglican (17.0 per cent) across Rest of NSW GCCSA.



In 2021, **separate houses** comprised 85.9 per cent of all occupied dwellings in the study area, whilst 11.9 per cent were **semi-detached** dwellings and 1.6 per cent were **flats or apartments**. This compares to 82.3 per cent, 9.9 per cent and 6.3 per cent respectively for the Rest of NSW GCCSA.



Approximately 53 per cent of households in the study area that had **two or more motor vehicles** registered in 2021, compared to 55 per cent in the Rest of NSW GCCSA. The proportion of households in the study area with **no motor vehicles registered** (7.1 per cent) was slightly higher than the proportion for the Rest of NSW GCCSA (6.1 per cent).



In 2021, the **median weekly household income** in the study area was \$1,383 per week, slightly lower than the Rest of NSW GCCSA's **median weekly household income of \$1,434** per week.



In 2021 in the study area, 34.5 per cent of rental households were paying more than 30 per cent of household income on weekly rent (compared to 36.0 per cent for the Rest of NSW GCCSA). 9.9 per cent of households with a mortgage were paying more than 30 per cent of household income on monthly mortgage payments (compared to 12.7 per cent for the Rest of NSW GCCSA).



At the 2021 Census, the proportion of **family households** was slightly lower in the study area (66.9 per cent) than in the Rest of NSW GCCSA (68.8 per cent). The proportion of **lone person households** (29.6 per cent) and **group households** (3.5 per cent) was slightly smaller in the study area when compared to the Rest of NSW GCCSA, at 27.9 per cent and 3.3 per cent respectively.



Of residents aged 15 years and over in the study area, 10,325 reported being **in the labour force** in 2021, of which 6,187 (59.9 per cent) worked full time. 488 persons (4.7 per cent) were **unemployed**, slightly higher than the Rest of NSW GCCSA average of 4.6 per cent.



The most common **industries of employment** were Hospitals (except Psychiatric Hospitals) (4.8 per cent), Meat Processing (3.7 per cent), and Other Social Assistance Services (3.6 per cent). The most common **occupations** were Professionals (16.2 per cent), Labourers (14.9 per cent), and Technicians and Trades Workers (14.6 per cent).

Source: ABS (2021), *Quickstats*

3.4 Social advantage and disadvantage

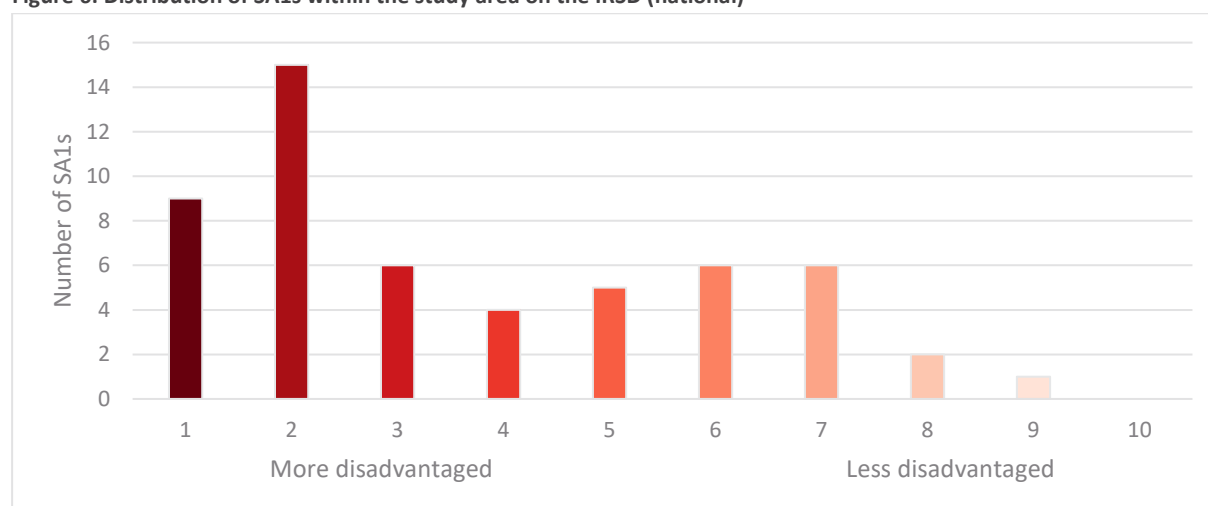
The Socio-Economic Indexes for Areas (SEIFA) are rankings of relative socio-economic status (advantage and disadvantage) for different geographic areas, within each state and nationally. The indexes rank areas against others of the same geographic type (e.g. Local Government Area or Statistical Area Level 1) based on specific socio-economic metrics, selected based on the particular SEIFA index.

3.4.1 Relative socio-economic disadvantage

Index of Relative Socio-economic Disadvantage (IRSD) examines factors like unemployment, proportion of lower income households, lower education levels or lack of internet access to compare overall levels of disadvantage in areas.

Figure 6 displays the distribution of IRSD rankings for SA1s within the study area which show moderate-high levels of disadvantage. This shows that almost half (24 SA1s) of the SA1s within the study area are concentrated within the two most disadvantaged deciles, with the remaining SA1s spread relatively evenly across the other deciles. This indicates that there is moderate-high socio-economic disadvantage throughout the study area.

Figure 6: Distribution of SA1s within the study area on the IRSD (national)

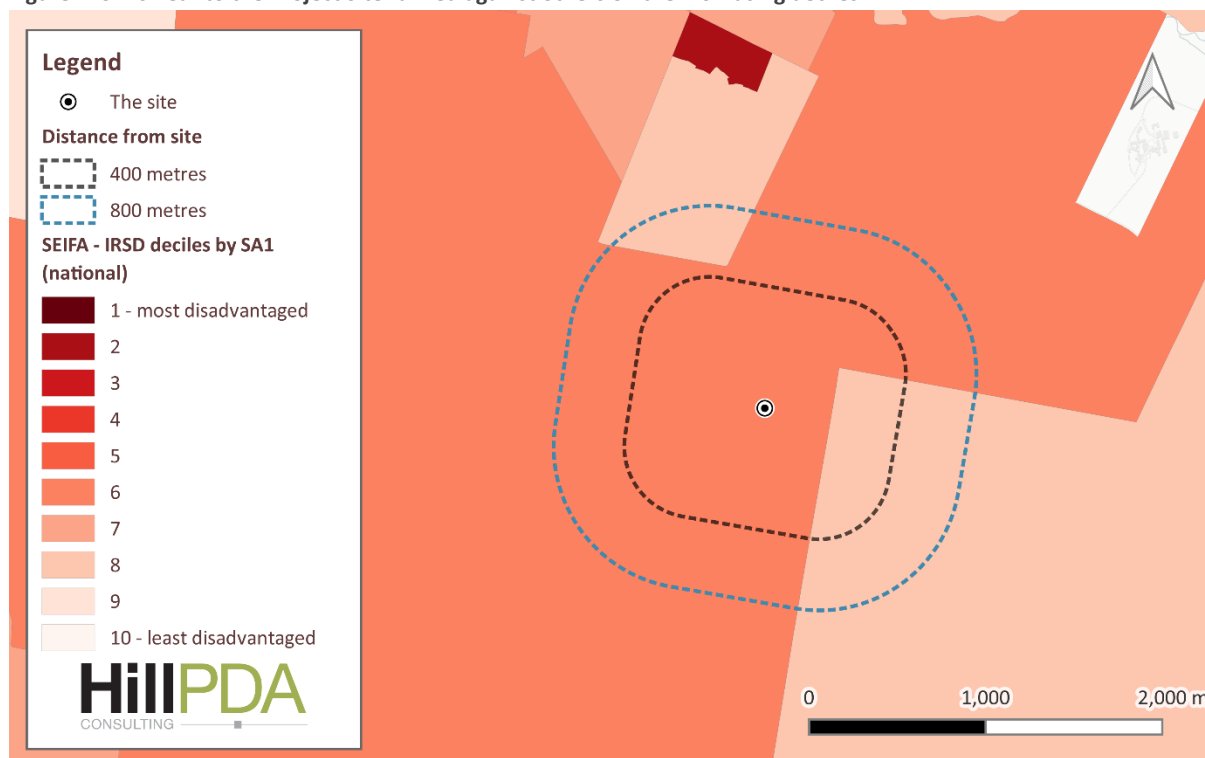


Source: ABS (2021). SA1s for which no score is recorded (low population) have been excluded.

This data has been mapped spatially in Figure 7. The SA1s immediately surrounding the Project Site have moderate-high levels of disadvantage, potentially indicating:

- Fewer households with higher incomes
- Fewer residents with qualifications
- Fewer residents in high skilled occupations.

Figure 7: SA1s near to the Project Site ranked against others on the IRSD using deciles



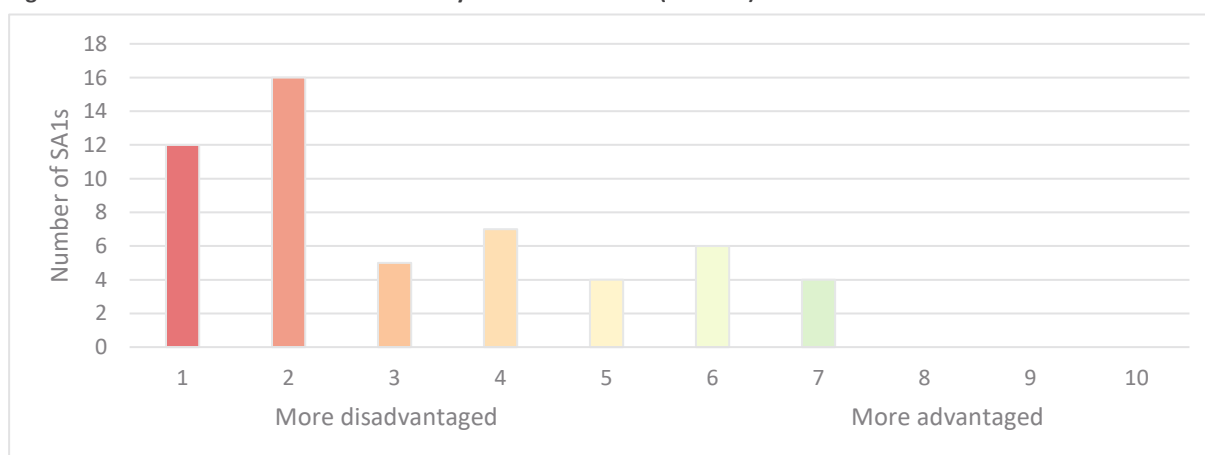
Source: ABS (2021). SA1s for which no score is recorded (low population) have been excluded.

3.4.2 Relative socio-economic advantage and disadvantage

Index of Relative Socio-economic Advantage and Disadvantage (IRSAD), in addition to the indicators of disadvantage above, examines factors like professional occupations, high income, higher education levels, larger houses to compare overall levels of advantage and disadvantage in areas.

Figure 8 shows the distribution of IRSAD rankings for SA1s within the study area. Over half (28 SA1s) of the SA1s within the study area are concentrated within the two most disadvantaged deciles, with the remaining SA1s spread relatively evenly across the third to seventh deciles. This indicates that the study area has a high concentration of moderate-high socio-economic disadvantage.

Figure 8: Distribution of SA1s within the study area on the IRSAD (national)

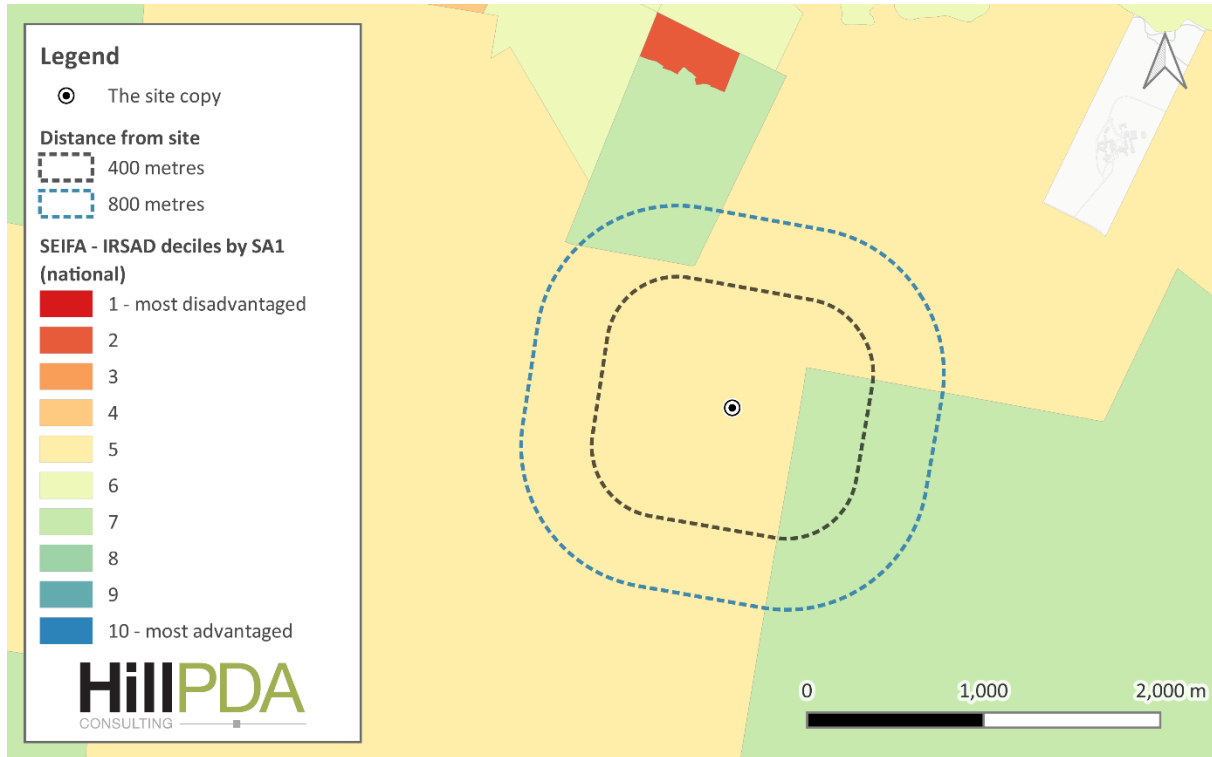


Source: ABS (2021). SA1s for which no score is recorded (low population) have been excluded.

This data has been mapped spatially in Figure 9. The SA1s in the study area have moderate to high levels of disadvantage, potentially indicating:

- Fewer households with high incomes, or less people in skilled occupations
- More households with low incomes, or more people in unskilled occupations.

Figure 9: SA1s near to the Project Site ranked on the IRSAD using deciles



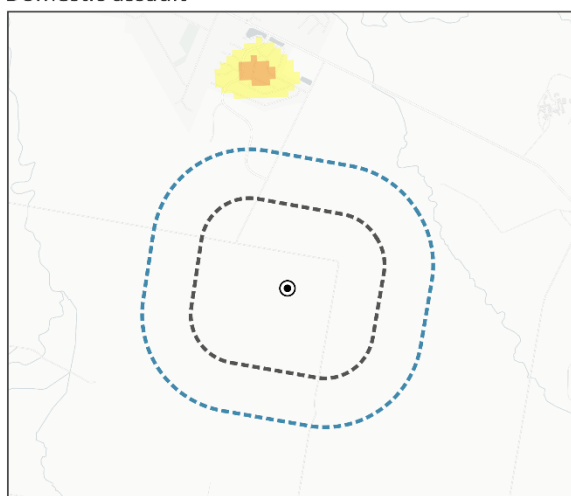
Source: ABS (2021). SA1s for which no score is recorded (low population) have been excluded.

3.5 Crime

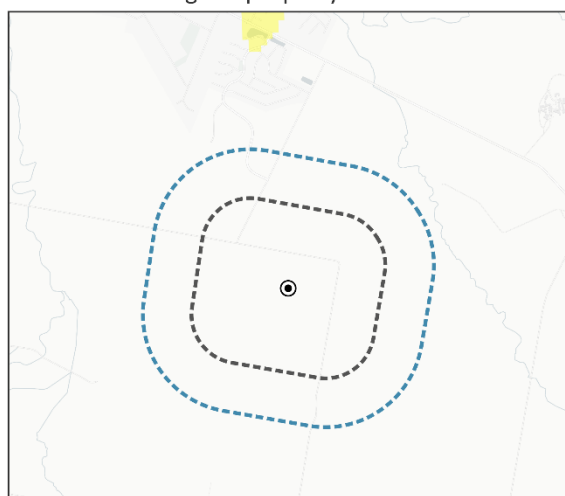
Data from the NSW Bureau of Crime Statistics and Research (BOCSAR) was reviewed to determine the presence of crime hotspots near the Project Site in the year to June 2023. No hotspots were identified within 400 metres or 800 metres of the Project Site. The nearest crime hotspots were identified in the built up area of Calala further than 800 metres to the north of the Project Site. Minor hotspots for domestic assault, malicious damage to property, theft (break and enter dwelling), and theft (motor vehicle) were identified, as shown in Figure 10.

Figure 10: BOCSAR crime hotspot maps for incidents between July 2022 and June 2023

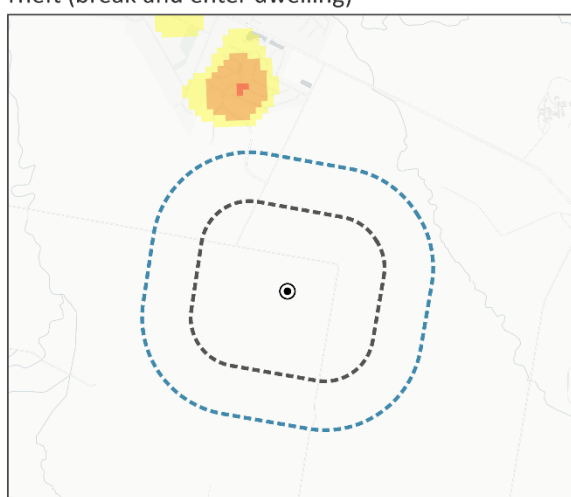
Domestic assault



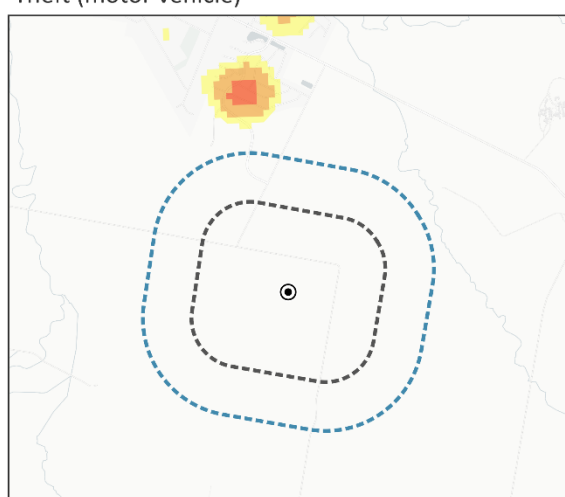
Malicious damage to property



Theft (break and enter dwelling)



Theft (motor vehicle)



Legend

Distance from site

Crime density (July 2022 to June 2023)



The site



400 metres



800 metres



High



Medium



Low

HillPDA
CONSULTING

Source: NSW BOCSAR (2023)

Detailed data obtained from BOCSAR is shown in the tables below for the crimes mapped above. As the Project Site is located at the boundary of Kingswood (SAL) and Calala (SAL), the tables below compare rates in both suburbs with the rates in Tamworth Regional (LGA) and NSW.

Table 7 shows that rates of reported domestic assault remained stable across the LGA and increased by 8.7 per cent per year in NSW in the two years to June 2023, whilst incidents of this crime were too low in Kingswood (SAL) and Calala (SAL) to produce a statistically significant trend. Over this two year period, rates of this crime were highest in the LGA and lowest in Calala out of the three comparison areas for which data is available.

Table 7: Incidents of domestic assault from July 2022 to June 2023 (rate per 100,000 population)

Year to	June 2023	June 2022		June 2023	
Area	Trend (2 year)	Count	Rate	Count	Rate
Kingswood (SAL)	n.c.	0	n.c.	2	n.c.
Calala (SAL)	n.c.	10	215.9	14	302.2
Tamworth Regional (LGA)	Stable	400	628.4	441	692.8
New South Wales	Up 8.7% per year	31,935	394.6	34,700	428.7

Source: NSW BOCSAR (2023)³

Table 8 shows that rates of malicious damage to property were stable across the LGA and NSW in the two years to June 2023, whilst incidents of this crime were too low in Kingswood (SAL) and Calala (SAL) to produce a statistically significant trend. As rates for Kingswood were not available, out of the three comparison areas rates were lowest in Calala (SAL) and highest in the LGA, where they were approximately three times the rate for Calala in the year to June 2023.

Table 8: Incidents of malicious damage to property from July 2022 to June 2023 (rate per 100,000 population)

Year to	June 2023	June 2022		June 2023	
Area	Trend (2 year)	Count	Rate	Count	Rate
Kingswood (SAL)	n.c.	3	n.c.	2	n.c.
Calala (SAL)	n.c.	11	237.5	22	475.0
Tamworth Regional (LGA)	Stable	785	1233.3	796	1250.5
New South Wales	Stable	47,610	588.2	48,585	600.3

Source: NSW BOCSAR (2023)²

Table 9 shows that rates of theft (break and enter dwelling) were stable in Calala (SAL) and the LGA in the two years to June 2023, and up by 10 per cent per year in NSW. Incidents of this crime in Kingswood (SAL) were too low to produce a statistically significant trend. Rates of this crime were highest in the LGA, where they were at approximately four times the rate for NSW over the two year period.

Table 9: Incidents of theft (break and enter dwelling) from July 2022 to June 2023 (rate per 100,000 population)

Year to	June 2023	June 2022		June 2023	
Area	Trend (2 year)	Count	Rate	Count	Rate
Kingswood (SAL)	n.c.	2	n.c.	0	n.c.
Calala (SAL)	Stable	21	453.4	22	475.0
Tamworth Regional (LGA)	Stable	561	881.4	521	818.5
New South Wales	Up 10.0% per year	17,346	214.3	19,076	235.7

Source: NSW BOCSAR (2023)³

Table 10 shows that rates of theft (motor vehicle) were stable for the LGA and increased by 23 per cent per year in NSW over the two years to June 2023, whilst incidents of this crime were too low in Kingswood (SAL) and Calala (SAL) to produce a statistically significant trend. Rates of this crime in the LGA were approximately double the rates for NSW over the two year period, with rates not available for Kingswood (SAL) and Calala (SAL).

Table 10: Incidents of theft (motor vehicle) from July 2022 to June 2023 (rate per 100,000 population)

Year to	June 2023	June 2022		June 2023	
Area	Trend (2 year)	Count	Rate	Count	Rate
Kingswood (SAL)	n.c.	0	n.c.	1	n.c.
Calala (SAL)	n.c.	2	n.c.	0	n.c.
Tamworth Regional (LGA)	Stable	218	342.5	195	306.4
New South Wales	Up 23.0% per year	10,718	132.4	13,183	162.9

Source: NSW BOCSAR (2023)³

Figure 10 identified minor hotspots for several crimes in Calala, beyond an 800 metre radius to the north of the Project Site. Analysis of the data in the tables above has revealed that rates for these crimes in Calala (SAL) were generally much lower than the rates for the LGA, whilst rates were not available for Kingswood (SAL) for the crimes reviewed. As such, due to the lower rates of crime and the lack of crime hotspots within the immediate vicinity of the Project Site, there is a low level of concern surrounding crime risks at the Project Site. In addition, it is considered very unlikely that the Project would have an impact on crime rates within the locality.

² (NSW Bureau of Crime Statistics and Research, 2023)

³ (NSW Bureau of Crime Statistics and Research, 2023)

3.6 Social infrastructure

Social infrastructure is comprised of the facilities, spaces, services and networks that support the quality of life and wellbeing of our communities.⁴ Social infrastructure is important to a community as it provides the tangible infrastructure to support the safety, health and wellbeing of that community which allows individuals to be happy, safe and healthy, to learn, and to enjoy life. Access to high-quality, affordable social services has a direct impact on the social and economic wellbeing of all community members.

Social infrastructure within a 400 metre radius from the Project Site is more likely to be affected by any impacts from the development. However, there is no social infrastructure within an 800 metre radius of the Project Site. The nearest social infrastructure facility is Lampada Park, a local park situated approximately 1.5 kilometres to the north of the Project Site within the built up area of Calala. Due to the sufficient distance provided between the Project Site and this park and other social infrastructure facilities, it is considered unlikely that they would be impacted by the Project.

Tamworth is a key service centre for the rural New England and North West Regions of New South Wales. As such it provides a range of key regional social services for the region, in addition to services for the local area and surrounding districts. These services are summarised in the table below.

Table 11: Community groups, services and organisations in Tamworth and surrounds

Type	Service or organisation	
Child care (including out of school hours care)	- Calrossy Preschool - Children First- Tamworth South OSHC - Community Kids Tamworth Early Education Centre - Good Start Early Learning - Brisbane Street - Good Start Early Learning – Calala - Good Start Early Learning - Tamworth South - Janelle Street Centre - Nurture One Tamworth Children's Centre	- Peter Pan Pre School Kindergarten - Rainbow Cottage Occasional Child Care Centre - St Mark's Preschool & Long Day Care Centre - St Mary's North Tamworth Preschool - St Peter's Preschool Tamworth Inc - Tamworth Family Day Care Service - Tamworth Montessori Preschool - Year Round Care
	- Bullimbal School for Special Purposes - Calrossy Anglican School - Calrossy Anglican School P & F Association - Calrossy Anglican School, Primary Campus - Carinya Christian School - College of Counselling Studies (NENW) Inc - Farrer Memorial Agricultural High School - Hillvue Public School - Liberty College - McCarthy Catholic College - Oxley High School - Oxley Vale Public School - Parry School for Special Purposes - St Edwards Primary School	- St Joseph's Primary School - St Nicholas School - TAFE NSW - New England Institute - Tamworth Community College - Tamworth High School - Tamworth Public School - Tamworth Regional U3A (University of the Third Age) - Tamworth South Public School - Tamworth West Public School - Timbumburi Public School - University of New England (Tamworth) - Westdale Public School
Community based services	- Aidacare Pty Ltd - Anglicare (Northern Inland) - Australian Unity Aboriginal Home Care Services - Australian Unity Home Care Services - BEST Employment - Billabong Clubhouse Inc - Bundaleer Care Services - Brighter Access - Cancer Council of NSW - Tamworth Family Support Service - Centacare New England North West - Challenge Disability Services - Co-Care Inc	- House with No Steps - Interact Group Australia - Joblink Plus Ltd - Kirinari Community Services - Legacy Tamworth - Liberty Foodcare - Mara-Mara Community Inc. - Northcott Disability Services - Oxley Community Transport Service - Sunnyfield Disability Services - Tamworth Community Event Centre - Tamworth Dementia Respite Service - Oakwood Centre

⁴ (Infrastructure Australia, 2019)

Type	Service or organisation	
	- Coledale Community Centre (managed by Tamworth Family Support) - Community Visitors Scheme - DCJ Community Services Centres - Department of Communities and Justice - Disability Advocacy NSW - EPPS Engineering and DEMAC Disability Sales and Modifications - Flourish Australia (RichmondPRA) - Hearing Australia - Homes North Community Housing - Horizon Early Childhood Intervention Inc	- Tamworth Family Support Service Ltd - Tamworth Local Aboriginal Land Council - Tamworth Meals on Wheels Inc - Tamworth Toy Library - Tamworth Women and Children's Refuge (managed by Tamworth Family Support) - The Benevolent Society - The Smith Family - Yinarr Health and Well Being Group (Aboriginal) - Peel Valley Training & Employment - The Butterfly Fulcrum
Community groups	- Australian Plant Society - Tamworth Group - Country Women's Association - Filipino Association of Tamworth - Inner Wheel Club of Tamworth Inc - Lions Club of Tamworth - Scouts (multiple groups) - Tamworth Cottage Gardeners Inc - Tamworth Orchid Society Inc. - Tamworth & District Family History Group Inc - Tamworth & District Model Engineers Inc. - Tamworth Bicentenary - Tamworth & District Highland Society/Pipe Band - Tamworth Broadcasting Society	- Tamworth Choral Society - Tamworth Clarinet Choir - Tamworth Dramatic Society - Tamworth Musical Society - Tamworth Regional Craft Centre - Tamworth RSL Brass Band & Training Brass Band - Tamworth Songwriters Association Inc Group - Rotary (multiple local) - Tamworth Toastmasters Club - Tamworth RSL Sub Branch - View Club (multiple local)
Youth services	- Tamworth PCYC - Tamworth Regional Youth Centre	- Tamworth Youth Homelessness Service - Youth Insearch Foundation
Health care	- Tamworth Hospital (regional hospital with 24-hour emergency and ancillary referral services) - HealthWISE New England North West - Home Nursing Group	- RehabCo The Rehabilitation Company - Rural Home Nursing Service - Tamara Private Hospital - Tamworth Aboriginal Medical Service
Sports and recreation	- Regional athletic and aquatic facilities - A range of local sporting facilities including ovals and courts	An extensive range local sporting clubs including organised and social sports. Also a range of clubs to suit participants requiring assistance.
Places of worship	- Trinity Church Tamworth - Christian City Church (C3) - St Edward's Catholic Parish - Mary Help of Christians Church - St Stephen's Presbyterian Church - Tamworth Southside Uniting Church - Cornerstone Church Incorporated - Liberty Church Inc - Northwest Church - Saint Paul's Lutheran Church - Salvation Army - Tamworth - Somerton Anglican Church	- St John the Evangelist Anglican Church - St Mary's Catholic Church (Served by Saint Nicholas Parish) - St Nicholas Catholic Church - St Paul's Anglican Church - Tamworth Baptist Church - Tamworth City Uniting Church - Tamworth Community Presbyterian Church - Peel Valley Uniting Church - Tamworth Bible Baptist Church - Tamworth Spiritualist Church - Tamworth Masjid Qubaa

Source: (Tamworth Regional Council, 2024)

3.7 Tourism and short term accommodation

Tamworth includes a range of short term accommodation providers which are an important component of the local tourist economy. The Tamworth Visitor Economy Plan states that tourism is worth almost \$300 million annually to the local economy.⁵ With a schedule of major events and festivals throughout the year, Tamworth

⁵ (Tamworth Regional Council, 2022)

has significant demand for tourism accommodation at certain times of year, with approximately 1.25 million visitors in 2019. In that year, 457 thousand (37 per cent) visited on holiday and 239 thousand (26 per cent) visited friends or relatives, with the remainder visiting for business or other reasons.⁶ Over the same period, the average night stay was 3 nights.

Being a major regional centre, there are smaller local events that happen throughout the year, most notably touring shows, local sporting events, produce shows and growers' markets. In addition to these there are some key annual events that attract significant tourism to the region, these are summarised in the table below.

Table 12: Key annual events in Tamworth

Event	Month	Format	Attendance
Tamworth Country Music Festival	January	Multi-day (10 days)	300,000+
Taste Tamworth	April	Multi-day (10-days)	10,000 ⁷
Hats Off To Country	July	Multi-day	1,000 ⁸
Tamworth Barbeque Festival	September	Multi-day	~5,000 (TBC – new event)
Fiesta La Peel	October	Single day	~5,000

Source: (Tamworth Region, 2024)

Of these events, the Country Music Festival in January is the single largest event in the region's calendar, contributing significantly to local tourism. As such, accommodation would be at a premium in the lead up to and during the festival in January.

Data from the Australian Accommodation Monitor for the 2022-23 Financial Year indicates that the New England North West tourism region supplied approximately 1,299,410 rooms per night over the course of the year, of which there was demand of 863,060, equating to an average occupancy of 66.4 per cent over that year.⁹ This indicates that there is availability within local accommodation to meet additional demand, however this availability may not be evenly distributed over the year or spatially within the region. Peak demand for tourist accommodation will occur around the major regional events mentioned above, Tamworth Country Music Festival and, to a lesser extent, Taste Tamworth. These significant annual events are important to the regional economy.

3.8 Neighbouring developments

HillPDA investigated both recently submitted and determined Development Applications (DAs) in the vicinity of the Project Site. A search of Tamworth Regional Council's DA tracker and the major projects website revealed two SSDAs within an approximate 1 kilometre radius of the Project Site. These are identified in Table 13 below.

Table 13: Surrounding developments

Name & SSD Number	Address	Description	Distance to site (approx.)	Status
Calala Battery Energy Storage System SSD-52786213	57 Burgess Lane, Calala	Construction of a BESS (300 MW / 1200 MWh) and underground transmission lines connecting to Tamworth substation plus ancillary works.	0.5 km	Response to Submissions
Tamworth Battery Energy Storage System SSD-23830229	696 Burgmanns Lane, Kingswood	Development of a 200 MW BESS with associated infrastructure.	0.4 km	Prepare EIS

The above developments are both located within 800 metres of the Project Site and currently in the planning phase. If approved, they could potentially contribute to cumulative social impacts during construction if they if this occurs concurrently, including through impacts to amenity, through increased vehicular movements, and an increase in the local worker population. All three BESS proposals would connect to the existing Tamworth 330kV

⁶ (Tourism Research Australia, 2019)

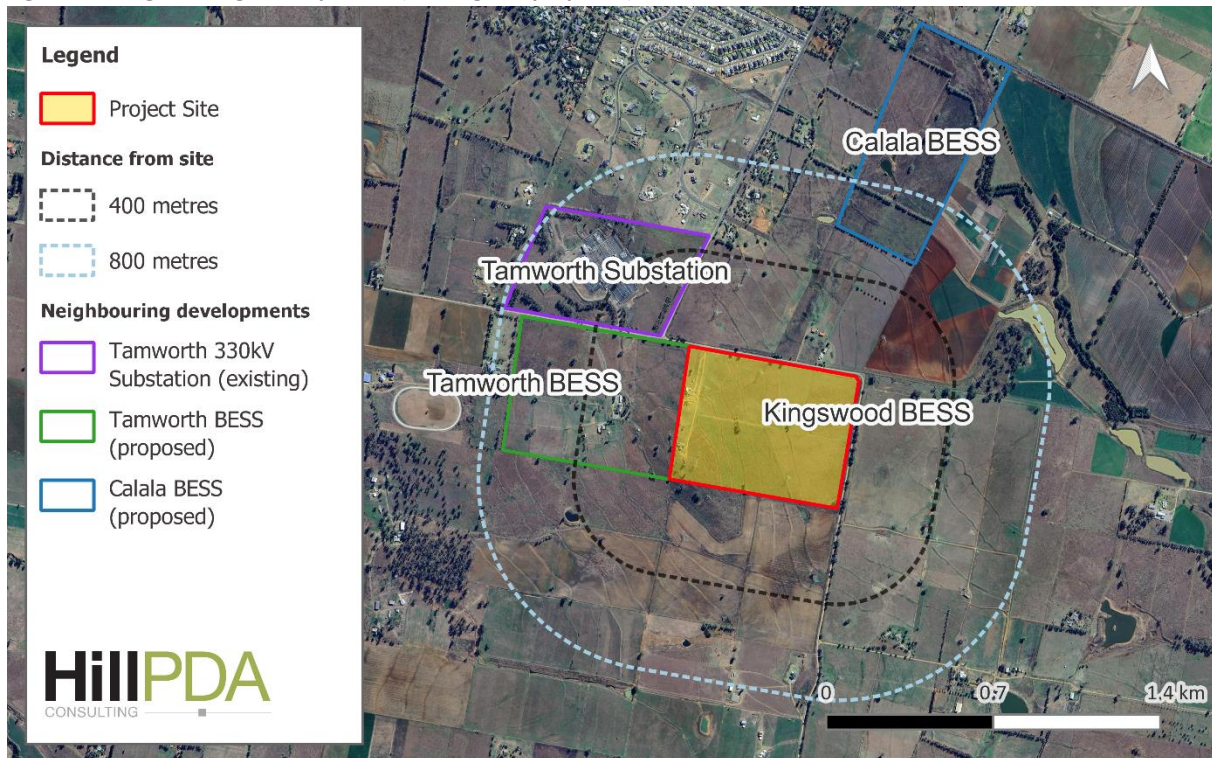
⁷ (Visit NSW, 2024)

⁸ (New England Times News Desk, 2023)

⁹ (STR, 2023)

Substation at 707 Burgmanns Lane, Calala, located to the northwest of the Project Site. Figure 11 maps the above developments alongside the location of the Project Site and the existing Tamworth 330kV Substation.

Figure 11: Neighbouring developments (existing and proposed)



Source: HillPDA, Google Maps (2023)

3.9 Key insights

The Project Site is located in a rural area in Kingswood approximately 7 kilometres to the south of the Tamworth CBD and is predominantly surrounded by agricultural land uses. The study area is notable for:

- A **median age** of 38 in 2021, which was lower than the median age of 43 for the Rest of NSW GCCSA.
- A slightly smaller proportion of people in the study area (6.8 per cent) **spoke a language other than English** at home than in the Rest of NSW GCCSA (8.4 per cent).
- A **larger proportion of residents born in Australia** in the study area (85.2 per cent) than in the Rest of NSW GCCSA (81.3 per cent)
- A **larger proportion of dwellings in the study area are separate houses** (85.9 per cent) when compared to the Rest of NSW GCCSA (82.3 per cent). Meanwhile, the proportion of dwellings that are **flats or apartments** was significantly lower in the study area (1.6 per cent) than in the Rest of NSW GCCSA (6.3 per cent).
- The median weekly household income in the study area (\$1,383 per week) was slightly lower than that of the Rest of NSW GCCSA (\$1,434 per week) in 2021.
- There are **higher levels of socio-economic disadvantage** in the study area, with no highly advantaged areas.
- Minor **crime hotspots** were identified beyond an 800 metre radius of the Project Site within the built-up areas of Calala. Further review of crime data revealed that crime rates in Calala (SAL) were generally much lower than the rates for the LGA. It is considered very unlikely that the Project would have an impact on crime rates within the locality.

- Due to its location within a rural setting, there is **limited social infrastructure in proximity to the Project Site** which no social infrastructure facilities being available within an 800 metre radius of the Project Site. The nearest social infrastructure facility is a local park situated approximately 1.5 kilometres to the north of the Project Site in Calala. Due to the sufficient distance provided between the Project Site and the nearest social infrastructure facilities, it is considered unlikely that they would be impacted by the Project.
- **Two SSDAs for similar BESS projects** have been identified in close proximity to the Project Site. This includes the Calala Battery Energy Storage System (SSD-52786213) and Tamworth Battery Energy Storage System (SSD-23830229), which are both at the Prepare EIS phase and located within 800 metres of the Project Site. These proposals could potentially contribute to cumulative social impacts if they are constructed concurrently, such as through impacts to amenity, increased vehicular movements, and an increase in the local worker population.

The background is a dark blue gradient with numerous colorful, semi-transparent geometric shapes (squares, rectangles, triangles) in shades of green, purple, and yellow, scattered across the surface. A thin white rectangular border is centered on the page, enclosing the text.

STAKEHOLDER ENGAGEMENT

4.0 STAKEHOLDER ENGAGEMENT

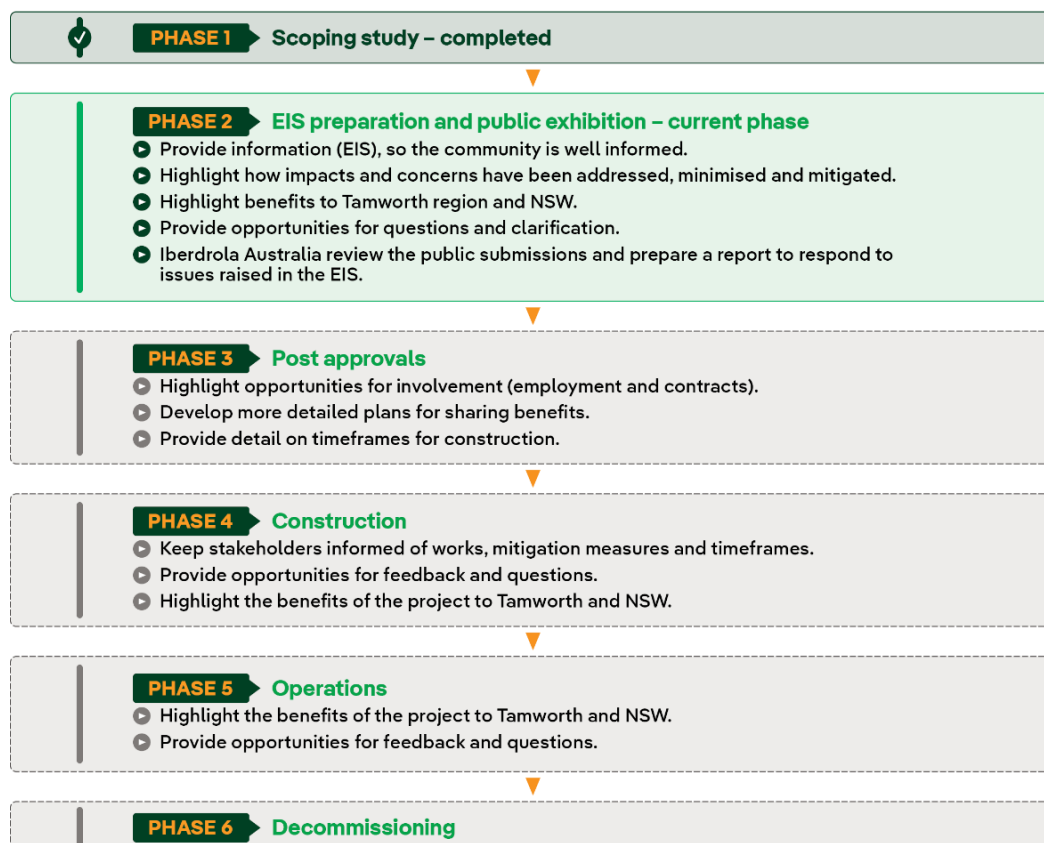
This chapter provides a summary of consultation activities undertaken for the Project including details of how issues raised during consultation have been addressed.

Community and stakeholder engagement for the Project has been undertaken in accordance with:

- Undertaking Engagement Guidelines for State Significant Projects (DPHI, 2024)
- Iberdrola's Community Engagement Policy
- Australian Energy Infrastructure Commissioner – Best Practice
- Clean Energy Council - Best Practice Charter
- International Association for Public Participation - Quality Assurance Standard 2015
- International Association for Public Participation – Code of Ethics

Iberdrola is a signatory of the Clean Energy Council's Best Practice Charter for Renewable Energy Projects and commits to honouring the Charter in renewable energy projects and associated transmission infrastructure. The framework shown in Figure 12 below identifies engagement activities to be carried out over the lifetime of the Project.

Figure 12: Engagement framework



Source: WSP (2024), Kingswood Battery Energy Storage System Community Engagement Report.

4.1 Method

4.1.1 Stakeholder identification

Stakeholders were identified as those that may be interested in, or who may be affected by, the Kingswood BESS. Stakeholders are listed in Table 14 and categorised into three main groups. These were:

- Government and technical stakeholders
- Traditional owners
- Neighbouring landowners and the wider community.

Stakeholders will continue to be identified and consulted during all project phases, including if approved, the construction, operation, and decommissioning and rehabilitation phases of the Kingswood BESS.

Table 14: Identified stakeholders

Stakeholder group	Stakeholders
Government and technical stakeholders	
State government	- DPHI including the following groups: - Water - Hazards - Biodiversity, Conservation and Science - NSW Environment Protection Authority (EPA) - Transport for NSW - Heritage NSW - Fire and Rescue - NSW Rural Fire Service - DPI Agriculture - Department of Regional NSW
Local government	Tamworth Regional Council
Utility providers	Transgrid
Traditional owners	
Registered Aboriginal Parties	- Tamworth Local Aboriginal Land Council - Gomeroi Applicant - Gomery Cultural Consultants - AT Gomilaroi Cultural - DFTV Enterprises - Didge Ngunawal Clan - Long Gully Cultural Services - Konanggo Aboriginal Cultural Heritage Services - Thomas Dahlstrom - Cacatua General Service (Cacatua Cultural Consultants) - AGA Services - Bawurra - Bill Trewlynn - Barraby Cultural Services - Galamaay Cultural Consultants
Neighbouring landowners and community	
Neighbouring landowners	- Landholders adjacent to the Project, including 795 Burgmanns Lane Calala 2340 (R2) 781 Burgmanns Lane Calala 2340 (R3) 696 Burgmanns Lane Kingswood 2340 (R4) 156C Roberts Road Kingswood 2340 910 Ascot-Calala Road Calala 2340 (R9)
Organisations	- Tamworth Business Chamber - Farrer Memorial Agricultural High School - Tamworth TAFE - Tamworth Agricultural Institute
Community	Wider community within the Tamworth Regional LGA

The consultation mediums adopted differed depending on the agency engaged with and the nature and level of their interest in the Project. Consultation mediums included virtual meetings, face to face meetings, telephone conversations and email correspondence.

A summary of the community engagement methods undertaken is provided in Table 15 below. Agency stakeholder engagement methods is detailed in the Engagement Report and EIS. Engagement with Traditional Owners is detailed in the ACHAR, Engagement Report and EIS, with findings from the ACHAR referenced in Chapter 6.0.

Table 15: Landowner and wider community engagement methods

Engagement method	Stakeholder group	Purpose
Project website	All interested parties	To provide an overview of the Project, an overview of the environmental impact assessment process and answers to frequently asked questions. This was set up in October 2023 and included in the engagement material.
Newsletter	Residents within 1km of the Project	Newsletters were provided to nearby landowners to provide awareness of the Project and provide avenues for feedback. The first newsletter was provided in August 2023 as part of the scoping stage for the Project. The second newsletter was provided in February 2024 to provide a Project update and invitation to the community drop in session.
Face to face	Neighbouring and interested landowners	To provide targeted consultation with neighbouring and interested landowners on specific matters of interest. Face to face meetings have occurred with: 795 Burgmanns Lane, Kingswood 2340 652 Burgmanns Lane, Kingswood 2340 877 Ascot-Calala Road Kingswood 2340 871 Ascot-Calala Road, Loomberah2340 781 Burgmanns Lane, Kingswood 2340 156C Roberts Road Kingswood NSW 2340
Advertising	All interested parties	Front page advertisement in the Northern Daily Leader, as well as digital advertisement on their website was undertaken to advertise the community information day and online survey. Advertising commenced on Saturday 10 February 2024 and finished on Wednesday 21 February 2024.
Community drop in sessions	All interested parties	The aim of the community drop in sessions was to provide information about the Project, and to understand community issues and opportunities to inform the EIS. Two community drop-in sessions were undertaken at Acacia Function Centre at 559 – 597 Burgmanns Lane, Hillvue on 23 February and 24 February 2024.
Online survey	All interested parties	To understand community issues, opportunities and preferred ongoing communication channels going forward with interested stakeholders. This survey was open between 9 February 2024 and 9 March 2024.
Enquiry lines (phone and email)	All interested parties	To provide community stakeholders with lines of enquiry and feedback to the Project team. This was set up in August 2023 and included in the engagement material.

4.2 Outcomes

A summary of the consultation activities carried out, the key aspects discussed, and how they been considered within the EIS and the development of the Project is provided in Table 16.

Table 16: Community engagement outcomes and response

Category	Theme	Comments/questions from the community	Response	SEIA chapters where addressed
Economic, environmental and social impacts of the Project	Noise	Concerns raised about noise levels impacting nearby residents during construction and operation of the Project.	- The Noise and Vibration Impact Assessment has undertaken construction and operational noise modelling to estimate potential noise impacts associated with the Project. Noise impacts are predicted to occur during construction. These impacts would be temporary and minimised through the implementation of the construction noise and vibration management plan. - To minimise the potential for operational noise impacts, the Project has sited the BESS in the south east of the Project Site to maximise distance from receivers. Operational noise is predicted to comply with all relevant noise criteria. A range of the proposed design mitigation measures would be verified during upon selection of the preferred supplier including the use of silencers, refinement of the layout and noise acoustic barriers. Other approaches to reduce noise levels that would be considered include selecting suppliers with fewer sound sources (quantity) and lower noise emissions and / or adjusting fan speeds to account for reduced cooling capacity overnight.	6.3, 6.7, 6.8
	Traffic and transport (and associated dust)	Concerns about increased dust in the area due to heavy vehicle movements on local roads.	- Potential impacts associated with dust generation due to vehicle movements on roads would be primarily limited to the construction phase of the Project. The Project would be remotely operated and monitored with periodic maintenance undertaken. Minimal traffic movements would be associated with operation of the Project and as such the potential for associated dust is considered low. - During construction, an Environmental Management Strategy will be prepared for the Project and will include dust management measures. This will include the use of water carts during peak traffic period, regular road dust inspections, adherence to speed limits and covering of vehicles transporting materials.	6.3, 6.5
	Visual amenity	Concerns raised about visual impacts of the battery on their outlook and light pollution.	- The Landscape and Visual Impact Assessment identifies 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. The establishment of landscaping buffers comprised of native plants will help the Project integrate with its surroundings and minimise any visual impact to the nearest dwellings. - The design of the Project will consider the use of materials that integrate with the surrounding landscape. Where possible, suitable colours and finishes will be chosen for Project infrastructure to minimise visual impacts (including glare/reflectivity), including ancillary infrastructure such as the O&M buildings/facilities and the noise acoustic wall surrounding the BESS. These buildings and materials will be designed to blend in with the local rural/farming landscape. If practicable, the wall may be painted in a neutral colour (e.g.	6.3, 6.8

Category	Theme	Comments/questions from the community	Response	SEIA chapters where addressed
			khaki, beige, green or similar) rather than white, so as to better blend in with the local rural landscape.	
	Safety and emergency management	Interest in how the Project would manage flooding and bush fire threats and/or the threat of a battery fire. Some community members have knowledge of previous flooding in the area, particularly along Burgmanns Lane, that they could share with the Project. Concern around 20ML tank being too small for fire safety risk	- As part of the EIS process, safety and emergency management has been thoroughly considered and mitigations provided in the EIS and will be available for community feedback during the public exhibition process. - Early investigations show that there is a low risk of fire occurring at the Project Site, however consideration has been made for every situation and a fire suppression system and comprehensive emergency management plan to be put in place. - The Project will be designed with the relevant Australian Standards, with appropriate fire suppression incorporated into the design and will be equipped with management systems that monitor the operational and fault status of the system to ensure its safe operation and minimise risk to adjacent properties. The management systems function to prevent potential fires by shutting down battery modules. - If the Project is approved, the Project team will use local knowledge and engage with emergency services and key stakeholders on our Emergency and Fire Management Plans to ensure they meet requirements.	6.7
	Water	Concern about the batteries contaminating the local water supply.	- Chemical hazards can arise from acid or corrosive components leaking from a BESS. This risk will be mitigated by installing containment measures and through the BESS management and monitoring systems. In the unlikely event of a fire/spill, the stormwater system has been designed with a closure mechanism on the outlet to detain flows from leaving the Project Site. The stormwater system will be designed to: - Collect all stormwater runoff from operational areas of the Project Site, including access tracks - Sufficiently detain stormwater runoff to ensure post-developed peak flows do not exceed existing peak flows leaving the Project Site for the all design events up to the 1% AEP - Include a dedicated volume for the collection of sediment - Include a dedicated volume for stormwater reuse purposes - Detailed design would include reviewing site hydrology and changes as a result of the development and ensuring sufficient drainage capacity, including the basin are provided to mitigate potential adverse impacts. With the implementation of the recommended mitigation measures, the Project is not anticipated to result in unacceptable impacts to water.	6.7
	Property value	Concerns about negative impacts to property values and loss of future land use opportunities, such as the ability to subdivide on their land.	- As grid-scale battery projects are relatively new in Australia, there is limited evidence to suggest any changes to property values or impacts on future land use opportunities. - While economic analyses for the industry in relation to valuation and pricing of land is not yet existing, and there are many factors that influence land values, inference can be drawn	6.9

Category	Theme	Comments/questions from the community	Response	SEIA chapters where addressed
			from one key factor, which is amenity and specifically, the impacts to the amenity of neighbouring properties and the locality. The EIS and supporting technical assessments have considered potential amenity impacts from the Project. Construction impacts will be temporary in nature and are therefore considered unlikely to have a lasting impact on the amenity of the locality. The residual impacts associated with the ongoing operation of the Project (i.e. after the implementation of proposed management and mitigation measures, such as landscaping) are predicted to be minimal.	
	Cumulative impacts	Impacts of multiple battery projects in a localised area	- The EP&A Act plays a central role in the NSW Government's statutory framework for managing cumulative impacts across NSW. The NSW Government has a comprehensive framework in place for assessing and managing cumulative impacts to communities. State significant projects are subject to a comprehensive assessment under the Act in proportion to the scale and impacts of the Project combined with other relevant projects. - A cumulative impacts assessment has been undertaken in Chapter 6.11. It is noted that the proximity of the Project to the existing Tamworth substation and other future renewable energy developments and planned road upgrades may contribute to cumulative impacts on the local community. This could include changes to accessibility and amenity during construction, which may contribute to cumulative noise or traffic impacts. Coordination between the contractor (when selected) and other nearby sites will be required during the construction phase, to ensure that potential cumulative impacts resulting from road movements and potentially disruptive construction activities being carried out are mitigated.	6.11
Justification	Technology	The effectiveness of the technology was raised by community members.	One of the key benefits of a Project is the flexibility it delivers compared to conventional energy sources. By enabling a balance of energy production and consumption between day and night, battery energy storage can support sustainability goals by supporting renewable energy generation. Unlike other forms of energy storage and generation, batteries' response time is fast. They respond to peak demand, build grid resilience, and provide backup power when you need it. They can also be used to enable access to Frequency Control Ancillary Services.	N/A – does not relate to a social impact
	Competition	Query as to whether all battery projects in the area could go ahead (particularly in relation to grid connection)	- NSW has an ambitious target of net zero emissions by 2050 - to meet this target will require a transformation. This means that large amounts of new energy are required to power regions and cities. By investing in multiple renewable energy production and storage solutions in the Tamworth region, the community will enjoy more secure, reliable, clean, and affordable energy during the transition and into the future - The Project is needed to support the NSW Government's strategy for a reliable, affordable and sustainable electricity future that supports a growing economy. The National Energy Market is rapidly moving away from reliance on thermal generation facilities towards renewable energy generators. Grid-scale battery energy storage is essential in providing infrastructure enabling the expansion of renewable energy in NSW and in ensuring firm	6.11

Category	Theme	Comments/questions from the community	Response	SEIA chapters where addressed
			capacity is met. As such, Iberdrola considers that the Project will play a role in the transformation of the NSW energy sector. The Project remains in continued conversation with TransGrid around the physical infrastructure required to connect the Project to the Tamworth substation and is progressing this workstream with no issues identified to date. Grid modelling studies have indicated that there is sufficient transmission capacity to accommodate multiple battery projects in the region without incurring generation curtailment.	
Design of the Project	Reduction of impacts on local residents	The majority of respondents to the community survey expressed the importance of the Project reducing any potential impacts on local residents.	- The Project understands the uncertainty and concern in the community regarding the potential impacts of the Project, and the Project team have been engaging with the immediate neighbours of the property since August 2023 to understand the local context and their views toward the proposal. - The Project has embedded measures to reduce impacts on residents based on community feedback, including - The location of the battery within the Project Site, to minimise the distance between the nearest residents - Reduction in the size of the battery to minimise noise impacts - Selection of a potential heavy vehicle route that avoids the urban area of Calala - Inclusion of vegetation screening to minimise visual impacts - Inclusion of recommended asset protection zones and separation distances from neighbouring properties/assets to minimise potential for off-site risks such as fire or other hazards. - Should the Project be approved following the EIS process, the Project team will continue to engage with the local community throughout the construction and operation stages of the Project.	6.3, 6.4, 6.5, 6.7, 6.8
	Hazard and risk	What precautions will the company take to prevent the Lithium-ion batteries from catching fire?	- The preliminary hazard analysis considers fire risk at the BESS and substation. Controls will be implemented (including protection and suppression systems) including an emergency shutdown. The Project will be largely separated from nearby residential dwellings and fire effects are not expected to have an off-site impact. Monitoring equipment will be installed to detect fire risk and initiate an emergency response. An asset protection zone will be established around project infrastructure in accordance with guideline requirements. Other measures to minimise fire risks, include: - Complying with guidelines, standards, and conditions to operate in accordance with the applicable legislations as set out by government and regulating bodies - Adopting an Emergency Response Management Plan to outline the protocols and requirements for fires and other risks - Implementing a Fire Safety Study (developed with Fire and Rescue NSW) to identify, assess, and outline controls to manage on-site and off-site risks at a BESS facility	6.7

Category	Theme	Comments/questions from the community	Response	SEIA chapters where addressed
			In its procurement process, Iberdrola will ensure that Project equipment complies with all relevant Australian and international standards, and will be subject to quality assurance testing (such as Factory Acceptance Testing) where relevant prior to commissioning.	
	Hazard and risk	Have alternative options to Lithium-ion batteries been explored that could be safer?	- Battery chemistry and associated technology options are rapidly evolving and combined with decreasing costs, are increasingly being investigated and pursued. Battery chemistries / technologies that were considered are discussed in Chapter 2.5.4 of the EIS. - Lithium-ion batteries are established in the marketplace and can be developed to comply with a range of Australian and international standards. For these reasons, this technology has been selected for the Project.	6.7.2
	Project functionality	What will the BESS look like and how and to whom will the battery provide power too?	- Regarding how the battery would look, the detailed design would be worked out through the EIS process, however typically, battery enclosures contain a group of lithium-ion (Li-ion) batteries, housed within weather-proof enclosures. Battery enclosures will be arranged in rows and comprise: - Racks of lithium-ion type batteries - Battery management system to protect cells from harmful excesses of voltage, temperature, and current - Energy management system that is responsible for system power flow control - Thermal management system that controls all functions related to the heating, ventilation, and air-conditioning of the enclosure system. - Regarding how the battery would provide power, the Australian Energy Market Operator (AEMO) manages electricity systems and markets across Australia. They monitor supply and demand, voltage and frequency, manage planned and unplanned outages and emergencies and would determine when electricity stored in the battery is required to be dispatched by staff on site.	N/A

Category	Theme	Comments/questions from the community	Response	SEIA chapters where addressed
Strategic context	Rural character	The industrial nature of the BESS will contrast with the rural character of the area. The Project will impact on residents and communities' sense of place (noting the rural lifestyle and quality of life).	• A Land Use Conflict Risk Assessment has been undertaken for the Project and is detailed in Chapter 6 of the EIS. The potential noise and visual impacts were identified as having the greatest potential for land use conflict. Measures for noise and visual have been adopted as part of the Project design to minimise potential conflicts of the Project on surrounding properties. • Landscape and Visual Impact Assessment – The Landscape and Visual Impact Assessment identifies 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. The establishment of landscaping buffers comprised of native plants will help the Project integrate with its surroundings and minimise any visual impact to the nearest dwellings. – The design of the Project will consider the use of materials that integrate with the surrounding landscape. Where possible, suitable colours and finishes will be chosen for Project infrastructure to minimise visual impacts (including glare/reflectivity), including ancillary infrastructure such as the O&M buildings/facilities and the noise acoustic wall surrounding the BESS. These buildings and materials will be designed to blend in with the local rural/farming landscape. If practicable, the wall may be painted in a neutral colour (e.g. khaki, beige, green or similar) rather than white, so as to better blend in with the local rural landscape. • Noise and Vibration Impact Assessment – To minimise the potential for operational noise impacts, the Project has sited the BESS in the south east of the Project Site to maximise distance from receivers. The Noise and Vibration Impact Assessment identifies that operational noise is predicted to comply with all relevant noise criteria. A range of the proposed design mitigation measures would be verified during upon selection of the preferred supplier including the use of silencers, refinement of the layout and noise acoustic barriers. Other approaches to reduce noise levels that would be considered include selecting suppliers with fewer sound sources (quantity) and lower noise emissions and / or adjusting fan speeds to account for reduced cooling capacity overnight.	6.8.2

Category	Theme	Comments/questions from the community	Response	SEIA chapters where addressed
Community engagement	Level of engagement	There has been limited community consultation and opportunities for feedback.	- Community and stakeholder engagement activities regarding the Project commenced in Quarter 3 of 2023. The initial engagement focused primarily on notifying neighbouring land owners and government agencies of Iberdrola's intention to lodge the Scoping Report. This included newsletters to nearby landowners. - As part of EIS consultation, a range of method and tools have been used to talk to the community. This has included newsletters, face to face meetings, advertising, online survey, community information days and enquiry lines (website, phone and email). Further detail is provided in Chapter 4.1. Iberdrola is committed to open, transparent and ongoing consultation. - Communication channels will continue to be updated to provide Project updates and ongoing opportunities for feedback.	Chapter 4.0

4.3 Continuing engagement

4.3.1 Public exhibition of the EIS

Public exhibition of the EIS will be for a minimum of 28 days as stated in the Environmental Planning and Assessment (EP&A) Act 1979. Advertisements will be placed in newspapers to advise of the public exhibition and where the EIS can be viewed, and details of proposed community consultation activities and information sessions.

Consultation activities during public exhibition of the EIS may include:

- Community information sessions
- Newsletter letterbox drop and email newsletters
- Information on project webpage
- Newspaper advertising
- Information available at local council offices
- Stakeholder meetings
- Local business engagement
- Government stakeholder engagement.

The extent and form of this consultation would be determined prior to the exhibition of the EIS.

4.3.2 Consultation during construction/operation

Iberdrola would continue to carry out consultation after the completion of the planning phase of the Project and into its construction and operational phases. Ongoing consultation would include, but not be limited to:

- Pre-commencement “job-fairs” or “meet the contractor sessions” to source local labour, suppliers and subcontractors and maximise local content
- Consultation in accordance with statutory requirements
- Ongoing consultation with key stakeholders, local council and other government agencies
- Provision of regular updates to nearby businesses and the community.

4.4 Community initiatives

4.4.1 Benefit sharing scheme

Community benefit sharing schemes are increasingly common in the Australian renewable energy industry. Community benefit sharing involves initiatives that benefit the community as a whole. Community benefit sharing might include:

- Providing funding (e.g., grants, sponsorships, or scholarships)
- Establishing partnerships with important local groups or projects
- Providing in-kind support or developing education and tourism initiatives
- Local jobs, training and procurement
- Innovative options for financing (e.g., community co-investment) or innovative products (e.g., energy retailing options)

Iberdrola is committed to establishing a benefit sharing scheme such as a fund for community-based projects. The details of the benefit sharing scheme are yet to be determined but would likely be managed through a committee comprising representatives from Iberdrola, TRC and the local community. This has discussed with TRC but requires further development in partnership with the community and key stakeholders.

Examples of benefit sharing schemes that Iberdrola have implemented within Australia include:

- Bodangora Wind Farm Community Benefit Fund: Provides funding to not-for-profit community organisations to support projects or programs that deliver social, economic or environmental outcomes to local communities of the Wellington and villages district.
- Lake Bonney Community Fund: Provides an annual contribution to foster lasting relationships with community organisations by funding local initiatives and local not-for-profit organisations that aim to make a positive difference in the areas of education, fire and police departments, social welfare, country shows, indigenous groups, sports clubs, art festivals and youth programs.

Iberdrola have also provided a number of further community benefits outside of established benefit sharing schemes, such as:

- A 'Women in Solar' Training and Apprenticeship Scheme established to assist First Nations women develop construction-based skills and experience in construction operations during the construction of the Avonlie Solar Farm in Narrandera, NSW
- Hosting the annual "Run with the Wind" event at Woodlawn Wind Farm in Bungendore, NSW
- Established scholarship opportunities for Aboriginal or Torres Strait Islander persons completing undergraduate studies

4.4.2 Prioritisation of local jobs and business

Iberdrola has agreed to prioritise local jobs and businesses wherever possible to achieve positive local employment and business outcomes for the region. As part of the Local Procurement Strategy, Iberdrola will:

- Encompass considerations regarding local employment and procurement (with a specific focus on First Nations participation) and the associated accommodation of the construction workforce
- Target people and businesses within Tamworth LGA and regional surrounds
- Continue to consult with stakeholders such as the TRC, Department of Regional NSW, Tamworth Business Chamber and other economic development or local social service agencies.



ECONOMIC IMPACTS

5.0 ECONOMIC IMPACTS

5.1 Economic impact assessment approach

Direct impacts and economic multipliers

Direct impacts refer to the economic activity supported onsite by the Project during its construction or operational phase.

Economic multipliers refer to the level of additional economic activity generated and/or supported by a source industry. There are two types of effects captured by multipliers:

Production induced effects: which is made up of:

- *First round effects:* which are all outputs and employment required to produce the inputs for the source industry, and
- *Industrial support effects:* which is the induced extra output and employment from all industries to support the increased production by suppliers in response to increased sales.

Consumption induced effects: which relates to the demand for additional goods and services due to increased spending by the wage and salary earners across all industries arising from employment.

Modelling sources and economic metrics assessed

In this report, direct economic activity is based on IBIS World 2023 world reports and ABS Input Output tables. The IBIS World reports provide revenue, remuneration and industry value add for a range of industry types (down to the ANZSIC 4-digit level) at the national level.

Indirect economic activity is estimated using Australian National Accounts Input Output tables 2020-21. Specifically, the multipliers for the Electricity Transmission in Australia; and Electricity Distribution in Australia are applied to determine indirect economic activity.

Economic activity supported by the Project is assessed through examination of four types of economic impact metrics described in the table below.

Table 17: Economic impact metrics assessed

Metric	Description
Output	Output is a gross measure of the total sales generated by the types of land uses present on the site or in the Project
Employment	Employment generated by the types of land uses present on the site or in the Project. Employment is expressed as Full-Time Equivalent (FTE).
Wages	The wages and salaries paid to employees on the site or in the Project
Gross Value Added	Gross value added (GVA) of an industry refers to the value of outputs less the costs of inputs. It measures the contribution that the industry makes to the country's wealth or gross domestic product (GDP).

Economic impact phases

Economic impacts are assessed during the construction phase and operational phase of the Project.

- **Design and construction phase:** is the economic activity generated/supported through the design and construction phase of the Project. These impacts are expected to be short-term, concluding when development activity is completed.

- **Operational phase (post-construction):** is the economic activity generated/supported during and post-construction or operational phase. This phase assumes the development is occupied by the proposed land uses.

Limitations with multipliers

Both the ABS and the NSW Treasury Employment Calculator describe several limitations with input-output multipliers, or at least shortcomings with typical interpretations of the multipliers, which generally result in an over-estimation of impacts. The main shortcomings or limitations are as follows:

- Production induced impacts can leave the impression that extra output can be produced without taking resources away from other activities.
- Multipliers assumed fixed input ratios and hence measure impacts based on average effects rather than marginal effects.
- The impacts are nationwide and are not regional or local impacts which would be smaller.

Other limitations are described in both the NSW Treasury Guide and on the ABS website.¹⁰

5.2 Construction phase

This section assesses the economic impact of the Project during its construction phase. HillPDA has been provided with a design and construction cost estimate of around \$382.3 million. Of this, 67% relates to the procurement and physical construction of the BESS. This would occur outside of Australia, and hence would not have any economic benefit to the Australian economy. As such, this section examines the economic impact of the 33% of the construction cost estimate that occurs on the Project Site. This equates to a design and construction cost of around \$124.9 million.

Please note that direct impacts can be viewed as new impacts for this assessment. Furthermore, regional impacts are provided at the Tamworth LGA level.

5.2.1 Construction phase – gross output

The Project would directly impact construction output and indirectly stimulate other industries that assist in production and cater to increased consumption.

The Project is estimated to directly increase Tamworth LGA's economic output by around \$124.9 million. This new economic output would support an additional \$234.7 million in economic output across NSW.

In total, the forecast increase in output generated supported across NSW as a whole is estimated at approximately \$360 million (directly and indirectly).

Table 18: Design and construction impact on gross output (\$m)

	Regional direct (new) impact	Impact supported across NSW	NSW whole impacts
Output multipliers	1	1.12	2.88
Gross Output (\$million)	\$124.9	\$140	\$360

Source: HillPDA estimate using data from ABS Australian National Accounts: Input-Output Tables 2020-21

¹⁰ <https://www.abs.gov.au/statistics/economy/national-accounts/australian-national-accounts-input-output-tables/latest-release>
<https://www.treasury.nsw.gov.au/information-public-entities/nsw-treasury-employment-calculator>

5.2.2 Construction phase – job creation

Every million dollars of construction work undertaken generates 2.17 full time job years¹¹ onsite directly in construction¹². Based on the estimated design and construction cost, the project's development would directly generate around 270 new job years in Tamworth LGA, as shown in the table below.

Table 19: Design and construction impact on employment (job years)

	Regional direct (new) impact	Impact supported across NSW	NSW whole impacts
Multipliers	1	2.69	3.69
Job Years per \$million	2.17	5.84	8.02
Total Job Years Generated	271	730	1,001

Source: HillPDA estimate using data from ABS Australian National Accounts: Input-Output Tables 2020-21

Every job year generated directly in construction would support a further 1.55 job years in production induced support (providing the inputs to construction). And for every job year directly in construction a further 1.14 job years is supported in consumption induced impacts (providing the goods and services for the workers directly employed in construction).

A further 730 job years would be supported across NSW because of the Project.

In total, the Project's development would directly and indirectly support 1,000 job years across NSW as a whole.

5.2.3 Construction phase – workers' remuneration

As shown in the table below, we estimate the remuneration impacts of workers at:

- \$22 million in new remuneration for workers in Tamworth LGA.
- Support a further \$57 million in remuneration across NSW.
- A total of \$79 million in remuneration generated and supported across NSW as a whole.

Table 20: Design and construction impact on wages (\$m)

	Regional direct (new) impact	Impact supported across NSW	NSW whole impacts
Workers remuneration per \$ of gross output	0.17	0.45	0.17
Workers remuneration (\$million)	\$22	\$57	\$79

Source: HillPDA estimate using data from ABS Australian National Accounts: Input-Output Tables 2020-21

5.2.4 Construction phase – Gross Value Added (GVA)

The Gross value added (GVA) of an industry refers to the value of outputs less the costs of inputs. It also measures the contribution that the industry makes to gross regional product (GRP). The major components of GVA are workers' remuneration, company profits and government taxes from production.

Design and construction would directly contribute around \$31 million to Tamworth's GRP. A further \$110 million would be indirectly contributed to the NSW gross state product (GSP).

In total, \$149 million would be contributed both directly and indirectly to the NSW GSP.

Table 21: Construction – impact on gross value added (GVA)

	Regional direct (new) impact	Impact supported across NSW	NSW whole impacts
Output multipliers	0.31	0.88	1.19
Output (\$million)	\$39	\$110	\$149

Source: HillPDA Estimate using data from ABS Australian National Accounts: Input-Output Tables 2020-21

¹¹ Note: One job year equals one full-time job over one year

¹² Source: ABS Australian National Accounts: Input – Output Tables 2020-21 (ABS Pub: 5209.0)

5.2.5 Construction phase - economic impact summary

During its construction, the Project would generate and support the following economic activity at the regional (Tamworth LGA) and State level.

Table 22: Construction phase economic impact summary

Performance indicator	Regional direct (new) impact	Impact supported across NSW	NSW whole impacts
Employment (job years)	271	730	1,001
Output (\$m)	\$124.9	\$235	\$360
Remuneration (\$m)	\$22	\$57	\$79
GVA (\$m)	\$39	\$110	\$149

5.3 Operational phase

This section estimates the economic activity generated and supported through the operational phase of the Project. This activity is compared to that generated by the current uses present on the Project Site. This is referred to as the “base case”.

5.3.1 Economic impact - base case

Use of the Project Site for agriculture uses is primarily constrained by its size, existing electrical infrastructure (overhead 330kV transmission line) and proximity to the Calala urban area.

The typical farm size for the North West Slopes region (which includes Tamworth, Gunnedah, Moree, Narrabri and Inverell) is 1,140 hectares. The Project Site’s size of 40 hectares suggests use for cattle grazing would not provide a sufficient return to be economically attractive/viable. This is evidenced by the fact that the Project Site is currently incidentally used for cattle grazing but not for livestock grazing for a commercial purpose or for cropping. The property owners do not gain their main source of income from cattle grazing.

As such, the economic activity currently generated onsite is considered negligible – **with any economic activity generated by the Project being a net benefit and higher economic outcome for the land.**

We have been advised that once the Project reaches the end of its investment and operational life, the project infrastructure will be decommissioned and the Project Site returned to its pre-existing land use, namely suitable for cattle grazing, or another land use as agreed by the Project owner and the landholder at that time. As such, the BESS would also not have a detrimental impact on the agricultural capability of the land in the region or across the State.

Figure 13: Project site – cattle grazing



Source: HillPDA, Site Visit January 2024

5.3.2 Operational phase – economic impact with the Project

Based on advice provided to HillPDA, it is estimated that upon operation of Project, the Project Site would directly generate 2 new Full-time Equivalent (FTE) jobs.

Please note that direct impacts can be viewed as new impacts for this assessment. Furthermore, regional impacts are provided at the Tamworth LGA level.

Based on this, coupled with ABS Input Output tables and IBIS world reports, the following assesses the economic activity generated/supported on the Project Site upon operation of the Project. This activity is estimated at:

- **Employment:** The Project would directly generate 2 new full-time equivalent (FTE) jobs in Tamworth LGA. In total, 13 FTE jobs would be supported across NSW as a whole.
- **Output:** The Project would directly generate \$1 million in new economic output for Tamworth LGA. In total, \$2.6 million in economic output supported across NSW as a whole.
- **Remuneration:** The Project would directly generate \$0.2 million in new remuneration in Tamworth LGA. In total, \$0.8 million in remuneration would be supported across NSW as a whole.
- **GVA:** The Project would directly contribute \$0.8 million to Tamworth's GRP. In total, \$2.6 million of NSW's GSP as a whole would be supported by the Project.

Table 23: Project case– economic performance upon Project Site

Impact metric	Direct	Indirect	Total
Employment (FTE)	2	11	13
Gross Output (\$m/ann)	\$1.0	\$1.6	\$2.6
Remuneration (\$m/ann)	\$0.2	\$0.6	\$0.8
GVA (\$m/ann)	\$0.8	\$1.8	\$2.6

Source: Australian National Accounts Input Output tables 2020-2021, IBIS World Reports 2023, HillPDA

5.4 Other economic benefits

Battery Energy Storage Systems (BESS) offer a range of economic benefits across various sectors, contributing to a more resilient, efficient, and sustainable energy infrastructure. Some of these benefits are summarised below:

Grid stability and reliability:

- Load balancing: BESS can help balance supply and demand by storing excess energy during periods of low demand and releasing it during peak demand, enhancing grid stability.
- Frequency regulation: BESS can provide rapid response services to maintain grid frequency, reducing the need for expensive and less efficient conventional power plants to operate for frequency regulation.

Grid deferral and Infrastructure savings

- Avoiding Upgrades: BESS can defer the need for grid infrastructure upgrades by providing localized energy storage solutions, reducing the strain on the grid during periods of high demand.

Backup power and resilience

- Critical Infrastructure Support: BESS can provide backup power during grid outages, ensuring continuous operation of critical infrastructure such as hospitals, data centres, and emergency services, minimizing economic losses due to downtime.

Job creation and economic growth:

- Growing industry: The deployment and maintenance of BESS create job opportunities and contribute to the growth of the energy storage industry, fostering economic development.

The background of the image is a dark blue field filled with a complex, abstract pattern of concentric, slightly offset circular bands. These bands create a sense of depth and movement, resembling a stylized maze or a series of overlapping rings. A thin, white rectangular frame is centered on the page, enclosing the text.

IMPACT ASSESSMENT AND PREDICTION

6.0 IMPACT ASSESSMENT AND PREDICTION

This chapter details the potential social impacts to arise from the Project. The assessment is informed by the analysis from the previous chapters and scoping of potential impacts using DPHI's *Social Impact Assessment Guidelines for State Significant Projects*.

The method for the social impact assessment is described in Chapter 2.0. Each potential impact is assessed having regard for the level of impact, the likelihood of impact, and the significance of impact, and a social risk rating matrix (refer to Table 6).

6.1 Scoping

Should the Project be constructed, the social impacts that may arise would be influenced by:

- The social and geographic context of the Project Site
- The construction process, final built form, and operations of the Project
- Any measures put in place to mitigate against identified negative impacts and enhance positive impacts.

Social issues already in existence are relevant only as context, within which the impacts of the proposed subdivision must be examined. Issues have been assessed based on their impact during the construction and operational period of the development.

Social impacts can involve changes to:

- Way of life
- Community
- Access
- Culture
- Health and wellbeing
- Surroundings
- Livelihoods
- Decision-making systems.

6.2 Area of influence

The social impacts to arise from the Project will be influenced by the existing situation, the eventual consequences of the Project, and measures put in place to mitigate against any negative impacts and enhance positive impacts.

Social issues already in existence are relevant only as context, within which the impacts of the proposed subdivision must be examined. The potential social impacts of the Project can extend beyond the immediate surroundings of the Project Site.

Issues have been assessed based on their impact during the construction and operational period of the development. The social impact matters are as stated in Chapter 2.0.

Table 24: Area of influence of potential impacts

Impact type	Meaning	Area of potential impact	
		Local Community	Broader Community
Way of life	How people live, how they get around, how they work, how they play, and how they interact on a daily basis	- Construction disturbance - Noise - Light pollution	Increased truck movements on road network during construction
Community	Composition, character, cohesion, function, and sense of place	Introduction of new local workforce	None
Access	How people access and use infrastructure, services and facilities, whether provided by local, state, or federal governments, or by for-profit or not-for-profit organisations or groups	- Access to employment - Construction vehicle movements - On street parking availability	- Road congestion - Access to social infrastructure during construction - Access to accommodation during construction
Culture	Both Aboriginal and non-Aboriginal culture, including shared beliefs,	Potential impacts to European heritage items	None

Impact type	Meaning	Area of potential impact	
		Local Community	Broader Community
	customs, values, and stories, and connections to country, land, waterways, places, and buildings	Potential impact to Aboriginal heritage items	
Health and wellbeing	Physical and mental health, especially for those who are highly vulnerable to social exclusion or substantial change, plus wellbeing of individuals and communities	- Health - Air quality - Safety	None
Surroundings	Access to, and use of, services that ecosystems provide, public safety and security, access to and use of the natural and built environment, and its aesthetic value and amenity	- Visual impact and local character - Passive surveillance	Visual impact and local character (for visitors)
Livelihoods	People's capacity to sustain themselves, whether they experience personal breach or disadvantage, and the distributive equity of impacts and benefits	- Job creation - Increased local spending/flow on effects - Development of site and more efficient use of infrastructure	- Construction expenditure (direct and indirect) - Operational expenditure (direct and indirect) - Housing affordability during construction - Cost of goods and services
Decision making systems	Whether people experience procedural fairness; can make informed decisions; have power to influence decisions; and can access complaint, remedy and grievance mechanisms	Feelings of exclusion from decision making processes	Feelings of exclusion from decision making processes

Each of the above impacts has been considered in the context of the area of influence, with findings outlined below.

6.3 Way of life

Way of life refers to how people live, how they get around, how they work, how they play, and how they interact on a daily basis. It can include impacts on people's daily routines caused by construction activities and/or operational arrangements. Impacts on people's commuting/travelling times, their experience of travel, and their ability to move around freely. Impacts on people's experience of privacy, peace, and quiet enjoyment, especially if affected by increased noise. Impacts on people's general experience of life in their community, especially if the project might cause a 'tipping point' of cumulative impacts on their lives (e.g. through property acquisitions, severance of communities, or major disruption during construction).

6.3.1 During construction

The construction process has the potential to affect the way of life of through disturbance to the neighbourhood and changes in amenity, particularly for sensitive receivers within the surrounding area, causing changes in routines and day to day activities. Sensitive receivers include residential properties but may also include child care centres, places of worship, community and recreational facilities, or businesses (such as cafés and restaurants) that rely on the amenity of a locality to attract customers.

During construction, the following may affect local amenity:

- The introduction of construction facilities
- Noise and dust arising from construction activities
- Unpleasant odours
- Increased traffic volumes and/or congestion.

These can have a range of impacts to way of life, including:

- Loss of peace and quiet for residents, workers, businesses and students living or working near the Project Site with consequential impacts to surroundings, way of life and health and wellbeing
- Loss of sleep for residents, particularly for shift workers
- Disturbance, inconvenience and safety concerns caused by construction vehicle movements and increased congestion on surrounding roads impacting travel times, access to services and livelihoods for residents, workers and businesses in the surrounds
- Potential for interruptions to daily life caused by interruptions to utilities service(s) for neighbouring residents and businesses
- Disturbance to workers (at nearby businesses or working from home) and students ability to concentrate with associated impacts to productivity and stress levels.

Construction impacts are by nature temporary, as they occur during the construction phase of the Project only. Construction impacts to amenity are generally experienced by receivers in close proximity to a construction site. As such, a short-term reduction in amenity may impact the neighbouring properties within the immediate vicinity of the Project Site. It would be appropriate for the proponent to engage in consultation with neighbouring occupants regularly throughout the construction period to inform them of construction timelines and potentially disruptive activities, with information about expectations of scale and severity and mitigation standards that will be met.

Construction of the Project would be undertaken during standard construction hours. Certain activities may be required outside of the standard construction hours, however key stakeholders would be informed prior to out of hours activities. Additionally, whilst standard construction hours may be beneficial in addressing concerns and potential amenity impacts in residential areas, impacts associated with construction works would be limited to times when workers and visitors would be likely to be attending the Project Site (i.e. during standard construction hours).

Construction of the Project is anticipated to take up to 15 months to complete and would commence as soon as all regulatory approvals have been obtained.

A Traffic Impact Assessment (TIA) has been prepared by Arcadis for the Project. The TIA concluded that traffic generated during the construction phase will generally be relatively minor compared to the existing average daily traffic volumes along Goonoo Goonoo Road/New England Highway. However, the proportional increase in traffic as a result of the construction of the Project along Ascot-Calala Lane and Whitehouse Lane are expected to be higher as a result of their lower existing traffic volumes.

A Noise and Vibration Impact Assessment (NVIA) has been prepared by Resonate for the Project. The NVIA concluded that construction activities would likely exceed the construction noise management levels, with the greatest impact predicted during clearing and earthworks. No receivers are predicted to be highly noise affected. The average exceedance is anticipated to range between 4 to 6 dB(A) with a maximum exceedance of 18 dB(A). To minimise potential construction noise impacts, a draft Construction Noise and Vibration Management Plan (CNVMP) has been developed and is included within the NVIA.

6.3.2 During operation

The NVIA assessed the potential noise and vibration impacts of the Project during operations. The NVIA found that operational noise levels of the Project are predicted to comply with the noise criteria during all time periods and meteorological conditions with the implementation of design noise mitigation measures. The design noise mitigation measures identified to achieve compliance (subject to detailed design) include the use of silencers, layout optimisation (including preferred supplier) and noise barriers.

Potential impacts to way of life were raised by community stakeholders during community engagement undertaken for the Project. Key concerns based on discussions with the community included increased noise, dust and light pollution levels and visual impacts on outlook.

As the Project will be generally operated remotely with the exception of site maintenance on an as-needs basis, it is expected to generate minimal levels of traffic once operational. As such minimal impacts to the traffic volumes on the road network are predicted.

6.3.3 Mitigation and management

A range of mechanisms can be applied to minimise any potential construction impacts on amenity. Such mechanisms are typically required as a condition of development consent and are employed by contractors and implemented through an Environmental Management Strategy (EMS) (or Construction Environmental Management Plan).

The EMS would be developed to provide the overall strategic framework for environmental management and compliance. The EMS would be prepared in accordance with the mitigation measures detailed in this EIS and the Conditions of Consent, if the Project is approved. It would also be prepared in accordance with any other statutory or licensing requirements that apply to the Project at the time.

The purpose of the EMS would be to ensure that environmental mitigation measures outlined in the issue-specific environmental management plans are incorporated into a comprehensive framework to facilitate appropriate management throughout the life of the Project.

The Environmental Management Strategy would detail how compliance with the Project would be monitored and communicated. The Environmental Management Strategy would include requirements to:

- Ensure that controls are properly implemented, regularly monitored, and audited to assess their effectiveness
- Ensure processes for resourcing and implementing the environmental management strategy are developed to provide certainty of delivery
- Demonstrate compliance with statutory, legislative and consent conditions
- Minimise impacts on the community and the environment
- Ensure timely and efficient response to environmental incidents and complaints
- Monitor, review, and report on environmental impacts of construction, operation, and decommissioning.

The NVIA prepared by Resonate included mitigation measures that will assist with mitigating impacts on way of life:

- Design mitigation measure such as silencers, layout optimisation (including preferred supplier) and noise barriers (informed by detailed design noise modelling)
- Development and implementation of a CNVMP to monitor, minimise or eliminate disturbance to local residents and surrounding dwellings through the use of a range of mitigating controls (such as working hours, community consultation and recommended measures identified in the Interim Construction Noise Guideline)

The TIA prepared by Arcadis included a measure to prepare a Construction Traffic Management Plan (CTMP), with a range of mitigations to minimise potential amenity impacts, specifically:

- Primary routes to be used by heavy construction-related vehicles to minimise impacts
- Dust management measures

6.4 Community

Community refers to the composition, character, cohesion, function, and sense of place that people experience. There are several aspects to community impacts, including:

- **Composition:** impacts on demographic characteristics and community structure. Can be changed by in-migration and out-migration over time, including the presence of newcomers and loss of longer term residents or sections of the community. Also inflow/outflow of temporary residents, e.g. during construction.
- **Character:** Impacts on a community's shared identity and attributes, and natural and built features that people value. Can be affected by changes to buildings, vegetation, landscapes, land uses/industries, or land ownership and management.
- **Cohesion and function:** Impacts on social connections, interrelationships, networks and interactions, trust and cooperation, participation in community activities and institutions, and the potential for harmony or conflict. Lack of cohesion can result in social dislocation, alienation, division, dispossession, tensions, impoverishment, and crime.
- **Sense of place:** Impacts on feelings of belonging in a place, or identity with a place, which may derive from cultural or historical connections.

6.4.1 During construction

Whilst construction activities typically have the potential to impact upon the community's sense of place, due to the Project Site's location the proposed construction activities are unlikely impact upon any of the matters considered under community.

By creating additional employment opportunities during construction, the Project would provide benefits to community cohesion and resilience by adding many opportunities for meaningful engagement in the workforce. The Project also creates more opportunities for residents in the area to work closer to home, thereby adding to time that they can spend with their families and in their communities.

6.4.2 During operation

The Project concerns the construction of a BESS in a rural area. The Project Site is located a sufficient distance away from any community land uses or infrastructure. The nearest location where the community would meet and interact has been identified in Chapter 3.6 and is located approximately 1.5 kilometres from the Project Site. Additionally, no stakeholders highlighted concerns that related to community impacts.

6.4.3 Mitigation and management

As no significant community impacts have been identified, no specific mitigation or management mechanisms have been proposed. The proposed Community Benefit Sharing Scheme would also potentially enhance positive impacts to the local community through funding for local community initiative (see section 4.4.1).

6.5 Access

Access refers to how people access and use infrastructure, services and facilities, whether provided by local, state, or federal governments, or by for-profit or not-for-profit organisations or groups. It includes impacts on how people use roads and other access routes; severance, restrictions, and/or improvements in access. It also includes the impacts of a project (including project-related transport) on pedestrian routes and people's access to schools, medical services, community services, and businesses.

6.5.1 During construction

Construction activities have the potential to impact upon access to locations near the Project Site through temporary removed or changed access arrangements and changes to local parking. Due to the rural context of the Project Site, it is considered unlikely that the proposal would impact on the availability of local parking or result in changes to access arrangements.

Heavy vehicle access to and from the Project Site during construction would be via Ascot-Calala Road along the eastern boundary of the Project Site, a 60 kilometre per hour unsealed dual lane local road. Some light vehicles are also likely to use Burgmanns Lane travelling to and from the Project Site in the morning and evening.

The construction workforce would include (but not be limited to) tradespeople and construction personnel, sub-contractor construction personnel, engineers, and functional and administrative staff. Parking requirements for the construction workforce would be met via temporary workforce parking at the temporary laydown area. Opportunities for shuttle buses from public transport hubs would also be explored as part of the CTMP.

Construction activities also have the potential to temporarily affect access to essential infrastructure, including gas, electricity, water, sewerage, and telecommunications. Although short-term impacts to neighbouring premises' ability to access utilities services may be possible during the construction phase of the project, any impacts would be short term and arranged with the affected parties in advance. Utility providers were contacted at the preliminary feedback stage, with no significant issues raised.

As noted in Chapter 5.0, the construction phase is expected to directly generate an equivalent of 271 full-time jobs (in a given year). As at least some of the workforce would be employed from outside of the local area, and so would likely rent accommodation close to the Project Site. This may add pressure to the local rental market, where over one third of rental households are already paying over 30 per cent of household income on weekly rent.

Workforce temporarily residing in the area will also access social infrastructure, potentially impacting access for existing residents through additional demand. The review of social infrastructure in section 3.6 noted that, as a regional centre, Tamworth includes numerous services that have been developed to cater for regional demand, meaning they have significant scalability.

While this proposal alone is unlikely to produce any significant impacts to social infrastructure or accommodation access, there are a number of other projects being undertaken concurrently, raising the potential for cumulative impacts. As such, coordination of construction workforce timing will be essential in managing these impacts. Cumulative impacts are explored further in Chapter 6.11.

6.5.2 During operation

The Project would make no changes to the existing access arrangements in the locality. Vehicular traffic to the Project Site would be via existing roads, and there is unlikely to be obstruction on existing roads.

Formal parking locations to accommodate the operational phase maintenance workforce would be provided in line with relevant planning scheme standards as well as design requirements contained in Australian Standard for off-street car parking.

Additionally, it is not anticipated that operation of the Project would impact on access to services within the vicinity.

6.5.3 Mitigation and management

The TIA prepared by Arcadis included a measure to prepare a CTMP with a range of mitigations to minimise potential impacts to access, specifically:

- Measures to manage and facilitate the ingress/egress of the vehicles to ensure safety for all users along Ascot-Calala Road
- Monitoring objectives to review the performance of traffic management
- Construction staging (including traffic) would be reviewed in consultation with stakeholders (as part the CTMP approval) to minimise the potential for disruptions during key Tamworth events.

While this proposal alone is unlikely to produce any significant impacts to social infrastructure or accommodation access during construction, there are a number of other projects being undertaken concurrently, raising the potential for cumulative impacts. As such, coordination of construction workforce timing will be essential in managing these impacts. Cumulative impacts are explored further in Chapter 6.11.

6.6 Culture

Cultural impacts refer to both Aboriginal and non-Aboriginal culture, including shared beliefs, customs, values, and stories, and connections to country, land, waterways, places, and buildings. Specifically, it encompasses impacts on people's values, customs, and beliefs associated with (or embedded in) the Project Site or locality, e.g. as secondary effects of changes to scenic quality, landforms, or water flows. Strengthening of community values and culture through project design elements. There are also potential intangible cultural impacts, particularly concerning Aboriginal cultural heritage, with risks of 'cultural or spiritual loss' (i.e., loss or diminution of traditional attachment to the land or connection to country, or loss of rights to gain spiritual sustenance from the land).

6.6.1 During construction

Construction activities have the potential to impact on community and culture through impacts to Aboriginal and Non-Aboriginal historic cultural heritage. This is often through disturbance of archaeological items or otherwise culturally significant locations by construction activities.

An Aboriginal Cultural Heritage Assessment Report (ACHAR) has been prepared by OzArk to support the proposal. The ACHAR did not record any Aboriginal sites or specific cultural values during the assessment, and as such there are no known impacts to Aboriginal cultural heritage from the Project.

In terms of Non-Aboriginal cultural heritage, a Historic Heritage Assessment Report prepared by OzArk did not record any historic heritage items of archaeological deposits. As such, the report found that there would be no impacts to historic heritage as a result of the Project.

6.6.2 During operation

None identified.

6.6.3 Mitigation and management

It recommended that an unexpected finds policy is implemented throughout the construction phase of the project. In the event of any unexpected finds of Aboriginal sites, objects, or historical archaeological deposits being identified during construction, all work in the vicinity should cease immediately. A qualified archaeologist must be contacted to assess the find, and Heritage NSW and the NSW Aboriginal Land Council must be notified.

6.7 Health and wellbeing

Health and wellbeing concerns both physical and mental health, especially for those who are highly vulnerable to social exclusion or substantial change, plus wellbeing of individuals and communities.

This includes health impacts and well-founded concerns/fears about health impacts associated with noise, dust, odour, vibration, lighting, and toxic materials. It also includes:

- Stress, anxiety, and uncertainty - or hopes - about a Project, about changes to adjacent uses, and about cumulative change to a neighbourhood
- Psychological stress and fears/hopes for the future. Potential impact of the project on social behaviours such as alcohol/drug use, domestic or other violence
- Impacts of project elements on ability to sleep, people's general health and wellbeing, and overall community health.

6.7.1 During construction

Construction activities can produce a range of environmental disturbances that can produce social impacts, including:

- Loud and continuous noise or vibration disturbance from activities such as piling, cutting or drilling could impact upon nearby residents' health and wellbeing.
- Dust and unpleasant odours arising from exposed loads the operation of machinery could impact upon air quality
- Residents and workers could also experience impacts to mental health caused by increased stress through loss of convenience, increased noise, sleep disturbance for shift workers and loss of amenity.

While potential impacts from construction will be temporary as they would only be present only while construction is occurring, their intensity requires mitigations to minimise the impact. Construction impacts on local amenity are also generally contained within close proximity to a construction site.

Potential site contamination during construction may impact on community health. However, impacts related to contamination are considered unlikely to be significant given the scale of the Project and as such, impacts to community health associated with site contamination are considered to be unlikely.

During construction, the storage or removal of dangerous goods has the potential to lower the overall levels of safety within an area. A Preliminary Hazard Analysis (PHA) has been prepared by Sherpa Consulting to accompany the proposal. The PHA determined that identified hazardous events were qualitatively risk profiled and all found to be 'Low' risk. Additionally, none of the identified events are expected to have significant off-site impacts. As such, the potential for negative impacts on local workers' health and wellbeing resulting from the removal of dangerous goods is considered to be unlikely.

6.7.2 During operation

The Project, while relatively isolated from more sensitive residential land uses, could have potential health and wellbeing impacts to neighbours. Should the Project be constructed, it could also cause health hazards arising from the disturbance of any hazardous substances during the construction phase.

Developments can increase or decrease perceived and actual safety. The earlier investigation of the community identified minor hotspots for several crimes in Calala, beyond an 800 metre radius to the north of the Project Site. Further analysis of this data revealed that crime rates in Calala (SAL) were generally much lower than the rates for the LGA, whilst rates were not available for Kingswood (SAL) for the crimes reviewed. It is considered very unlikely that the Project would have an impact on crime rates within the locality. It is also possible that the intensification of development on the Project Site, including through site improvements, may assist in providing passive surveillance in the area associated with worker movements.

During the engagement process, community members raised concerns about fire safety and emergency management. The PHA considers fire risk at the BESS and substation. Controls will be implemented (including protection and suppression systems) including an emergency shutdown. The distance of the facility of nearby residences also reduces this risk. Even with safety procedures and mitigations in place, fears and anxieties regarding the safety of the proposal may remain. The proponent is committed, as part of ongoing engagement, to continuing to engage with the community of the operational lifespan of the Project. A key part of this will be

ensuring that information regarding emergency procedures and safety will be available on request for community members.

Community members also raised fears and anxieties regarding the proposal's possible impacts upon their access to water. Chemical hazards can arise from acid or corrosive components leaking from a BESS. This risk will be mitigated by installing containment measures and through the BESS management and monitoring systems. In the unlikely event of a fire/spill, the stormwater system has been designed with a closure mechanism on the outlet to detain flows from leaving the Project Site. The stormwater system will be designed to:

- Collect all stormwater runoff from operational areas of the Project Site, including access tracks
- Sufficiently detain stormwater runoff to ensure post-developed peak flows do not exceed existing peak flows leaving the Project Site for the all design events up to the 1% AEP
- Include a dedicated volume for the collection of sediment
- Include a dedicated volume for stormwater reuse purposes.

Notwithstanding the above, residual fears and anxieties may remain within the community. The proponent has committed to ongoing community engagement over the operational life of the proposal. As part of that ongoing engagement with the surrounding community should take place to allay any fear regarding impacts on water quality. This would include actively engaging with community regarding any risk associated with the project (real or perceived) and making information available regarding mitigations and residual risks to water quality.

As such, detailed design would include reviewing site hydrology and changes as a result of the development and ensuring sufficient drainage capacity, including the basin are provided to mitigate potential adverse impacts. With the implementation of the recommended mitigation measures, the Project is not anticipated to result in unacceptable impacts to water. Where possible, this information should be made available to the public as part of ongoing engagement.

The Bush Fire Assessment prepared by Bushfire Consulting Services is included with the EIS at Appendix N. It assesses the project against the requirements of the NSW Rural Fire Services *Planning for Bush Fire Protection Guideline 2019* and concludes that, with the implementation of all recommendations, the proposal is compliant with the guideline's aims and objectives. As such, the proposal is not considered to increase risks to health and wellbeing as a result of bush fire.

The PHA prepared by Sherpa Consulting also identified hazards and assessed the risks associated with the operations of the Project. It found that for all identified events associated with the proposed operation of the project, the resulting consequences are not expected to have significant off-site impacts. Subsequently, the risk level for all identified hazardous events are rated as 'Low.'

6.7.3 Mitigation and management

A range of standard measures will be developed as part of the EMS. Implementation of recommended mitigations as outlined in the PHA to reduce the potential for fire involving the lithium-ion battery to start at the Project Site and spread from the Project Site, including:

- Adopting an Emergency Response Management Plan to outline the protocols and requirements for fires and other risks
- Implementing a Fire Safety Study (developed with Fire and Rescue NSW) to identify, assess, and outline controls to manage on-site and off-site risks at a BESS facility
- Providing sufficient spacing between the substation and BESS units to minimise the potential for fire propagation
- Ensuring ensure that the setback distance from the Project Site boundary is based upon the BESS fire and toxic gas consequence calculations.

6.8 Surroundings

Impacts to surroundings can include access to, and use of, services that ecosystems provide, public safety and security, access to and use of the natural and built environment, and its aesthetic value and amenity.

It extends to impacts on anything provided by the environment and that is useful for people, e.g. food and clean water supply, flood or fire defences. Impacts on safety of pedestrians, children, drivers, and cyclists. Impacts on levels of crime and violence, perceptions of crime, safety, and security, especially for women. Loss or enhancement of public spaces. Impacts on the perceived quality and uses of a natural or built area. Impacts on the valued features, the soundscape, and aesthetics of a place and how people use or appreciate it.

6.8.1 During construction

During construction, some activities may impact upon the ability of people to access and enjoy their natural environment. Standard project measures such as appropriate temporary screening and hoarding will form part of the construction management plan and would mitigate these impacts on a temporary basis.

A streamlined Biodiversity Development Assessment Report (BDAR) was prepared by Arcadis to support the Proposal. It found that no threatened flora, fauna or their habitats will be cleared as part of the Project. 0.16 hectares of a native vegetation community does occur within the subject land and as such, two ecosystem credits are required to offset the impacts of clearing the vegetation. A small line of native vegetation along Burgmanns Lane interfaces the construction area and is at risk of inadvertent impacts from the Project. However, any increases in noise, dust, light spill or edge effects were determined to be negligible due to the habitat already being subject to these impacts from surrounding developments. Transport of weeds and pathogens from the Project Site to adjacent vegetation and the trampling of threatened flora species were also identified as unlikely indirect impacts. No other indirect were identified.

6.8.2 During operation

The public domain plays an important role in supporting public and community life. Changes to the public domain can affect the experience of vehicles, pedestrians, and bicycle users as they pass a site.

In this instance, there is minimal potential for the Project to impact on the public domain due to the rural location of the Project Site. Additionally, there is no social infrastructure near the Project Site (refer to Chapter 3.6) that would be impacted by a change to its built environment context.

Potential visual amenity impacts associated with the Project have been assessed as part of the LVIA. The assessment states that the proposal 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. The establishment of landscaping buffers comprised of native plants will help the Project integrate with its surroundings and minimise any visual impact to the nearest dwellings.

6.8.3 Mitigation and management

Implementation of the following mitigation measures to reduce the visual impacts of the Project:

- Establish landscaping buffers comprised of native plants will help the Project integrate with its surroundings and minimise any visual impact to the nearest dwellings.
- The design of the Project will consider the use of materials that integrate with the surrounding landscape. Where possible, suitable colours and finishes will be chosen for Project infrastructure to minimise visual impacts (including glare/reflectivity), including ancillary infrastructure such as the O&M buildings/facilities and the noise acoustic wall surrounding the BESS. These buildings and materials will be designed to blend in with the local rural/farming landscape. If practicable, the wall may be painted

in a neutral colour (e.g. khaki, beige, green or similar) rather than white, so as to better blend in with the local rural landscape.

6.9 Livelihoods

A person's livelihood is their capacity to sustain themselves, whether they experience personal breach or disadvantage, and the distributive equity of impacts and benefits. It can include change in livelihood from new employment and business opportunities (positive), or from disruption during construction (negative). For Aboriginal people, it also includes rights to land and to gain spiritual and cultural sustenance from the land. The Project would affect the local and regional economy both during construction and operation. The extents of economic effects are discussed in the following sections.

6.9.1 During construction

Construction of the proposal would be expected to have short and long-term benefits with respect to construction employment and the purchase of materials. During construction, it is anticipated that the Project would generate additional jobs, with indirect benefits flowing to local businesses as workers spend on local services (e.g. food and beverage, other services). The construction industry has strong linkages with other sectors, so its impact on the economy goes further than the direct contribution of construction. The procurements of construction materials would be one such activity generator.

The Project is committed to ongoing discussions with neighbouring residents regarding any demonstrated future changes to property values as a direct result of being adjacent to the Project.

An Estimated Development Cost (EDC) has been prepared by Arcadis for the Project. The CIV for the construction of the Project is estimated at over \$30 million. As noted in Chapter 5.0, HillPDA has estimated that construction activity associated with the Project would generate the following economic outputs over the construction period:

- Directly supporting employment of 271 full time jobs years and delivering a direct value-add of \$124.9 million to the local economy
- Indirectly supporting employment of 730 full time job years and delivering an indirect value-add of \$140 million to the economy.

The presence of the construction workforce could also negatively impact upon the livelihoods of the community through increased demand for local accommodation, goods and services. While there are positive social outcomes through improved livelihoods for businesses and operators receiving increased income, residents in the key communities may be subject to negative outcomes to way of life or health and wellbeing through being forced to access goods and services or at higher prices, or to switch to lower quality offerings.

Lower income residents would be most sensitive to any such impacts, such as no longer being able to afford a particular good or being 'priced out' of some purchases such as fresh or healthy food, critical housing repairs, attending medical appointments or filling prescriptions, unless mitigation measures are put in place.

Impacts to tourism in the social locality are difficult predict. Although, a review of accommodation usage across the region provided in section 3.7 suggested that there was accommodation across the tourism region was occupied on average 66.4 per cent of the time across the year, suggesting that there was additional capacity outside times of peak demand (major festivals, events and the like). With effective coordination on the timing of work, any adverse impacts on tourism resulting from the construction disturbances would be more than outweighed by the benefits of consumption induced impacts in the social locality resulting from additional workers and their families. This would benefit existing businesses in the social locality in retail, hospitality, food services and the like.

6.9.2 During operation

As noted in Chapter 5.0, it is estimated that the Project would generate the following economic outputs during its operational phase:

- Directly supporting employment of 2 FTE jobs and delivering a direct value-add of \$0.8 million annually to the economy
- Indirectly supporting employment of 11 FTE jobs and delivering an indirect value-add of \$1.8 million annually million to the economy.

During engagement, some community stakeholders raised concerns about potential impacts to land and property values. As grid-scale battery projects are relatively new in Australia, there is limited evidence to suggest any changes to property values or impacts on future land use opportunities. Given the Project aligns with the mitigation measures recommended by both the NVIA and the LCVIA (Landscape Character and Visual Amenity) Report, this mitigated impact is assessed as low, given the unlikely and minor magnitude.

Regarding potential livelihood impacts through loss of agricultural land, as noted in section 5.3.1, the Project Site is smaller than generally required for agricultural grazing in the area and is currently incidentally used for cattle grazing but not used for the grazing of livestock for a commercial purpose or for cropping. As such it is already considered less well suited for agricultural grazing and we understand that the property owners do not gain their main source of income from the incidental grazing currently occurring on site.

6.9.3 Mitigation and management

The Project stands to make a positive contribution to the livelihood of residents across the wider region, increasing employment opportunities on-site during construction, closer to residents' homes. The proposal also has the potential to produce some negative impacts through additional demand for goods and services, including essential item and accommodation, potentially placing additional financial on more vulnerable residents. As part of a Local Procurement Strategy the proponent should seek to coordinate with local representatives including businesses, including chambers of commerce and Council to:

- Coordinate the timing and quantity of goods and services required by the project, service provision opportunities and compliance requirements of businesses to secure contracts
- Encourage and support local business in meeting the requirements of the project for supply contracts
- Assist qualified local businesses to tender for provision of goods and services to support the construction of the project, where possible.

The project should will also mitigate potential demand impacts from the construction workforce through coordination with other projects, as identified in the cumulative impact assessment in section 6.11.

6.10 Decision making systems

Decision marking systems concerns whether people:

- Experience procedural fairness
- Can make informed decisions
- Have power to influence decisions
- Can access complaint, remedy and grievance mechanisms.

It concerns matters like the capacity of affected people to influence project decisions, including elements of project design and:

- Extent to which they can navigate large amounts of technical material and make informed decisions

- Effectiveness of engagement mechanisms at enabling all groups (especially vulnerable or marginalised groups) to participate in the assessment process. Levels of trust in the rigour and impartiality of the assessment process
- Extent to which people feel empowered to determine their futures, including after a project closes
- Opportunities for people to have a say in the project's community investment decisions
- Accessibility and effectiveness of complaint and remedy procedures/mechanisms.

6.10.1 During construction

During the construction process, there is a potential for people to feel powerless or that they have a lack of means to have input or say on the Project. In the case of this Project, the proponent has been. Furthermore, the Project has had a targeted engagement process, which has approached neighbouring residents and businesses for input.

6.10.2 During operation

It is not anticipated the Project would introduce additional fears relating to decision making systems above the baseline. Notwithstanding, a range of mitigations and enhancements are proposed below.

6.10.3 Mitigation and management

A Stakeholder Management Plan (SMP) should be implemented at the construction phase. The SMP should provide for triggers to notify neighbours of disruptive construction activity, with minimum notice periods to allow neighbours to prepare. It would also nominate a single point of contact for neighbours with issues or concerns.

Is it also anticipated that the EMS will be prepared to provide an overarching framework for the management of all potential impacts resulting from the operation of the Project. The EMS should include measures to minimise impacts of operational activities to surrounding occupants and occupants within the Project Site and identify a clear participatory structure for residents to make suggestions or raise issues in the operation of the Project. The EMS should also identify a transparent process for resolving complaints by neighbours and community members. This process should be transparent, with clear timeframes for resolution of matters, as well as a clear system tenant management where tenants are breaching the agreed code of conduct.

6.11 Cumulative impacts

The Project is located in proximity to the New England Renewable Energy Zone (REZ), which is anticipated to support approximately 1,250 construction jobs and 830 operational jobs associated with future renewable energy projects and development.

The proximity of the Project to the existing Tamworth substation and other future renewable energy developments and planned road upgrades may contribute to cumulative impacts on the local community. This could include changes to accessibility and amenity during construction, which may contribute to cumulative noise or traffic impacts.

The TIA prepared by Arcadis assessed the impact of 'worst' case scenario for the cumulative traffic demand generated by the Project and the surrounding development on the road network. It concluded that Whitehouse Lane and New England Highway are expected to have adequate capacity to cater for developments.

Available information from the Tamworth BESS and Calala BESS has been reviewed and compared with the noise impact predictions of the Project. Under noise enhancing meteorological conditions, it is possible that noise levels could exceed up to approximately 2 dB(A) during evening and night-time. However, the following should be considered:

- The predictions assume the worst-case wind direction meaning that the wind direction would be from the noise source to receiver for all developments. In reality, receivers would not receive worst case wind

direction for all developments at the same time. Wind analysis over the period of one year revealed that the most occurring wind directions are SSE and SE

- Predictions are based on noise enhancing meteorological conditions which occur during limited days of the year
- Marginal exceedances of 1 to 2 dB(A) are deemed to have negligible impact as ≤ 2 dB(A) exceedance is typically not discernible by the average human ear. Therefore, predicted levels that exceed the noise criteria by 2 dB(A) or less are considered to achieve compliance with the criteria.

It will be critical for the contractor to engage with all relevant stakeholders to understand whether there will be overlap in construction programme and to ensure appropriate coordination of construction activities is carried out to maintain safety for all users within the road network. During construction, the Project should ensure that the Environmental Management Strategy (EMS) are continuously applied and implemented, to mitigate the potential for cumulative impacts. Once operational, the Project should be operated in accordance with the EMS. These plans should be reviewed in the case that any additional nearby projects are announced.

There is potential that two similar projects in the area will be under construction at the same time as the Project. These will likely require a larger workforce than the local market can supply, meaning that workers from outside the area will move in temporarily. This could have a negative effect on access to housing for local residents. It also has the potential to affect livelihoods by driving rental price increases. Potential impacts from this could be twofold, with flow-on effects to the local tourism industry if the demand for accommodation is too high for the local rental market, and workers utilise short-term accommodation options. As previously described, impacts from additional short-term demand could be mitigated to some extent through coordination between the project teams, particularly contractors, on workforce staging and construction activities. In coordinating construction staging and timing, the proponent and contractor should also seek input from local community and business representatives to ensure that this coordination also accounts for periods with a high number of visitors to the region. This would also assist by mitigating wider impacts on the local community and, particularly, any impacts upon key tourism events .

6.12 Evaluation of impacts

6.12.1 Construction

This section considers impacts that may occur during the construction phase. An evaluation of social impacts and the proposed mitigation response during the construction phase is summarised in Table 25.

Table 25: Construction phase: social impact evaluation and mitigation response

Detail	Evaluated	Standard measures	Project-specific mitigation measures	Residual impact significance
Way of life				
Additional construction vehicle movements may increase congestion on surrounding roads, impacting way of life, access and livelihoods for surrounding residents, workers, and businesses.	Unlikely + Minor = Low (negative)	- Manage access to/from adjacent properties. - Restrict construction vehicle movements to designated routes to/from the Project Site. - Manage and control construction vehicle activity in the vicinity of the Project Site.	- Construction contractor, when selected, to develop a CTMP to mitigate potential impacts arising from construction activity, including the following as specified in the TIA: - Consultation outcomes with the relevant road authorities and adjacent landowners during preparation of CTMP - A process for ongoing consultation with relevant authorities, neighbours and other nearby developments - Primary and secondary routes to be used by heavy construction-related vehicles to minimise impacts - Notification requirements prior to the movement of hazardous / dangerous or oversize construction material and equipment - Measures to manage and facilitate the ingress/egress of the vehicles to ensure safety for all users along Ascot-Calala Road, including, as required regulatory and direction signposting, variable message signs, traffic management personnel and all other traffic control devices necessary for the implementation of the CTMP - Monitoring objectives to review the performance of traffic management - Commitment to undertake dilapidation survey of Ascot-Calala Road and Burgmanns Lane prior to construction activity commencing - Dust management measures for primary routes - Measures to manage traffic impacts during key events in Tamworth	Unlikely + Minor = Low (negative)
Impacts to surrounding properties from changed access during construction, potentially affecting way of life and access.	Unlikely + Minor = Low (negative)			Unlikely + Minor = Low (negative)
Community				
Impacts through additional funding for community initiatives	Unlikely + Minor = Low (negative)	N/A	- Implementation of a Community Benefit Sharing scheme, which may include initiatives such as: - Providing funding (e.g., grants, sponsorships, or scholarships) - Establishing partnerships with important local groups or projects	Possible + Minor = Medium (positive)

Detail	Evaluated	Standard measures	Project-specific mitigation measures	Residual impact significance
			- Providing in-kind support or developing education and tourism initiatives - Local jobs, training and procurement - Innovative options for financing (e.g., community co-investment) or innovative products (e.g., energy retailing options) - Compensation for impacted residents that is allocated in a structured manner.	
Access				
Potential changes to access for neighbouring properties during construction, negatively impacting on accessibility	Unlikely + Minor = Low (negative)	Ensure dedicated parking is provided for workers	- Incorporation of recommended measures from the TIA into the CTMP (when prepared), particularly: - Primary and secondary routes to be used by heavy construction-related vehicles to minimise impacts - Notification requirements prior to the movement of hazardous / dangerous or oversize construction material and equipment	Unlikely + Minor = Low (negative)
Greater demand on local services and infrastructure associated with an increase in population of workers during construction, impacting on access.	Unlikely + Minimal = Low (negative)	Preparation of a construction workforce management plan by the contractor (when selected)	Provision of shuttle buses to facilitate construction worker travel to and from the Project Site	Unlikely + Minimal = Low (negative)
Additional demand for accommodation arising from additional short term construction workers potentially recuing short-term access to accommodation	Possible + Moderate = High (negative)	Preparation of a construction workforce management plan by the contractor (when selected) which would identify workforce staging requirements over the construction period	- Through coordination with representatives from local business and council, develop a Local Procurement Strategy which would: - Encompass considerations regarding local employment and procurement (with a specific focus on First Nations participation) and the associated accommodation of the construction workforce to mitigate any supply chain impacts - Target people and business with the Tamworth LGA and regional surrounds. - Continue to consult with stakeholders such as the TRC, Department of Regional NSW, Tamworth Business Chamber and other economic development or local social service agencies.	Possible + Minor = Medium (negative)
Culture				
Potential impact on community and culture through fear of impacts to Aboriginal cultural	Possible + Minor = Medium (negative)	- Engagement with Local Aboriginal Land Council - Adherence to requirements under AHIP (if required)	If Aboriginal objects are noted during construction, the Unanticipated Finds Protocol in the ACHAR should be applied.	Very unlikely + Minor = Low (negative)

Detail	Evaluated	Standard measures	Project-specific mitigation measures	Residual impact significance
heritage sites during construction.				
Potential impact on local cultural values through fear of impacts to historical cultural heritage sites during construction.	Very unlikely + Minimal = Low (negative)	None	If items of historic heritage are noted during construction, the Historic Heritage Unanticipated Finds Protocol in the HHIA should be applied.	Very unlikely + Minimal = Low (negative)
Health and wellbeing				
Noise and vibration from construction activity may negatively affect amenity for residents, workers and businesses surrounding the Project Site, impacting upon quiet enjoyment of surroundings, way of life and health and wellbeing.	Unlikely + Minor = Low (negative)	- When planning construction work that will generate significant noise or vibration, consider: - Substitution by an alternative process. - Restricting times when work is carried out. - Screening or enclosures. - Utilisation of temporary supports where deemed necessary. - Carry out construction activity in accordance with the approved work hours.	Implement the recommended mitigation measures from the CNVMP.	Unlikely + Minor = Low (negative)
Dust from construction activity could cause a decline in air quality, potentially impacting the amenity of surroundings and health and wellbeing of neighbouring residents and workers.	Possible + Minor = Medium (negative)	Construction phase air quality impacts shall be minimised or avoided by incorporation of appropriate dust suppression and air quality control measures at various stages of the project.	- Implement the recommended controls as identified in the air quality assessment, including: - Reasonable and feasible dust suppression will be implemented during construction activities to minimise fugitive dust emissions - All vehicles transporting materials to and from the Project will be covered and secured - Speed limits on the Project Site will be established and enforced during construction	Unlikely + Minor = Low (negative)

Detail	Evaluated	Standard measures	Project-specific mitigation measures	Residual impact significance
Release of hazardous building materials could potentially impact the health and wellbeing of neighbouring residents.			– All plant and equipment will be inspected before it is used on-site and maintained in accordance with manufacturers specifications and will comply with relevant vehicle emission standards, where applicable. – All plant and equipment will be switched off when not in use for extended periods – Dust and air quality complaints will be managed in accordance with the overarching complaints handling process for the Project. Appropriate corrective actions, if required, will be taken to reduce emissions in a timely manner.	
Surroundings				
Temporary changes to the surroundings during the construction phase	Likely + Minor = Medium (negative)	• Minimise clearance of native vegetation • Install appropriate sediment and erosion controls.	• Prepare a EMS in line with the BDAR, to prevent over clearing of vegetation and the establishment or invasion of weeds.	Likely + Minor = Medium (negative)
Livelihoods				
Additional employment opportunities on-site arising from construction activity (direct and indirect) positively impacting livelihoods	Likely + Moderate = High (positive)	• HillPDA has estimated that construction activity will: – Directly support employment of 271 full time jobs years and delivering a direct value-add of \$271 million to the regional economy – Indirectly support employment of a further 730 full time job years statewide and delivering an indirect value-add of \$110 million to the NSW economy.	• Through coordination with representatives from local business and council, develop a Local Procurement Strategy which would: – Encompass considerations regarding local employment and procurement (with a specific focus on First Nations participation) and the associated accommodation of the construction workforce – Target people and business with the Tamworth LGA and regional surrounds. – Continue to consult with stakeholders such as the TRC, Department of Regional NSW, Tamworth Business Chamber and other economic development or local social service agencies.	Likely + Moderate = High (positive)
Expenditure by construction workers	Likely + Moderate	• None proposed	• Coordinate with local business/tourism bodies to obtain information on local tourism, dining and service offering to supply construction workers with	Likely + Moderate = High (positive)

Detail	Evaluated	Standard measures	Project-specific mitigation measures	Residual impact significance
while resident in the region.	= High (positive)		information on local services for shopping and dining options during construction.	
Decision making systems				
Potential feeling of powerlessness or lack of means to have input or say on the Project during construction for surrounding properties and the wide community, negatively impacting decision-making systems	Possible + Minor = Medium (negative)	Standard engagement mechanisms as part of SSDA process	Implementation of a Community and Stakeholder Management Plan to address the implementation of project specific mitigation and management strategies in order to minimise the potential for negative impacts on the community in and around the construction site.	Unlikely + Minor = Low (negative)

6.12.2 Operation

This section considers impacts that may occur once construction is completed and the development is occupied and in operation. An evaluation of social impacts and the proposed mitigation response during the operational phase is summarised in Table 26.

Table 26: Operation phase: social impact evaluation and mitigation response

Detail	Evaluated	Standard measures	Project-specific mitigation measures	Residual impact significance
Way of life				
Noise emissions from the operation of the facility could potentially impact residents, workers, and businesses (on-site and surrounding) enjoyment of surroundings, way of life and health and wellbeing	Unlikely + Minor = Low (negative)	- Locating mechanical equipment as far as practicable from noise sensitive receivers - Using in-duct treatments such as internally lined ductwork or silencers - Building barriers or enclosures around equipment.	- Noise modelling will be undertaken for the preferred supplier to verify: - Compliance with the Project specific noise criteria in accordance with the Noise Policy for Industry (EPA, 2017) - Design noise mitigation measures to be implemented such as silencers, layout refinements and noise path controls. Other approaches to reduce noise levels that would be considered include selecting suppliers with fewer sound sources (quantity) and lower noise emissions and / or adjusting fan speeds to account for reduced cooling capacity overnight. - The EMS will include measures and processes for managing noise resulting from the operation of the Project, including a process for managing complaints.	Unlikely + Minor = Low (negative)
Community				
Potential impacts to local character associated with the construction and operation of the Project in a rural area.	Unlikely + Minor = Low (negative)	- Selection of a potential heavy vehicle route that avoids the urban area of Calala - Inclusion of vegetation screening to minimise visual impacts	- Locate project within Project Site to minimise the distance between the nearest residents - The design of the Project will consider the use of materials that integrate with the surrounding landscape. Where possible, suitable colours and finishes will be chosen for Project infrastructure to minimise visual impacts (including glare/reflectivity), including ancillary infrastructure such as the O&M buildings/facilities and the noise acoustic wall surrounding the BESS. These buildings and materials will be designed to blend in with the local rural/farming landscape. If practicable, the wall may be painted in a neutral colour (e.g. khaki, beige, green or similar) rather than white, so as to better blend in with the local rural landscape.	Unlikely + Minor = Low (negative)
Access				
None identified				
Culture				
None identified				

Detail	Evaluated	Standard measures	Project-specific mitigation measures	Residual impact significance
Health and wellbeing				
Potential for fire to start at the Project Site with the potential to spread offsite, increasing risks to the health and wellbeing of surrounding workers and residents.	Unlikely + Minimal = Medium (negative)	- The preparation of maintenance procedures, a Site Emergency Response Plan, Fire Management Plan and external firefighting protocol - Preventative maintenance including insulation and replacement of faulty equipment - The establishment of an Asset Protection Zone buffer	- Implementation of recommended mitigations as outlined in the PHA, including: - Providing sufficient spacing between the substation and BESS units to minimise the potential for fire propagation - Ensuring ensure that the setback distance from the Project Site boundary is based upon the BESS fire and toxic gas consequence calculations.	Very unlikely + Minimal = Low (negative)
Potential for negative impacts on local workers' health and wellbeing resulting from the storage of dangerous goods, which could potentially lower the overall safety of the area.	Unlikely + Moderate = Low (negative)	- Ensure relevant standards are adhered to in the storage of dangerous goods - Select appropriate battery chemistry - Use appropriate PPE and clean-up measures.	Adhere to the findings of the Preliminary Hazard Analysis prepared by Sherpa Consulting.	Unlikely + Minor = Low (negative)
Surroundings				
Potential impacts to the surroundings (and community) for local residents through visual impacts and changes to visual amenity associated with the Project.	Likely + Minimal = Low (negative)	- Maximise opportunities to contribute plantings and landscaping, where possible - Retain existing vegetation screening to minimise visual impacts where possible.	- The design of the Project will consider the use of materials that integrate with the surrounding landscape. Where possible, suitable colours and finishes will be chosen for project infrastructure to minimise visual impacts (including glare/reflectivity), including the O&M buildings/facilities and the noise acoustic wall surrounding the BESS. These buildings and materials will be designed to blend in with the local rural/farming landscape. If practicable, the wall may be painted in a neutral colour (e.g. khaki, beige, green or similar) rather than white, so as to better blend in with the local rural landscape. - Cut off and direct light fittings (or similar technologies) would be used where appropriate to minimise glare and light spill onto private property. - Landscaping will be installed in accordance with the conceptual landscape plan, including screen planting along the north, east and south of the BESS facility. The final location and extent of landscaping will be determined during detailed design. The key principals include: - Planting should remain in keeping with existing landscape character - Species selection is to be typical of the area	Possible + Minimal = Low (negative)

Detail	Evaluated	Standard measures	Project-specific mitigation measures	Residual impact significance
			- Planting layout should avoid screening views of the broader landscape - Avoid the clearing of existing vegetation. Where appropriate reinstate any lost vegetation - Allow natural vegetation to regrow over any areas of disturbance.	
Broader benefits to the surrounding environment from reduced emissions.	Possible + minor = Low (positive)	None proposed	None proposed	Possible + minor = Low (positive)
Livelihoods				
Potential fears and anxieties surrounding the perceived impacts of the Project on property values, impacting on livelihoods.	Unlikely + Moderate = Medium (negative)	None proposed	Implementation of a Community and Stakeholder Management Plan to address the implementation of project specific mitigation and management strategies in order to minimise the potential for negative impacts on the community in and around the Project.	Unlikely + Minor = Low (negative)
Decision making systems				
Potential feeling of powerlessness or lack of means to have input or say during operations, negatively impacting decision-making systems.	Unlikely + Minor = Low (negative)	N/A	- The EMS will identify a transparent process for resolving complaints by neighbours and community members. This process should be transparent, with clear timeframes for resolution of matters. - Implementation of a Community and Stakeholder Management Plan to address the implementation of project specific mitigation and management strategies in order to minimise the potential for negative impacts on the community in and around the Project.	Unlikely + Minor = Low (negative)

A person's hands are shown holding a small amount of dark soil or earth. The background is a solid blue color. The hands are positioned in the lower half of the frame, with the fingers gently cupping the soil. The overall image has a soft, slightly blurred quality.

ENHANCEMENT, MITIGATION AND RESIDUAL IMPACTS

7.0 ENHANCEMENT, MITIGATION AND RESIDUAL IMPACTS

Activities associated with the construction and operation of the Project have the potential to be disruptive to the day-to-day lives of residents, workers, visitors and businesses in the surrounds. However, these activities can be effectively mitigated through the implementation of a range of measures, as well effective coordination and planning of potentially disruptive activities.

Key mitigation and enhancement measure proposed as part of the project are summarised in Table 27 below.

Table 27: Mitigation and enhancement measures

ID	Mitigation measure
SE1	A Community Enhancement Fund to support very localised and meaningful community and environmental initiatives that have strong resident and broader community support, throughout the life of the Project would be developed. Iberdrola is committed to establishing a benefit sharing scheme such as a fund for community-based projects. The details of the benefit sharing scheme are yet to be determined but would likely be managed through a committee comprising representatives from Iberdrola, TRC and the local community. This has discussed with TRC but requires further development in partnership with the community and key stakeholders.
SE2	- A Local Procurement Strategy will be implemented to prioritise local jobs and businesses wherever possible. The Local Procurement Strategy will: - Encompass considerations regarding local employment and procurement (with a specific focus on First Nations participation) and the associated accommodation of the construction workforce - Target people and businesses within Tamworth LGA and regional surrounds - Continue to consult with stakeholders such as the TRC, Department of Regional NSW, Tamworth Business Chamber and other economic development or local social service agencies.
SE3	As part of broader engagement with local business, provide an outline of planned workforce staging and likely material requirements, to allow local supply chains to plan for potential surges in need for goods and services.
SE4	Coordinate with local business/tourism bodies to obtain information on local tourism, dining and service offering to supply construction workers with information on local services for shopping and dining options during construction.
SE5	- A Community and Stakeholder Management Plan will be prepared and implemented in line with DPHI's <i>Undertaking Engagement Guidelines for State Significant Projects 2024</i>. The plan provides procedures for: - Informing stakeholders of potential impacts - Providing project-related updates - Registering and responding to complaints and feedback.

With these mitigations in place, potential social impacts that could result from the construction and operation of the Project are generally considered to have been sufficiently mitigated:

- The impacts to localised health, wellbeing and amenity arising from the construction of the Project would generally be well-mitigated by standard mitigation measures, combined with the Project Site's location in a rural area
- The potential for wider impacts to residents' access to accommodation and services during the construction period, if unmitigated, could have significant impacts to local residents, particularly on lower incomes, through higher costs and potential exclusion from housing. These can be mitigated through coordination with council, local business and other projects in the area to minimise construction workforce overlap. These would be implemented through ensuring the EMS is continuously applied
- Tourism impacts from increased demand on accommodation from workers could be mitigated through coordination of construction staging with Council, local businesses and surrounding projects
- Potential impacts of construction would also be mitigated through relevant measures in the EMS, including but not limited to:
 - Implementing a stakeholder communications plan
 - Develop and follow processes for recording complaints and incidents

- Limit construction works to standard construction hours.
- Impacts to culture through damage to items of Aboriginal or historical significance were found to be highly unlikely due to the extremely disturbed nature of the Project Site, though it is recommended that an unexpected finds procedure be implemented should unexpected finds occur during construction
- Impacts to access in the vicinity of the site are unlikely as the Project would make no changes to the existing access arrangements in the locality, and vehicular access to the Project Site will be via existing roads. The inclusion of multiple access points would also enable efficient access to and from the Project Site, thereby reducing any potential impacts to property for surrounding premises.

There are also several social benefits that would arise from the Project proceeding:

- The Project would contribute positively to livelihoods and social cohesion through the generation of new employment opportunities, including:
 - 1,001 full time job years (direct and indirect) during the construction phase
 - 13 full time job years (direct and indirect) during the operation phase
- Flow-on benefits to other local businesses from the increased number of workers in the local area, including expenditure and tourism.

The majority of potential social impacts that may arise from construction and operation of the Project are considered to be well-mitigated, with a range of social benefits being noted.

CONCLUSION

8.0 CONCLUSION

This report has assessed the potential social and economic impacts arising from the State Significant Development Application for the construction and operation of a BESS at 744 Burgmanns Lane, Kingswood, NSW.

The analysis has examined the Project Site and its surrounds, as well as its social context, noting that:

- The project is situated in an area with a **generally younger** population than other regional areas
- A slightly lower proportion of people who **spoke a language other than English** than other regional areas
- A **larger proportion of residents born in Australia** compared to other areas in Regional NSW
- A **larger proportion of dwellings in the study area are separate houses**
- Areas surrounding the site had a **lower median weekly household income** (\$1,383 per week) than that of the Rest of NSW GCCSA (\$1,434 per week)
- There are **higher levels of socio-economic disadvantage** in the study area, with no highly advantaged areas
- Minor **crime hotspots** were identified beyond an 800 metre radius of the Project Site within the built-up areas of Calala. Further review of crime data revealed that crime rates in Calala (SAL) were generally much lower than the rates for the LGA. It is considered very unlikely that the Project would have an impact on crime rates within the locality
- Due to its location within a rural setting, there is **limited social infrastructure in proximity to the Project Site** which no social infrastructure facilities being available within an 800 metre radius of the Project Site. The nearest social infrastructure facility is a local park situated approximately 1.5 kilometres to the north of the Project Site in Calala. Due to the sufficient distance provided between the Project Site and the nearest social infrastructure facilities, it is considered unlikely that they would be impacted by the Project
- **Two SSDAs for similar BESS projects** have been identified in close proximity to the Project Site. This includes the Calala Battery Energy Storage System (SSD-52786213) and Tamworth Battery Energy Storage System (SSD-23830229), which are both at the Prepare EIS phase and located within 800 metres of the Project Site. These proposals could potentially contribute to cumulative social impacts if they are constructed concurrently, such as through impacts to amenity, increased vehicular movements, and an increase in the local worker population.

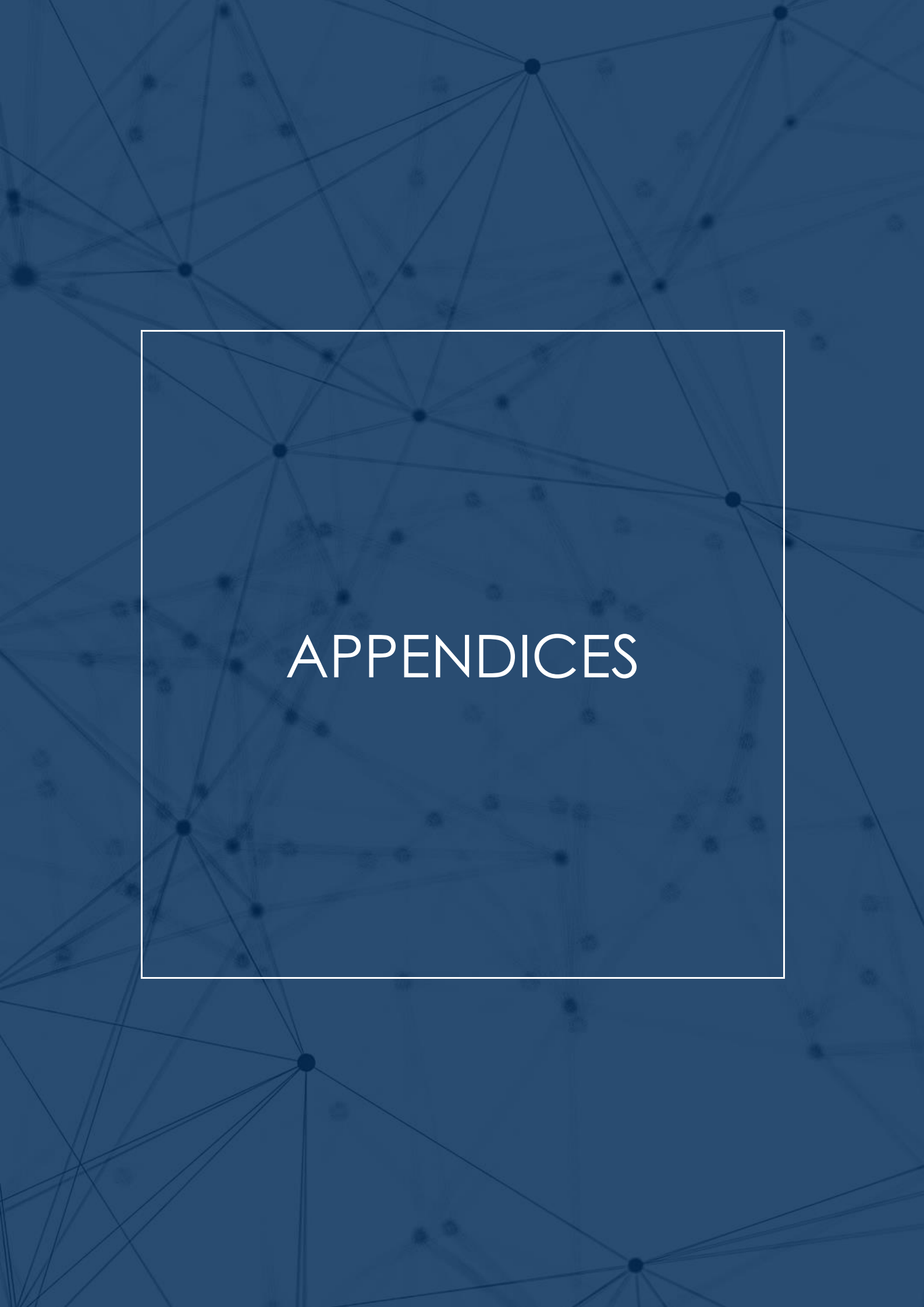
Potential negative social impacts associated with the Project are centred around noise, vibration, and dust impacts for neighbouring premises, and adverse amenity impacts during the construction of the Project. Potential cumulative impacts also arise from potential increased demand for accommodation, goods and services from the construction workforce. However, the social risks from the construction of the Project were found to be mostly able to be effectively mitigated through the application of appropriate measures and coordination.

Reductions in amenity and enjoyment of surroundings associated with the construction phase of the Project would likely be experienced by workers at neighbouring businesses, resulting in a minor social impact to amenity. The Project was also found to have significant positive social impacts through the generation of an estimated 1,001 full time job years (direct and indirect) during construction, and 13 full time job years (direct and indirect) during operations.

Additionally, the construction industry is known to be a significant driver of economic activity and employment, and any expenditure in this industry has flow-on effects to other areas of the economy. The Project would therefore benefit the wider local and regional economy in this manner.

The proponent is also committed to the implementation of a Community Benefit Sharing Scheme, which would provide benefits to local community groups and projects.

Therefore, it has been determined that the Project would have positive social impacts, whilst potential negative social impacts of the Project can largely be managed with the implementation of appropriate mitigation measures. With consideration of the above potential impacts and benefits, this assessment concludes that the SSDA would produce an overall benefit to the local social environment.



APPENDICES

APPENDIX A : DECLARATIONS BY AUTHORS

The *Social Impact Assessment Guideline for State Significant Projects (SIA Guideline)* prepared by the Department of Planning and Environment requires authors of SIAs to provide a declaration. The required declarations are below.

Declaration by Alexander Peck

This Social Impact Assessment (SIA) relates to a proposal by Iberdrola for a Battery Energy Storage System at 744 Burgmanns Lane, Kingswood, NSW 2340. This SEIA has been prepared to accompany the State Significant Development Application for the Project (SSD-63207219).

The SEIA was completed on 6 June 2024.

It is my opinion that the SEIA contains all relevant information as specified in the *Social Impact Assessment Guideline* for State Significant Projects.

I understand the legal and ethical obligations set out in the *SIA Guideline* and confirm that none of the information in the SEIA is false or misleading.

I satisfy the requirements for lead authors of SIAs as set out in the *SIA Guideline* as follows:

- Qualifications: Bachelor of Science, Bachelor of Social Science, Master of Planning
- Experience: Five years preparing Social Impact Assessments
- Professional memberships: Member of Planning Institute of Australia



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APPENDIX B : SIA REVIEW QUESTIONS

Appendix C of the *Social Impact Assessment Guideline for State Significant Projects* sets out review questions. This appendix indicates where the required information sits within this report.

Table 28: SIA review questions and relevant report chapters

	Impact area	Chapter
General		
1	Does the lead author meet the qualification and experience requirements?	Yes, Appendix A
2	Has the lead author of provided a signed declaration?	Yes, Appendix A
3	Would a reasonable person judge the SIA report to be impartial, rigorous, and transparent?	Yes, HillPDA has been engaged as an independent expert and Chapter 2.0 details the approach taken.
Project's social locality and social baseline		
4	Does the SIA report identify and describe all the different social groups that may be affected by the project?	Yes, Chapter 3.0
5	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, Chapter 3.0
6	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, Chapter 3.0
7	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 views and likely experiences?	Yes, Chapter 3.0
8	Does the social baseline study demonstrate social-science research methods and explain any significant methodological or data limitations?	Yes, Chapters 2.0 and 3.0
Identification and description of social impacts		
9	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, the method and approach for preparing the SIA is described in Chapter 2.0.
10	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, the precautionary principle is applied in Chapter 6.0.
11	Does the SIA report describe how the preliminary analysis influenced both the project design and EIS Engagement Strategy?	Yes, the design of the engagement approach is summarised in section 4.1. Engagement has been undertaken over an extended period by the proponent, influencing the scoping report, brief for this project (Chapter 1.0) and eventual SEARs as described in section 1.1.
Community engagement		
12	Were the extent and nature of engagement activities appropriate and sufficient to canvass all relevant views, including those of vulnerable or marginalised groups?	Yes, Chapter 4.0
13	How have the views, concerns and insights of affected and interested people influenced both the project design and each element of the SIA report?	Outcomes including changes arising from engagement are described in sections 4.2, 4.4 and Chapter 7.0
Predicting and analysing social impacts		
14	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, Chapter 6.0
15	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, Chapter 6.0

Impact area		Chapter
16	Does the SIA report identify its assumptions, and include sensitivity analysis and alternative scenarios? (including 'worst-case' and 'no project' scenarios where relevant)	Yes, Chapter 6.0
Evaluating significance		
17	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, Chapter 6.0
18	Are the evaluations of significance disaggregated to consider the likely different experiences for different people or groups, especially vulnerable groups?	Yes, however no significant impacts to vulnerable groups have been identified.
Responses, monitoring and management		
19	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?	Sections 4.4, 6.12 and Chapter 7.0
20	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?	HillPDA has been engaged as an independent expert. Evidence presented here is from impartial sources. Engagement has been undertaken in conjunction with the Engagement Report to ensure that any perceived impacts are also incorporated and addressed. The proponent is committed to ongoing engagement to ensure that impacts during construction and operation are mitigated as intended.
21	Does the SIA report demonstrate how the proponent will adaptively manage social impacts and respond to unanticipated events, breaches, grievances and non-compliance?	The SIA identifies a need for ongoing monitoring and proposes a coordinated approach as part of the day-to-day operation of the Project Site in Chapter 7.0.

APPENDIX C : REFERENCES

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