



Appendix O

Social Impact Assessment

Battery Energy Storage System - Jindera

FOR: BESS Atlantic Pty Ltd c/o Gransolar Development Australia Pty Ltd

SLR PROJECT No: 620.041088.00012

Revision: 1.0



Revision Record

Revision	Date	Prepared By	Checked By	Authorised By
1.0	13 May 2025	Roland Short	Esther Diffey	Esther Diffey

Basis of Report

This report has been prepared by SLR Consulting Australia (SLR) with all reasonable skill, care and diligence, and taking account of the timescale and resources allocated to it by agreement with Gransolar Development Australia (the Client). Information reported herein is based on the interpretation of data collected, which has been accepted in good faith as being accurate and valid.

This report is for the exclusive use of the Client. No warranties or guarantees are expressed or should be inferred by any third parties. This report may not be relied upon by other parties without written consent from SLR.

SLR disclaims any responsibility to the Client and others in respect of any matters outside the agreed scope of the work.

Statement of Qualification

The New South Wales Social Impact Assessment Guideline for State Significant Projects (DPHI, 2023) requires that authors of SIAs are 'suitably qualified persons' who hold appropriate qualifications and have relevant experience in social science or related areas.

The author's qualifications, experience and demonstrated understanding of social impacts is outlined below.

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Role: Principal – Social Performance

Expertise/Qualifications: Roland holds a Bachelor of Urban and Regional Planning (Honours), is a member of *Environment Institute of Australia and New Zealand* (EIANZ) and has over a decade of experience in community development and social impact assessment.

Date the SIA was completed: 8 May 2025

I declare to the best of my knowledge that this SIA contains all relevant information. I understand my legal and ethical obligations, and confirm that assessment has been undertaken impartially using the best available information at the time of writing and none of the information herein is false or misleading.



Executive Summary

This Social Impact Assessment (SIA) evaluates the potential social impacts of the proposed Jindera Battery Energy Storage System (BESS) project, to be developed by BESS Atlantic c/o Gransolar Development Australia (GDA) in the Greater Hume Shire of New South Wales. The project involves the construction and operation of a 250 MW/500 MWh BESS connecting to the existing Jindera 330/132 kV Transmission Substation, with an expected operational life of 20-25 years.

Project Context and Assessment Approach

The SIA was conducted in accordance with the NSW Social Impact Assessment Guideline for State Significant Projects (DPHI, 2023), building upon the initial SIA Scoping Report. The assessment is situated within a regional context where multiple renewable energy projects are either planned or under construction, including the adjacent Glenellen Solar Farm and nearby Jindera Solar Farm. This creates a unique cumulative impact scenario that was carefully considered in the assessment.

The social locality was defined as:

- Local Study Area (LSA): Jindera (population 2,721) and Glenellen (population 130).
- Regional Study Area: Greater Hume Shire Local Government Area (LGA) and Albury LGA.

The methodology involved extensive stakeholder consultation, social baseline analysis, impact prediction and evaluation, and development of mitigation strategies. The assessment was informed by findings from other technical studies, including economic impact, visual impact, noise and vibration, bushfire risk, and traffic analyses.

Key Findings

The SIA identified several key potential social impacts across the project lifecycle:

Construction Phase

Potential Positive Impacts:

- Creation of an average of 47 direct jobs for 10 months, with 80 full time construction jobs at peak, with an estimated 75% to be sourced locally.
- Economic stimulus through local procurement and worker spending, generating up to \$28 million in regional economic output.
- Skills development opportunities in the emerging renewable energy sector.

Potential Negative Impacts:

- Medium-level amenity impacts (noise, dust) for nearby sensitive receivers.
- Medium-level traffic impacts on local rural roads.
- High-level pressure on the already constrained local labour market (1.8% unemployment).
- Medium-level impacts on Aboriginal cultural heritage values.



Operational Phase

Potential Positive Impacts:

- Very high beneficial impact on regional and state energy security and grid stability.
- High-level community benefit through implementation of a Voluntary Planning Agreement (VPA) with Greater Hume Council.

Potential Negative Impacts:

- Medium-level impacts on community perceptions of safety related to fire risks.
- Medium-level changes to rural character and agricultural identity (particularly when considered cumulatively with nearby solar farms).

Mitigation and Enhancement Measures

Most social impacts would be effectively managed through a range of project environmental performance requirements, including targeted environmental management measures to reduce amenity impacts and fire safety measures and engagement with local emergency services.

To address further identified social impacts, the following social impact management measures have been developed, including:

- Implementation of a detailed Community and Stakeholder Engagement Plan (CSEP) to ensure transparent communication throughout all project phases.
- Development of educational resources about BESS safety to address community concerns.
- Coordination with accommodation providers to manage non-local workforce accommodation needs.
- Local business inclusion strategies to maximise economic benefits and reduce labour market pressure.
- Coordination with surrounding projects to plan for and avoid cumulative impacts on local receivers.

Residual Impacts

With the implementation of proposed mitigation measures, most negative social impacts are expected to be reduced to medium or low significance. The project will deliver substantial positive social outcomes through improved energy infrastructure, economic benefits, and community funding through the VPA.

The assessment found that the Jindera BESS project can proceed with acceptable social outcomes, provided the recommended management measures are implemented effectively and ongoing stakeholder engagement is maintained throughout the project lifecycle.



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Acronyms and Abbreviations

ABS	Australian Bureau of Statistics
AHIMS	Aboriginal Heritage Information Management System
ALARP	As Low As Reasonably Practicable
AV	Articulated Vehicle
BESS	Battery Energy Storage System
DPE	Department of Planning and Environment
DPHI	Department of Planning, Housing and Infrastructure
EIS	Environmental Impact Statement
EMF	Electromagnetic Field
EOL	End of Life
FTE	Full-Time Equivalent
GDA	Gransolar Development Australia
HV	Heavy Vehicle
IF	Isolated Find (in Aboriginal heritage context)
IRSD	Index of Relative Socio-Economic Disadvantage
kg	Kilogram
km	Kilometre
kV	Kilovolt
LALC	Local Aboriginal Land Council
LGA	Local Government Area
LSA	Local Study Area
LSPS	Local Strategic Planning Statement
m	Meter
MAMA	Murray Art Museum Albury
IANZ	Environment Institute of Australia and New Zealand
MW	Megawatt
MWh	Megawatt Hour
NFPA	National Fire Protection Association
NSW	New South Wales
OOH	Out of Hours
OSOM	Oversize and Over Mass
PAD	Potential Archaeological Deposit
QLD	Queensland
RFS	Rural Fire Service
SA2	Statistical Area Level 2
SA3	Statistical Area Level 3



SAL	Suburbs and Localities
CSEP	Community and Stakeholder Engagement Plan
SEARs	Secretary's Environmental Assessment Requirements
SIA	Social Impact Assessment
SLR	SLR Consulting (company name)
ST	Scarred Tree (in Aboriginal heritage context)
TL	Transmission Line
TMP	Traffic Management Plan
TS	Transmission Substation
UL	Underwriters Laboratories
VPA	Voluntary Planning Agreement



1.0 Introduction

BESS Atlantic Pty Ltd c/o Gransolar Development Australia (GDA) engaged SLR Consulting (SLR) to prepare this Social Impact Assessment (SIA) as part of the Environmental Impact Statement (EIS) for the Jindera Battery Energy Storage System (BESS) project (the Project).

1.1 Purpose

The SIA builds upon the findings of the initial SIA Scoping Report (SLR, 2024), aligning with the *New South Wales (NSW) Social Impact Assessment Guideline for State Significant Projects* (the SIA Guideline) (Department of Planning, Housing and Infrastructure (previously: Department of Planning and Environment), 2023) and reflects the recommendations of supporting resources including the *Technical Supplement*. This SIA aims to comprehensively analyse potential social impacts associated with the project, ensuring that the assessment accurately reflects the scope and scale of anticipated impacts.

The primary objective of the SIA is to validate and expand upon the preliminary findings from the Scoping Report by examining specific social impacts in greater detail. The SIA does this by:

- Assessing potential social risks and benefits identified in the SIA Scoping Report by incorporating technical data from other assessments and stakeholder feedback to refine understanding of these impacts.
- Identifying and evaluating the likely social impacts on local and regional communities, with attention to vulnerable or potentially impacted groups.
- Developing targeted management and mitigation strategies to address identified adverse impacts and enhance project benefits for affected communities.
- Establishing a framework for ongoing monitoring and evaluation of social impacts throughout the project lifecycle, ensuring adaptive management in response to emerging social dynamics.

This document serves as a critical component of the EIS, supporting informed decision-making and promoting sustainable, socially responsible outcomes for the project and surrounding communities.

1.2 Compliance with Secretary's Environmental Assessment Requirements

This SIA has been prepared to meet the Secretary's Environmental Assessment Requirements (SEARs) for the Project, specifically addressing the requirement related to Social:

Social - including an assessment of the social impacts or benefits of the project for the region and the State as a whole in accordance with the Social Impact Assessment Guideline (DPE, 2023), including consideration of any increase in demand for community infrastructure services, and consideration of construction workforce accommodation.

In line with the SEARs, this SIA includes a comprehensive baseline study, details consultation undertaken, a social impact analysis, and tailored management measures. Per the requirement, the SIA also includes an analysis of local community infrastructure and services and local accommodation options.



1.3 Project description

1.3.1 Project Overview

The Jindera Battery Energy Storage System (Jindera BESS) 'the Project' will involve the development, construction, operation, and eventual decommissioning of a BESS with an approximate capacity of 250 Megawatts (MW) / 500 Megawatt Hours (MWh) connecting via transmission line (TL) directly to the existing JINDERA 330/132 kilovolt (kV) Transmission Substation (TS), operated by Transgrid.

The BESS will consist of BESS containers (or enclosures), with each container having dimensions of 6m length with an approximate weight of 35,000 kilograms (kg). The BESS will be supported by inverters from the BESS and connect to the existing Transgrid substation via approximately 500 metres (m) of 330 kV overhead lines.

The key elements of the Project include the following:

- Installation and operation of a BESS including battery enclosures, inverters, and transformers on hardstand and benching of the site to level the foundation for each project component.
- Connection and associated upgrades to JINDERA 330/132kV TS, including construction of overhead 330 kV TL to facilitate connection, associated high voltage steel poles, increase in hardstand area and establishment of easements.
- Associated ancillary infrastructure including security fencing, landscaping, access and internal road, water tanks, temporary parking.
- Extension of the council water main along a portion of Ortlipp Road and a portion Lindner Road.
- Vegetation removal.
- Decommissioning of the BESS at the end of life (EOL).

Construction of the Project is anticipated to take approximately 10 months. It is expected that the operational life of the Project would be approximately 20 - 25 years, after which the BESS would be decommissioned and the infrastructure removed, returning the site to its original use.

1.3.2 Project Objectives

The purpose of the Project is to coincide with the integration of renewable energy consumption and to improve overall grid stability and resilience. This is achieved by storing excess renewable power from the network during low demand periods (i.e., renewable electricity created in daylight hours such as solar energy) and distributing back at peak times alleviating added network constraints.

Lower daytime demand means coal-fired generators need to turn-down and then ramp-up in the early evening to ensure adequate supply. Commercial scale solar farms and wind farms may need to constrain their output during the day due to insufficient system demand and increased power supply from rooftop installations. Meanwhile, peak demand in the evening continues to increase.

By participating in the statewide frequency control market, the Project will assist to stabilise the frequency of the grid at critical times in response to loss of load or loss of generation. The resulting improvement to the stability of grid frequency reduces the risk of system failure and blackouts. It also helps to ensure that the national grid can accommodate an increasing proportion of variable solar, wind and other renewable generations in years to come.



Once constructed, the utility-scale development will operate independently to store and discharge excess power to the electricity grid, generating an array of economic, environmental, social and network benefits.

1.3.3 Project Location

The area to which the Project relates, hereafter referred to as the 'Subject Sites', and comprises:

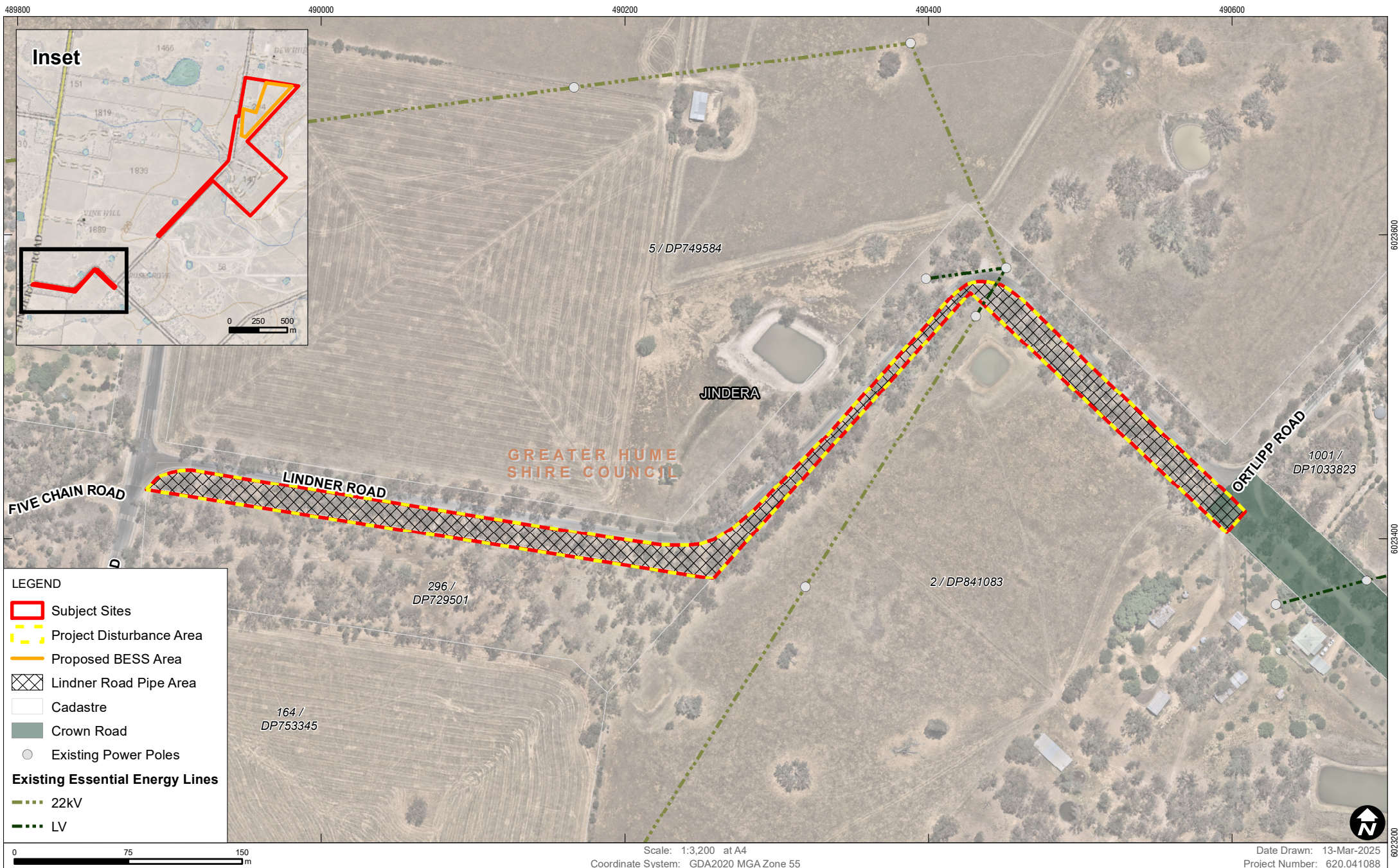
- As shown in Lot 204 DP753342 , which is the 'BESS Site' (private land owner).
- Lot 1 on DP588720, which is the 'Substation Site' (owner by Transgrid).
- An area of unformed Crown road reserve (owned by Crown Lands).
- Ortlipp Road and Lindner Road road reserves (owned by Greater Hume Council and Crown Lands).

Figure 1 and Figure 2, the BESS is proposed on Lot 204 DP 753342 at 204 Ortlipp Road, Glenellen New South Wales (NSW) 2642 (BESS Site). The existing JINDERA 330/132KV TS that the BESS will connect to via overhead line is on Lot 1 DP 588720, 140 Ortlipp Road, Jindera NSW 2642 (Substation Site), approximately 500m south of the BESS site.

The TL will traverse an area of unformed Crown Road reserve, located between the BESS Site and Substation Site, referred to as the 'Subject Sites'. In addition to the works proposed within the Subject Sites are infrastructure works located within the road reserve for watermain upgrades and extension.

The BESS Site is part of a privately owned site and will be leased from the landowner.





Data Source: basedata supplied by NSW SS, June 2024
Aerial imagery supplied by Nearmap, November 2024
Other data sources include Gransolar Group, Look up & Live (LUAL)



Lindner Road Overview

FIGURE 2

1.3.4 Construction Hours and Personnel

Construction of the Project is anticipated to take approximately 10 months. During construction, it is anticipated that approximately 80 full time equivalent (FTE) jobs will be required during the peak of site activity. Employment numbers will fluctuate starting with about 20 workers on site for one to two months. Worker numbers then progressively increase to 80 staff at about the 65% completion stage for several months before tailing off toward completion and the start of commissioning. About 5-10 staff are required for commissioning.

The workforce will be sourced from the local area where possible, and the wider region where worker deficits arise. It is expected the peak period would extend for approximately 4 months. Outside of this period, approximately 10-20 workers will be required at any one time.

The following standard construction hours are proposed for the Project:

- Monday to Friday - 7 am to 6 pm.
- Saturday – 8 am to 1 pm.
- Sunday and Public Holidays - No works to be undertaken.

No works are proposed to be undertaken outside of the standard construction hours. In the event this is required, Out of Hours (OOH) approval would be sought, and all works would be undertaken in accordance with the appropriate OOH protocols and approval processes.

1.3.5 Construction Traffic and Access

It is proposed that access to and from the BESS site will be provided from a new driveway crossover from Ortlipp Road which will be retained for operations. An internal access road will accommodate heavy vehicles associated with the construction of the Project.

Most of the workers who need to travel to Jindera will reside in local short-term accommodation facilities (e.g. motels) during construction. During construction, it is proposed that bus transfers will be provided by the subcontractors (where practicable) to minimise traffic volumes and transit risks during construction as per a Traffic Management Plan (TMP). The number of shuttle buses and the identified routes will be determined to minimise travel times and ensure convenient pick-up points for staff.

The BESS facility, along with the other materials and the construction fleet, will be transported to the site from the Port of Melbourne. There will be no oversize and over mass (OSOM) vehicles required during the construction period except for the one-off transportation of the transformer. Excluding the one-off transportation of the transformer, the largest vehicle that will be utilised will be limited to the size of a standard 20m long articulated vehicle (AV) or 19m or 26m long B-Doubles (short).

The construction fleet is to be finalised, however, at the preliminary stage, it is anticipated that there will be a composition of the following fleet:

- 20m long AVs.
- Up to 25m long low loaders.
- 19m or 26m long B-Doubles.
- 17m long truck & dog combinations.

All heavy vehicles (HV) will take the routes to and from the Subject Sites, as shown in Figure 3 and Figure 4.



Figure 3 Indicative Heavy Vehicle Route – Victoria



Figure 4 Indicative Heavy Vehicle Route – New South Wales



During their inbound journey, all HV's will travel along Hume Motorway (M31) to Albury and will use the Riverina Highway (Guinea St) Offramp. This route is the shortest and likely to accommodate the anticipated construction fleet. A review of the proposed route is consistent with the National Heavy Vehicle Regulator Route Planner Tool.

The route includes a series of intersections, including five signalised intersections through Albury and around four roundabouts between Albury and Jindera.

It is proposed that vehicular access to/ from the development will be provided via Urana Road, Lindner Road and Ortlipp Road.

1.3.6 Water Use

Water will be required during the construction phase for dust suppression, general construction, and maintenance activities. Construction water requirements for the Project are anticipated to be sourced from the Council's bulk water supply once the water main works are complete. Water required prior to the reticulated water connection will be brought to site as required.

Wastewater during construction will be captured and appropriately removed from site and disposed of in accordance with the council/water authority requirements. Potable water may be transported to site in bottles for use by the construction workforce. If utilised, toilet facilities will involve waterless toilets (or equivalent) that are emptied off-site.

1.3.7 Operational Aspects

1.3.7.1 Operation Activities and Equipment

The operation of the Project will involve, but not be limited, to the following general activities:

- Maintenance and management of equipment, site buildings, and landscaping.
- General administrative activities.
- Receipt of equipment or goods.
- Waste removal from maintenance and administration activities.

Minimal plant and equipment will be required for operation of the facility, primarily for staff access and maintenance vehicles.

1.3.7.2 Operation Hours and Personnel

The Project is proposed to self-operate 24 hours a day 7 days a week and will be monitored remotely. It is anticipated the BESS will require periodic and irregular maintenance by authorised staff, otherwise the facility is restricted to the public.

Emergency responses and maintenance activities may be required to be undertaken out of hours. During operation, it is anticipated that approximately two FTE job will be required.

1.4 Decommissioning

The Project is proposed to be decommissioned, and the infrastructure removed following the End of Life (EOL) of the BESS, with works required to return the Subject Sites as close as possible to its original state and use. All decommissioning and restoration activities shall be in accordance with permits, approvals and regulatory requirements at the time.

The operational life of the Project will be determined by the evolving nature of the technology; however, it is anticipated that the lifespan will be approximately 20 - 25 years.



The standard construction hours and HVs, plant, and equipment required for the construction of the Project shall also apply to the decommissioning phase.

The decommissioning phase is anticipated to generate waste such as end of life lithium-ion batteries and associated infrastructure, such as cabling, inverters, transformers and other electrical and structural components. Most materials will be reused or recycled at a facility lawfully able to accept them. Any waste that cannot be reused or recycled would be collected by a licenced contractor and disposed of at a site lawfully able to accept it.

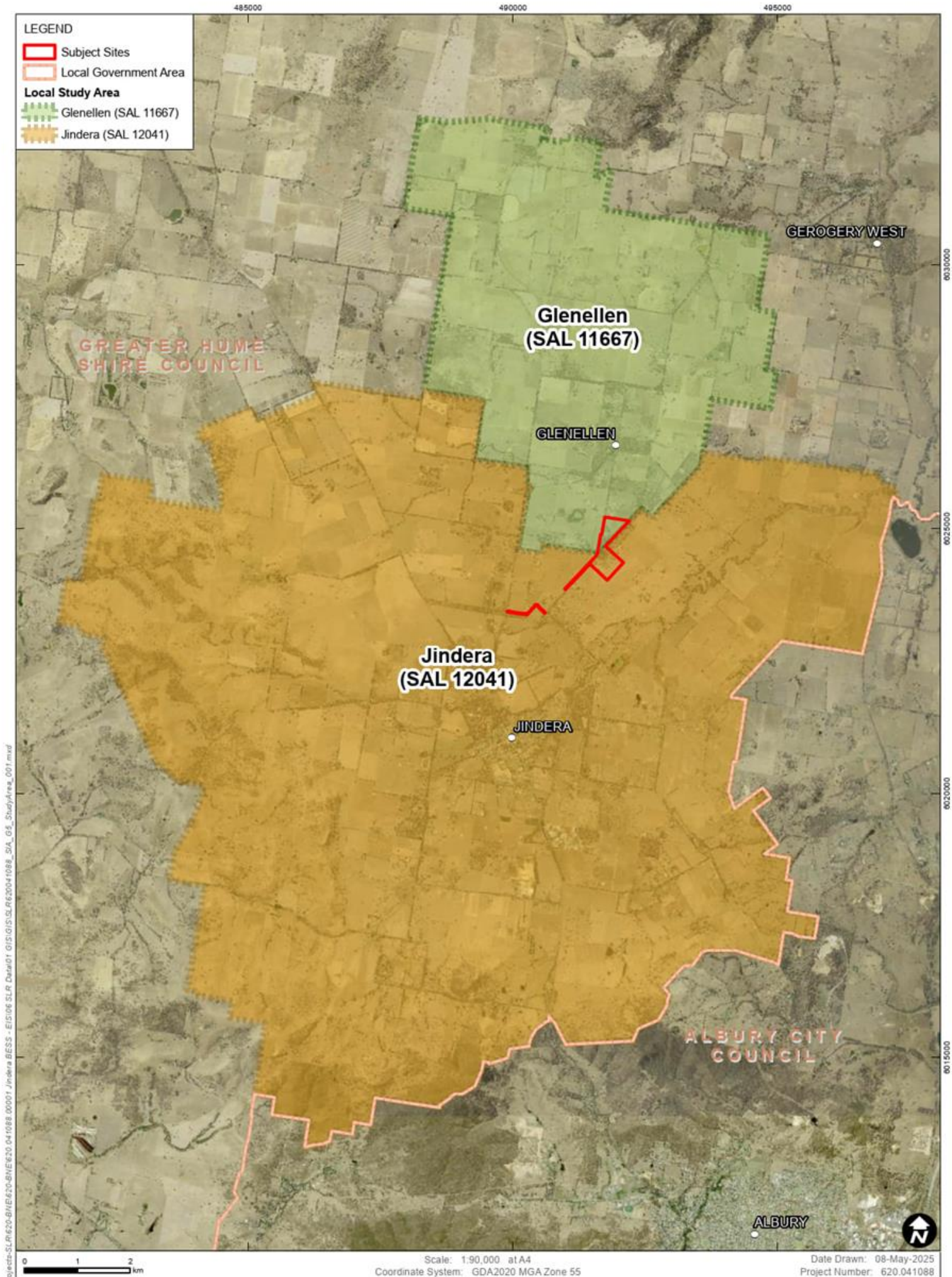
1.5 Social locality

The SIA study area has been slightly amended from what was proposed in the scoping report. The Albury SA3 has been removed, and the Regional Study Area now comprises the LGAs of Greater Hume and Albury. The Study areas are shown in Figure 5 and described below:

- **Local Study Area (LSA):** this includes the suburbs of Jindera (ABS Suburbs and Localities (SAL) area code SAL12041) and Glenellen (SAL area code SAL11667), where residents are likely to experience direct impacts from the Project, such as effects on local amenity and traffic.
- **Local Government Area (LGA):** covering the Greater Hume Shire LGA and the Albury LGA, this area provides the broader strategic policy and socioeconomic context for the Project. Residents here may encounter indirect impacts, including employment opportunities, workforce accommodation needs, and changes in service accessibility.

Together, these study areas define the social locality, capturing socioeconomic and demographic characteristics at the local, LGA, and regional levels.





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1.5.1 Cumulative impacts in the LSA:

The Local Study Area has experienced significant renewable energy development activity, with two large-scale solar farms (Jindera Solar Farm and Glenellen Solar Farm) in various stages of development on land surrounding the project site. These projects, with capacities of 150MW and 200MW, respectively, have meant the local community has already participated in multiple consultation processes, planning approvals, and environmental assessments over the past five years.

This engagement history has shaped community expectations and perceptions regarding renewable energy infrastructure. As both solar projects progress through construction, residents within the LSA will experience the cumulative effects of concurrent or sequential construction activities, potential construction workforce presence, and changes to local visual amenity across multiple viewsheds.

Once operational, the combined presence of these renewable energy facilities will permanently alter the area's landscape character, representing a substantial change from its historically agricultural setting.

Understanding this context is important for considering the effects of consultation fatigue and cumulative development impacts when assessing the community's capacity to absorb additional change.

2.0 Methodology

The methodology adopted for this SIA meets the requirements of the SIA Guideline and applies the following principles:

- Life-cycle focus: understanding likely impacts (including cumulative impacts) at all project stages, from construction through to decommissioning.
- Material: focusing on those impacts that matter the most for people and/or pose the greatest risk/opportunity to those expected to be affected.
- Proportionate: ensuring that the scope of the SIA corresponds to the outcomes of the SIA Scoping Report.
- Integrated: using and referencing information and findings of other technical assessments.

2.1 Review SIA Scoping Report

The SIA Scoping Report was reviewed, and any potential changes associated with project refinement of initial stakeholder feedback were noted and incorporated into the methodology for this SIA. Based on the SIA Scoping Report, the following potential social impacts have been identified to be considered in this SIA:

- Construction phase amenity impacts on residential receivers, including noise, vibration, dust and potential sleep disturbance.
- Potential stress and anxiety for residents related to construction activities, particularly for vulnerable community members.
- Loss of Aboriginal and non-Aboriginal cultural heritage values due to construction activities and site preparation works
- Access to local accommodation and services during construction.



- Health and safety risks associated with construction traffic and heavy vehicle movements on local roads and ongoing fire risks.
- Perceived changes to local community character and landscape resulting from reduced agricultural land and associated activities in the local area.
- Potential cumulative impacts on community wellbeing from multiple construction activities occurring simultaneously.
- Operational noise impacts on nearby sensitive receivers and associated health effects.
- Long-term benefits to community wellbeing through improved energy security and reliability.

These issues will be investigated in detail through the SIA process, particularly the impacts on vulnerable groups.

2.2 Social Baseline

The preliminary social baseline from the SIA Scoping Report was enhanced to understand the social characteristics of the social locality and suit the required level of assessment. Key actions included:

- Identify indicators relevant to the eight social impact categories.
- Determine appropriate measures for each indicator.
- Collect data from a range of publicly available sources, including:
 - The Australian Bureau of Statistics (ABS) 2021 Census.
 - NSW Government health, crime, transport and population projection data.
 - Greater Hume Shire Council and City of Albury websites.
- Desktop review of existing social infrastructure.
- Review of local and regional planning documents.

2.3 Consultation

For the most part, community and stakeholder engagement activities were incorporated with broader EIS consultation activities to address the identified risk of over-consulting and community and stakeholders experiencing engagement fatigue. Multiple methods were utilised to provide opportunities to participate:

- EIS and SIA Stakeholder interviews with key informants and representatives.
- Community drop-in session and pop-up.
- Online surveys and feedback mechanisms.
- One-on-one meetings with directly affected stakeholders.

2.4 Impact assessment

Social impacts identified in the scoping phase were validated and re-assessed through data triangulation – the application of multiple data sources to understand the dimensions of the impact.



The dimensions of each social impact were investigated by:

- Understanding the key components and activities of the project contributing to the impact.
- Contextualising the project in its strategic and regulatory setting.
- Considering the characteristics of communities in the social locality likely to be affected.
- Identifying links to outcomes of various other technical studies prepared for the EIS.
- Understanding the outcomes of stakeholder and community engagement.

2.5 Evaluation of Significance

The overall significance rating will be determined using the social impact significance matrix provided in the SIA Guideline and shown in Table 1. A detailed description of the impact criteria is provided on page 12 of the SIA Guideline Technical Supplement.

Table 1 Social Impact Significance Matrix

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

2.6 Cumulative impacts

Cumulative impacts will be assessed by:

- Identifying other approved or proposed projects in the social locality.
- Analysing the temporal and spatial overlap of impacts.
- Considering the community's experience with past projects.
- Evaluating the potential combined effects on social impact categories.
- Assessing the community's capacity to adapt to cumulative change.

2.7 Development of mitigation and enhancement measures

Mitigation and enhancement measures will be developed for impacts rated medium or higher significance through:

- Refinement of stakeholder suggestions and recommendations.
- Review of best practice social impact management strategies.



- Integration with other EIS mitigation measures.
- Consideration of implementation feasibility and effectiveness.
- Development of monitoring and adaptive management approaches.

3.0 Policy context

Table 2 outlines the project's regional and local policy context as relevant to the SIA.

Table 2 Local and regional policy context

Policy	Overview	Relevance to the SIA
Riverina Murray Regional Plan 2041	The Riverina Murray Regional Plan 2041 is the NSW Government's framework to guide the region's development through 2041. It aims to establish the area as a hub for sustainable agriculture, renewable energy, and vibrant communities. Key priorities include economic diversification, infrastructure enhancement, environmental protection, housing development, and cultural preservation, with a particular focus on Indigenous heritage and community wellbeing.	• Housing: Assessment needed of project's impact on local housing availability and affordability, particularly regarding temporary workforce. • Infrastructure: Evaluation required of project's impact on local roads and community infrastructure. • Agriculture: Need to assess compatibility with nearby farming activities and potential impacts on rural lifestyle. • Culture: Requires culturally sensitive engagement, especially with Indigenous communities regarding heritage sites.
Greater Hume Community Strategic Plan 2022 - 2032	The Plan envisions a sustainable and prosperous Greater Hume through economic growth, infrastructure, and community wellbeing. It's built on principles of Inclusivity, Consultation, Accountability, Liveability, and Growth, with focus areas each having specific outcomes and indicators: • "Community Prosperity and Wellbeing" targets vibrant, growing towns and responsible business, measured by community perception and development metrics. • "Sustainable Growth and Development" balances infrastructure with environment, focusing on wastewater, clean energy, and recycling, tracked through public satisfaction. • "Accessible and Connected Transport" aims for well-maintained networks across urban and rural areas, guided by road quality satisfaction. • "Responsive and Inclusive Governance" ensures open Council	• Community Character: Evaluation needed of impacts on rural lifestyle and local amenity. • Infrastructure: Assessment of potential strain on local community services. • Community Benefits: Identification of potential local economic and partnership opportunities.



Policy	Overview	Relevance to the SIA
	decision-making, measured by leadership satisfaction. These areas form Greater Hume's development roadmap, aligning growth with community goals.	
Greater Hume Local Strategic Planning Statement 2018	The Greater Hume Local Strategic Planning Statement (2020) (the LSPS) provides direction for Greater Hume Shire Council's social, environmental, and economic land use vision for the next 20 years through a series of key planning priorities and actions. The LSPS has the vision of "Over the next 20 years Greater Hume will leverage the area's agricultural strengths to generate economic and social growth opportunities that continues to recognise the underlying agricultural value and rural strengths.	• Housing and community character: Assessment of impacts on property values and rural lifestyle. • Infrastructure capacity: Evaluation of effects on community facilities and services. • Community benefits: Analysis of potential local economic opportunities and community contributions. • Township growth: Assessment of the Project's influence on Jindera's planned growth.

4.0 Consultation

4.1 Community Consultation: Jindera and Glenellen Solar Farms

As noted in section 1.5.1, the Jindera and Glenellen Solar Farm proponents have delivered consultation programs in the LSA over the past five years. The approaches and information gathered during these programs provide a wealth of additional social context and further depth to the outcomes gathered as part of the Project consultation.

Jindera Solar Farm

The Jindera Solar Farm proponent first engaged in direct, face-to-face consultation with the closest neighbours, gradually extending outward between June 2018 and June 2019. They used a combination of door-knocking, open houses, newsletters, and digital communication. They documented feedback and made specific project modifications in response to community concerns, particularly regarding visual impacts and transmission infrastructure. The proponents continue to engage as the project progresses through a modification of existing approvals for design refinements in response to community feedback.

Glenellen Solar Farm

The proponent engaged with 42 households within a 5km radius between January 2018 and September 2020, successfully meeting with 38 of these households. The majority (27) had no material issues with the project, while 9 expressed significant concerns. They used individual engagement and broader community outreach through newsletters, media, and digital platforms. The project made specific design modifications in response to feedback, including increased setbacks, deeper vegetation screening buffers, and retention of existing vegetation features.



4.1.1 Common Social Issues in the Area

Visual Amenity Impacts

Visual impacts emerged as the predominant concern across both solar farm projects, reflecting the significant importance residents place on rural landscape values and viewsheds. The consistent concerns suggest that in this rural setting, preservation of landscape character is a deeply held community value, and future projects should prioritise visual impact assessments and mitigation measures from the earliest stages of design.

Property Values

Property value impacts represented a significant concern across both projects, reflecting residents' financial anxieties about renewable energy development in their vicinity. This widespread concern indicates a need for transparent information about property value trends in areas with established renewable energy projects. It suggests that financial impacts remain a key social consideration for communities.

Agricultural Land Use Change

The conversion of agricultural land to solar energy production raised concerns in both project areas, reflecting the community's connection to farming traditions and food production. These consistent concerns highlight the community's strong cultural and economic connections to agricultural land use, suggesting that future projects should carefully consider agricultural capability assessments and opportunities for complementary land uses.

Traffic and Road Impacts

Traffic impacts, particularly during the construction phase, emerged as a significant concern for both projects, reflecting the rural road network's limitations and residents' desire for peaceful surroundings. This common concern highlights the importance of comprehensive traffic impact assessments and management plans, particularly given the cumulative impacts of multiple projects utilising the same road infrastructure.

Environmental Considerations

A range of environmental impacts were raised across both projects, including water runoff, dust generation, heat island effects, and potential microclimate changes. These environmental concerns reflect the community's understanding of landscape interconnections and sensitivity to ecological changes, suggesting that future projects should incorporate comprehensive environmental assessments that address these local concerns.

4.2 Project Consultation

Recognising the challenge of "engagement fatigue" from previous energy projects in the area, particularly solar farms, the consultation program established clear objectives:

- Engage interested stakeholders.
- Understand community concerns and perceptions.
- Gain Jindera-specific insights regarding community values and expectations.



Consultation with stakeholders has refined the project and informed the EIS and SIA development. Two engagement levels were incorporated:

- Broader EIS consultation with the Jindera and Glenellen communities throughout the EIS preparation, with outcomes incorporated into the analysis of project-related social impacts.
- Targeted SIA engagement through focused stakeholder interviews to understand their project involvement, perceived benefits, concerns, and potential impacts across planning, construction, and operational phases. Interviews included stakeholders from:
 - Greater Hume Council.
 - NSW Rural Fire Service.

Attempts to arrange interviews with a local doctor at Jindera clinic, Albury Police station, and a nearby real estate agency received no responses.

4.2.1 Consultation Activities

SLR Consulting and GDA implemented a comprehensive engagement program for the Jindera BESS Project, as detailed in the project consultation report. This program used newspaper advertisements and tailored communications to political representatives, government departments, and sensitive receivers, addressing specific concerns, including traffic, emergency response, and community partnerships. Key activities included:

- Community pop-up (10 October 2024): Held near Jindera's IGA supermarket to provide project updates and gather feedback.
- Drop-in session (12 October 2024): Hosted at Jindera School of Arts to offer detailed information and address questions.
- Online survey: Designed for broad participation to capture environmental, social, and economic concerns.
- Individual SIA stakeholder meetings: Conducted with key stakeholders for personalised, detailed discussions.

The program engaged approximately 40 participants across pop-up and drop-in events, establishing a foundation for ongoing collaboration between GDA and Greater Hume Shire residents.

4.2.2 Issues and outcomes

Table 3 provides an overview of the consultation outcomes and where they are addressed in the SIA.



Table 3 Issues and outcomes as relevant to the SIA

Theme	Interest and/or identified issue	Stakeholders who raised this	Also raised in the Jindera and Glenellen Consultations?	Addressed in other technical assessment	Where addressed in the SIA
Traffic and transport	- Increased heavy vehicle movements during construction. - Safety concerns at site access points. - Need for road upgrades, particularly Ortlipp Road and Urana Road. - Turn-around areas for large vehicles. - Cumulative traffic impacts from nearby developments.	- Local residents - Local bus driver - Sensitive receivers - Transport for NSW.	Yes - concerns about construction traffic on local transport networks were previously raised.	Traffic Report addressing intersection performance, recommended routes, and road upgrades. Includes analysis of cumulative impacts from adjacent solar farm developments.	Section 6.2.1
Social impact and local benefits	- Job creation and local procurement opportunities. - Accommodation for construction workforce. - Distribution of project benefits. - Voluntary Planning Agreement (VPA) funding allocation. - Support for community groups (sports clubs, museums, Jindera Community Hub). - Infrastructure improvements (swimming pool, roads, telephone network).	- Local residents - Greater Hume Council - Construction workers - Property valuers.	Yes - opportunities for procurement of local goods and services were previously noted.	Economic Impact Assessment forecasting \$28 million in economic output and 87 direct and indirect jobs. Analysis of local procurement and employment opportunities.	Sections 6.2.1 (employment impacts), 6.2.3 (VPA benefits), and 7.0 (impact enhancement measures)
Emergency management	- Fire risks and mitigation strategies. - Need for water tanks (25,000+litres). - Emergency vehicle access and gates.	- Local residents - Rural Fire Service (RFS) members	Not specifically mentioned in previous consultations.	Bushfire Risk Assessment and Hazards and Risk Assessment detailing	Section 6.2.3



Theme	Interest and/or identified issue	Stakeholders who raised this	Also raised in the Jindera and Glenellen Consultations?	Addressed in other technical assessment	Where addressed in the SIA
	- Fire suppression training and drills with local brigades. - Use of gravel to reduce grass fire risk. - Equipment and training for Rural Fire Service.	- NSW Rural Fire Service - Sensitive receivers.		firebreaks, buffer zones, fire-resistant materials, suppression systems, and emergency response planning.	
Environmental impacts	- Noise from cooling systems during operation. - Construction noise. - Native vegetation and wildlife impacts. - Protection of squirrel glider populations. - Cumulative impacts from nearby developments. - Water resources and hydrology. - Erosion and sediment control.	- Local residents - Sensitive receivers - Environmental groups - University lecturer.	Yes - concerns regarding potential impacts on visual amenity, noise, and environmental impacts were previously raised.	Noise and Vibration Assessment, Night Light Impact Assessment, ecological assessments, erosion and sediment control plans.	Sections 6.2.1 and 6.2.3
Community benefit sharing	- Transparency in VPA fund allocation. - Funding for local facilities (swimming pool, sports clubs, museums). - Education and awareness programs. - Community partnerships. - Previous disappointments with solar farm community commitments.	- Local residents - Greater Hume Council - Community groups.	Not specifically mentioned in previous consultations.	Not specifically addressed in technical assessments but relates to social and economic contributions.	Section 6.2.3
Health and safety	- Health risks associated with battery facility. - Electromagnetic fields.	- Local residents - Sensitive receivers.	Not specifically mentioned in previous consultations.	Hazards and Risk Assessment addressing EMF compliance, fire	Section 6.2.3



Theme	Interest and/or identified issue	Stakeholders who raised this	Also raised in the Jindera and Glenellen Consultations?	Addressed in other technical assessment	Where addressed in the SIA
	- Battery fire risks. - Hazardous materials management.			suppression systems, separation distances, and containment measures.	
Grid stability and energy supply	- Contribution to network reliability. - Power outage mitigation. - Benefits to local electricity supply. - Integration with renewable energy sources.	- Local residents - Energy industry stakeholders.	Not specifically mentioned in previous consultations.	Project description and objectives in EIS focus on grid stability benefits.	Section 6.2.3
Cumulative impacts	- Concerns about multiple energy projects in the area. - Combined effects on infrastructure, services, and environment. - Relationship to Jindera and Glenellen Solar Farms.	- Local residents - Greater Hume Council - NSW Rural Fire Service.	Yes - local landowners expressed opposition to development of solar and BESS infrastructure on high-value agricultural land.	Traffic Report and Visual Impact Assessment addressing cumulative effects. Other technical assessments consider adjacent developments.	Through the SIA and Section 6.3
Property values	- Concerns about diminished landscape and vistas - Impact on property values.	- Local residents - Property valuers.	Yes - concern regarding impact on land values due to diminished landscape and vistas.	Economic Impact Assessment addressing regional economic effects and property market considerations.	Section 6.2.2
Visual impacts	- Visual impact of the facility. - Transmission line visual intrusion. - Need for screening vegetation.	- Local residents - Sensitive receivers	Yes - concerns about visual impacts when walking and diminished landscape	Visual Impact Assessment rating impact as "Minor-Negligible" with	Section 6.2.2 and Section 6.2.3



Theme	Interest and/or identified issue	Stakeholders who raised this	Also raised in the Jindera and Glenellen Consultations?	Addressed in other technical assessment	Where addressed in the SIA
	Night lighting effects.	Greater Hume Council.	were previously raised.	screening recommendations. Night Light Impact Assessment confirming compliance with standards.	
Decommissioning and recycling	- End-of-life battery management. - Recycling of lithium-ion batteries. - Site rehabilitation.	Local residents.	Not specifically mentioned in previous consultations.	Project description addressing decommissioning plans and waste management approaches.	Section 6.2.4
Aboriginal cultural heritage	- Protection of cultural heritage sites. - Consultation with First Nations people. - Potential disturbance of undiscovered heritage items.	- Aboriginal organisation representatives - Survey respondents.	Not specifically mentioned in previous consultations.	Aboriginal Cultural Heritage Assessment identifying sites, consultation process, and management recommendations.	Section 6.2.2
Water resources	- Water supply with Jindera's projected growth. - Extension of water supply line to BESS site. - Sustainable water management.	Greater Hume Council.	Not specifically mentioned in previous consultations.	Project description addressing water requirements and management during construction and operation.	Screened out of the SIA as effectively managed with council.



5.0 Social baseline

The social baseline provides an understanding of the social character of the people and places the project is likely to affect. This analysis has been tailored according to the potential impacts identified within each level of the project's social locality.

5.1 Regional setting

5.1.1 Greater Hume Shire

Greater Hume Shire had a population of 11,149 residents as of the 2021 census. The area is known for its rich agricultural heritage, scenic rural landscapes, and strong farming sector, particularly in sheep and cattle production. The Shire features several notable characteristics:

- **Historic towns and heritage sites:** Heritage-rich towns like Holbrook, Henty, and Culcairn showcase historic buildings and host annual events celebrating local culture and rural traditions.
- **Agricultural events:** The region is renowned for the Henty Machinery Field Days, a significant agricultural event attracting attendees from across Australia.
- **Natural landscapes:** The region offers abundant natural beauty, with popular spots like Woomargama National Park.
- **Cultural trails:** The Shire features several historic trails guiding visitors through locations significant to Indigenous heritage and early European settlement.

Population forecasts

Greater Hume Shire is projected to experience steady population growth over the next two decades. Between 2021 and 2041, the Shire's population is expected to increase from 10,883 to 13,459, reflecting an annual growth rate of 1.2%. This slightly outpaces the overall growth rate projected for New South Wales (0.95% annually).

Key industries

Greater Hume Shire has a diversified economy anchored by agriculture, manufacturing, and construction. The local government area supports 3,512 jobs and has an annual economic output of \$1.394 billion, making it a notable economic player in southern NSW.

Major settlements

The Shire has several key settlements, each with its unique character:

- **Jindera:** Located approximately 3 km from the Project with a population of 2,722 (2021 census), Jindera combines a rural lifestyle with easy access to employment and amenities in nearby Albury.
- **Culcairn:** Known as the "Town in the Middle" with 1,112 residents (2021 census), located approximately 33 km from the Project.
- **Henty:** Located approximately 56 km from the Project with 1,225 residents (2021 census), Henty is famous for its Machinery Field Days.
- **Holbrook:** Known as "Submarine Town" with 1,251 residents (2021 census), located approximately 40 km from the Project.



- **Walla Walla:** With 814 residents (2021 census), located approximately 20 km from the Project.

5.1.2 City of Albury

The City of Albury had a population of 56,149 residents according to the 2021 census. Key characteristics include:

- **Murray River and outdoor recreation:** Offering beautiful parks, riverfront trails, and water activities.
- **Historic and cultural landmarks:** Including the heritage-listed Albury Railway Station and Albury Botanic Gardens.
- **Arts and cultural scene:** Featuring MAMA (Murray Art Museum Albury) and various festivals throughout the year.
- **Transport and commerce hub:** Positioned on the Hume Highway with a regional airport, serving as a central point for transport and logistics.
- **Education and health services:** Providing services through Charles Sturt University, Albury Base Hospital, and several high-quality schools.

Population forecasts

Albury is projected to experience robust population growth, with its population expected to increase from 55,670 in 2021 to 76,341 by 2041, reflecting an annual growth rate of 1.9%. This significantly outpaces the NSW average of 0.95%.

Key industries

Albury functions as a major regional hub with a diverse economic base, including health (Albury Base Hospital), education (Charles Sturt University), manufacturing, retail, and transport/logistics. Albury supports 29,487 jobs and has an annual economic output of \$10.820 billion.

5.2 Local social baseline characteristics

This section compares the local area suburbs of Jindera (population 2,721) and Glenellen (population 130) with the Greater Hume Shire LGA and the Albury region to provide context for the assessment of local impacts.

5.2.1 Demographics

Gender

Jindera (male: 49.8%, female: 50.2%), Greater Hume Shire (male: 50.7%, female: 49.3%) and Albury (male: 48.7%, female: 51.3%) all have relatively even gender splits that align with the NSW average (49.4% male, 50.6% female).

Aboriginal and Torres Strait Islander People

The Project is located in the region of the Albury and District Local Aboriginal Land Council (LALC). Jindera (3.0%), Greater Hume (3.4%) and Albury (3.7%) all have Aboriginal and Torres Strait Islander populations close to the NSW average (3.4%).



Age Distribution

- **Jindera:** Median age of 38, comparable to the NSW median. The population is relatively young, with a significant proportion (24.5%) in the 0-14 age range, suggesting a family-oriented community.
- **Glenellen:** Median age of 55, nearly 20 years about the NSW median and older than Jindera and the LGAs, suggesting an established older community in the later stages of their working life.
- **Greater Hume Shire:** Median age of 44, with the 60+ population making up about 29.7%, indicating a mix of families and retirees.
- **Albury:** Median age of 40, reflecting a balanced distribution typical of urban areas, with a mix of working-age residents, families, and retirees.

5.2.2 Housing and Accommodation

Housing Characteristics

Jindera has 828 occupied private dwellings, representing 94.2% occupancy, which is above both Greater Hume Shire (87.8%) and Albury (91.3%). The predominant dwelling type in Jindera is the separate house, comprising 97.8% of dwellings.

Family households represent 82.1% of all Jindera households, higher than Greater Hume Shire (72.7%) and Albury (65.9%), emphasising a community-oriented household structure.

Housing Affordability

The median weekly rent for postcode 2642, in which Jindera is located, was \$400 per week in January 2025, significantly lower than NSW's median of \$675. Rent also fell 8% in the previous month. The median rent in 2640, which encompasses Albury, was \$480 and had experienced a month-on-month increase of 6.7%.

Short-term Accommodation

Approximately 2,909 rooms are available across the regional study area, with the Albury-Wodonga urban area accounting for the majority. Albury serves as the primary accommodation centre with 1,404 rooms. Occupancy rates average 72% year-round in urban centres, while regional areas experience seasonal fluctuations.

The highest accommodation availability occurs in June and July (approximately 979 rooms), with the lowest availability in October and November (approximately 743 rooms).

5.3 Employment and Industry

5.3.1 Employment by Industry

- **Jindera:** Key industries are manufacturing, construction, and retail.
- **Glenellen:** Grazing and transport-oriented including sheep farming and grazing and road freight transport.
- **Greater Hume Shire:** Agriculture, forestry, and fishing are the largest industries, followed by manufacturing, health care, and education.
- **Albury:** Diverse profile with major employment in health care, retail, and education, reflecting its role as a regional service hub.



5.3.2 Occupations

The top three occupations in the Greater Hume LGA are:

- Managers 29.8%
- Technicians and Trades Workers 16.0%
- Labourers 12.3%.

Machinery Operators and Drivers (8.8%) is the third least common occupation in the LGA. The employment profile in Greater Hume aligns with the region's agricultural-intensive economy.

The top three occupations in the Albury LGA are:

- Professionals: 20.9%
- Community and Personal Service Workers: 14.8%
- Technicians and Trades Workers: 14.4%.

Labourers (8.4%) and Machinery Operators and Drivers (5.4%) are the two least common occupations in the Albury LGA. The employment profile in Albury LGA aligns with its role as a regional hub and service centre for surrounding communities.

5.3.3 Employment Rates

Based on Small Area Labour Markets data for September 2024:

- **Albury Surrounds SA2 incorporating Jindera and Glenellen:** 1.8% unemployment
- **Greater Hume Shire LGA:** 1.8% unemployment rate
- **Albury LGA:** 3.9% unemployment rate.

All geographies exhibit very constrained labour markets with rates well below what is considered a sustainable rate of full employment (4.25-4.5%). Areas with employment rates lower than full employment can experience wage inflation and worker shortage as employers compete for local resources.

5.4 Community and Culture

5.4.1 Volunteering and Community Participation

Jindera (25%) and Greater Hume Shire (26.7%) have high volunteering rates compared to the national average of 14.1%, reflecting a strong community spirit and active participation in local initiatives.

Approximately 12% of residents in both Jindera and Greater Hume Shire provided unpaid assistance to a person with a disability, health condition, or due to old age in the two weeks before the census.

5.4.2 Household Mobility

Jindera and Glenellen both show relatively stable population mobility in line with the Greater Hume LGA. 75.4% of people in Glenellen and 77.0% of people in Jindera had the same addresses as one year ago (LGA: 79.4%).



Five-year householder mobility is slightly different, with 54.8% of people in Jindera and 66.7% of people in Glenellen having the same address as five years ago (LGA: 58.4%), which aligns with Jindera being a family growth area and Glenellen exhibiting an older, more established population.

5.4.3 Transport and Connectivity

Over 90% of households in Jindera own at least one vehicle, with many having two or more. Public transport options are limited in Jindera, with no direct train services and minimal bus routes connecting to larger centres like Albury.

Glenellen is serviced by a network of sealed and unsealed rural roads of varying conditions including the North-south Walla Walla Jindera Road, and Linder Road and Ortlip Road which will provide connections to the project.

Jindera is serviced by the north-south Urana Road, providing connections to employment and services in Albury as well as to the Hume Highway.

5.4.4 Health and Wellbeing

Approximately 4.5% of residents in Jindera report needing assistance with core activities, slightly lower than the Greater Hume Shire (5.3%) and Albury (5.5%). The top three chronic health conditions commonly reported across these areas include arthritis, asthma, and heart disease.

5.4.5 Socioeconomic Indicators

Jindera has an Index of Relative Socio-Economic Disadvantage (IRSD) score of 1,020, placing it in the 7th decile nationally. This indicates a lower level of socioeconomic disadvantage compared to many other areas.

Greater Hume Shire has an IRSD score of 1,002, placing it in the 6th decile, suggesting a moderate level of disadvantage consistent with the mixed economic activities in the area.

5.5 Summary of key findings relevant to the Social Impact Assessment

The social baseline analysis reveals several key considerations for the Jindera BESS Project's Social Impact Assessment:

- **Population growth and demographic change:** Greater Hume Shire and Albury are experiencing population growth above the NSW average, which may increase demand for energy infrastructure while potentially increasing the number of people affected by the project.
- **Strong community connections:** High volunteerism rates in Jindera (25%) and Greater Hume Shire (26.7%) indicate strong community bonds and social capital. The project should consider potential impacts on these community networks and how to engage effectively with this active community.
- **Family-oriented community:** Jindera has a significantly higher proportion of family households (82.1%) than state and national averages, with many young children (24.5% aged 0-14). This demographic profile suggests that particular consideration should be given to the potential impacts on family life and children. Conversely, Glenellen exhibits a much older demographic profile, noting a population that may be more susceptible to health and wellbeing impact.



- **Housing affordability:** The relatively affordable housing in the region (lower rents and mortgage payments compared to NSW averages) is a key community asset that should be preserved. However, it should be noted that prices have seen substantial increases in the last five years. The project should consider potential housing availability and affordability impacts, particularly during the construction phase.
- **Limited public transport access:** High vehicle ownership (>90% of households) and limited public transport options indicate a car-dependent community. The project should carefully assess traffic impacts and the effects on community access to essential services.
- **Regional economic context:** The project intersects with a diverse regional economy spanning agriculture, manufacturing, and services. Understanding potential impacts on and opportunities for local businesses will be important, particularly given the area's slightly lower unemployment rates compared to state averages.
- **Aboriginal and Torres Strait Islander considerations:** With Aboriginal populations in Jindera (3.0%), Greater Hume (3.4%), and Albury (3.7%) close to the NSW average, the project should ensure appropriate consultation with Indigenous communities and consideration of potential impacts on cultural heritage.
- **Emergency services planning:** Given the rural context and bushfire risks identified in technical assessments, coordination with local emergency services will be essential for project planning and community safety.

These findings provide context for evaluating potential social impacts and developing appropriate mitigation measures and benefit enhancement strategies for the Jindera BESS Project.

5.5.1 Social infrastructure

The relatively small construction workforce and short-term duration of the peak workforce mean that project impacts on social infrastructure are likely limited to any interactions with essential services such as police, fire and hospitals in the event of an emergency.

- **Albury Wodonga Health:** Situated in Albury, about 21 km from Glenellen, this major regional hospital offers comprehensive healthcare services, including emergency care, surgery, and specialist consultations.
- **NSW Police Force:** The nearest police stations are in Walla Walla and Albury, providing law enforcement and community safety support.
- **NSW Ambulance Service:** Albury ambulance station serves as the primary dispatch point for ambulance services, ensuring response during medical emergencies that require immediate transport.
- **NSW Rural Fire Service (RFS):** Given the rural setting, collaboration with the local RFS brigade is essential for fire safety and emergency response planning. The project is located in the South Western District, which is managed out of Albury. The closest RFS brigades are:
 - **Jindera Rural Fire Brigade:** 38 Urana Road, Jindera, NSW 2642.
 - **Glenellen:** Glenellen Rd, Glenellen NSW 2642.



6.0 Impact assessment and prediction

This section provides a detailed assessment of social impacts identified through scoping and consultation.

6.1 Interaction with other technical studies

Table 4 provides a summary of the outcomes of other technical assessments as relevant to the SIA.

Table 4 Summary of interactions with other technical assessment outcomes

Technical Assessment	Relevance to the SIA
Economic Impact Assessment	The project will generate approximately \$28M in direct and indirect regional economic output during its 10-month construction phase, creating 87 regional jobs (including an estimated average of 47 direct onsite for 10 months), while its operational phase will contribute approximately \$13M in annual regional economic output and create 7 regional jobs. At the state level, the project will generate \$40M in construction-related economic output with 132 jobs, and during operations will contribute \$17M in annual output with 17 jobs. However, increased demand for short-term accommodation may affect housing availability and pricing for residents, and the demand for skilled workers across multiple renewable energy projects could lead to labour shortages in other sectors.
Visual Impact Assessment	Visual impact was assessed as Minor-Moderate when viewed in reference to the surrounding landscape character. Substantial vegetation screening at the periphery of the site will help maintain acceptable visual outcomes for the community.
Noise and Vibration Assessment	Construction noise impacts will be limited to standard working hours. Operational noise is expected to comply with NSW Noise Policy for Industry standards. A 4 metre noise wall is planned for the northern and western boundaries, and silencing treatments will be applied to battery containers and inverters. Designated complaint channels and continuous noise monitoring will ensure ongoing compliance and community responsiveness.
Night light impact assessment	Light spill is expected to remain within standards with no exceedance of the 1 lux limit during curfew hours. Lighting fixtures will be directed downward with full cut-off luminaires to prevent upward light emission, minimising impacts on nearby residents and nocturnal wildlife.
Bushfire	The project includes the installation of firebreaks, cleared buffer zones, fire-resistant materials, onsite fire suppression systems, and a up to 60 metre easement from the BESS site to the substation. There is a commitment to collaboration with local fire services and community engagement regarding risk mitigation measures.
Historic Heritage Impact Assessment	No significant historic heritage value was identified at the subject sites. A protocol is established to cease work and engage a heritage consultant if unanticipated relics are discovered during construction. Landscaping measures will minimise visual impacts on nearby heritage sites.
Hazards and Risk Assessment	Electromagnetic Field (EMF) levels comply with national safety guidelines. Fire suppression systems, adequate separation distances, and containment measures are designed to prevent fire spread. The project adheres to industry standards such as National Fire Protection



Technical Assessment	Relevance to the SIA
	Association (NFPA) 855 and UL Solutions 9540A. Open communication about safety measures aims to foster community trust and address concerns.
Traffic Report	The project will generate approximately 15 daily return trips during construction (up to 31 during peak periods). Existing intersection configurations are deemed sufficient to accommodate traffic from this project and two adjacent approved solar farm developments. Recommendations include sealing a section of Ortlipp Road, preparing a construction traffic management plan, and conducting dilapidation surveys.
Agricultural	The site is classified as Class 4 Land and Soil Capability, and a Reduced Assessment (Level 2) found no significant impact on agricultural lands. The erosion risk rating was determined to be very low, requiring only general erosion control measures.
Aboriginal Cultural Heritage	The project area has social, cultural, and spiritual significance to the Aboriginal community, with connections to Table Top Mountain and waterways. Mitigation measures include fencing for identified sites, archaeological testing where necessary, cultural monitoring during initial ground disturbance, cultural inductions for all site workers, and development of a detailed care and control strategy in consultation with Registered Aboriginal Parties.

6.2 Social impacts

6.2.1 During construction

Amenity impacts during construction activities, including, but not limited to, noise, vibration, dust, and odour affect residents' wellbeing and the way they use and enjoy private space.

Intensity or scale: Construction activities for the Jindera BESS project, including site preparation, earthworks, construction of hardstand areas, installation of battery enclosures, and construction of overhead 330 kV transmission lines. These activities will involve using heavy machinery, construction vehicles, and equipment that generate noise, vibration, and dust over approximately 10 months.

Extent: Seven noise-sensitive receivers (one being the project host) located within 1.1 km of the Project area and households along haul routes.

Duration: Temporary impacts over the 10-month construction period.

Level of concern/interest: Local residents expressed concerns regarding construction noise and dust during community consultation activities. During the pop-up engagement event and drop-in session, residents specifically mentioned concerns about noise pollution from construction activities and requested noise abatement measures.

Sensitivity or importance: Localised impacts primarily affecting sensitive receivers closest to the development, with diminishing effects as distance increases. The most significant impacts would be experienced by rural properties adjacent to the project site and along access routes that will experience increased construction vehicle traffic.

Project Considerations and Technical Assessment outcomes:

- The Noise and Vibration Assessment confirms that construction noise impacts will be limited to standard working hours:



- A 4m noise wall is planned for the northern and western boundaries to reduce noise impacts.
- Designated complaint channels will be established for noise-related feedback during construction.
- Construction activities will comply with the NSW Noise Policy for Industry standards.
- Dust suppression measures, such as water spraying, will be implemented during earthworks.
- The Construction Traffic Management Plan will designate approved routes for construction vehicles to minimise disruption.

Impact Assessment:

- **Consequence:** Minor – Amenity impacts may be noticeable to a relatively small group of nearby residents and temporarily disrupt the peaceful enjoyment of private property. However, impacts will be limited to standard working hours and managed through various noise management measures.
- **Likelihood:** Possible – While it is certain that construction impacts will occur, as they are an unavoidable consequence of the development activities. The intensity and, therefore, social response may vary depending on the success of proposed environmental management measures.
- **Overall Impact:** Medium - The combination of minor consequence and possible likelihood results in a medium overall impact rating before mitigation. This suggests that specific social impact management measures are not required outside of those other environmental technical assessments propose. However, additional measures may reduce the significance of construction amenity impacts further.

Changes to community cohesion and character due to an influx of construction workers during construction into a relatively small rural community.

Intensity or scale: The influx of approximately 80 FTE workers during the peak construction period of the Project, with workers likely being accommodated in Albury and transported to the site by bus. Their presence in local communities would be primarily limited to occasional visits to Jindera for retail and hospitality services during lunch breaks, with minimal expected interaction with Glenellen residents.

Extent: Residents of Jindera may experience limited interaction with construction workers, primarily through local retail and hospitality venues. Glenellen residents would experience minimal direct interaction with workers, as workers would be largely confined to the Project site when in that area.

Duration: Temporary impact over the 10-month construction period, with peak workforce presence (approximately 80 workers) expected for approximately 4 months. Worker presence in local communities would be intermittent and during business hours only.

Level of concern/interest: During consultation, community members expressed interest in how the workforce would be accommodated during construction. Some stakeholders suggested that the project should investigate potential workforce accommodation options. A local property valuer specifically suggested the project should "investigate potential workforce accommodation," indicating some community awareness of potential impacts from worker influx.



Sensitivity or importance: The impact would be highly localised and limited primarily to retail and hospitality venues in Jindera where workers might purchase lunch or supplies. Glenellen would experience minimal community interaction effects due to workers being confined to the Project site when in that area.

It is acknowledged that accommodating construction workers in Albury also introduces non-residents into another community. However, in the context of Albury being a significant regional centre with a population of 56,149 (2021 census), even if the entire construction workforce of 80 workers were sourced from outside the region, this would constitute only a 0.14% temporary population increase. This minimal increase would be indistinguishable from baseline population fluctuations in a regional hub like Albury, which regularly accommodates visitors, business travellers, and temporary workers across various sectors.

As such, any potential impacts on community cohesion in Albury were screened out during the scoping phase as negligible.

Project Considerations and Technical Assessment Outcomes:

- The planned accommodation of workers in Albury with bus transportation to the site significantly reduces potential community interaction.
- The Economic Impact Assessment notes that worker spending at local businesses could benefit the local economy.
- Workers will have minimal community presence in residential areas as they will be transported directly to and from the work site.
- The project plans to source approximately 75% of the workforce locally, reducing the "outside influence" factor.
- Workers will be primarily located at the Project site when in Glenellen, minimising interaction with local residents.

Impact Assessment:

- **Consequence:** Minimal - The limited interaction between construction workers and local communities (primarily through patronage of retail and hospitality venues in Jindera during lunch breaks) means that impact on cohesion and character would be negligible. The rural character and social dynamics of both communities would remain largely unchanged, with workers having a minimal presence in residential areas.
- **Likelihood:** Possible - While some interaction between workers and community members will occur, particularly at local food and retail venues in Jindera, the likelihood of these interactions meaningfully affecting community cohesion or character is reduced due to their limited nature and context.
- **Overall Impact:** Low - The combination of minimal consequence and possible likelihood results in a low overall impact rating before additional mitigation. The accommodation of workers in Albury and their transportation directly to the work site significantly reduces potential community interaction. The limited presence of workers in the community (primarily when purchasing lunch or supplies in Jindera) is unlikely to affect community cohesion or alter local character in any substantive way.



Delays and disruption to local traffic networks resulting from construction activity, including increased truck movements and heavy and oversized vehicles, affect residents' movement patterns and perceptions of safety on the road network.

Intensity or scale: Construction of the Jindera BESS project will generate approximately 3,800 inbound and 3,800 outbound vehicle trips over the 10-month construction period. This includes a mix of light vehicles for worker transportation and heavy vehicles for equipment and material delivery. At peak construction, the project is expected to generate around 31 daily return trips (23 light and eight heavy vehicle trips). These vehicles will primarily use Urana Road, Lindner Road, and Ortlipp Road for site access, with most heavy vehicles traveling via the Hume Motorway (M31) to Albury and using the Riverina Highway (Guinea St) offramp.

Extent: Residents of Jindera and Glenellen who regularly use the affected road network, particularly those living along or near the designated transport routes (Urana Road, Lindner Road, and Ortlipp Road). This includes local bus drivers, as identified in stakeholder consultation, who expressed concerns about construction traffic affecting their routes. Other affected populations include school transport services, agricultural vehicle operators, and general road users.

Duration: Temporary impacts over the 10-month construction period, with varying intensity depending on the construction phase. The most significant traffic impacts are expected during the peak construction period of approximately 4 months.

Level of concern/interest: Traffic concerns were prominently raised during community consultation. A local bus driver specifically discussed his route around the project and the need for road upgrades. Residents requested turn-around areas for large vehicles and expressed concerns about potential traffic disruptions during both the construction and operational phases. Transport for NSW also provided input, requesting consideration of traffic volumes, heavy vehicle routes, safety assessments, and cumulative impacts from nearby developments.

Sensitivity or importance: Localised impacts primarily affecting the roads providing direct access to the site (Ortlipp Road, Lindner Road, and Urana Road) with diminishing effects on the broader road network. The impact will be most pronounced on narrow rural roads that may not be designed for frequent heavy vehicle use.

Project Considerations and Technical Assessment outcomes:

- The Traffic Report analysed intersection performance at two study intersections and concluded that the existing road network can accommodate the traffic impacts of the proposed project and two adjacent approved solar farm projects.
- The assessment found no recurring crash patterns that would require significant safety mitigations.
- Several recommendations were made to manage traffic impacts, including sealing the section of Ortlipp Road from Glenellen Solar Farm to the site's access location and briefing the construction workforce on recommended routes with a Driver's Code of Conduct.
- The project proposes to provide bus transfers for workers to minimise traffic volumes and transit risks during construction.

Impact Assessment:

- **Consequence:** Minor - The project will introduce some additional traffic, including heavy vehicles, to local rural roads that typically experience low volumes. This increase has some potential to cause delays, create safety concerns, and



temporarily alter residents' travel patterns. However, the technical assessment indicates that the road network can accommodate this increase, and several management measures are proposed to minimise disruption. The consequence is moderated by the relatively short duration of peak impacts and the planned improvements to road infrastructure (such as sealing a portion of Ortlipp Road).

- **Likelihood:** Possible - Given the volume of construction traffic and the rural nature of the affected roads, it is possible that residents will experience some intermittent disruption to their normal movement patterns and may have concerns about road safety, particularly related to heavy vehicles on narrow rural roads.
- **Overall Impact:** Medium - The combination of minor consequence and possible likelihood results in a medium overall impact rating before additional mitigation. Introducing approximately 31 daily vehicle movements (including 8 heavy vehicles) during peak construction will be noticeable for some who reside close to the typically quiet rural road network. Residents who regularly use these roads may alter their travel behaviour in response to safety concerns, particularly when encountering large construction vehicles on narrow rural roads. While the technical assessment indicates that the road network can accommodate this increase in traffic, the social experience of this change for residents will likely be intensified when considered alongside the cumulative effects of traffic from adjacent solar farm developments.

Increased demand for temporary accommodation providers in the local area during construction results in limited accommodation options for seasonal workers, local needs, and tourists.

Intensity or scale: The Jindera BESS project will require approximately 80 workers at peak construction, with an estimated 25% (20 workers) potentially coming from outside the local area and requiring temporary accommodation. This workforce will be present over a 10-month construction period, with peak workforce numbers concentrated over approximately 4 months. These non-local workers will require short-term accommodation in the region, potentially competing with existing demand from tourists, business travellers, and seasonal agricultural workers.

Extent: Several groups could be affected by increased competition for accommodation:

- Seasonal agricultural workers who typically rely on temporary accommodation during harvest periods.
- Tourists and visitors to the region who require short-term accommodation.
- Business travellers to Albury-Wodonga.
- Local residents seeking short-term housing solutions (such as those between permanent homes or those experiencing housing vulnerability).
- Accommodation providers (hotels, motels, caravan parks) who may benefit from increased occupancy.

Duration: Temporary impact over the 10-month construction period, with peak demand during the 4-month period when the workforce reaches its maximum size. The impact may be more pronounced during existing high accommodation demand periods, such as during regional events or agricultural harvest seasons.

Level of concern/interest: During consultation, concerns were raised regarding workforce accommodation. A stakeholder specifically asked whether the project would support improvements to local accommodation, indicating awareness of potential pressure on



existing facilities. The Economic Impact Assessment noted concerns about potential impacts on housing availability and pricing for residents.

Sensitivity or importance: The impact would primarily affect accommodation providers in Albury, where most workers are expected to be housed, with minimal effects in Jindera or Glenellen due to limited existing accommodation options in these smaller communities.

Project Considerations and Technical Assessment outcomes:

- The Social Baseline study identified approximately 2,909 rooms across the regional study area, with Albury accounting for 1,404:
 - Average occupancy rates are 72% year-round in urban centres, leaving approximately 393 rooms potentially available in Albury under normal conditions.
 - The highest accommodation availability occurs in June and July (approximately 979 rooms regionwide), with the lowest in October and November (approximately 743 rooms).
- The Economic Impact Assessment noted that the peak workforce of 80 people represents a small fraction of the regional population, with an estimated 20 non-local workers needing accommodation, representing less than 1% of available rooms.
- The project plans to house workers primarily in Albury, which has substantial accommodation capacity as a regional centre.
- The project will employ approximately 75% local workers, limiting the number requiring accommodation.

Impact Assessment:

- **Consequence:** Minimal - The relatively small number of non-local workers requiring accommodation (approximately 20 at peak construction) represents only about 5% of the typically available rooms in Albury (based on normal 72% occupancy rates). This limited demand is unlikely to significantly affect accommodation availability or pricing in a regional centre like Albury with substantial accommodation infrastructure.
- **Likelihood:** Unlikely - While some pressure on accommodation is possible, during periods of already high demand, such as regional events or peak tourism seasons, the small number of workers requiring accommodation relative to the available capacity makes significant impacts on accommodation availability less likely.
- **Overall Impact:** Low - The combination of minimal consequence and unlikely likelihood results in a low overall impact rating that does not require mitigation. The relatively small number of non-local workers requiring accommodation compared to the substantial accommodation capacity in Albury suggests that impacts on overall accommodation availability will be limited.

The assessment also notes that additional construction workers in a region can add additional demands to local community services. However, owing to the relatively small cohort of non-resident workers proposed, and these workers being located in Albury when in the region, these impacts were deemed insignificant during scoping and hence screened from the assessment.



Construction activities create jobs in an emerging renewable industry that enhances economic opportunities in the community.

Intensity or scale: The Jindera BESS project will create approximately 80 full-time equivalent jobs during peak construction. This represents an injection of employment opportunities in an emerging renewable energy sector growing in regional NSW. Construction activities require various skills, including general labour, specialised trades, project management, and engineering expertise, to create diverse employment pathways.

Extent: Working-age residents in Greater Hume Shire and Albury LGAs who could potentially gain employment, particularly those with relevant skills in construction, electrical trades, or related fields. The project aims to source approximately 75% of the workforce locally, benefiting around 60 local workers at peak construction. The opportunities could be especially valuable for:

- Unemployed or underemployed residents seeking work.
- Tradespeople looking to diversify their skills into the renewable energy sector.
- Young workers seeking to enter the construction industry or gain experience in emerging technologies.
- Local businesses and contractors who may supply goods and services to the project.

Duration: Temporary direct employment impacts over the 10-month construction period, with potential longer-term benefits from skills development and experience gained in the renewable energy sector that could enhance future employability.

Level of concern/interest: During consultation, community members expressed interest in local job creation and economic benefits. Stakeholders specifically inquired about how the project would "hire locally for construction jobs," indicating community interest in local economic benefits. A nearby Glenellen Solar Farm construction worker also expressed interest in potential local procurement and work opportunities.

Sensitivity or importance: Employment benefits would primarily affect residents of Greater Hume Shire (including Jindera and Glenellen) and Albury, with some wider regional benefits possible. The economic multiplier effects would extend throughout the regional economy through increased spending and business activity.

Project Considerations and Technical Assessment outcomes:

- The Economic Impact Assessment forecasts that construction activities could generate up to \$28 million in direct and indirect economic output, supporting approximately 87 direct and indirect jobs in the regional economy.
- The project plans to source approximately 75% of the workforce locally, maximising local employment benefits.
- The construction sector represents a smaller employment share in Greater Hume Shire (16.0% in Technicians and Trades Workers) compared to other sectors, suggesting new opportunities in this area could diversify employment options.
- The unemployment rate in the region is very low (1.8% in Greater Hume Shire), indicating a tight labour market where new job creation may need to draw workers from other sectors rather than from the unemployed population.



Impact Assessment:

- **Consequence:** Moderate - The creation of up to 80 FTE jobs represents a meaningful economic opportunity for the local community, particularly in the emerging renewable energy sector, which offers skills development in a growing industry. The forecast \$28 million in economic output and 87 total direct and indirect jobs would provide substantial economic stimulus to the region. These benefits are somewhat moderated by the temporary nature of construction employment and the already tight labour market in the region (1.8% unemployment), which may limit the project's ability to address unemployment specifically.
- **Likelihood:** Almost Certain - The job creation and economic benefits are an inherent and unavoidable positive consequence of the project proceeding. The construction phase will require workers and generate economic activity in the region.
- **Overall Impact:** High - The combination of moderate consequence and almost certain likelihood results in a high overall positive impact rating. The project will create employment opportunities in the construction phase, providing valuable experience in the renewable energy sector and generating economic activity throughout the regional economy. The co-location next to two other developments also offers opportunities for workers to move between projects as their roles are no longer required, offering continuity and further opportunities in the energy sector.

The project is not anticipated to have ongoing local employment during operations.

Increased demand for local workers further constrains local labour markets, affecting local businesses' ability to attract and retain skilled staff.

Intensity or scale: The Jindera BESS project aims to source approximately 75% of workforce, estimated at an average of 47 for 10 months and a peak of 80 workers, from the local area. This draw on local labour occurs in a regional context where unemployment is already extremely low (1.8% in Greater Hume Shire and Albury Surrounds SA2), well below what is considered a sustainable rate of full employment (4.25-4.5%). Additionally, the project may coincide with the construction of other regional renewable energy projects proliferating across the Riverina region, creating compounded demand for similar skill sets.

Extent: Local businesses and employers in Greater Hume Shire and Albury, particularly those requiring similar skills to construction projects (such as tradespeople, equipment operators, and general labourers). This could include:

- Small and medium enterprises in construction, manufacturing, and maintenance sectors.
- Agricultural operations that rely on seasonal or casual labour.
- Service businesses that employ technical or maintenance staff.
- Local government and infrastructure maintenance operations.

Duration: Temporary impact over the 10-month construction period, with more significant effects during the 4-month peak construction period when workforce demand is highest. The effects could be more pronounced when construction coincides with other local labour demands, such as agricultural harvest seasons or when multiple construction projects occur simultaneously.



level of concern/interest: While not directly raised as a major concern in community consultation, the Economic Impact Assessment acknowledged that "the collective demand for skilled workers across multiple renewable energy projects in the region may lead to labour shortages in other sectors and increased wage pressure."

Sensitivity or importance: The impact would be felt throughout the Greater Hume Shire and potentially into Albury, affecting the broader regional labour market. The effects would be more pronounced for businesses requiring similar skills to those needed for the project, particularly in construction, trades, and technical services.

Project Considerations and Technical Assessment outcomes:

- The Social Baseline Study identified that all geographies in the study area exhibit very constrained labour markets with unemployment rates (1.8% in Greater Hume Shire) well below sustainable full employment (4.25-4.5%).
- The Economic Impact Assessment acknowledged potential labour shortages in other sectors and increased wage pressure due to multiple renewable energy projects.
- The project's peak construction workforce of approximately 80 workers, with up to 75% (60 workers) sourced locally, represents a significant draw on available labour in a tight market.

Impact Assessment:

- **Consequence:** Moderate - The project's demand for local workers, especially when considered alongside other renewable energy developments in the area, will likely create noticeable constraints in an already tight labour market (1.8% unemployment). Local businesses may experience difficulty filling vacancies, particularly for roles requiring similar skills to those needed for construction projects. However, these effects would be somewhat mitigated by the temporary nature of construction employment and the relatively small workforce size compared to the total regional labour force.
- **Likelihood:** Likely - Given the extremely low unemployment rate in the region and the simultaneous construction of multiple renewable energy projects requiring similar skills, it is highly probable that the additional labour demand will create or exacerbate workforce constraints for local businesses.
- **Overall Impact:** High - The combination of moderate consequence and likely likelihood results in a high overall impact rating. In a region already experiencing very tight labour market conditions (1.8% unemployment), the additional demand for approximately 60 local workers will almost certainly create hiring challenges for other businesses, particularly those requiring similar construction and technical skills. The cumulative effect of multiple renewable energy projects being constructed simultaneously will intensify competition for workers with relevant skills.

The influx of construction workers will generate increased spending at local hotels, restaurants, retail stores, and other businesses, stimulating economic growth across multiple sectors

Intensity or scale: The presence of approximately 80 construction workers at peak construction will result in increased local spending, particularly from the estimated 20 non-local workers staying in local accommodation. Workers will spend money on accommodation, meals, retail purchases, entertainment, and other services throughout the



10-month construction period. In addition, the project itself will generate local procurement opportunities for construction materials, equipment, and services.

Extent: Local businesses and their employees in Greater Hume Shire (particularly Jindera) and Albury, including:

- Accommodation providers (hotels, motels).
- Food service businesses (restaurants, cafes, takeaway shops).
- Retail stores (supermarkets, convenience stores, clothing retailers).
- Entertainment venues.
- Service providers (laundry, transport).
- Construction supply businesses and contractors.

Duration: Temporary stimulus over the 10-month construction period, with highest spending during the 4-month peak construction period when the workforce reaches approximately 80 workers.

level of concern/interest: During consultation, local business interest in economic benefits was evident. Stakeholders discussed how the project would create "opportunities for procurement of local goods and services." Economic benefits were identified as one of the most valuable potential positive impacts in community survey responses.

Sensitivity or importance: Economic benefits would primarily affect businesses in Jindera (where workers are likely to purchase meals and supplies during workdays) and Albury (where non-local workers will be accommodated), with some wider benefits throughout Greater Hume Shire. The impact would be most significant for businesses directly servicing construction workers or the project, with secondary benefits flowing through the local economy.

Project Considerations and Technical Assessment outcomes:

- The Economic Impact Assessment forecasts that construction activities could generate up to \$28 million in direct and indirect economic output in the regional economy.
- Non-local workers will primarily be accommodated in Albury, creating accommodation spending in that area.
- Local contractors and businesses are expected to benefit from providing goods and services to the project.

Impact Assessment:

- **Consequence:** Moderate - The increased spending from construction workers and project procurement will create noticeable economic benefits for local businesses, particularly in the accommodation, food service, and retail sectors. However, the temporary nature of these benefits and their concentration in specific sectors somewhat moderates the overall consequence.
- **Likelihood:** Almost Certain - The increased local spending is an inevitable consequence of the project proceeding with its planned workforce. Workers will definitely require accommodation, food, and various services throughout the construction period.
- **Overall Impact:** High - The combination of moderate consequence and almost certain likelihood results in a high overall positive impact rating. The project will



inject significant spending into the local economy, benefiting a range of businesses in Jindera and Albury. While the direct stimulus is temporary, the broader economic benefits may have lasting positive effects on local business development and employment.

6.2.2 Construction and operation

Loss of Aboriginal cultural heritage values due to construction activities and site preparation works affects Aboriginal peoples' connection to Country and spiritual wellbeing.

Environmental Trigger/ Scale of Change: Site preparation, clearing, and construction activities for the Jindera BESS project will disturb the landscape and potentially impact identified Aboriginal cultural heritage sites, including Jindera IF1 (AHIMS ID 55-6-0294), an associated Potential Archaeological Deposit (PAD), and Jindera ST1 (AHIMS ID 55-6-0295), a culturally modified tree. Construction activities include vegetation clearing, bulk earthworks, construction of hardstand areas, and installation of battery enclosures and transmission infrastructure, all of which have the potential to impact tangible and intangible cultural heritage values.

Extent: The Aboriginal community who maintain connection to this Country and for whom the area has cultural and spiritual significance.

Duration: Permanent impacts on the physical landscape and any disturbed cultural heritage sites or artifacts. Spiritual and cultural impacts may persist beyond the construction phase and continue through the operational life of the project.

Level of concern/interest: The Aboriginal Cultural Heritage Assessment consultation process documented that the project area has social and cultural significance to the Aboriginal community. Specifically, the area has spiritual value associated with its views and connection to Table Top Mountain and the nearby waterways. All flora, fauna, and Aboriginal objects, including those recorded within the project area, were identified as having social value to Aboriginal people.

Sensitivity or importance: Localised to the project site but connected to broader cultural landscapes. The impacts would primarily affect the specific cultural values associated with the project area but must be understood within the context of cumulative impacts to Aboriginal cultural heritage across the wider region.

Project Considerations and Technical Assessment outcomes:

- The Aboriginal Cultural Heritage Assessment identified two sites that may be impacted: Jindera IF1 (an artifact) with associated PAD, and Jindera ST1 (a culturally modified tree).
- The assessment established that the project area has spiritual value associated with views/connection to Table Top Mountain and waterways.
- The ACHA recommends several management measures, including fencing around protected sites, cultural heritage monitoring and inductions of workers.

Impact Assessment:

- **Consequence:** Moderate - The project will permanently alter the landscape and potentially impact identified Aboriginal cultural heritage sites. While specific management measures will help protect known sites, the spiritual connection to Country and the broader cultural landscape will still be affected. The impact is moderated by implementing cultural heritage management protocols developed



in consultation with Aboriginal stakeholders, including protecting significant sites, cultural monitoring, and respectful management of any artifacts discovered.

- **Likelihood:** Possible - Given the nature of the construction activities and the identified cultural significance of the area, it is possible that some impacts on Aboriginal cultural values will occur, even with mitigation measures in place. The transformation of the landscape itself represents a change to Country that has spiritual meaning to Aboriginal people.
- **Overall Impact:** Medium - The combination of moderate consequence and possible likelihood results in a high overall impact rating before additional mitigation. The project will permanently alter a landscape that has established cultural significance related to views of Table Top Mountain and connection to waterways. While management measures will protect specific identified sites, the broader impact on Aboriginal peoples' spiritual connection to Country cannot be entirely mitigated.

Perceived changes to local community character resulting from the reduction of agricultural land and associated activities in the local area affect residents' sense of place and agricultural identity

Intensity or scale: Construction of the Jindera BESS project will convert approximately 3 hectares of rural land to industrial energy infrastructure. This change represents a shift from traditional agricultural use to energy infrastructure in an area where farming activities have historically dominated the landscape and contributed to local identity. The installation of battery enclosures, transmission infrastructure, and supporting facilities will create a visual and functional contrast to the surrounding agricultural landscape. This change occurs in the context of other significant energy developments in the immediate area, with the Glenellen Solar Farm already under construction on the adjacent property and the Jindera Solar Farm likely to commence construction in the near future.

Extent: Residents of Jindera and Glenellen, particularly those with long-standing connections to the area's agricultural heritage. The Greater Hume Shire community may also experience impacts on their sense of rural identity, as agriculture forms a significant component of the region's economic and cultural character.

Duration: Long-term impacts lasting for the project's operational life (approximately 20-25 years), though the land would be rehabilitated and potentially returned to agricultural use after decommissioning.

level of concern/interest: Some residents expressed opposition to developing energy infrastructure on agricultural land during consultations for this project and previous solar farm developments in the area. The consultation summary for earlier solar projects noted that some "local landowners expressed opposition to the development of solar and BESS infrastructure on high-value agricultural land." Some residents also expressed concern about the diminished landscape and vistas affecting the area's rural character. During the Jindera BESS consultation, stakeholders specifically raised concerns about "cumulative impacts in relation to the other projects in the area such as solar farms."

Sensitivity or importance: Localised to the immediate community surrounding the project, with diminishing effects at greater distances. The impact primarily relates to perceptions of community character rather than physical impacts that extend beyond the project boundaries. However, the cumulative effect of multiple energy projects in close proximity amplifies the extent of perceived character change from isolated development to a more substantial transformation of the local landscape.



Project Considerations and Technical Assessment outcomes:

- The Agricultural Impact Assessment classified the site as Class 4 Land and Soil Capability and concluded that there would be no significant impact on agricultural lands. The site is considered suitable for development, and insignificant impacts on adjacent agricultural land and soil are anticipated.
- The Visual Impact Assessment rated the impact significance as "Minor-Negligible" when viewed in reference to the surrounding landscape character, noting that substantial vegetation screening at the site's periphery would maintain acceptable visual outcomes.
- The project design incorporates vegetation screening to minimise visual impacts and maintain the rural aesthetic of the area.
- While each individual project may have limited impacts on agricultural productivity, the cumulative effect of multiple energy infrastructure projects nearby could be perceived as a more significant transformation of the area's agricultural character.

Impact Assessment:

- **Consequence:** Moderate - In isolation, the BESS project would have minor consequences for agricultural identity due to its small footprint. However, when considered alongside the adjacent Glenellen Solar Farm under construction and the planned Jindera Solar Farm, the cumulative effect represents a more substantial change to the local agricultural landscape. Even with vegetation screening and the limited agricultural capability of the specific parcels, the concentration of energy infrastructure projects creates a more noticeable shift in land use patterns that could affect residents' perception of place and community character. This cumulative transformation is more likely to challenge traditional agricultural identity than any single project would on its own.
- **Likelihood:** Possible - Given the expressed community concerns about energy development on agricultural land and the visible cumulative changes occurring with multiple projects in close proximity, some residents may perceive a meaningful change to community character and agricultural identity. The clustered development of energy projects creates a more pronounced visual and psychological impact than isolated facilities would.
- **Overall impact:** Medium - The combination of moderate consequence and possible likelihood results in a medium overall impact rating. While each project might have limited effects on agricultural identity, particularly the BESS, the cumulative transformation from multiple energy infrastructure developments represents a more significant challenge to traditional rural character. Hence, individual project impacts cannot be viewed in isolation. The cluster of projects represents a change to the area's visual character and functional land use, potentially challenging established notions of place identity strongly tied to agricultural heritage. The location of these projects away from population centres and the proposed environmental management measures for the BESS have moderated the overall significance of the impact.



6.2.3 Operations

Operational noise and light emissions affect residents' well-being and the way they use and enjoy private space.

Intensity or scale: The operation of the BESS facility will introduce new sources of noise from cooling systems, inverters, and transformers, as well as lighting for safety and security purposes. These changes will occur in a previously rural setting with minimal industrial noise or light sources. The facility will operate 24 hours a day, 7 days a week, permanently changing the existing acoustic and visual environment.

Extent: Primarily sensitive receivers (neighbouring residents) located within proximity to the BESS site.

Level of concern/interest: Community consultation revealed specific concerns about noise impacts from cooling systems. One sensitive receiver specifically mentioned that "noise echoes through the valley" where the Jindera BESS will be located and recommended "installing quieter cooling systems and additional noise reduction measures" to mitigate impacts on surrounding properties.

Residents also expressed concerns about night lighting effects, particularly regarding potential impacts on nocturnal wildlife and the area's rural character. Several stakeholders suggested vegetative screening to minimise both visual and noise impacts.

Sensitivity or importance: Based on the noise and light impact assessments, the impacts will primarily affect residents within a 2km radius of the project site. The Night Light Impact Assessment indicates that light spill is expected to remain within standards with no exceedance of the 1 lux limit during curfew hours. For noise, the assessment shows that operational noise is expected to comply with NSW Noise Policy for Industry standards with the implementation of proposed mitigation measures.

Project Considerations and Technical Assessment outcomes:

- The Noise and Vibration Assessment confirms that noise from the facility can be managed to comply with NSW regulatory standards through:
 - A 4m noise wall planned for northern and western boundaries.
 - Silencing treatments for battery containers and inverters.
 - Continuous noise monitoring and adjustment of mitigation measures.
- The Night Light Impact Assessment indicates minimal visual impact from lighting fixtures due to:
 - Downward-directed lighting fixtures to minimise light spill.
 - Full cut-off luminaires to prevent upward light emission.
 - Energy-efficient lighting design.
 - Compliance with curfew limits to minimise disturbance during night-time hours.

Impact Assessment:

- **Consequence:** Minor - The technical assessments indicate that with mitigation measures in place, noise and light impacts will be within regulatory standards. However, there will still be some noticeable change to the existing environment, particularly for the nearest sensitive receivers who currently experience minimal noise and light pollution in their rural setting.



- **Likelihood:** Unlikely - The combined effect of noise and light emissions is unlikely to impact residents' well-being and enjoyment of their private spaces, particularly during nighttime hours with mitigation measures in place. Technical assessments indicate compliance with standards. However, standards do not always account for subjective experiences, particularly in quiet rural areas where changes are more perceptible.
- **Overall Impact:** Low - The combination of unlikely likelihood and minor consequence results in a low significance rating. With technical impacts within acceptable standards with mitigation, the change from a quiet rural environment to one with constant, albeit low-level, industrial noise and light should not materially impact residents' wellbeing or health.

Improved infrastructure will facilitate access to renewable energy sources in NSW and enhance the reliability of the energy supply throughout the energy transition.

Intensity or scale: Operation of the Jindera Battery Energy Storage System (BESS) will introduce significant new energy storage capacity (250 MW/500 MWh) to the regional electricity grid. The BESS will store excess energy during periods of low demand and release it during peak periods, helping to stabilise the grid, integrate variable renewable energy sources, and reduce the risk of blackouts. This represents a substantial enhancement to grid infrastructure that supports the transition from coal-fired generation to renewable energy sources.

Extent: The primary beneficiaries include:

- Residents and businesses across the NSW electricity network, particularly in the Riverina-Murray region.
- Energy consumers in areas prone to power outages or requiring high reliability.
- Local communities in Greater Hume Shire and Albury regions.
- Future generations benefiting from reduced carbon emissions and more sustainable energy systems.

Duration: Long-term benefit beginning upon commissioning and continuing throughout the operational lifespan of approximately 20-25 years. The infrastructure improvement represents a multi-decade contribution to grid reliability and renewable energy integration.

Level of concern/interest: During consultation, stakeholders expressed interest in understanding how the BESS would contribute to grid stability and ensure reliable energy supply. Some residents questioned whether the Project would directly benefit the local grid or mainly serve broader network needs. The consultation report noted that residents sought "clarity on how the Jindera BESS would contribute to grid stability and ensure a reliable energy supply, particularly during peak demand periods."

While some community members expressed scepticism about local benefits, others recognised the value of enhancing energy reliability, especially given the growing population in the region (Jindera projected to grow by 750 new homes, according to Council discussions).

Sensitivity or importance: The positive impact extends across regional and potentially state-level electricity infrastructure. Direct benefits include:

- Enhanced grid stability in the Riverina-Murray region.
- Improved reliability of electricity supply during peak demand periods.



- Increased capacity to integrate renewable energy from nearby solar farms (Jindera and Glenellen Solar Farms).
- Support for NSW's energy transition and Net Zero Plan Stage 1: 2020-2030.

The technical benefits align with project objectives to "improve overall grid stability and resilience" and "assist to stabilise the frequency of the grid at critical times in response to loss of load or loss of generation," reducing the risk of system failure and blackouts.

Project Considerations and Technical Assessment Outcomes:

While not specifically addressed in the technical assessments provided, the Project's design purpose is explicitly focused on these infrastructure benefits. The BESS will:

- Store excess renewable power during low demand periods.
- Distribute stored energy back during peak times to alleviate network constraints.
- Participate in the statewide frequency control market.
- Support increasing integration of variable solar, wind, and other renewable generation.

These functions directly enhance the reliability and resilience of electricity supply throughout NSW's energy transition.

Impact Assessment:

- **Consequence:** Major - The Project will deliver substantial improvement to something people value highly (reliable electricity), lasting for an extended period and benefiting a large population across the region. The 250MW/500MWh capacity represents a significant contribution to grid stability and renewable energy integration. The BESS will provide critical support for NSW's energy transition by addressing key challenges of intermittent renewable generation and peak demand management.
- **Likelihood:** Almost Certain - The Project has been specifically designed to deliver these grid reliability and renewable energy integration benefits, making these outcomes definite or almost definitely expected. Battery energy storage technology has been proven and deployed globally for these purposes.
- **Overall impact:** Very High (Positive) - The combination of an almost certain likelihood and major consequence results in a very high positive impact significance. The Project represents a positive contribution to NSW's energy infrastructure, supporting both local and regional electricity reliability while enabling greater renewable energy integration.

Residents concern about the risk of fire from the BESS Facility affects general feelings of safety and wellbeing.

Intensity or scale: The introduction of a large-scale lithium-ion Battery Energy Storage System (BESS) in a predominantly rural area creates a perceived and actual fire risk. Battery energy storage systems, particularly those using lithium-ion technology, carry inherent fire risks that differ from conventional infrastructure. The facility will store a significant amount of energy (500 MWh) using battery technologies that have been associated with thermal runaway events and fires in other locations globally.

Extent: Primary populations affected by fire risk concerns include:

- Sensitive receivers (immediate neighbors) within 2km of the project site.



- Residents of Jindera and Glenellen.
- Local Rural Fire Service (RFS) members responsible for emergency response.
- Property owners in bushfire-prone areas surrounding the project site.

Duration: Long-term concern spanning the entire operational life of the project (estimated 20-25 years). Fire risk perceptions may diminish over time if the facility demonstrates consistent safe operation but will likely persist at some level throughout the project lifecycle.

Level of concern/interest: Fire safety emerged as one of the most significant community concerns during consultation. Specific stakeholder concerns included:

- Need for water tanks containing more than 25,000 litres to help manage potential fires.
- Requests for fire suppression training and drills with local fire brigades.
- Need for emergency vehicle access and gates at strategic locations.
- Recommendations to use gravel to reduce grass fire risks.
- Concerns about fires spreading at 50-80 km/h in the prevailing wind direction (west and north).
- Suggestions for specialised equipment for the Rural Fire Service.
- Questions about emergency management plans and coordination with local authorities.
- As noted in the consultation report: "Fire safety is a top priority for the NSW Rural Fire Service" with significant community interest in "addressing possible fire risks and bushfires that may impact the area associated with the Project."

Sensitivity or importance: The concern extends beyond physical project boundaries to encompass broader community perceptions of safety. While the actual fire risk may be confined to the immediate project area, the psychological impact of perceived risk affects a wider population across the local community. The bushfire-prone nature of the region exacerbates these concerns, with stakeholders noting that "fires in the region go from West and North to East in terms of direction at 50 to 80 km/h."

Project Considerations and Technical Assessment outcomes:

- The Hazards and Risk Assessment and Bushfire Assessment address fire safety through multiple measures:
 - Installation of firebreaks and cleared buffer zones around the BESS site.
 - Fire-resistant materials and designs for battery enclosures.
 - Onsite fire suppression systems for rapid response.
 - Creation of a 60-metre easement from the BESS Site to the Substation.
 - Development of emergency response plans in collaboration with local fire services.
 - Regular maintenance of vegetation to mitigate bushfire risks.
 - Engineering controls to prevent thermal runaway.
 - Compliance with industry standards, including NFPA 855 and UL 9540A.
 - Creation of Asset Protection Zones.



The project team has engaged directly with the NSW Rural Fire Service to address concerns and develop collaborative approaches to fire safety training and response protocols.

Impact Assessment:

- **Consequence:** Moderate - The perceived risk of fire from the BESS facility represents a notable concern for community members that affects something they value highly (safety and security). While technical assessments indicate that fire risks can be effectively managed through mitigation measures, the psychological impact on community wellbeing is noticeable and affects a significant group of people. Even with mitigation measures in place, community concerns about a new and unfamiliar technology with perceived fire risks will continue to affect some residents' sense of safety.
- **Likelihood:** Likely - Based on consultation feedback, community concern about fire risks is already evident and has a high probability of persisting throughout the project lifecycle, even with mitigation measures. The novelty of large-scale battery storage in a rural setting and heightened community awareness of bushfire risks in Australia make ongoing concern about fire safety highly probable.
- **Overall Impact:** High - The combination of moderate consequence and likely occurrence results in a high significance rating for this social impact. While the project includes comprehensive fire safety measures that meet or exceed regulatory requirements, the subjective nature of perceived risk means that community concern will likely remain a significant factor affecting local wellbeing.

The implementation of a voluntary planning agreement with Greater Hume Council provides funding for community measures that enhance livability and provide community benefit

Intensity or scale: The establishment of a Voluntary Planning Agreement (VPA) between Gransolar Development Australia (GDA) and Greater Hume Council will create a formal mechanism for delivering financial contributions to the local community.

Extent: Depending on the social program funded, the VPA will broadly benefit the residents of Jindera and Glenellen.

Duration: The VPA will create long-term benefits through both initial contributions and potentially ongoing funding arrangements. The benefits will commence upon finalisation of the agreement and continue through infrastructure improvements that may last decades beyond the contribution period.

Level of concern/interest: Community consultation revealed significant interest in VPA funding and how it would be allocated. Specific stakeholder suggestions included:

- Funding for local organisations like sports clubs, museums, and the Jindera Community Hub.
- Infrastructure improvements, including roads, the local swimming pool, and telephone network coverage.
- Addressing previous disappointments with community commitments from other renewable energy projects.
- Ensuring transparent communication about how funds would be allocated.
 - **As noted in the consultation report:** "Stakeholders expressed the need for more clarity on how the Project would provide tangible benefits to the local



community. There was a call for transparent communication on how funds from the Voluntary Planning Agreement with local council would be allocated to community development and improvement projects."

- **Sensitivity or importance:** The benefits will extend throughout the Greater Hume Shire, with a focus on the local community.
- **Project Considerations and Technical Assessment outcomes.**

While not directly addressed in technical assessments, the VPA will align with:

- The Greater Hume Community Strategic Plan 2022-2032, which focuses on community prosperity, sustainable growth, accessible transport, and responsive governance.
- The Greater Hume Local Strategic Planning Statement's vision for leveraging strengths to generate economic and social growth opportunities.
- Council's established VPA framework requiring contributions amounting to 1% of capital investment value.

The VPA provides a framework for distributing project benefits in alignment with community priorities and the Council's strategic objectives.

Impact Assessment:

- **Consequence:** Moderate: The VPA will deliver noticeable improvement to community infrastructure, services, or programs that residents value highly. These improvements will be experienced by multiple people and persist over an extensive period. While not transformational for the entire community, the VPA represents a substantial positive intervention that can address specific community priorities and enhance overall liveability.
- **Likelihood:** Almost Certain: The implementation of a VPA is a standard requirement from the Greater Hume Council for projects of this nature, as explicitly stated in their preliminary feedback to the project.
- **Overall Impact:** High (Positive): The combination of moderate consequence and almost certain likelihood results in a high positive significance rating. The VPA represents one of the project's most direct and substantial community benefits, creating a mechanism for addressing community priorities identified during consultation.

6.2.4 Decommissioning

Socio-environmental changes associated with decommissioning the Jindera BESS Facility

Sensitivity or importance: The decommissioning of the Jindera Battery Energy Storage System (BESS) after its operational lifespan of approximately 20-25 years will involve the removal of infrastructure, site rehabilitation, and managing end-of-life battery components. This represents a significant change from the operational phase, introducing new activities, including dismantling of battery containers, removing infrastructure, and restoring the site to its original condition.

Extent:

- Sensitive receivers (nearby residents) in proximity to the site.



- Local community members in Jindera and Glenellen are concerned about environmental impacts.
- Local businesses and contractors who may be involved in decommissioning activities.
- Future generations affected by long-term waste management and site remediation outcomes.
- Greater Hume Shire Council and broader regional community.
- **Duration:** The decommissioning phase will likely last 6-12 months based on similar projects, with residual impacts potentially extending further depending on the effectiveness of site rehabilitation and waste management processes. The project documentation states: "The Project is proposed to be decommissioned, and the infrastructure removed following the EOL of the BESS, with works required to return the Subject Sites as close as possible to its original state and use."
- **Level of concern/interest:** Community consultation revealed specific concerns about decommissioning:
 - End-of-life battery management was raised as a key issue, with residents requesting "transparent communication about battery lifespan and recycling options, particularly how lithium batteries will be managed after their lifecycle".
 - One resident suggested "refurbishing the battery containers" rather than completely decommissioning.
 - Questions were raised about site rehabilitation and land restoration processes.
 - Multiple stakeholders expressed interest in recycling options for lithium-ion batteries
 - Community members stressed that "recycling and reuse of materials to be prioritised throughout the Project to reduce construction waste, and during the decommissioning of the project".
- **Sensitivity or importance:** The decommissioning impacts will primarily affect the immediate project area and nearby sensitive receivers, with waste management considerations extending to regional disposal and recycling facilities. The project documentation indicates the decommissioning phase will use similar equipment and follow similar hours as the construction phase, suggesting comparable levels of activity and disturbance.

Impact Assessment:

While the project documentation provides basic information about decommissioning intentions, detailed assessment of long-term social impacts is inherently limited by the 20–25-year timeframe. The project documentation commits to removing infrastructure and returning the site "as close as possible to its original state and use," with materials predominantly recycled or reused at appropriate facilities.

It is important to acknowledge that accurately assessing social impacts over a timeframe of decades is inherently speculative. The Greater Hume region is undergoing continuous change and growth, with Jindera alone projected to add 750 new homes in the coming years. Social values, community composition, and technological capabilities will all evolve



substantially over the project's lifetime. The recycling and reuse opportunities for battery components will likely advance significantly as the circular economy for renewable energy infrastructure matures. Similarly, remediation techniques and standards will continue to develop.

Given these realities, while decommissioning must be considered in current planning, detailed decommissioning strategies should be developed closer to implementation when community priorities, technological capabilities, and regulatory frameworks will be better understood. This approach allows for adaptive planning that incorporates emerging best practices and responds to the social context as it exists when decommissioning occurs, rather than as we currently project it might be. The project's commitment to eventual site restoration provides a foundation for this future planning process, which should maintain the principles of community involvement, environmental responsibility, and transparent communication established during earlier project phases.

6.3 Cumulative impacts

While the social impacts of the Jindera BESS project have been assessed throughout this report, it is important to place them within the broader regional development context. The Greater Hume and Albury regions are currently experiencing significant infrastructure development activity, with multiple large-scale projects either underway or planned.

Several major infrastructure projects are currently being developed in the region, including:

- **Project Energy Connect:** A 900km electricity interconnector between South Australia and NSW, with construction underway and expected completion in 2024-25.
- **Inland Rail (Albury to Illabo section):** Part of the larger 1,700km Melbourne to Brisbane freight rail project, with construction in the region planned for 2024-26.
- **Renewable Energy Projects:** Multiple solar and wind farms in various stages of development, including the approved Jindera Solar Farm (150MW) and Glenellen Solar Farm (200MW) adjacent to the proposed BESS site.

These projects, individually and collectively, are creating cumulative pressures on regional resources, particularly regarding workforce, accommodation, and transportation infrastructure. In the context of these major infrastructure developments, the Jindera BESS represents a relatively small project.

6.3.1 Cumulative Impact Considerations

Workforce and Accommodation

The simultaneous construction of multiple projects creates competition for skilled workers within the limited regional labour pool. While the Jindera BESS project alone will have a relatively minor impact on the labour market (approximately 75% of workers will be sourced locally), the cumulative effect of all projects may:

- Further tighten the already-constrained labour market.
- Potentially drive wage inflation as employers compete for workers.

Conversely, this may challenge the ability for the Project to recruit locally, and workers may increase the need for more non-resident workers, which increases demands on short-term accommodation providers, creating temporary accommodation shortages in Albury and surrounding areas during peak construction periods.



Community Services and Amenities

The combined influx of workers across all projects may place additional pressure on:

- Healthcare services in Albury and surrounding communities.
- Recreational facilities and hospitality venues during after-work hours.
- Emergency services, particularly with increased demands on the Rural Fire Service for multiple project sites.

Social Cohesion and Community Wellbeing

The concentration of development activity within a relatively short timeframe may:

- Contribute to "development fatigue" among residents who experience continuous construction activity.
- Create a sense of rapid change to the rural landscape and character of the area.
- Lead to uneven distribution of both benefits and impacts across the community.

The relatively modest scale of the Jindera BESS project means its contribution to cumulative impacts will be limited. However, ensuring ongoing communication with the Council and relevant agencies to keep abreast of these impacts will help ensure the community experiences regional development benefits while minimising adverse effects.

7.0 Impact enhancement, mitigation and residual impacts

The management of social impacts will primarily be achieved through:

- Integration with the project's environmental management and reporting frameworks, as many social impacts are directly related to environmental factors such as noise, visual amenity, and traffic.
- Implementation of specific social management measures targeting impacts that cannot be fully addressed through environmental management alone.
- Ongoing stakeholder engagement to monitor community sentiment and respond to emerging concerns.
- Ongoing reporting and regular auditing of performance and mitigation measures on public platforms including the project website and collateral.

The proponent will employ additional management approaches shown in Table 5 for any remaining social impacts.

Given the relatively short construction timeframe and even shorter peak construction period, the plan will emphasise timely response to issues rather than long-term trend analysis. The management approach will:

- Focus on effective communication mechanisms managed in real-time.
- Address issues promptly as they emerge.
- Adjust management strategies based on feedback and observations.
- Apply learnings from similar BESS projects in the region.



Table 5 Proposed Management Measures

Reference	Measure
S01	The proponent will develop and execute a Community and Stakeholder Engagement Plan (CSEP) to ensure community members receive accurate, timely information throughout the construction phase. This strategy will encompass: • Systems for notifying nearby communities, residents, visitors and road users about scheduled activities, their timing, possible effects, and mitigation strategies (including transport operations and activities generating significant noise). • Methods for consultation with impacted stakeholders and residents regarding possible effects and management approaches. • Systems for gathering and addressing project-related inquiries and concerns during construction, operational, and decommissioning phases, such as an online project portal with contact information. • Ongoing and consistent reporting of performance measures, engagement summaries, project updates and outcome of impact mitigations on public platforms including project website and printed collateral.
S02	The proponent will establish educational resources and communication channels for community members seeking information about safety considerations related to battery energy storage system technologies.
S03	The proponent will coordinate with nearby temporary accommodation businesses to locate willing providers and assess tourism accommodation availability, working to coordinate non-local workforce accommodation needs (when necessary).
S04	To reduce potential negative impacts on local labour forces and enhance business and industry benefits, the project will: • Prioritise local business inclusion in procurement strategies, including motivating contractors to utilise local products and services when feasible • Evaluate various approaches to promote local service utilisation, such as establishing a directory of regional businesses and collaborating with business organisations and local government about regional capabilities and skill requirements to enhance readiness.
S05	Where Project works overlap with the Glenellen or Jindera Solar Farm works, the proponent will seek to consult with each relevant proponent to identify concurrent activities that may result in heightened negative impacts on stakeholders and plan accordingly to minimise impacts.

7.1 Residual Impacts

In accordance with the guidelines, a comprehensive assessment of potential social impacts has been conducted. Following this initial assessment, additional social management measures have been developed specifically targeting impacts rated as medium or higher. These enhanced measures aim to reduce all identified social impacts to as low as reasonably possible (ALARP), ensuring the project maintains appropriate social performance throughout its lifecycle.

The following sections detail these supplementary management approaches and their anticipated effectiveness in further mitigating residual social risks.

Note: Shaded cells indicate unchanged residual rating where no enhanced mitigation is required or recommended.



Table 6 Residual Risk Assessment

Social Impact	Stakeholder Affected	Pre-Mitigation Social Risk Rating (Likelihood + Magnitude)	Mitigation and management measures	Residual impact significance		
				Likelihood	Magnitude	Residual Social Risk Rating
Amenity impacts during construction activities, including noise, vibration, dust, and odour, affect residents' wellbeing and the way they use and enjoy their private space.	Project sensitive receivers	Minor + Possible = Medium	Managed through environmental performance requirements. Ongoing engagement through the CSEP will support residents' capacity to plan for and adapt to change. Where Project works overlap with the Glenellen or Jindera Solar Farm works, the proponent will seek to consult with each relevant proponent to identify concurrent activities that may result in heightened negative impacts on stakeholders and plan accordingly to minimise impacts.	Possible	Minor	Medium (Negative)
Changes to community cohesion and character due to an influx of construction workers during construction into a relatively small rural community.	Local community	Minimal + Possible = Low	Further management not required.	Minimal	Possible	Low (Negative)
Delays and disruption to local traffic networks resulting from construction	Local community road users and	Minor + Possible = Medium	Managed through environmental performance requirements.	Unlikely	Minor	Low (Negative)



Social Impact	Stakeholder Affected	Pre-Mitigation Social Risk Rating (Likelihood + Magnitude)	Mitigation and management measures	Residual impact significance		
				Likelihood	Magnitude	Residual Social Risk Rating
activity, including increased truck movements and heavy and oversized vehicles, affect residents' movement patterns and perceptions of safety on the road network.	project-sensitive receivers		Ongoing engagement through the CSEP will support residents' capacity to plan for and adapt to change. Where Project works overlap with the Glenellen or Jindera Solar Farm works, the proponent will seek to consult with each relevant proponent to identify concurrent activities that may result in heightened negative impacts on stakeholders and plan accordingly to minimise impacts.			
Increased demand for temporary accommodation providers in the local area during construction results in limited accommodation options for seasonal workers, local needs, and tourists.	Various stakeholders require short-term accommodation for tourist, business and personal needs.	Minimal + Unlikely = Low	No further management is needed. However, once the extent of local employment is determined and accommodation requirements are known, the proponent will coordinate with nearby temporary accommodation businesses to locate willing providers and assess tourism accommodation availability, working to coordinate non-local workforce accommodation needs (when necessary).	Minimal	Unlikely	Low (Negative)



Social Impact	Stakeholder Affected	Pre-Mitigation Social Risk Rating (Likelihood + Magnitude)	Mitigation and management measures	Residual impact significance		
				Likelihood	Magnitude	Residual Social Risk Rating
Construction activities create jobs in an emerging renewable industry that enhances economic opportunities in the community.	Residents, Sensitive receivers	Moderate + Certain = High (Benefit)	To reduce potential negative impacts and enhance business and industry benefits, the project will: ▪ Prioritise local business inclusion in procurement strategies, including motivating contractors to utilise local products and services when feasible.	Moderate	Certain	High (Benefit)
Increased demand for local workers further constrains local labour markets, affecting local businesses' ability to attract and retain skilled staff.	Local businesses and industry.	Moderate + Likely = High	▪ Evaluate various approaches to promote local service utilisation, such as establishing a directory of regional businesses for opportunity communications and collaborating with business organisations and local government about regional capabilities and skill requirements to enhance readiness.	Possible	Moderate	Medium (Negative)
Influx of construction workers will generate increased spending at local hotels, restaurants, retail stores, and other businesses, stimulating economic growth across multiple sectors.	Local businesses and industry.	Moderate + Almost certain = High (Benefit)	No further management needed.	Moderate	Almost certain	High (Benefit)



Social Impact	Stakeholder Affected	Pre-Mitigation Social Risk Rating (Likelihood + Magnitude)	Mitigation and management measures	Residual impact significance		
				Likelihood	Magnitude	Residual Social Risk Rating
Loss of Aboriginal cultural heritage values due to construction activities and site preparation works affects Aboriginal peoples' connection to Country and spiritual wellbeing.	Aboriginal people who have connection to local Country.	Moderate + Possible = Medium	Managed through environmental performance requirements.	Moderate	Possible	Medium (Negative)
Perceived changes to local community character resulting from the reduction of agricultural land and associated activities in the local area affect residents' sense of place and agricultural identity.	Local residents, particularly those in Glenellen, with broader regional changes.	Moderate + Possible = Medium	Managed through environmental performance requirements.	Moderate	Possible	Medium (Negative)
Operational noise and light emissions affect residents' well-being and the way they use and enjoy private space.	Nearby sensitive receptors.	Minor + Likely = Low	Managed through environmental performance requirements.	Minor	Likely	Low (Negative)
Improved infrastructure will facilitate access to renewable energy sources in NSW and enhance the reliability of the energy supply throughout the energy transition.	Residents of NSW.	Major + Almost certain = Very High (Benefit)	No further management needed.	Minor	Almost certain	Very High (Benefit)



Social Impact	Stakeholder Affected	Pre-Mitigation Social Risk Rating (Likelihood + Magnitude)	Mitigation and management measures	Residual impact significance		
				Likelihood	Magnitude	Residual Social Risk Rating
Residents concern about the risk of fire from the BESS Facility affects general feelings of safety and wellbeing.	Nearby residents and the broader community.	Moderate + Likely = High	Managed through environmental performance requirements. The proponent will establish educational resources and communication channels for community members seeking information about safety considerations related to battery energy storage system technologies.	Possible	Moderate	Medium (Negative)
The implementation of a voluntary planning agreement with the Greater Hume Council provides funding for community measures that enhance liveability and provide community benefit.	Jindera and Glenellen communities and the Great Hume Region.	Moderate + Almost certain = High (Benefit)	Implementation of the VPA.	Moderate	Almost certain	High (Benefit)



8.0 Conclusion

The Social Impact Assessment for the Jindera BESS Project has identified and evaluated a range of social impacts across the construction, operational, and decommissioning phases of the development. The assessment demonstrates that while the project will introduce some changes to the local social environment, these changes can be effectively managed to minimise adverse outcomes while maximising benefits for both local and broader communities.

The project's contribution to grid stability and renewable energy integration represents a significant positive outcome aligned with state and national energy transition goals. The 250 MW/500 MWh facility will enhance electricity reliability, support the integration of nearby renewable energy projects, and contribute to system resilience during peak demand periods.

At the local level, the project will generate economic opportunities through construction employment and procurement, providing valuable experience in the growing renewable energy sector. The implementation of a Voluntary Planning Agreement with Greater Hume Council will ensure tangible community benefits throughout the project's operational life.

The assessment acknowledges community concerns regarding fire safety, amenity impacts, and cumulative development effects. These concerns have been addressed through comprehensive management strategies, including robust stakeholder engagement, technical design features, and collaboration with emergency services.

The project must be viewed within its broader development context, where multiple renewable energy projects are transforming the regional landscape. While each individual project may have limited impacts, their collective presence represents a meaningful shift in land use patterns and community character. This cumulative dimension has been considered in the assessment and informs the management approach.

By implementing the recommended mitigation and enhancement measures outlined in this report, GDA can deliver the Jindera BESS project with social outcomes that align with community expectations and generate lasting benefits for the Greater Hume region. Ongoing stakeholder engagement, transparent communication, and adaptive management will be essential to maintaining social performance throughout the project lifecycle.

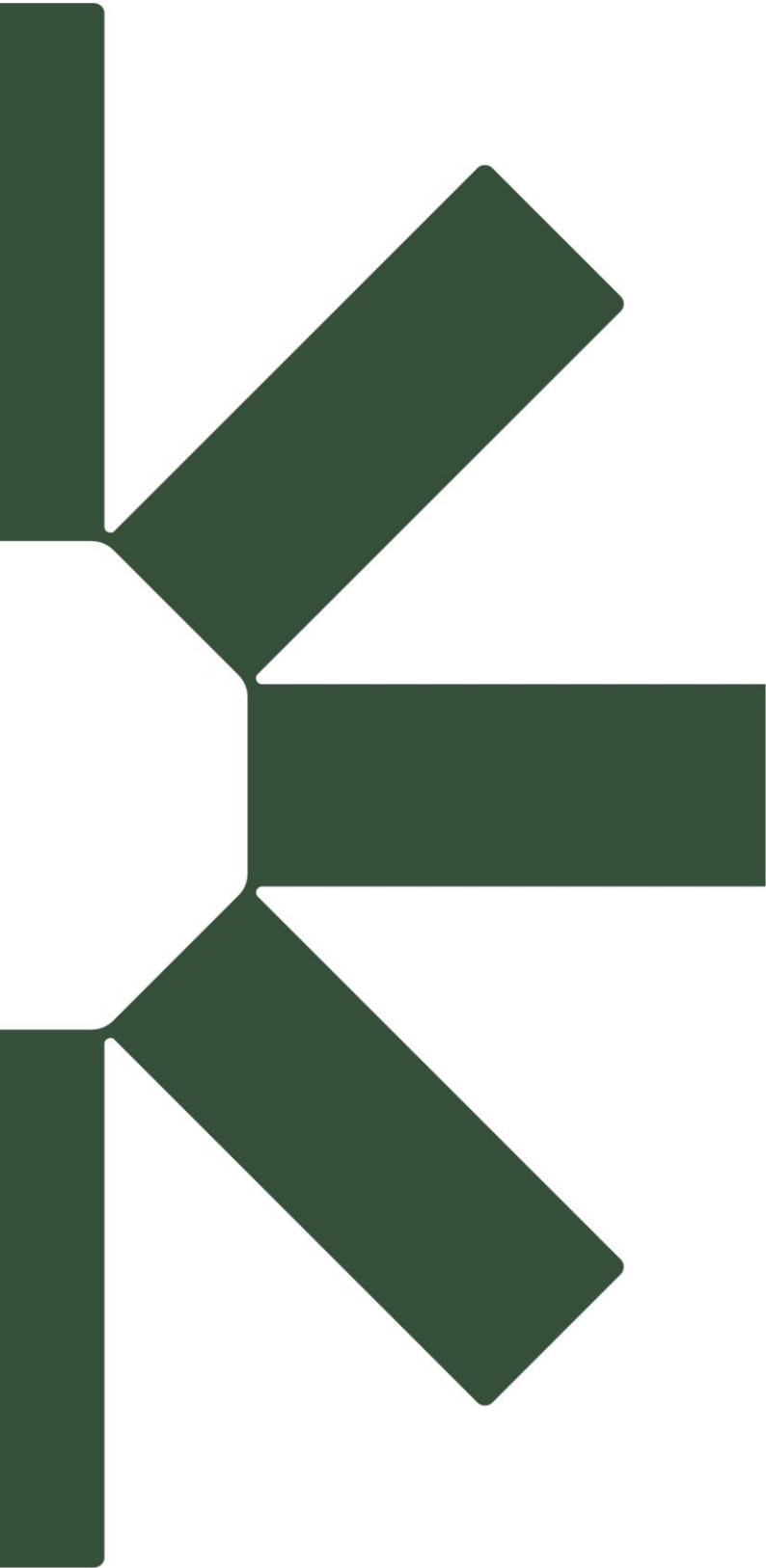
In conclusion, the Jindera BESS represents an important contribution to Australia's renewable energy transition that, with appropriate management, can be delivered with acceptable social outcomes while providing significant infrastructure benefits at local, regional and state levels.



9.0 References

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