

Oven Mountain Pumped Hydro Energy Storage Project

Amendment Report - Social Impact Assessment

Prepared for Alinta Energy

August 2024

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Alinta Energy

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V1	12 July 2024	Caroline Wilkins	Chris Mahoney	Draft
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Approved by



Chris Mahoney

Associate Director

2 August 2024

Level 1 87 Wickham Terrace

Spring Hill QLD 4000

ABN: 28 141 736 558

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ABN: 28 141 736 558

Executive Summary

ES1 Introduction

Alinta Energy is the owner of OMPS Pty Ltd (OMPS) and proposes to develop the Oven Mountain Pumped Hydro Energy Storage Project (the Project), an off-river pumped hydro energy storage system (referred to as the 'pumped hydro system') located approximately half-way between Kempsey and Armidale, adjacent to the Macleay River in northern NSW. The Project is located within the New England REZ and the Armidale Regional Local Government Area (LGA), proximate to its border with Kempsey Shire LGA. At a basic level, the Project will consist of upper and lower water reservoirs and an underground tunnel connecting them via a hydro-electric power station. The Project will also include the construction of and upgrades to access roads in the area, the construction of an electrical substation, and the construction of up to two high voltage transmission lines that will connect the pumped hydro system to the existing transmission network.

The Project is a scheme designed to provide utility-scale energy storage. It will provide up to 900 MW of electricity generating capacity and between eight hours of dispatchable energy to the National Electricity Market (NEM). The expected operational lifespan of the Project is in excess of 100 years.

The Project has been declared State significant infrastructure (SSI) and critical State significant infrastructure (CSSI) in accordance with the provisions of the NSW *Environmental Planning and Assessment Act 1979* (EP&A Act). The declaration of the Project as a CSSI project acknowledges that the Project is critical to the State and would generate significant public benefit to NSW.

Following the public exhibition of the EIS, 92 submissions were received, including 16 from special interest groups and 58 from individual community members. In addition, 18 submissions were received from state government agencies and councils. Of the 92 submissions, 22% were in support of the Project, 54% objected to the Project, and the remaining submissions provided a variety of comments (24%). A Submissions Report (EMM 2024a) has been prepared to respond to the matters raised.

Several key amendments were also made to the Project. An Amendment Report (EMM 2024) has been prepared to assist the community, government agencies and the approval authority to understand the implications of the amended Project. The Minister for Planning and Public Spaces will subsequently decide whether to grant approval, or to refuse the project, under the EP&A Act.

In response to DPHI's request for further information and to address amendments made to the Project, this Social Impact Assessment (SIA) has been prepared. Project amendments comprise the following:

- realignment of the Eastern Access Road (EAR)
- temporary bridges to facilitate construction - Eastern Access Temporary Bridge and a temporary bridge crossing of the Macleay River about 600 m north-east of Georges Junction
- Upper Dam Access Road (UDAR) refinement
- additional of up to three fly camps located near Smiths Bluff, the intersection of the Main Access Road and the EAR and the upper reservoir
- demarcation of four areas to be used for stockpiling and material laydown
- adoption of blasting as a construction method
- increasing the estimated water requirements from 1 ML/day to 3 ML/day for construction
- allowing sufficient area for retention basins within the construction envelope, in particular for early works

- rock processing/crushing facilities in the lower reservoir (LR) and upper reservoir (UR) areas to process rock for use in dams
- allowing for the use of helicopters during the construction phase
- increasing generation capacity to 900 MW with up to 8 hours of energy storage at full generating capacity.

ES2 Purpose of social impact assessment

EMM has prepared this Social Impact Assessment Amendment (SIAA) to address social impacts associated with proposed amendments to the Project. Preparation of the SIAA also meets the requirements of the Secretary's Environmental Assessment Requirements (SEARs) for the Project and the *Social Impact Assessment Guideline for State Significant Projects (SIA Guideline 2023)* (DPE 2023a) and the *Technical Supplement: Social Impact Assessment Guideline for State Significant Projects (SIA Technical Supplement 2023)* (DPE 2023b).

ES3 Engagement informing the SIA Amendment

Community and stakeholder engagement are core elements of the SIA process. This SIA Amendment draws on feedback generated through ongoing community and stakeholder engagement undertaken as part of ongoing engagement on the Project by OMPS since the EIS was submitted, along with First Nations engagement conducted as part of the Aboriginal Cultural Heritage Assessment (ACHA) for the amendment.

OMPS has actively sought to inform the local communities about the Project in a number of ways. Since the exhibition of the EIS, OMPS has issued Project updates, attended local events and provided up-to-date information through the Project website as detailed below:

- Issue of two Project updates marking important planning milestones including responses to submissions update and a notification that the application for community grants had opened.
- OMPS has also attended local events including the Kempsey show (9 to 10 April 2024) with an information stall, presented to the Kempsey rotary (19 March 2024) and facilitated a community workshop (19 June 2024) to understand community views on benefit sharing associated with the Project.
- The Project team co-ordinated an onsite cultural heritage inspection (16 April 2024) at the request of the Dunghutti Elders Council (Aboriginal Corporation) Board of Directors, in partnership with members and key cultural heritage and knowledge holders of the Thungutti Local Aboriginal Land Council.
- The Project website has been regularly updated with newsletters and community information released to date: <https://www.ompshydro.com/>.
- Engaging with a nearby landholder regarding the potential establishment of a biodiversity stewardship site to meet a portion of the Project's biodiversity offset credit liability.

Regarding First Nations engagement, consultation has also been carried out with the Project's Registered Aboriginal Parties (RAPs) throughout the response to submissions phase of the Project and the updated ACHA.

GIRA Advisory (a First Nations owned and operated business) has been engaged since the exhibition of the EIS as a First Nations advisor to the Project to assist with development of specific programs and cultural benefits. These include an Aboriginal Ranger program, development of an Aboriginal Advisory Group for the Project, Heal Country initiatives and health, housing and accommodation services.

Through the analysis of Project amendments, social baseline characteristics and engagement feedback, the following key SIA themes which reflect community observations and perceptions, were identified:

- **Accessibility** – the nature of the local housing market and service provision in the local and regional area and how this intersects with the project.
- **Livelihoods** – the positive contributions that the project would make to the local and regional economy and how these can be maximised.
- **Surroundings** – potential amenity, traffic and public safety impacts experienced by the local community, potential impacts upon the natural environment including water quality and water security impacts, and fire safety risk.
- **Culture** – potential impacts upon Aboriginal connections to Country, land and waterways.
- **Health and wellbeing** – concerns relating to health and emergency services in the area which are at capacity servicing the existing population.
- **Decision-making systems** – a perceived lack of understanding and trust in approval processes for renewable projects.

ES4 Assessment of social impacts and benefits

ES4.1 Approach

Key to the SIAA approach was the detailed review of the previously identified social impacts and benefits of the Project, to determine how the previous SIA findings are altered by the proposed amendments and updated community feedback.

The SIAA assessed that there were 3 social impacts and benefits that were materially affected by the proposed amendments and 20 social impacts and benefits that were not likely to be materially affected by the proposed amendments. Materially affected is defined as a relevant and significant change resulting in an assessed change to the significance rating of a social impact or benefit.

Where new information or greater detail has become available relating to impacts or benefits assessed as not likely to be materially affected by the proposed amendment, this detail is included for clarification purposes.

The approach to determining further assessment requirements for each impact or benefit is outlined in Section 7 of this report.

ES4.2 Assessment

As outlined in Table ES1, the proposed amendments result in fewer Project impacts, and the assessed significance rating of some impacts identified in the SIA (EMM 2023) are reduced.

The assessment of impacts and benefits associated with the amended Project concludes that the addition of the fly camps reduces the significance of some key social impacts which would otherwise be experienced by the community. Specifically, the amendment:

- reduces the impact on local housing availability and affordability during the construction phase of the project – refer to impact I03 in Section 7.4

- reduces the impact on availability of short-term and emergency accommodation – refer to impact I04 in Section 7.4
- reduces the impact on sense of community and social cohesion during operation– refer to impacts L01 in Section 7.3.

Whilst not specifically addressed in this assessment, the construction workforce accommodation facilities could also potentially provide local government or other entities with relocatable accommodation facilities that can be re-purposed to meet future community needs.

Table ES1 Social impacts of the amended project

ID	Category	Impact	Original project – Relevant impacts and significance (mitigated)	Amended project – Significance (mitigated)
L01	Community, way of life	Impacts related to sense of community and social cohesion (construction, operation)	Construction Significance (mitigated): High Operation Significance (mitigated): Medium	Construction High Operation Low
L02	Community, way of life	Perceived impacts to privacy during construction	Significance (mitigated): Medium	Medium
L03	Community, surroundings	Changes to the character of the landscape in the local area (construction, operation)	Construction Significance (mitigated): Medium Operation Significance (mitigated): Low	Construction Medium Operation Low
L04	Way of life, health and wellbeing	Impacts from noise and vibration in the local area (construction)	Significance (mitigated): Medium	Medium
L05	Way of life, health and wellbeing	Impacts from dust and decreased air quality in the local area (construction)	Significance (mitigated): Low	Low
L06	Livelihood	Perceived decrease in property values (construction, operation).	Construction Significance (mitigated): Medium Operation Significance (mitigated): Low	Construction Medium Operation Low
L07	Way of life, health and wellbeing, surroundings	Perceived risk to public safety (construction).	Significance (mitigated): Medium	Medium
I03	Way of life, accessibility	Decline in rental affordability and availability for residents (construction, operation).	Construction Significance (mitigated): High Operation Significance (mitigated): Low	Construction Medium Operation Low
I04	Way of life, accessibility	Reduced availability of short-term and emergency accommodation for vulnerable groups (construction, operation).	Construction Significance (mitigated): High Operation Significance (mitigated): Low	Construction Medium Operation Low

ID	Category	Impact	Original project – Relevant impacts and significance (mitigated)	Amended project – Significance (mitigated)
R01	Accessibility, surroundings	Reduced access to recreational areas and facilities (construction, operation).	Significance (mitigated): Low	Construction Low Operation Low
R02	Accessibility, surroundings	Reduced amenity at recreational areas and facilities (construction, operation).	Significance (mitigated): Low	Construction Medium Operation Low
R03	Surroundings	Impacts on environmental values related to the Project (construction, operation).	Significance (mitigated): Medium	Construction Medium Operation Medium
R04	Accessibility, surroundings	Reduced availability of tourist accommodation (construction, operation).	Construction Significance (mitigated): High Operation Significance (mitigated): Low	Construction High Operation Low
T01	Accessibility, health and wellbeing	Public safety risks caused by construction traffic.	Significance (mitigated): High	High
T02	Accessibility, health and wellbeing	Impacts related to traffic congestion and road delays (construction)	Significance (mitigated): Medium	Medium
W02	Health and wellbeing, surroundings	Concerns regarding water quality due to construction waste and disturbance of existing metals.	Significance (mitigated): Low	Low
W04	Health and wellbeing, surroundings	Concerns regarding access to water during drought (construction, operation).	Construction/Operation Significance (mitigated): Medium	Medium
C01	Culture, health and wellbeing	Potential disturbance or destruction of Aboriginal cultural artefacts and sites (Life of Project)	Significance (mitigated): Medium	Medium
C04	Community, culture, health and wellbeing	Declining social cohesion between First Nations groups (Life of Project)	Significance (mitigated): High	High
E01	Decision making systems	Perceived insufficient community consultation and engagement resulting in lack of trust (including ownership) (construction, operation).	Construction/Operation Significance (mitigated): Medium	Medium

Table ES2 Social benefits of the amended project

ID	Category	Benefit	EIS SIA Benefit and Significance (enhanced)	Significance (enhanced)
L10	Livelihood, health and wellbeing	Benefits of opportunities for local businesses (construction, operation).	Significance (Enhanced): High	High
T03	Accessibility, way of life, health and wellbeing	Benefit related to improved road conditions as a result of the Project (construction, operation).	Addressed in cumulative assessment section. Significance (Enhanced): Very High	Very High
LH02	Livelihood	Benefit of regional business procurement opportunities (construction, operation).	Construction Significance (Enhanced): High Operation Significance (Enhanced): Medium	Construction High Operation Medium

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1 Introduction

EMM Consulting Pty Ltd (EMM) has prepared this Social Impact Assessment (SIA) Amendment for the Oven Mountain Pumped Hydro Energy Storage Project (the Project) on behalf of OMPS Pty Ltd (OMPS). This Amendment re-assesses impacts and benefits identified in the *Social Impact Assessment: Oven Mountain Pumped Hydro Energy Storage Project* (EIS SIA) (EMM 2023c) to address changes as per the amended project description (the amendment). The context for this SIA Amendment is outlined below.

1.1 Background and previous steps

Alinta Energy is the owner of OMPS proposes to develop the Oven Mountain Pumped Hydro Energy Storage Project (the Project), an off-river pumped hydro energy storage system (referred to as the 'pumped hydro system') located approximately half-way between Kempsey and Armidale, adjacent to the Macleay River in northern NSW. The Project is located within the New England REZ and the Armidale Regional Local Government Area (LGA), proximate to its border with Kempsey Shire LGA.

The Project involves building two 'off river' water containment structures to create an upper and a lower reservoir (referred to as 'the upper dam and reservoir' and 'the lower dam and reservoir', respectively), on an ephemeral tributary of the Macleay River. An underground hydro-electric power station complex will be connected to the reservoirs by infrastructure including a power waterway and tunnels. The power station complex will effectively have three operating modes: energy generating mode, pumping mode, and synchronous condenser, enabling the water to generate electricity as it passes through the underground power station while moving from the upper to the lower reservoir, from where it is pumped back up via the same waterway in a 'closed-loop circuit'. The pumped hydro system will be connected to the existing transmission network via new overhead high voltage transmission lines.

Other components of the Project will include the construction of and upgrades to access roads in the area, the construction of an electrical substation, and the construction of up to two high voltage transmission lines (132 kilovolt (kV) and 330 kV) that will connect the pumped hydro system to the high voltage transmission lines that connect Kempsey and Armidale (known as Line 965).

The Project is a scheme designed to provide utility-scale energy storage. It will provide 900 MW of electricity generating capacity and up to eight hours of dispatchable energy to the NEM. The expected operational lifespan of the Project is in excess of 100 years.

Water from the Macleay River will be used for the initial one-off filling of the reservoirs and for sporadically required top ups, which are expected to be minimal. The filling will occur during periods of high water flow in the river and will not impact downstream water users.

The Project has been declared State significant infrastructure (SSI) and critical State significant infrastructure (CSSI) in accordance with the provisions of the NSW *Environmental Planning and Assessment Act 1979* (EP&A Act). The declaration of OMPS as a CSSI project acknowledges that the project is critical to the State and that the public benefit of the Project is considered significant.

Following the public exhibition of the EIS, 92 submissions were received, including 16 from special interest groups and 58 from individual community members. In addition, 18 submissions were received from state government agencies and councils. Of the 92 submissions, 22% were in support the Project, 54% objected to the Project, and the remaining submissions provided a variety of comments (24%). A Submissions Report (EMM 2024a) has been prepared in response to matters raised in these submissions and agency advice, as well as an Amendment Report (EMM 2024b). Where response to submissions has resulted in a change to the Project, this is noted. This report is appended to the Amendment Report for the Project, but input was also provided to the Submissions Report. This report contains information

Several key amendments were also made to the Project. This SIA Amendment Report provides an assessment of the social impacts and benefits associated with the proposed Project amendments. The Minister for Planning and Public Spaces will subsequently decide whether to grant approval, or to refuse the project, under the EP&A Act.

1.2 Project amendments

A review of the Project design and constructability was carried out following exhibition of the EIS and with consideration of regulator feedback and comments raised during the submission period. This review identified the need for several amendments to the Project. Wherever possible, the aim was to continue to avoid and minimise environmental impacts.

This SIA Amendment Report is intended to assist the community, government agencies and the approval authority to understand the implications of the amended project in terms of potential social impacts and benefits.

An overview of the proposed amendments is provided in Table 1.1. As part of these amendments, the project area, construction envelope, disturbance footprint and operational footprint, have consequently all been revised to accommodate stakeholder feedback, design changes and refined construction requirements.

Table 1.1 Summary of proposed amendments

Project element	Summary of amendments to the project	As exhibited in EIS	Amended Project
Internal roads			
Eastern Access Road (EAR) refinement	Realignment of the EAR to reduce need for earthworks, improve road safety and address drainage issues.	Approximately 11.4 kilometres (m)	Approximately 12.1 km
Temporary bridges	A temporary bridge will be utilised prior to the construction of the two permanent bridges near Smiths Bluff (referred to as Eastern Access Temporary Bridge). A secondary, temporary access is proposed via the construction of a new, temporary bridge crossing of the Macleay River about 600 m north-east of Georges Junction (referred to as Western Access Temporary Bridge). This amendment is proposed to reduce the period of internal road construction and therefore overall construction period, and improve effectiveness of emergency response measures (access and egress).	One temporary bridge: Eastern Access Temporary Bridge. Two permanent bridges near Smiths Bluff.	Two temporary bridges: Eastern Access Temporary Bridge (EATB) and Western Access Temporary Bridge (WATB). Two permanent bridges near Smiths Bluff.
Upper Dam Access Road (UDAR) refinement	Realignment of the UDAR (including removal of a large north-south connecting section of road) in response to regulator feedback to avoid known habitat and potentially significant impacts to the threatened Brush-tailed Rock Wallaby.	Approximately 7.1 km	Approximately 6.4 km
Construction			
Temporary or fly camps	While fly camps were previously anticipated for the project, up to three fly camps are confirmed to be required and will be located near Smiths Bluff (Eastern fly camp), the intersection of the Main Access Road and the EAR (Western fly camp), and the upper reservoir (within spoil emplacement area) (Southern fly camp). The camps will each accommodate about 20 workers and up to 90 workers depending on the ultimate configuration, and be established within the first year of construction. All services will be trucked in and out of the sites, with no permanent facilities or services proposed.	Temporary or fly camps may be required. The location and size will be documented during the detailed design phase.	Three temporary or fly camps will provide small scale temporary work accommodation for workers completing initial road works until the main accommodation camp is completed. Proposed locations in proximity of EATB, WATB, and Upper reservoir.

Project element	Summary of amendments to the project	As exhibited in EIS	Amended Project
Blasting and rock crushing/processing	Allowing blasting as a construction method for road works and other above-ground works. Rock processing/crushing facilities will be required in the lower reservoir (LR) and upper reservoir (UR) areas to process rock for use in dams.	Blasting required for tunnels and portals.	Blasting required for tunnels and portals, reservoirs and road works.
Construction water requirements	Increasing the estimated water requirements for use in construction (e.g. dust suppression, concrete batching).	Approximately 1 megalitre per day (ML/day)	Approximately up to 3 ML/day
Construction envelope	Updates to the construction envelope to accommodate stakeholder feedback, design changes and refined construction requirements.	Approximately 780 hectares (ha)	Approximately 768 ha
Disturbance footprint	Updates to the disturbance footprint to accommodate stakeholder feedback, design changes and refined construction requirements.	Approximately 330 ha	Approximately 367 ha
Spoil and materials			
Laydown/stockpile areas	There will be four areas used for stockpiling and material laydown instead of two. One area is located along the main access road (between transmission towers 14–16), one area is located in proximity to the batching plant, one area is located near Georges Junction, and one is located near the Eastern Access Temporary Bridge on the eastern side of the Macleay River. The largest of the four areas has also been flagged as available for other ancillary uses, to provide further flexibility as the detailed design progresses.	There will be two areas used for stockpiling and material laydown, covering a total area of 114,000 square metres (m ²)	There will be four areas used for stockpiling and material laydown, covering a total area of 119,600 m ²
Spoil emplacement	Revised spoil estimates were derived following changes to the underground arrangement and sizing. This, in addition to incorporating agency feedback, required changes to the conceptual landform design. The conceptual landform design presents reduced height and slopes however requires a greater disturbance area as a result.	Three permanent spoil emplacement locations to store around 2.9 million cubic metres (Mm ³) plus dead storage within the reservoirs with approximate capacity 300,000-400,000 cubic metres (m ³).	Two permanent spoil emplacement locations to store around 3.55 Mm ³ .
Operational footprint	Updates to the operational footprint to accommodate design changes (including permanent spoil emplacement and transmission alignment along the UDAR).	Approximately 270 ha	Approximately 280 ha
Underground arrangement and sizing			
Underground arrangement and sizing for improved generation capacity	The Project will provide more than 900 megawatt (MW) of electricity generating capacity and at least eight hours of energy storage at full generating capacity.	Up to 900 MW and between 8 and 12 hours of energy storage.	Up to 900 MW and at least 8 hours of energy storage. Underground arrangement and tunnel sizes reflect greater energy storage capacity. Re-location of Main Access Portal (MAT) portal to align with amended arrangement.

1.2.1 Terminology

Approval for the Project is being sought based on feasibility and concept designs as is common for projects of this size and scale. To accommodate minor changes and amendments to the design as it progresses, a 'Project area', 'construction envelope', 'disturbance footprint' and 'operational footprint' approach is being adopted for the Project. This approach is aimed at ensuring environmental impacts are assessed as accurately as possible, whilst accounting for the current level of design and the likelihood of design refinements occurring as the Project progresses towards construction. The terms are explained below.

The **Project area** is the broader area within which the Project will be built and operated, and the extent within which direct impacts from the Project are anticipated. Importantly the Project area does not represent a footprint for the construction works, but rather indicates an area that was investigated during environmental assessments. The Project area has been further divided into different areas to facilitate the assessment of direct impacts from the Project.

The **construction envelope** represents the maximum extent of where disturbance may occur during the construction of the Project. In order to derive the construction envelope, buffers have been applied to the key Project elements and infrastructure. The buffers used to derive the final construction envelope area reflect the confidence around the current siting of the asset or infrastructure, and the likelihood that some minor amendments may be required prior to commencing the construction works as a result of the detailed design. The construction envelope for the Project covers an area of around 768 ha.

Located entirely within the bounds of the construction envelope sits the **disturbance footprint**, a smaller area that has been derived directly from the current level of design. The disturbance footprint represents the physical disturbance that can be expected as part of the construction works. As the design is refined, the final siting of the disturbance footprint can move within the construction envelope, subject to the recommended environmental management measures, and provided it does not exceed any limits as defined by the construction envelope. It is proposed that part of the disturbance footprint will be rehabilitated, and land formed at the completion of the Project. However, other parts will be retained after construction which is necessary for the ongoing operation and maintenance of the new power station (operational footprint). The disturbance footprint for the Project covers an area of around 367 ha.

Progressively and at the end of construction, temporary components that are required to support the construction of the Project will be rehabilitated and returned to a state representing their previous use. The exceptions to this are the areas required for the permanent operation of the Project, which would be retained (referred to as the **operational footprint**). The operational footprint of the Project covers an area of around 280 ha. Approximately 62.7 ha would be progressively rehabilitated during and following the completion of construction.

1.3 Assessment approach and requirements

This SIA Amendment report assesses social impacts and benefits of the amended Project in accordance with the Secretary's Environmental Assessment Requirements (SEARs), as well as relevant government assessment requirements, guidelines, and policies, including:

- the *Social Impact Assessment Guideline for State Significant Projects* (SIA Guideline 2023) (DPE 2023a)
- the *Technical Supplement: Social Impact Assessment Guideline for State significant Projects* (SIA Technical Supplement 2023) (DPE 2023b)
- the *Cumulative Impact Assessment Guidelines for State Significant Projects* (DPE 2022a).
- the *State significant development guideline – preparing an amendment report* (DPE 2022b).

Additionally, Alinta Energy’s Environment and Community Policy has provided guidance.

The SEARs outline what is required to be addressed in the EIS and were issued on 10 June 2022. The SEARs for the project, and where each element is addressed in this SIA technical report, are provided below.

Table 1.2 SEARS requirements relating to social impact assessment

Reference	Requirements	Section addressed
Social – including a Social Impact Assessment, which provides:		
1.	An assessment of the social impacts of the project in accordance with <i>Social Impact Assessment Guideline</i> (DPIE, 2021), including impacts on:	Section 7, Section 8
2.	<ul style="list-style-type: none"> The locality. 	Section 7.3
3.	<ul style="list-style-type: none"> The demand for infrastructure and services in the Armidale Regional and Kempsey Shire local government areas. 	Section 7.4
4.	<ul style="list-style-type: none"> Users of nearby National Parks and Reserves, Conservation Areas, World Heritage Areas, areas of declared wilderness under the <i>NSW Wilderness Act 1987</i>, Macleay River and Bicentennial National Trail. 	Section 7.5

The SIA Guideline has subsequently been updated, and this assessment references the current version (DPE 2023a).

1.4 Authorship and SIA Declarations

This report has been prepared by a suitably qualified and experience lead author, Caroline Wilkins, consistent with SIA Guideline 2023 requirements, and reviewed and approved by a suitably qualified and experienced social scientist, Chris Mahoney. All contributors hold appropriate qualifications and have the relevant experience to carry out the SIA for this project.

i SIA Declarations

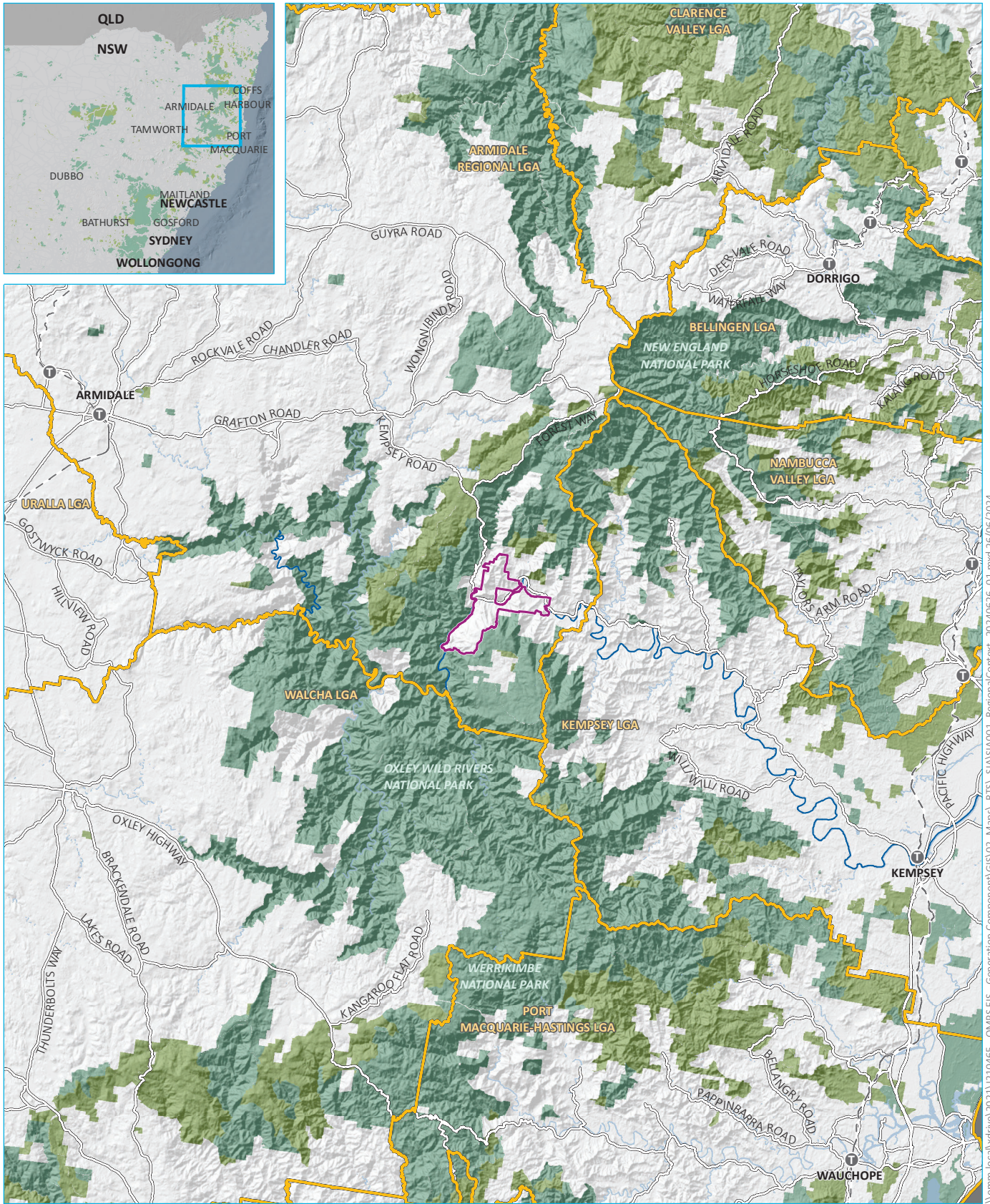
The authors declare that this SIA report:

- was completed in March 2023
- was updated in July 2024
- has been prepared in accordance with the EIS process under the *EP&A Act 1979*
- has been prepared in accordance with the SIA Guideline 2023
- contains all reasonably available project information relevant to the SIA
- as far as EMM is aware, contains information that is neither false nor misleading.

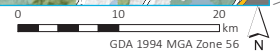
Assumptions and limitations of this report are outlined in Section 3.3.

Figure 1.1 displays the regional context of the Project.

Figure 1.2 shows key project elements within the Project area including the proposed location of the onsite accommodation facilities.



Source: EMM (2024); ABS (2021); DFSI (2020, 2021); GA (2011)



KEY

- Project area
- Train station
- Rail line
- Major road
- Macleay River
- Named waterbody
- Local government area
- NPWS reserve
- State forest

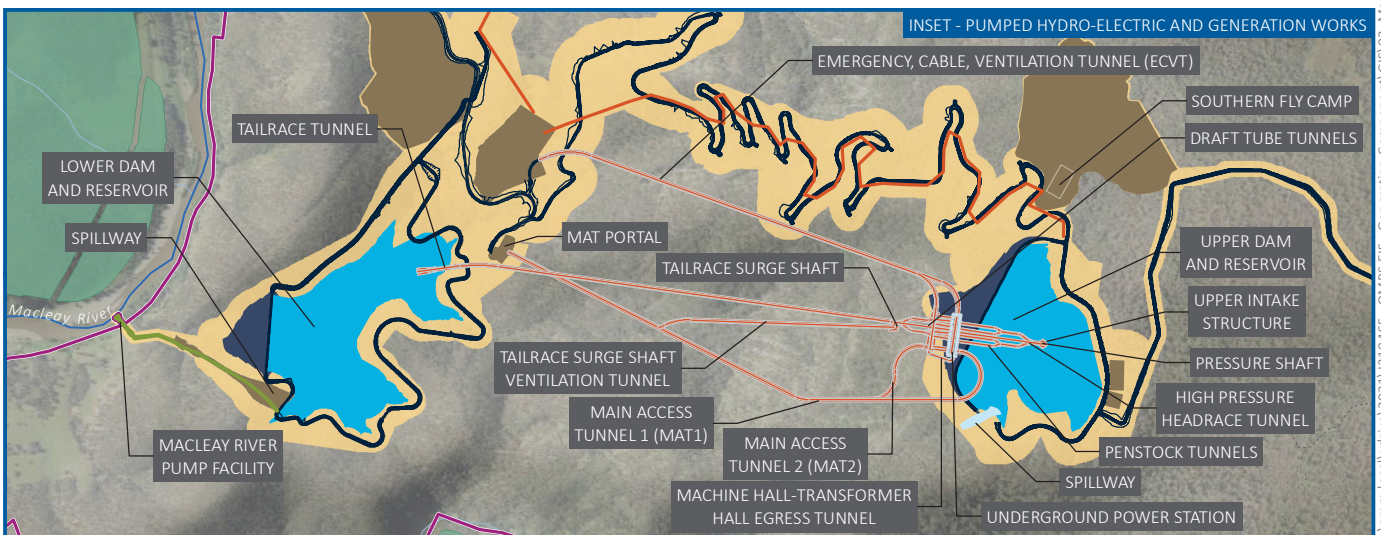
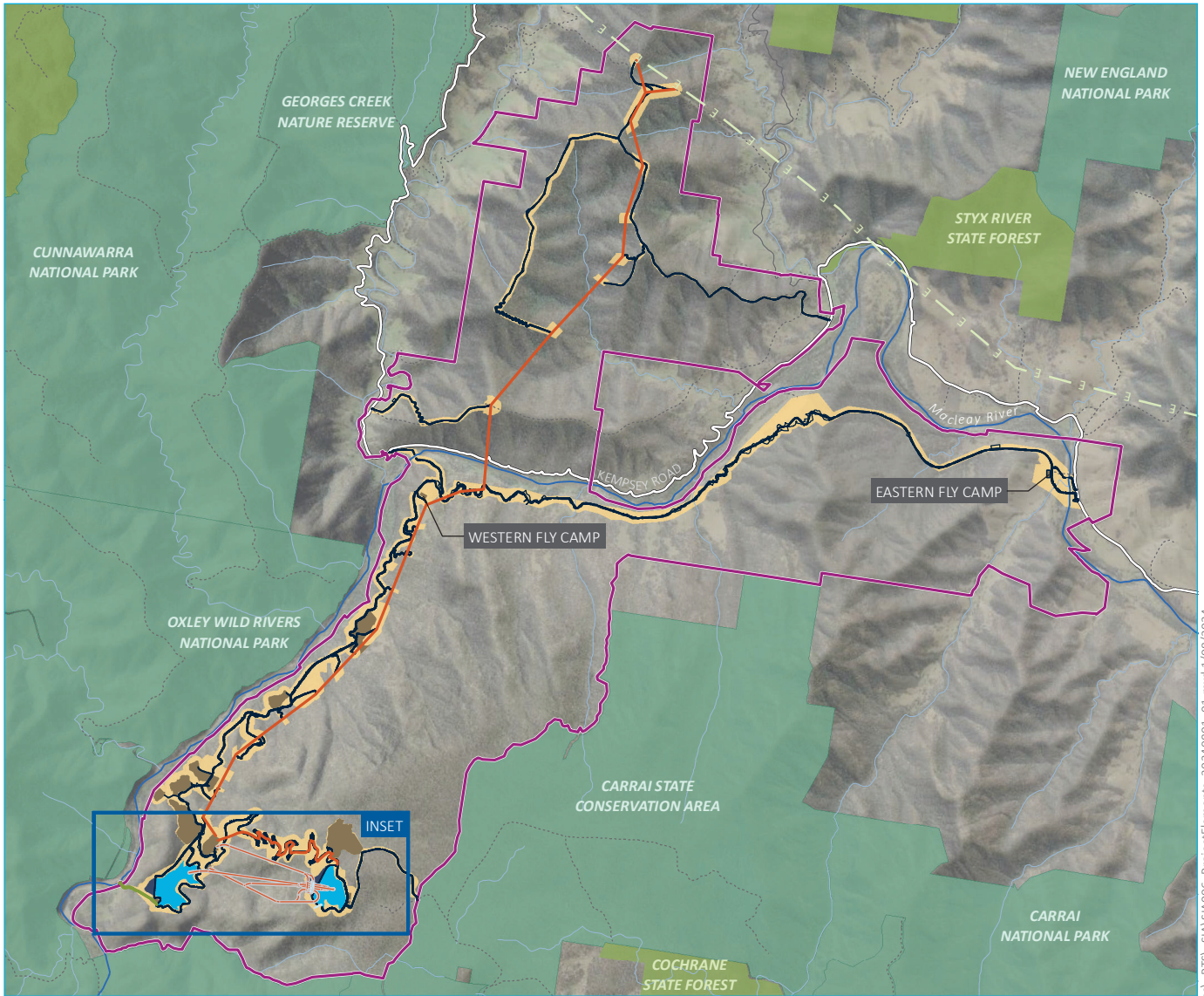
- INSET KEY**
- Major road
 - NPWS reserve
 - State forest

Regional context

Oven Mountain Pumped Hydro Energy Storage Project
 Social Impact Assessment Amendment
 OMPS Pty Ltd
 Figure 1.1



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Source: EMM (2022); DFSI (2020); GA (2011); SMEC (2022)

KEY		Existing environment	
Project area	Construction envelope	Macleay River	Major road
Surface works	Power station	Watercourse/drainage line	Minor road
Pump station	Tunnels, portals, intakes, shafts	Vehicular track	Existing transmission line
Transmission overhead lines	Permanent road	NPWS reserve	State forest
Dam wall	Reservoir		
Spillway			

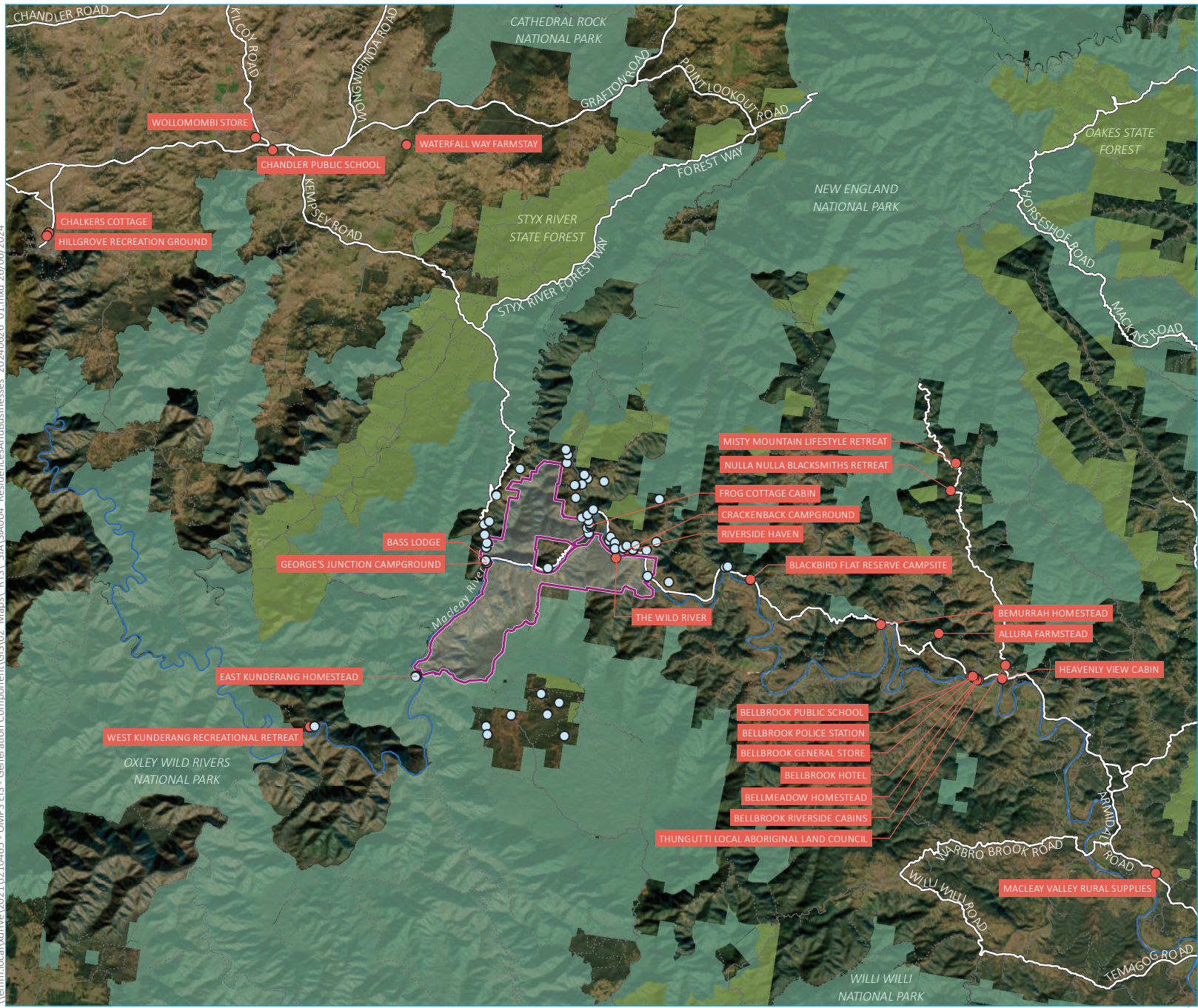
Overview of key project elements

Oven Mountain Pumped Hydro Energy Storage Project
 Social Impact Assessment
 OMPS Pty Ltd
 Figure 1.2



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- KEY**
- Planning footprint
 - Residences
 - Local business
 - Major road
 - Minor road
 - Vehicular track
 - Macleay River
 - Named waterbody
 - NPWS reserve
 - State forest

Local residences and businesses

Oven Mountain Pumped Hydro
Energy Storage Project
Social Impact Assessment Amendment
OMPS Pty Ltd
Figure 1.3



Source: EMM (2022); DFSI (2020); GA (2011); SMEC (2022); ESRI (2022)



2 Description of key Project elements

2.1 Overview

Construction of the Project has numerous overlapping phase and stages across the five-year construction period. The planned Project phases and stages are show in Figure 2.1.

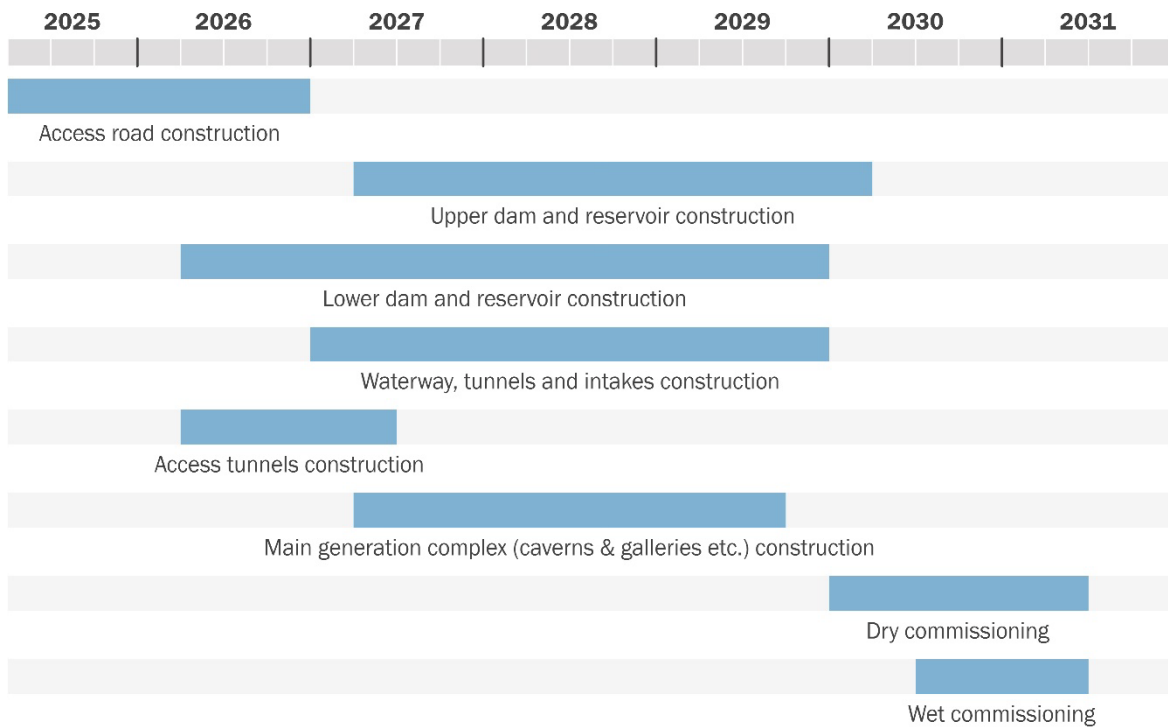


Figure 2.1 Project timing and sequencing

2.1.1 Project workforce requirements

The Project workforce is estimated to peak at 822 workers during year 4 of the construction phase.

For the purposes of this report, a maximum of 30% of the construction workforce is being assumed to be able to be recruited from within the regional area of Armidale and Kempsey LGAs. This excludes recruitment of Aboriginal persons from the regional area as targets for First Nations recruitment are captured separately¹. Therefore, this assessment assumes that 70% of the construction workforce will be sourced from outside the region – referred to as non-local hires (NLH).

Figure 2.2 provides a histogram of workers by source over the construction period.

¹ The Industry and Aboriginal Participation Plan (IAPP) outlines the Project’s initiatives on indigenous employment targets, education, training and capability-building plans for Aboriginal staff of businesses and Aboriginal-owned sub-contracting targets.

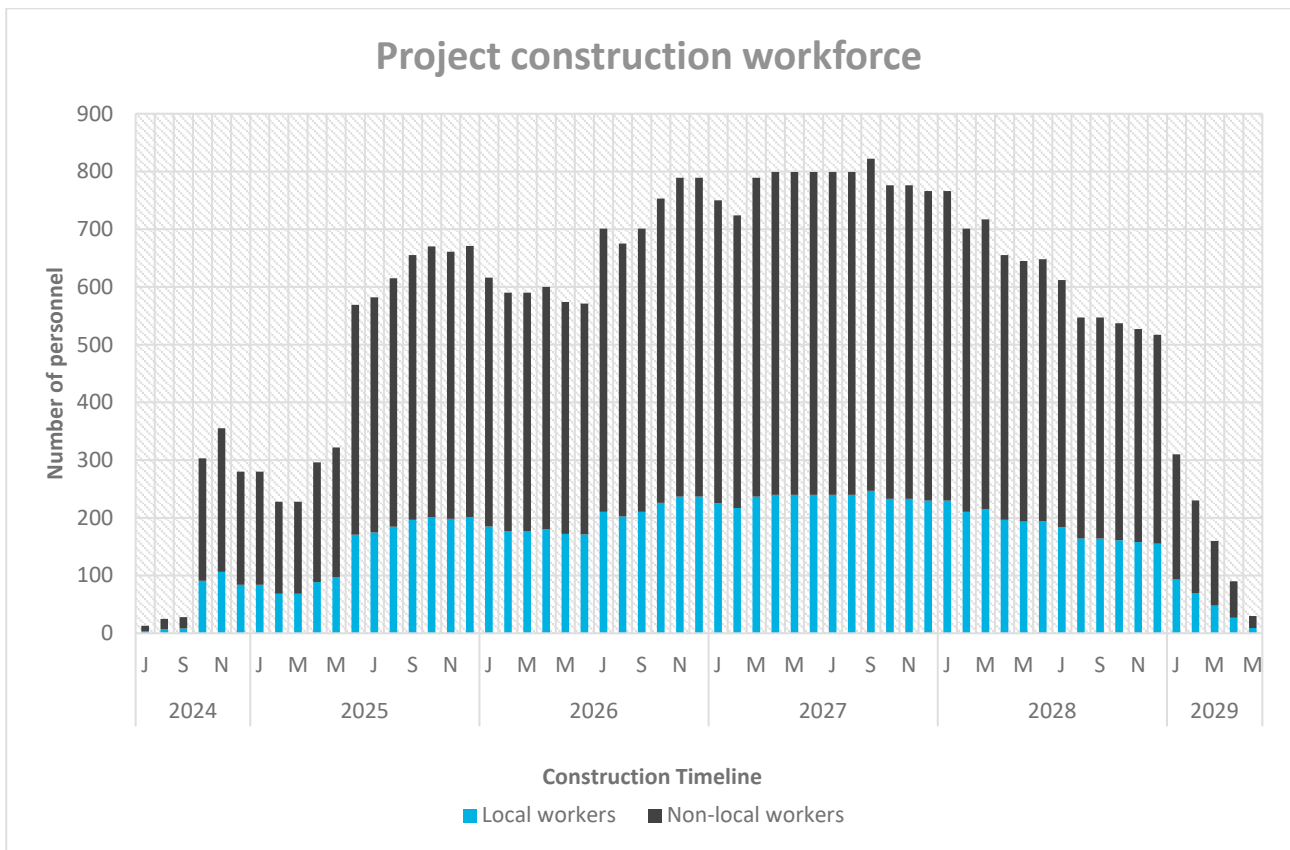


Figure 2.2 Project construction workforce

Figure 2.2 shows that within the first year of the construction phase the workforce will rapidly increase to 539 workers, of which 377 are NLH and require accommodation.

It is expected that the typical shift cycle for construction workers will be 12 hours per day for 10 days and four days off. The shifts will be arranged to enable construction works to occur 24 hours/day and 7 days/week.

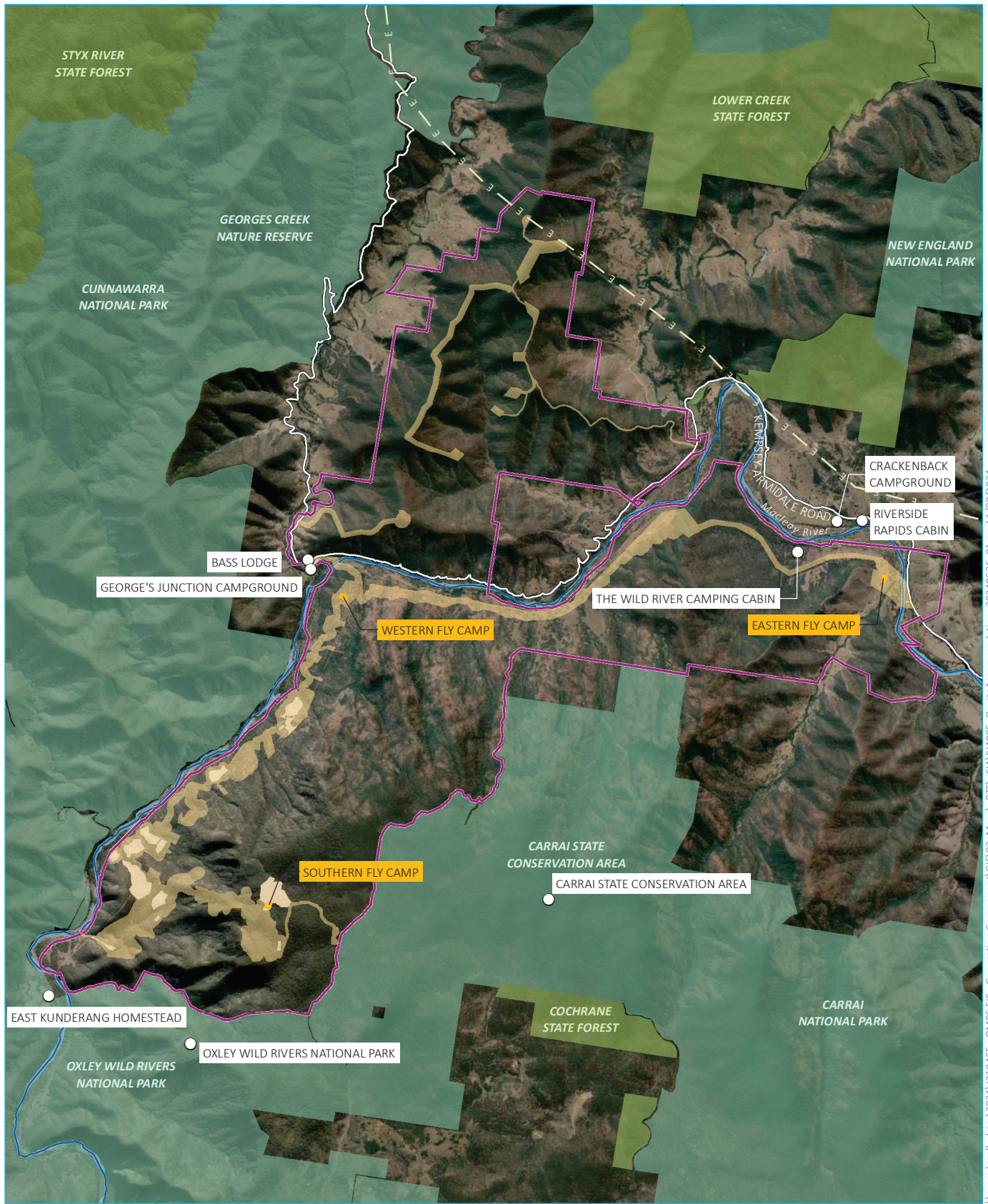
2.1.2 Onsite accommodation

The amendment provides onsite accommodation for an additional proportion of the workforce during construction, with the addition of three fly camps.

The fly camps will be constructed within the construction footprint in the following locations:

- at the Western Access Road near Smiths Bluff (fly camp 1)
- the intersection of the Main Access Road and the Eastern Access Road (fly camp 2)
- the upper reservoir, within the spoil emplacement area (fly camp 3).

Figure 2.3 displays the location of the three fly camps.



Source: EMM (2024); ABS (2021); DFSI (2020, 2021); GA (2011)

KEY

- Project area
- Onsite accommodation facilities
- Amended construction envelope
- Fly camps
- Surface works
- Existing transmission line
- Major road
- Macleay River
- Named waterbody
- NPWS reserve
- State forest

Location of onsite accommodation facilities

Oven Mountain Pumped Hydro Energy Storage Project
 Social Impact Assessment Amendment
 OMPS Pty Ltd
 Figure 2.3



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Table 2.1 shows the nearest residence or tourism accommodation to each onsite accommodation facility.

Table 2.1 Nearest residence/tourism accommodation to each Project accommodation facility

#	Camp	Nearest residence/ tourism accommodation or recreational area	Approximate straight line distance
1	Western Access Road fly camp	Riverside Rapids cabin at Riverside Haven	1 km
		Crackenback Campgrounds	1 km
		The Wild River camping cabin	2 km
2	Eastern Access Road Fly camp	George’s Junction Campground	700 m
		Bass Lodge	750 m
3	Upper Reservoir fly camp	Carrai State Conservation Area	1.5 km
main	Main accommodation camp	East Kunderang Homestead	2.5 km
		Oxley Wild Rivers National Park	2 km

The main accommodation camp will have a capacity to house 600 construction staff. The main accommodation camp will be established progressively, with an assumed 50-100 person capacity being established per month from year 2 of construction phase.

Each fly camp will have a capacity for between 30 and 90 construction staff. In total, the fly camps will provide an additional capacity for a proposed 205 staff in addition to the 600 person capacity at the main accommodation camp.

In total, at peak, up to 735 staff will be accommodated in onsite accommodation during construction.

Table 2.2 provides the estimated timeframe for the availability of on-site accommodation for use by construction workers.

Table 2.2 Accommodation camp capacity and availability

#	Camp	Capacity	Availability
1	Western Access Road fly camp	50–90 staff	Q3 2025 – Q2 2027 (year 1 – year 3)
2	Eastern Access Road Fly camp	40–70 staff	Q3 2025 – Q4 2026 (year 1 – year 3)
3	Upper Reservoir fly camp	30–45 staff	Q3 2025 – Q2 2027 (year 1 – year 3)
main	Main accommodation camp	600 staff	Q3 2026 (year 2) – up to 100 staff capacity added each month until completion in Q4 2026 Demobilisation in Q4 2031

The schedule for the establishment of workforce accommodation shows the three ‘fly’ or temporary camps being established from Q3, 2025 (year 2). Where onsite accommodation is insufficient, workers would reside in local accommodation.

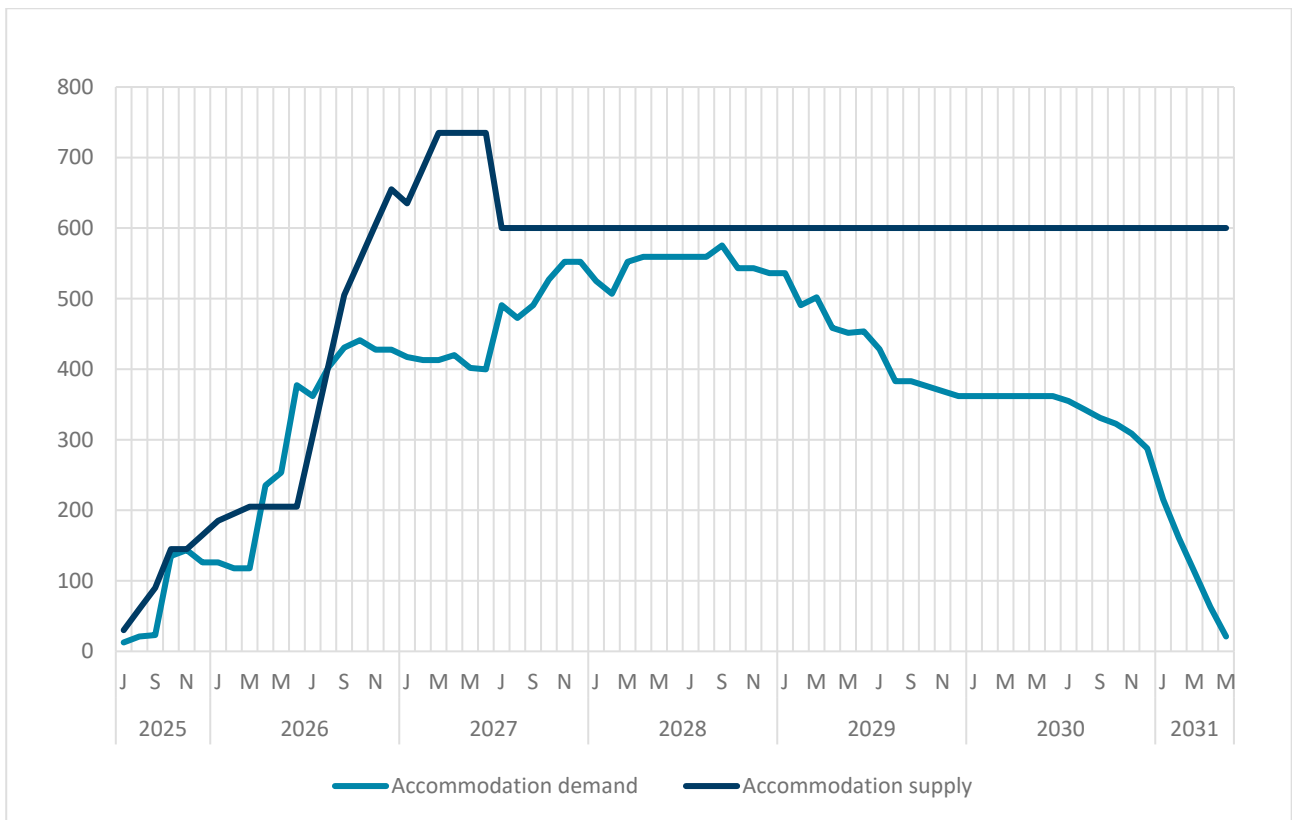


Figure 2.4 NLH workers and accommodation capacity

Figure 2.4 displays the estimated capacity available at onsite accommodation facilities during construction phase and the demand for onsite accommodation from NLH construction workers. The data shows a projected shortfall of onsite accommodation within the first year of construction of between 30 and 172 staff. After year 1 of the construction schedule, it is estimated there will be sufficient onsite accommodation for all NLH workers, and from year 4, excess rooms.

2.1.3 Accommodation facilities

Prior to the establishment of the fly camps, workers are expected to source their own accommodation in the local area or in Kempsey or Armidale.

A range of additional facilities are also planned for the main accommodation camp, including:

- contractor’s staff and labour accommodation
- employer’s staff accommodation
- private staff and bus parking
- kitchens, food preparation and storage
- dining area
- shop and social facilities
- laundries, washrooms, and locker rooms
- gymnasium and recreation facilities

- first aid unit
- camp offices
- fire water and raw water tanks
- raw water and fire water pump station (camp use only)
- water and wastewater treatment
- generator building
- rubbish area
- security.

Potable water will be trucked in to fly camps during early stages of construction after which it will be sourced from the Macleay River and treated prior to consumption.

Food and laundry units will be shared, and waste will be collected in holding tanks before being transported to nearby processing plants.

2.1.4 Workforce transport and logistics

The majority of the non-local construction workforce will be bussed to/from Kempsey to the Project area. Some Project vehicles will also be used to transport workers to and from the Project site. It is assumed that non-local workers travelling for leave breaks will not require transit accommodation in Armidale or Kempsey. It is assumed that workers will depart in the morning, travel to the respective airport and fly out within the same day.

2.1.5 Access roads

Construction traffic for all the construction activities will either be from Kempsey or Armidale, with the majority travelling to and from Kempsey.

Construction vehicular trip distribution for each site access is summarised below:

- Site Access 1 – EAR (near Smiths Bluff): to and from Kempsey – all over size over mass (OSOM) vehicles, light and heavy vehicles (excluding heavy vehicles associated with construction of the power lines). This access is expected to have only minor construction related traffic travelling to and from Armidale.
- Site Access 2 (transmission access road, located west of Lower Creek): for the construction of the transmission corridor:
 - heavy vehicles: 80%–90% of the heavy vehicles to/from Armidale
 - light vehicle: 80%–90% of the light vehicles for the construction of the transmission corridor with 50/50 split between Kempsey and Armidale.
- Site Access 3 (transmission access road, north of Georges Junction): for construction of the transmission corridor:
 - heavy vehicles – 10%–20% of the heavy vehicle to/from Armidale
 - light vehicle: 10%–20% of the light vehicles for the construction of the transmission corridor with 50/50 split between Kempsey and Armidale.

- Site Access 4 (Eastern Access Temporary Bridge): for construction of roads and accommodation camp
- Site Access 5 (Carrai Access): for initial mobilisation of plant and equipment for the upper reservoir construction and emergency access.

Site Access 3 and 4 will be needed for approximately four months.

2.1.6 Traffic movements

A variety of activities will be undertaken throughout the construction phase of the Project that will generate additional traffic on the road network. Such activities will include:

- delivery of materials and equipment
- conveyance of the workforce (via bus and private vehicle) between local accommodation and the Project site
- servicing of accommodation camps, such as waste collection and food delivery
- transportation of spoil from tunnelling and surface works.

A wide range of vehicles will be used for such activities including light vehicles, buses, concrete trucks, and semitrailers, in addition to a variety of specialised vehicles.

The construction related traffic generation will fluctuate in various construction stages. At its peak, there will be over 200 daily light and heavy vehicles which will access the site via Kempsey-Armidale Road (KAR). The majority of the construction related vehicles, including Over Size Over Mass (OSOM) vehicles, will be to/from Kempsey. The longest construction related vehicles, apart from OSOM vehicles, will be 19 m semi-trailers.

All Project light vehicles will bypass Kempsey town centre. All light vehicles will travel via the Pacific Highway, Macleay Valley Way, Second Lane and North Street to avoid traffic congestion at the Macleay River bridge in Kempsey town centre at the intersection of Smith Street and Lord Street.

2.1.7 Housing and transportation of personnel

Prior to the completion of the accommodation camp, it is expected that the majority of non-locally hired (NLH) workers will reside at the fly camps. When there is a shortfall of onsite accommodation, it is expected that workers will reside in the local area with the majority of the remainder sourcing short-term accommodation in Kempsey and some in Armidale. Where a shortfall of onsite accommodation exists, workers would undertake daily trips from Kempsey or Armidale via mini bus to the Project site. Updated modelling shows prior to the accommodation camp being completed, at peak, 172 NLH workers will need to be transported to and from the Project site. Locations for pick up and drop off in Kempsey have yet to be determined. These will be determined during the detailed design phase, and in consultation with local councils. It is likely that FIFO workers would fly into Armidale, Coffs Harbour or Port Macquarie and will link up with the bus service in Kempsey.

The use of buses will reduce number of vehicles present on the local road network and within the Project site while also improving safety outcomes. Superintendents, engineers, and other employees requiring flexibility of transport for their roles will have access to light vehicles in accordance with their needs.

It is estimated there will be two average and maximum three daily heavy vehicle movements (coach shuttle buses) for peak construction month for transportation of workers.

For daily heavy vehicle movements to/from the Project site, it is estimated that there will be 58 average daily trips during peak construction. It is estimated that there will be 46 trips between the Project site and Kempsey, and 12 trips between the Project site and Armidale.

For daily light vehicle movements during peak construction, it is estimated that there will be 155 trips, 19 from Armidale and 136 from Kempsey.

2.1.8 Off-Project area works

To support the construction of the Project, off-Project site works will be required to upgrade the Kempsey-Armidale Road and to upgrade Line 965, the transmission line connecting the Lower Creek substation to Armidale substation. These improvement works do not form part of this EIS. The social benefits relating to road improvements are addressed separately in the cumulative impact assessment (refer to Section 8).

It is assumed that the Kempsey-Armidale Road upgrades required for light vehicles will be completed prior to commencement of Project construction. Road upgrades required for oversized overmass and heavy vehicle will be completed prior to scheduled commencement of heavy vehicle transportation for the Project. Access to both Armidale and Kempsey from the Project site is assumed for both light vehicles and heavy vehicles.

2.1.9 Operations

It is anticipated that the Project will become fully operational by the end of 2030. It is expected that the operation will require around 30–50 full-time workers, as well as occasional contractors to perform additional maintenance and repairs. The Project will have a full operating life span of 100+ years.

Control of the Project can be conducted remotely as such facilities will operate automatically, however periodic routine maintenance, and repairs to the operational infrastructure will potentially take place by on-site crew. An office area will be provided as part of the control room building, to be used by staff when requiring on-site work.

Operation and maintenance staff will potentially be able to stay at the 'operation and maintenance housing' (O&M housing), which will be permanently established at the construction camp site.

Rehabilitation will, as far as practicable, be undertaken progressively during all phases of the Project and consideration of rehabilitation risks and planning will apply from construction, operations and decommissioning through to final landform design, reinstatement, and revegetation.

All decommissioning activities will be planned and delivered in accordance with a dedicated decommissioning plan. Some elements of a pumped hydro system are more likely to require decommissioning and replacement over the life of the Project, either directly or post-construction, and some elements may remain permanently.

3 Methodology

3.1 Introduction

This section presents the methodology which guided completion of the SIA. The methodology was tailored to update the EIS SIA (EMM 2022a) to consider the amendment to the Project as well as adhere to the SIA Guideline 2023 (DPE 2023a). The methodology of the SIA has also been informed by best practice guidance and standards set out by the International Association for Impact Assessment (IAIA).

3.2 Methodological phases

The phases of the SIA methodology are described below.

i Phase 1

a EIS SIA review

An initial review of the amended Project Description and the impacts identified in the EIS was undertaken. The review included an analysis of social impacts and benefits from the Social Impact Assessment and determination of which social impacts and benefits would be materially affected by the proposed amendments (see Section 4).

The review of the EIS SIA considered the following:

- potentially affected stakeholders
- an understanding of the SIA study area
- potential, negative and positive social impacts for further investigation
- the level of assessment required to address potential social impacts associated with the amendments.

Impacts from the EIS SIA Report which were found to require no further assessment are outlined in Section 4.3.

ii Phase 2

a Stage 1 – Updated social baseline study

Since the preparation of the social baseline study for the Social Impact Assessment (SIA) was completed, the third release of the 2021 Census was issued. Given the time between the EIS SIA and this Amendment, and building upon the understanding of the existing social environment attained in the EIS SIA, an update to the social baseline study was completed. Key sources of information included socio-economic data from the second and third release of the 2021 ABS Census, and data from state government agencies, and local government; published literature and social research; government policies and plans; and documents relating to similar projects. Data not relevant to assessing the amendments has been replaced with references to the previous SIA.

The social baseline study provides a community profile and analysis of social infrastructure and capacity, as well as housing and accommodation indicators across the SIA study areas. The social baseline defines characteristics of the existing social environment against which potential social impacts are identified and assessed. The updated sections of the social baseline study are presented in Section 5.

b Stage 2 – Engagement informing the SIA

A primary source of data informing the SIA Amendment was feedback generated through engagement with potentially affected stakeholders and communities. Extensive engagement was conducted for the EIS Amendment and the Aboriginal Cultural Heritage Assessment (ACHA) Amendment. No further engagement was conducted specifically as part of the SIA Amendment.

c Stage 3 – Data analysis and review

Qualitative and quantitative data collected during engagement was analysed to identify community values strengths and vulnerabilities. Data analysis provided the basis to identify and develop social impact themes and confirm potential social impacts.

d Stage 4 – Social impact identification

Social impacts and benefits relevant to the amendment were identified by suitably qualified social scientists (see Section 1.4) through analysis of the nature of Project activities, baseline characteristics of potentially affected communities and feedback generated through engagement processes.

The SIA Guideline 2023 (DPE 2023a) notes that social impacts may be tangible and intangible or may manifest as rational or justified fears or aspirations. As such, a valid social impact may be perceived rather than actual. Social impacts may be experienced differently by individuals within a community or by different communities and at different times/stages of the project.

Identification and assessment of impacts was undertaken with consideration of the impact categories outlined in the SIA Guideline 2023 (DPE 2023a) which refers to potential changes to people's:

- **way of life:** how people live, work, play and interact
- **community:** its composition, cohesion, character, how it operates and sense of place
- **accessibility:** how infrastructure provided by public, private or not for profit organisations, including services and facilities is accessed and used
- **culture:** shared beliefs, customs, values and stories, and connection to Country, land, places, waterways and buildings, both Aboriginal and non-Aboriginal
- **health and wellbeing:** physical and mental health
- **surroundings:** access to and use of ecosystem, public safety and security, access to and use of natural and built environment, aesthetic value and/or amenity
- **livelihoods:** how people sustain themselves through employment or business, their capacity to do so and whether disadvantage is experienced
- **decision-making systems:** extent community can have a say in decisions that affect their lives, access to complaint, remedy, and grievance mechanisms.

Identification of the Project's potential social impacts and benefits was completed through several complementary approaches, helping to triangulate the findings and confirm accuracy. These approaches included consideration of:

- environmental impacts – review of similar projects in the area, as well as available academic and grey literature to identify potential impacts
- local plans and policies – findings from the review aided to contextualise and understand the local priorities as well as to identify local values
- the existing social environment – demographic and social analysis in the form of a social baseline study
- feedback generated through stakeholder engagement including findings from SIA engagement along with ongoing broader engagement on the Project
- findings from other technical disciplines that contributed to the amendment report (EMM, Oven Mountain Pumped Hydro Energy Storage System: Addendum Report 2024b) were reviewed and potential social impacts defined; these included:
 - noise and vibration
 - traffic and transport
 - surface water
 - groundwater
 - biodiversity
 - soils, erosion and agriculture
 - bushfire
- consideration of cumulative impacts – review of documentation from other existing projects in the study area (DPE 2022a).

A full description of each social impact is provided in Section 7 of this report.

e [Stage 5 – Social risk assessment](#)

This stage involved the systematic assessment of each identified social impact to predict the nature and scale of potential social risk associated with construction and operation of the amended project. The risk approach adopted assesses the magnitude and likelihood of potential positive and negative social impacts with and without mitigation. The social risk assessment matrix, including the assessment framework, is provided in the SIA Guideline Technical Supplement (DPE 2023b) and presented in Figure 3.1.

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

Source: SIA Guideline Technical Supplement, Social impact significance matrix

Figure 3.1 Social impact significance matrix

Determination of the dimensions of magnitude for impacts was achieved through application of the magnitude levels outlined in Table 4 of the SIA Guideline Technical Supplement (DPE 2023b).

Dimensions		Details needed to enable assessment
Magnitude	Extent	Who specifically is expected to be affected (directly, indirectly, and/or cumulatively), including any vulnerable people? Which location(s) and people are affected? (e.g. near neighbours, local, regional, future generations).
	Duration	When is the social impact expected to occur? Will it be time-limited (e.g. over particular project phases) or permanent?
	Intensity or scale	What is the likely scale or degree of change? (e.g. mild, moderate, severe)
	Sensitivity or importance	How sensitive/vulnerable (or how adaptable/resilient) are affected people to the impact, or (for positive impacts) how important is it to them? This might depend on the value they attach to the matter; whether it is rare/unique or replaceable; the extent to which it is tied to their identity; and their capacity to cope with or adapt to change.
	Level of concern/interest	How concerned/interested are people? Sometimes, concerns may be disproportionate to findings from technical assessments of likelihood, duration and/or intensity.

Source: SIA Guideline Technical Supplement, Dimensions of social impact magnitude

Figure 3.2 Dimensions of social impact magnitude

Identified magnitude and likelihood ratings and the associated level of significance of each impact and benefit was based upon the best information available at the time of assessment along with the expert opinion of the technical specialists that completed the assessment. This aligns with the SIA Guideline directive for the assessment to be of a scale appropriate to the project.

f Stage 6 – Social impact mitigation and management

A mitigation and management framework was prepared with consideration of all potential social impacts and benefits to allow for the identification of:

- required impact mitigation measures
- enhancement measures to maximise potential benefits
- partnership opportunities to manage broader, cumulative effects.

Findings from Stages 1–5 were used to distil and analyse recommendations for the SIA report. This stage used a multidisciplinary approach led by EMM’s social scientists supported by environmental advisers.

g Stage 7 – SIA reporting

Development of this SIA technical report and internal peer review were conducted by EMM’s social scientists and environmental scientists.

3.3 Research limitations

3.3.1 Limitations of secondary data sources

This SIA has been based on the best available information relevant to the amended Project.

The SIA assessment is based on the current, amended Project design. The amended Project is subject to detailed design. It has been noted that while Project components are generally fixed, some aspects of the Project (including the siting of Project elements within the development footprint and construction methodology) are subject to change during the detailed design process. The objective is to ensure that the detailed design can meet construction requirements while continuing to minimise social and environmental impacts and deliver benefits.

The SIA relies on several assumptions regarding workforce estimates that will be refined during later stages of project planning and development. The outcomes of the impact assessment and related mitigation strategies may differ upon confirming detailed project plans.

Other assumptions and limitations of the research include the following:

- A key source of data describing social conditions is the ABS Census of Population and Housing, the latest of which was in 2021. There may have been changes to social characteristics since this census event. A consideration is that the 2021 Census occurred during the height of COVID epidemic restrictions which may have impacted upon socio-economic trends and characteristics as recorded.
- Social infrastructure reviewed in the social baseline predominantly considers government-provided facilities or services. In some instances, it is possible that local communities access services through private providers for which data is not available.
- Data presented from the SIA engagement program is based on the interviewee’s knowledge and experience and on their willingness to participate and share data openly. The data collected through the SIA engagement process may not be representative of the perspectives of all community members.
- During stakeholder interviews data is recorded in note form by the SIA specialist conducting the interview. Comments and quotes in this report are summarised as accurately as possible but may not be verbatim.
- Potential social impacts have been informed by evidence from primary and secondary data and engagement sources, including:
 - in-depth interviews conducted by EMM’s social scientists
 - engagement for the EIS and amendment report, by OMPS’s engagement team
 - academic, government, and grey literature (e.g. community engagement materials, reports, working papers, government documents, white papers and evaluations)
 - baseline data.

4 SIA context and scope

As outlined in the SIA Guideline (2023), scoping is the first phase of SIA and focuses on gaining an appreciation of the social context and the nature of the Project in order to complete initial identification of the potential impacts and benefits which need to be taken forward for detailed assessment in the SIA.

This section outlines the SIA study areas, provides a summary of key features of the area within which the Project will be developed, the policy and planning context and the outcomes of the review of the previous SIA to determine which impacts and benefits need to be re-assessed due to Project amendments.

4.1 SIA study area

The SIA study area (referred to as ‘social locality’ in the SIA Guideline) is defined with reference to stakeholders who could potentially be directly or indirectly affected by the Project. This includes landholders, nearby neighbours, community members, businesses, service providers and indigenous groups who may have an interest in the Project or could be directly or indirectly impacted.

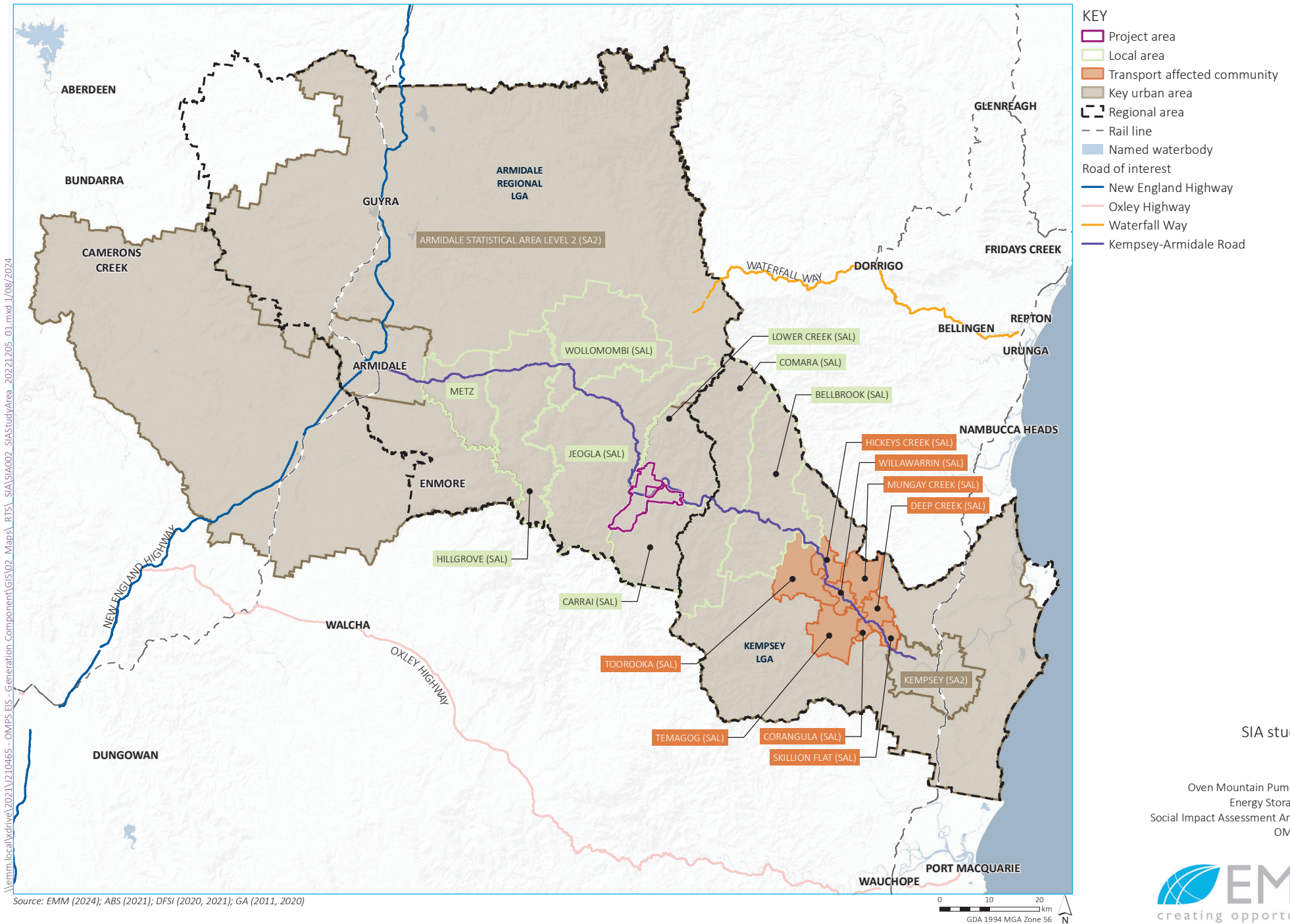
The SIA study area is detailed in Table 4.1 below.

Table 4.1 SIA study area

SIA study area	Geographic area	ABS data category	Referred to in report as:
Local study area	Bellbrook	Bellbrook SAL	Local area
	Carraí	Carraí SAL	
	Comara	Comara SAL	
	Jeogla	Jeogla SAL	
	Lower Creek	Lower Creek SAL	
	Metz	Metz SAL	
	Wollomombi	Wollomombi SAL	
Key urban areas	Armidale	Armidale SA2	Key urban areas
	Kempsey	Kempsey SA2	
Transport affected communities	Corangula	Corangula SAL	Transport affected communities
	Deep Creek	Deep Creek SAL	
	Hickeys Creek	Hickeys Creek SAL	
	Mungay Creek	Mungay Creek SAL	
	Skillion Flat	Skillion Flat SAL	
	Temagog	Temagog SAL	
	Toorooka	Toorooka SAL	
	Willawarrin	Willawarrin SAL	
Regional study area	Armidale Regional	Armidale Regional LGA	Regional area
	Kempsey Shire	Kempsey Shire LGA	

SIA study area	Geographic area	ABS data category	Referred to in report as:
Area of reference	Mid North Coast	Mid North Coast SA4	
	New England and North West	New England and North West SA4	
State of New South Wales	State of New South Wales	New South Wales STE	NSW

Figure 4.1 displays the SIA study areas and the Project area.



4.2 SIA Context

4.2.1 Key features of the area

The Bicentennial National Trail (BNT), or National Trail, runs along the western boundary of the southern part of the Project area. The National Trail follows historic coach and stock routes, old pack horse trails, mail runs and country roads for over 5,000 km through Queensland, NSW, Victoria and the Australian Capital Territory. The National Trail was originally conceived as a route for the long-distance horse treks but is now used by cyclists and walkers as well.

A section of the National Trail (part of the 'Georges Junction to Left Hand Hut' section) passes through the western side of the Project site, running adjacent to the Macleay River. This section is one of the more popular parts of the Trail because of its beauty and remoteness. It is estimated that this section of the Trail has on average between 10 and 30 trekkers per month (National Trail, 2022).

The official Bicentennial National Trail (BNT) map of Section 8, Map 4 Georges Junction – Left Hand Hut shows the National Trail runs predominantly along the east of Macleay River from Georges Junction to Peach Tree Crossing (Trail 2021). The Trail crosses the Macleay River at various intersections including:

- between Broad Crossing and Flaggy Rock Crossing
- at Raffertys Crossing
- at Fingerboard Crossing
- at Peach Tree Crossing/East Kunderang Homestead
- at Carrai Flats.

The National Trail route is situated within the Project site at various sections between Georges Junction and Peach Tree Crossing where it crosses the river to East Kunderang Homestead.

Figure 4.2 displays the location of the National Trail.

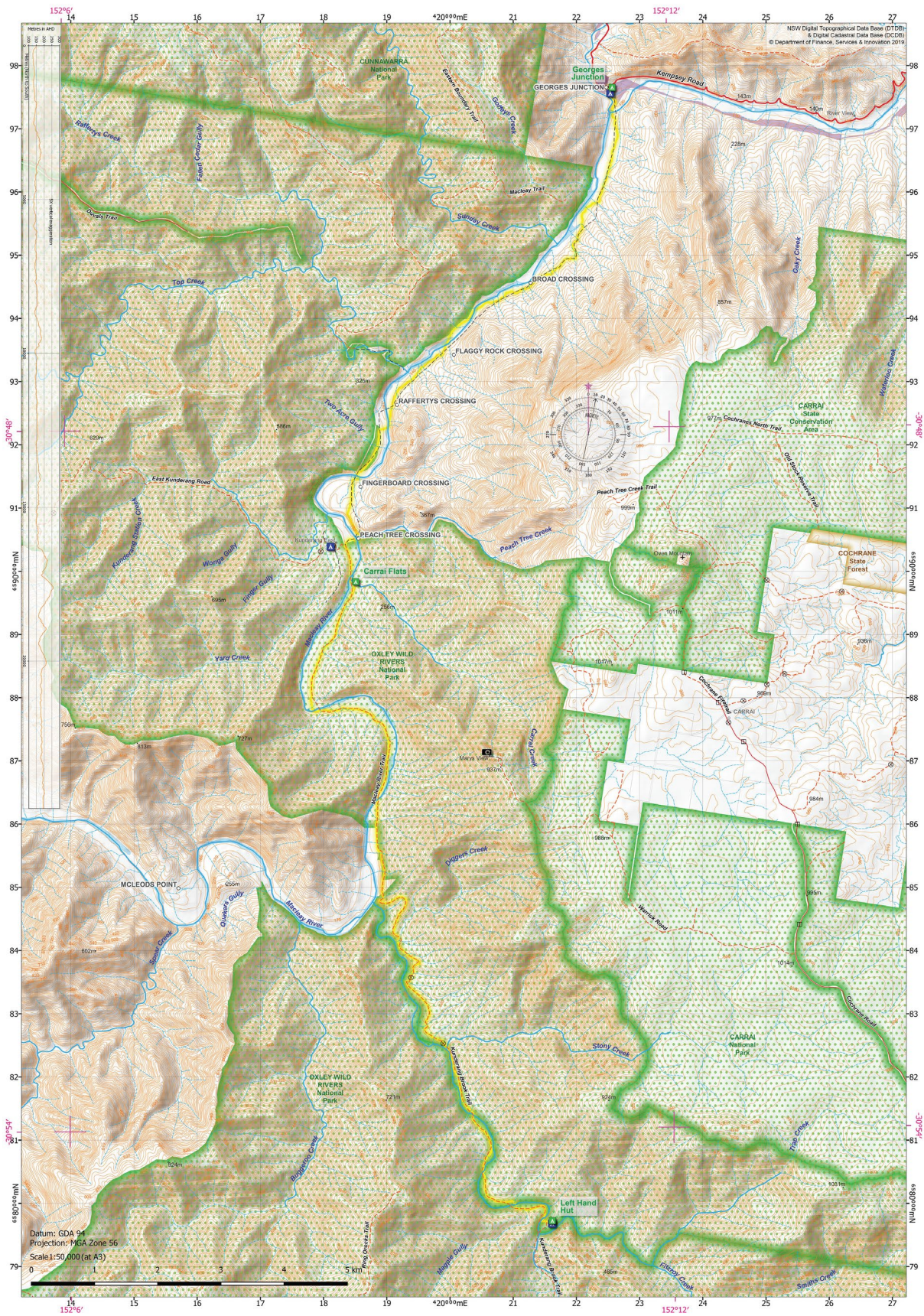


Figure 4.2 Bicentennial National Trail Section 8 - Georges Junction to Left Hand Hut

4.3 Scope of SIA amendments

The impacts and benefits identified in the EIS SIA were reviewed against the Project amendments to determine which would be altered and therefore require re-assessment.

Project amendments will not result in any changes to certain impacts assessed in the original SIA. Matters which do not require further investigation are outlined in Table 4.2 below.

Table 4.2 Matters identified in the EIS SIA which require no further assessment

	Impact	Impact / benefit	Reason no further assessment is required
L08	Stress and anxiety related to perceived dam break (operation).	Impact	Proposed amendments would not alter stress and anxiety related to perceived dam break.
L09	Benefits related to improved bushfire mitigation due to improved evacuation route (operation).	Benefit	Proposed amendments would not alter the construction of access roads.
L10	Benefits related to improved bushfire mitigation due to improved water access (operation).	Benefit	Proposed amendments would not change improved access to water for bushfire mitigation.
I01	Increase in demand for infrastructure and services in the regional area (construction, operation).	Impact	Proposed amendments would not alter the demand for infrastructure and services in the regional area.
I02	Increased competition for social infrastructure and services in the local area (construction).	Impact	Proposed amendments would not alter the increased competition for social infrastructure and services in the local area.
I05	Benefit of improved access to telecommunications and power stability on the main network (construction, operation).	Benefit	Proposed amendments would not alter the benefit of improved access to telecommunications and power stability on the main network.
W01	Impacts on perceived water quality, flow and water security for local downstream receivers	Impact	Proposed amendments would not alter the perception of impacts to water quality, flow and water security.
W03	Perception of reduced water quality and quantity due to aquifer damage by the Project (construction)	Impact	Proposed amendments would not alter the perception of reduced water quality and quantity due to aquifer damage by the Project.
C02	Access restrictions limiting the ability of Aboriginal people to connect to Country (construction, operation).	Impact	Proposed amendments would not alter the access restrictions for Aboriginal people to connect to Country as a result of the Project.
C03	Changes to downstream flows affecting ongoing use of the area for cultural connection and sustenance (construction and operation)	Impact	Proposed amendments would not alter downstream flows affecting use of the area for the purposes of cultural connection and sustenance.
C05	Impacts to historic heritage and cultural landscape values (construction, operation).	Impact	Proposed amendments would not alter impacts to historic heritage and cultural landscape values.
L01	Livelihood benefit of local employment and training opportunities (construction, operation).	Benefit	Proposed amendments would not alter the livelihood benefit related to local employment and training opportunities (Construction).

	Impact	Impact / benefit	Reason no further assessment is required
L03	Employment and training pathways for Aboriginal people (construction, operation).	Benefit	Proposed amendments would not alter the employment and training pathways for Aboriginal people during construction and operation.
E02	Engagement impact related to perceived unequal distribution of impacts and benefits (construction, operation)	Impact	Proposed amendments would not alter perceptions regarding unequal distribution of impacts and benefits.

The identified impacts and benefits requiring further assessment due to proposed amendments are outlined in Table 4.3.

Table 4.3 Matters identified in the EIS SIA which require further assessment

	Impact	Positive / Negative	Reason further assessment is required	Response
L01	Impacts related to sense of community and social cohesion (construction, operation)	Positive	The amendment includes the addition of three fly camps which will increase the number of construction workers residing in the local area and the potential interaction between workers and the local community.	Section 7 Section 7.3
L02	Perceived impacts to privacy during construction	Positive	The amendment includes the addition of three fly camps which may increase the perceived impacts to privacy for local residents due to more workers residing at the Project site.	Section 7 Section 7.3
L03	Changes to the character of the landscape in the local area (construction, operation)	Negative	The amendment will include the addition of three fly camps which may increase the changes to the character of the landscape in the local area.	Section 7 Section 7.3
L04	Impacts from noise and vibration in the local area (construction)	Negative	The amendment includes blasting as a construction method and the use of helicopters which may increase noise and vibration during construction. Additional construction workers residing in fly camps has the potential to increase noise during construction.	Section 7 Section 7.3
L05	Impacts from dust and decreased air quality in the local area (construction)	Negative	The amendment includes blasting as a construction method, the use of helicopters during construction and the addition of three fly camps which may increase dust and decrease air quality during construction.	Section 7 Section 7.3
L06	Perceived decrease in property values (construction, operation).	Negative	The amendment may affect perceived property values due to increased amenity impacts throughout construction.	Section 7 Section 7.3
L07	Perceived risk to public safety (construction).	Negative	The amendment may increase the perceived risk to public safety during construction due to the increase in construction workers residing onsite due to the addition of three fly camps.	Section 7 Section 7.3
L11	Benefits of opportunities for local businesses (construction, operation).	Positive	The amendment is proposed to increase opportunities for local businesses with the addition of contracts for construction of the fly camps.	Section 7 Section 7.3
I03	Decline in rental affordability and availability for residents (construction).	Positive	The amendment will include the addition of three fly camps which will lessen the impact of the Project on rental affordability and availability for residents.	Section 7 Section 7.4

	Impact	Positive / Negative	Reason further assessment is required	Response
I04	Reduced supply of short-term and emergency accommodation for vulnerable groups (construction, operation).	Positive	The amendment will include the addition of three fly camps which will lessen the impact of reduced availability of short-term and emergency accommodation for vulnerable groups.	Section 7 Section 7.4
R01	Reduced access to recreational areas and facilities (construction, operation).	Negative	The amendment confirms that access to the National Trail and Georges Junction campground will be maintained throughout construction. A safety exclusion zone surrounding the Macleay River pumping facility will be implemented for safety purposes.	Section 7 Section 7.5
R02	Reduced amenity at recreational areas and facilities (construction, operation).	Negative	The amendment alters the amenity at recreational areas due to noise impacts and the addition of blasting as a construction technique.	Section 7 Section 7.5
R03	Impacts on environmental values related to the Project (construction, operation).	Impact	The amendment is proposed to alter the environmental impacts of the Project by an increase in land clearing which includes native vegetation and threatened species habitat.	Section 7 Section 7.5
R04	Reduced availability of tourist accommodation (construction, operation).	Positive	The amendment will reduce the use of local (tourist) accommodation by construction workers and therefore increase the availability of tourist accommodation.	Section 7 Section 7.5
T01	Traffic impacts related to public safety risk during construction.	Positive	The amendment will reduce the proportion of workers travelling from the Project site to private accommodation.	Section 7 Section 7.6
T02	Impacts related to traffic congestion and road delays (construction)	Positive	The amendment will reduce the proportion of workers travelling from the Project site to private accommodation.	Section 7 Section 7.6
T03	Benefit related to improved road conditions as a result of the Project (construction, operation).	Positive	The amendment removes the upgrade of Kempsey-Armidale Road from the Project. This change removes the potential benefit as road upgrades do not form part of this Project. This benefit will be assessed under cumulative impact assessment.	Section 8
W02	Concerns regarding water quality due to construction waste and disturbance of existing metals.	Negative	The amendment includes the addition of blasting as a construction method which may lead to increased sedimentation.	Section 7 Section 7.7
W04	Concerns regarding access to water during drought (construction, operation).	Negative	The amendment will increase the estimated water requirements from 1 ML/day to 3 ML/day for construction including potable water requirements for fly camps.	Section 7 Section 7.7
C01	Potential disturbance or destruction of Aboriginal cultural artefacts and sites (Life of Project)	Negative	The amendment will decrease the construction envelope which may marginally decrease potential disturbance or destruction of Aboriginal cultural artefacts and sites.	Section 7 Section 7.8
C04	Impacts to social cohesion between First Nations groups (construction, operation)	Positive	Consultation conducted for the Project since the EIS was submitted included the addition of First Nations groups originating from Kempsey and Armidale. The approach was designed to increase inclusion and participation among those who had not had the opportunity to participate in the original consultation, and thereby support social cohesion.	Section 7 Section 7.8



	Impact	Positive / Negative	Reason further assessment is required	Response
L02	Benefit of regional business procurement opportunities (construction, operation).	Positive	The amendment includes contracting of the construction of three fly camps. This additional contract may increase regional business procurement opportunities.	Section 7 Section 7.9
E01	Perceived insufficient community consultation and engagement resulting in lack of trust (including ownership) (construction, operation).	Positive	Community consultation conducted since the submission of the EIS and for the purposes of this amendment may change perceptions regarding insufficient community consultation and engagement.	Section 7 Section 7.10

4.4 Policy and planning context

4.4.1 Relevant studies and assessments

This section draws upon studies relevant to the amendment, or which have been released since completion of the EIS SIA. It also provides a review of SIA reports completed for similar, nearby REZ projects.

Table 4.4 Relevant studies and assessments

Name	Description and relevance to the project
<p><i>Employment, Skills, and Supply Chains: Renewable Energy in NSW</i> (Briggs, et al. 2022)</p> 	<p>Commissioned by the NSW Renewable Energy Sector Board and the DPE, the Institute of Sustainable Futures, University of Technology Sydney and SGS Economics and Planning developed this assessment of employment and industry development opportunities associated with the Electricity Infrastructure Roadmap. The report details renewable energy supply chains, employment and skills, and also provides a skills and employment assessment for each REZ.</p> <p>The report is relevant to identifying and assessing potential social impacts and benefits associated with the project. The report provides insights to regional and broader drivers, and an assessment of workforce and skills requirements across the life of projects, which is drawn upon in the baseline section (Section (Baseline chapter on workforce)) of this report to build a more nuanced basis for assessing potential impacts.</p> <p>Some overall findings from this report include:</p> <ul style="list-style-type: none"> • the pace of change in the energy sector poses a challenge to predict and plan for local workforce capacity and skilling • skills shortages emerged as the number one identified constraint during stakeholder interviews • short construction timeframes and uncertainty on contracts discourages investment in training workers and can even deter new entrants.
<p><i>Renewable energy generation and agriculture in NSW's rural landscape and economy – growth sectors on a complementary path</i> (NSW Agriculture Commissioner 2022)</p> 	<p>This report was formed as a review of existing framework to manage issues and opportunities relating to growth in the renewable energy and agriculture sectors. Informed by submissions to the <i>Renewable Energy and Agriculture in NSW: Issues paper</i>, (NSW DPI 2022), this report recognises competing needs for land, including for agricultural, housing, and renewable energy infrastructure. Differing interests are recognised as rendering different patterns of land use, leading to land use conflict.</p> <p>The report provides an assessment of potential impacts to the agricultural sector in NSW using four growth scenarios for the rollout of Roadmap infrastructure.</p> <p>The report provides a land-use profile for the CWO REZ, describing the region as highly a highly diverse and the total area is made up of 88% rural land, where 34% of rural land is considered state significant agricultural land (SSAL).</p> <p>Across broader NSW, the study found that in the worst-case scenario for land use changes associated with the roll out of renewable energy infrastructure to 2051, there is no material impact to agricultural production. It does suggest, however, that in some specific cases, there will be 'small local effects', mainly attributable to the sheer number of projects.</p> <p>For example, in the Central West Orana, there are some higher land use change results under the worst-case scenario, where 21.5% of SSAL would be required for wind and solar projects. The step change scenario, considered to be the most likely scenario, sees 9.2% of SSAL would be required.</p>

5 Social baseline

At the time of preparing the Social Impact Assessment for the Project, the third release of the 2021 Census, which includes the Socio-Economic Indexes for Areas (SEIFA) indicators, had not been released. The ABS issued data for complex topics such as include SEIFA and estimates of homelessness in April 2023 (ABS 2021). This section provides an analysis of these topics as well as updated data describing housing availability and affordability.

5.1 Socioeconomic disadvantage

The level of relative disadvantage or advantage in the population is indicated by the Socio-Economic Indexes for Areas (SEIFA) produced by the ABS. Scores are derived using a range of socio-economic indicators including income, education, employment and housing. SEIFA scores are developed across four summary measures:

- the Index of Relative Socio-Economic Disadvantage (IRSD)
- the Index of Relative Socio-Economic Advantage and Disadvantage (IRSAD)
- the Index of Economic Resources (IER)
- the Index of Education and Occupation (IEO).

The SEIFA decile ranking system allocates the lowest 10% of areas to the decile number of 1 and the highest 10% of areas to a decile number of 10. While there are variations to interpreting the decile scores across the four indexes, generally a low decile rank is associated with disadvantage, and a high decile rank is associated with less disadvantage.

The rankings of the communities within the study area for each Index are outlined in Figure 5.1 below.

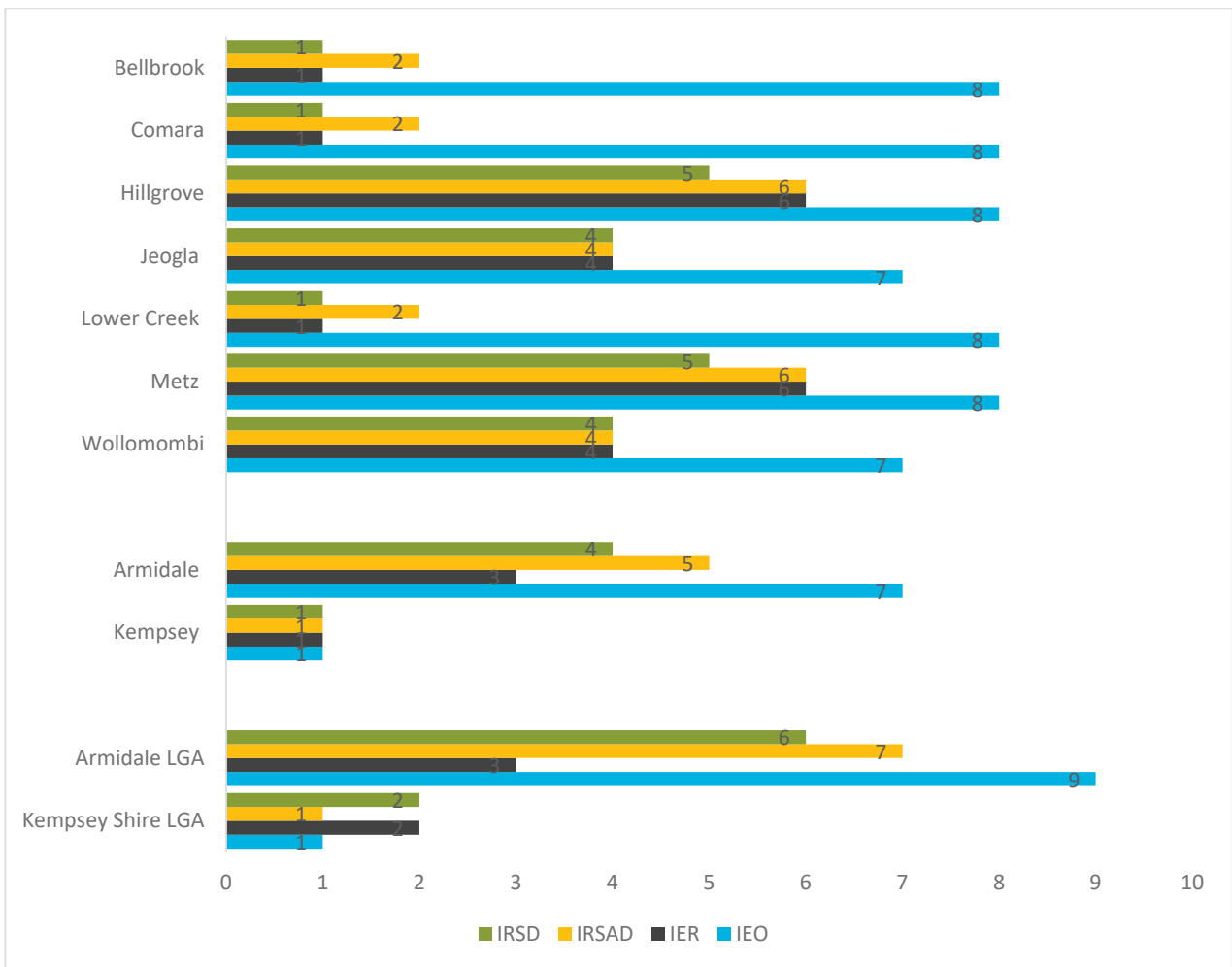


Figure 5.1 SEIFA deciles for the local area, key urban areas and regional area, 2021

As shown in Figure 5.1, the SEIFA deciles for the study area fall in the middle to low range. This indicates that the study area faces a level of relative disadvantage based on the measures including income, education and employment. Bellbrook, Comara and Lower Creek are the most disadvantaged localities in the study area, and within the lowest 10% of localities in NSW. This indicates that these areas experience relative socio-economic disadvantage such as low levels of education, higher rates of unemployment and low household and personal incomes. This is also reflected in Kempsey township and Kempsey LGA.

Armidale city falls in the middle range deciles (ranging from 3 to 7), reflecting relatively average levels of advantage and disadvantage. Meanwhile, Kempsey township faces significantly higher rates of disadvantage.

A further comparison between areas can be achieved using IRSAD which measures both advantage and disadvantage, allowing for clearer comparison. Armidale LGA falls in decile 7 for IRSAD, whilst Kempsey LGA is in decile 2. This reveals that social conditions in Kempsey LGA are within the lowest 20% of LGAs, characterised by low employment, income and educational qualifications when compared to Armidale LGA which ranked within the highest 30% of LGAs in NSW.

Kempsey's overall ranking on the 2021 SIEFA index was 903, the 6th lowest ranking of all LGAs in NSW. Armidale was ranked at 980, also indicating relatively high levels of disadvantage compared to the rest of NSW, but higher levels of advantage than Kempsey.

5.2 Homelessness

As outlined by the Australian Human Rights Commission (AHRC), “the causes of homelessness are numerous and complex. Homelessness can be caused by poverty, unemployment or by a shortage of affordable housing, or it can be triggered by family breakdown, mental illness, sexual assault, addiction, financial difficulty, gambling, or social isolation” (AHRC n.d.). Homelessness can lead to health problems including poor nutrition, depression, substance abuse, poor dental health, and mental health conditions (AHRC 2008). For homeless persons, hardships with finances, transport, identification, Medicare, and difficulty with appointment maintenance/treatment plans make accessing health care services more difficult than the average person (AHRC 2008). As such, homeless persons are at greater risk of being negatively affected by potential impacts on livelihoods and health and wellbeing.

The 2021 Census estimated rates of homelessness in the regional study area (by LGA) and the NSW average, which are shown below:

- Kempsey Shire LGA – 63 people per 10,000 population
- Armidale Regional LGA – 51 people per 10,000 population
- NSW state average – 43 per 10,000 population.

These rates show that Kempsey and Armidale have higher rates of homelessness than the NSW average.

5.3 Housing and short-term accommodation

5.3.1 Housing availability

On 1 May 2024, there was one property for sale and no properties for rent within the local area (REA Group 2024). In the regional area, encompassing Armidale LGA and Kempsey LGA, there was a total of 825 rural and residential properties for sale and 167 properties for rent, with the majority of these properties located within the local suburb of Armidale city (281 properties for sale and 89 properties for rent) (SQM Research 2024)).

Rental vacancy rates are traditional market indicators that “measure the proportion of residential properties vacant and available for rent at any point in time” (REINSW 2019). A higher vacancy rate indicates that there are a higher proportion of vacant (unoccupied) units, based on the total number of units in an area. Vacancy rates under 3% are low and indicate a tight rental market with an undersupply of rental options while vacancy rates above 3% indicate an oversupply of rental options. A rental market with a vacancy rate of 3% is considered at equilibrium (Brewsters Property Group nd).

When the social baseline study last recorded the data in September 2022, Armidale’s residential vacancy rate was 1.1%. The availability of residential properties in Armidale peaked in October 2023 at 3.5% with 127 properties available for rent. Since then, the vacancy rate has fallen back to 1.7% in April 2024 with 62 properties available. This demonstrates an overall small increase in availability in residential properties in Armidale since September 2022 although overall the data indicates low availability of housing in Armidale.

Table 5.1 shows the availability of rental accommodation in Kempsey and Armidale.

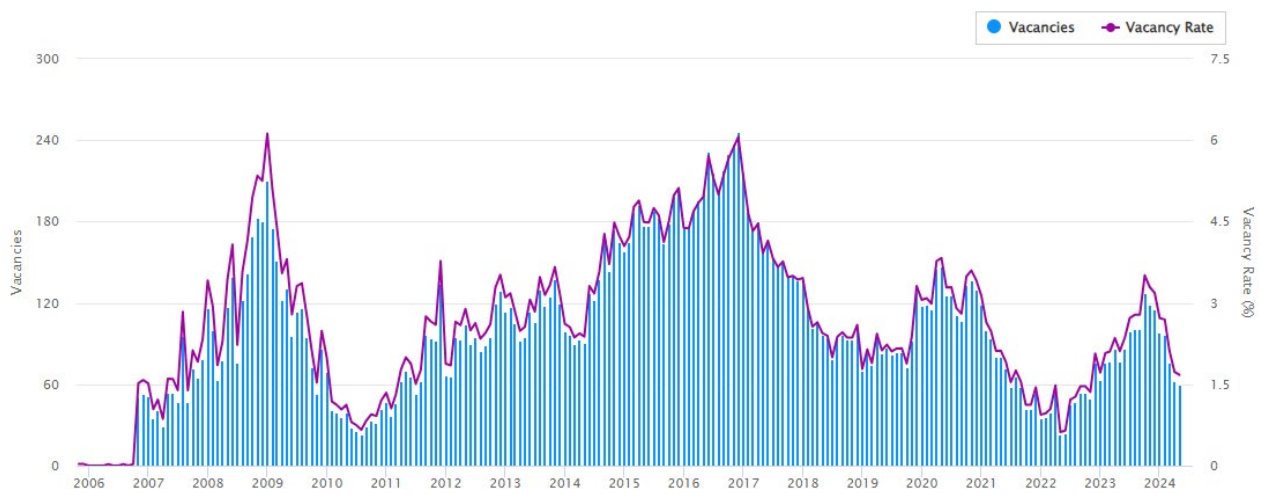
Table 5.1 Rental accommodation availability – April 2024

	Kempsey township	Armidale city	Total
Available rental properties (township)	14	62	
Average bedrooms (township)	2.7	2.3	-
Total number of rooms to rent (township)	38	143	181

Source: SQM Research 2024, Residential Vacancy Rates

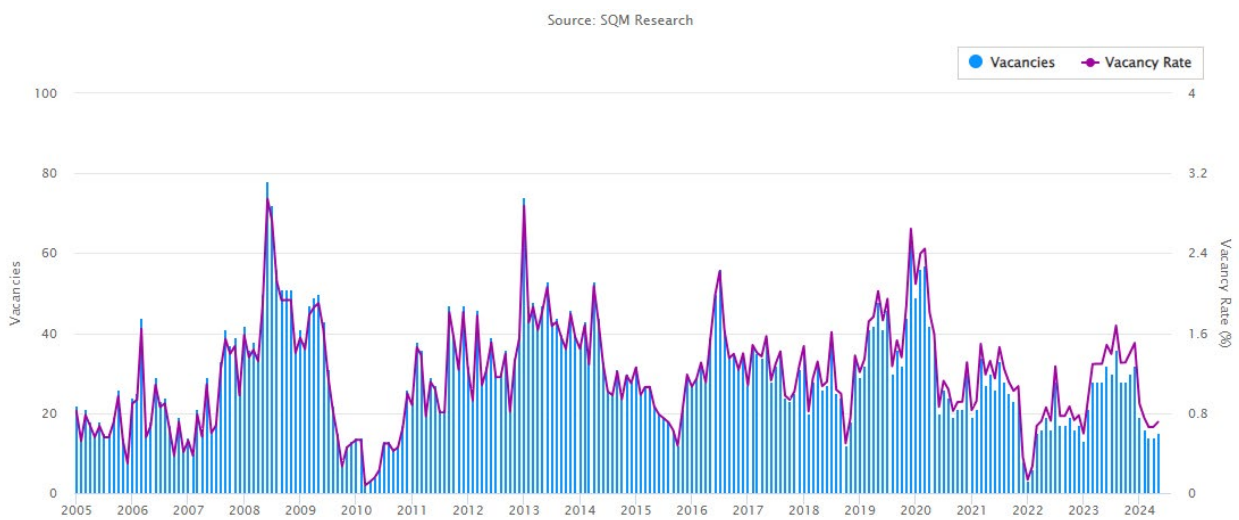
The social baseline study last recorded data for Kempsey’s residential vacancy rate in September 2022 at 0.7%. Since then, a peak rate of 1.7% was recorded in August 2023. As of April 2024, the residential vacancy rate for Kempsey has fallen back to a low of 0.7% or 14 properties available. Therefore, since September 2022, Kempsey’s vacancy rate is virtually unchanged.

Figure 5.2 and Figure 5.3 display residential vacancy trends in Armidale and Kempsey based on post code.



Source: SQM Research 2024, Residential Vacancy Rates

Figure 5.2 Residential vacancy rate trends, Armidale, 2006–2024



Source: SQM Research 2024, Residential Vacancy Rates

Figure 5.3 Residential vacancy rate trends, Kempsey, 2006–2024

The total number of rooms available for rental accommodation is 181 including 38 in Kempsey township and 143 in Armidale city.

5.3.2 Supply of short-term accommodation

The term short-term accommodation refers to accommodation options that are typically provided to visitors or tenants for a short period of time for example, motels, hotels, serviced apartments, bed and breakfast, self-contained homes, caravan and camping parks. The length of tenancy in these forms of accommodation can often extend to lengthy stays, depending on accommodation availability, price and personal circumstances.

Short-term accommodation providers in the local area and key townships service industry sectors including tourism, mining, renewable energy and agriculture.

Table 5.2 provides an overview of short-term accommodation availability in the LGAs of Kempsey and Armidale. This includes tourist accommodation such as hotels, motels, holiday parks and caravan parks as well as Airbnb accommodation. There are an estimated total of 894 rooms across Kempsey and Armidale LGAs. Assuming an occupancy rate of 63.2% results in there being an estimated 332 rooms potentially available. It is recognised that this represents an absolute best-case scenario as not all rooms would be available in the timeframe required for the Project nor suitable for the accommodation of Project workers.

Table 5.2 Short term accommodation

Accommodation type	Kempsey LGA	Armidale LGA	Totals
a) Short term accommodation # properties	16	24	40
b) Short term accommodation # rooms	371	523	894
c) Occupancy rate*	65.1%	61.2%	63.2%
d) Short term accommodation # Total rooms potentially available	129	203	332* ²
e) Airbnb # active properties**	130	20	150
f) Airbnb # rooms	351	46	397
g) Airbnb Occupancy rate	55%	55%	55%
h) Airbnb Total rooms potentially available	158	21	179
i) Short term accommodation + Airbnb Total rooms potentially available d) + h)	287	224	511
Proportion of LGA accommodation located in township	30%	70%	-
j) Short term accommodation + Airbnb Total rooms available (township)	86	156	242

Source: Destination NSW Kempsey and Armidale-Dumaresq 2022. Short term accommodation is based on hotels, motels and serviced apartments with 15 rooms or more (Destination NSW 2024).

Notes: *Short-term accommodation occupancy rates based on Destination NSW regional occupancy rates for New England North West (Armidale) and North Coast (Kempsey) (Destination NSW 2024).

**Airbnb number of active properties based on the average of off-peak and on peak availability at a maximum of \$200 per night, sourced from Airbnb.com.au

Airbnb occupancy rate is based on the average rate, sourced from Airdna.co.

5.4 Community safety and crime

Data describing the incidence of crime in the regional area and NSW is presented in Table 5.3 and sourced from the NSW Bureau of Crime Statistics and Research (BOCSAR). BOCSAR is a statistical and research agency within the Department of Communities and Justice. Data is only available at the LGA level.

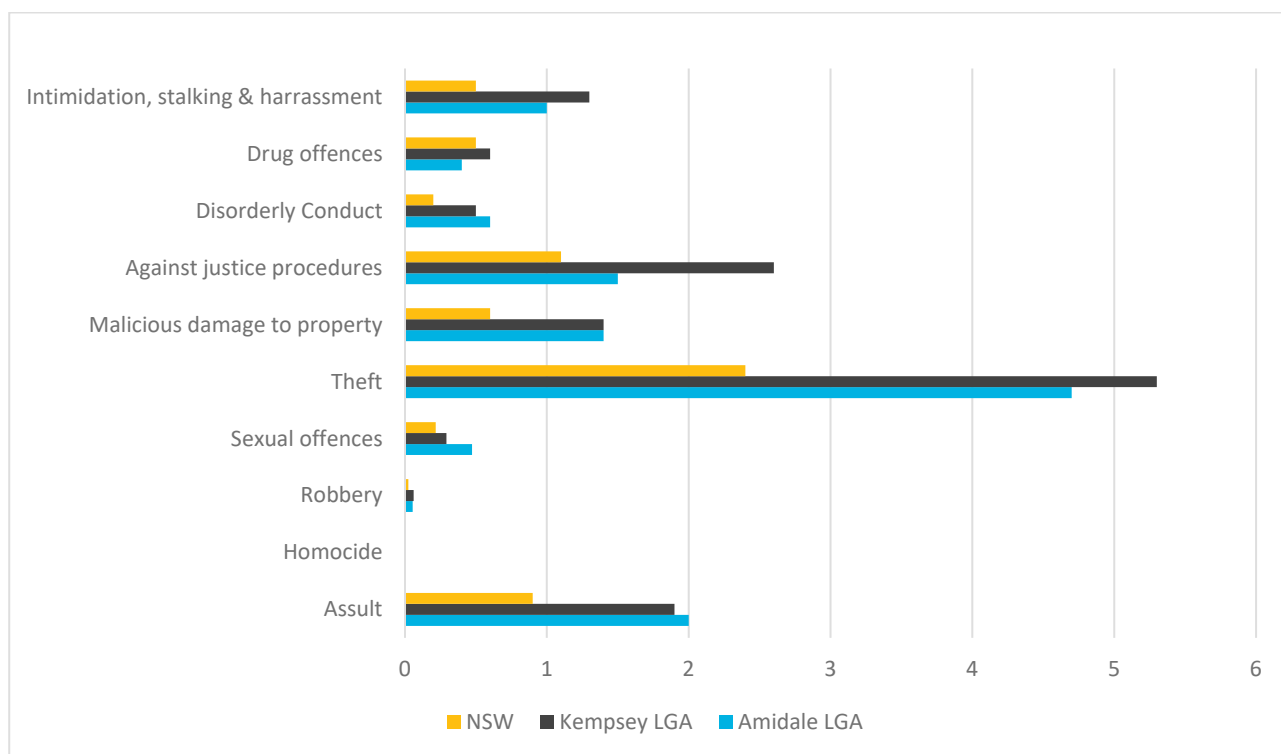
Table 5.3 shows crime rates per 100,000 population in Armidale and Kempsey LGA in 2023.

² * Based the number of rooms of short-term accommodation available, excluding Airbnb properties, the total rooms available in Kempsey township and Armidale city would be 270 (129 x 30%) + (203 x 70%).

Table 5.3 Crime rates in Armidale and Kempsey LGA

Crime	Armidale LGA - 2023	2 year trend	Kempsey LGA - 2023	2 year trend	NSW average
Assault	1,597.4	Stable	1,927.5	Up 23.9% per year	894.4
Homicide	0	n.c.	3.2	n.c.	1.0
Robbery	54.5	n.c.	60.9	n.c.	23.6
Sexual offences	473.4	Stable	291.9	Stable	215.1
Theft	4,748	Up 34.0% per year	5,320.7	Up 26.3% per year	2,362.6
Malicious damage to property	1,389.6	Stable	1,433.6	Stable	605.0
Against Justice procedures	1,451.0	Stable	2,662.0	Up 15.1% per year	1,056.7
Disorderly conduct	674.4	Stable	551.6	Stable	238.1
Drug offences	364.4	Stable	619.0	Stable	516.3
Intimidation, stalking & harassment	1,042.2	Up 34.8% per year	1,363.1	Up 26.1% per year	569.7

Source: BOCSAR, 2024



Source: BOCSAR, 2024

Figure 5.4 Crime rates per 100,000 people in Armidale and Kempsey LGAs, 2023

As shown in Figure 5.4, all categories of crime in Armidale and Kempsey LGAs were above the NSW average per 100,000 population, with the exception of homicide and drug offences in Armidale LGA. In some instances, crime rates in the two LGAs are two or more times the NSW average (assault, robbery, theft, disorderly conduct, and intimidation, stalking and harassment).

There has been an increase in specific crimes such as assault, theft and intimidation, stalking and harassment in Armidale and Kempsey Local Government Areas since 2022.

5.5 Road accidents

Between 2019 and 2022 the number of minor road accidents increased in Kempsey LGA and Armidale LGA. In Kempsey LGA there was an increase from 62 minor accidents in 2018 to 58 accidents in 2022, and in Armidale Regional LGA there was an increase from 47 minor accidents in 2018 to 51 accidents in 2022.

There was a sharp increase in serious accidents where occupants were seriously injured in Kempsey LGA. In 2018 there were with 12 accidents and in 2022 there were 32 accidents. In Armidale LGA, the trend reversed with 22 accidents in 2018 and 13 accidents in 2022.

The number of fatal road accidents increased in Armidale Regional LGA during this period from 2 accidents in 2018 to 3 accidents in 2022. In Kempsey LGA, there was one fatal road accidents in 2018 and no fatal accidents in 2022.

Given the populations of Armidale LGA and Kempsey LGA are similar (29,449 people in Armidale LGA and 30,688 people in Kempsey LGA), Kempsey has a much higher rate of road accidents, and casualties and injuries caused by road accidents per 100,000 population.

Table 5.4 provides crash and casualty data for road accidents in Armidale and Kempsey LGAs.

Table 5.4 Crash and casualty summary – Armidale and Kempsey LGA, 2022

		Armidale LGA		Kempsey LGA	
		2022	5 year total	2022	5 year total
Degree of crash	Fatal	3	9	-	11
	Injury – serious	13	72	30	106
	Injury – moderate injury	27	118	18	143
	Injury – minor/other injury	8	30	10	40
	Non-casualty	16	83	25	126
	Total	67	312	83	426
Degree of casualty	Killed	3	9	-	12
	Seriously injured	13	80	32	115
	Moderately injured	37	157	31	200
	Minor/other injured	13	52	15	54
	Total	66	298	78	381

Source: Transport for NSW, 2024

6 Community and stakeholder engagement

This section summarises the community engagement activities which have informed the SIA Amendment and the stakeholder feedback which was generated. This Amendment Report has drawn upon engagement which was:

- undertaken as part of the EIS engagement program and since the EIS was submitted
- undertaken as part of the Aboriginal Cultural Heritage Assessment (ACHA) for the Project and since the EIS was submitted
- undertaken specifically to collect data to inform the SIA.

OMPS Pty Ltd (now owned by Alinta Energy) actively engaged with the community throughout the design phase of the Project and during the preparation of the EIS. The purpose of this engagement was to obtain further feedback and inform and update stakeholders about the Project. This engagement continued throughout the public exhibition period and remains ongoing. This section describes the additional consultation that has taken place since the public exhibition of the EIS.

6.1 Amendment report engagement

Throughout the public exhibition period the Project team has implemented a diverse range of consultation approaches. Since the lodgement of the EIS, Alinta continues to engage with stakeholders including local authorities, government agencies, the local community and neighbouring landholders, as the project design is refined.

6.1.1 Community engagement

i Local community

OMPS has actively sought to inform the local communities about the Project. Since the exhibition of the EIS, OMPS has issued Project updates, attended local events and provided up-to-date information through the Project website.

- OMPS has issued two Project updates, December 2023 and March 2024, marking important planning milestones, providing a response to submissions update and a notification that the application for community grants had opened. OMPS has also attended local events such as the Kempsey show (9 to 10 April 2024) with an information stall, presented to the Kempsey rotary (19 March 2024), and facilitated a community workshop in Kempsey (19 June 2024) to understand community views on benefit sharing associated with the Project.
- On 16 April 2024, the Project team co-ordinated an onsite cultural heritage inspection at the request of the Dunghutti Elders Council (Aboriginal Corporation) Board of Directors, in partnership with members, key cultural heritage and knowledge holders of the Thungutti Local Aboriginal Land Council.
- The Project website has been regularly updated with newsletters and community information released to date: <https://www.ompshydro.com/>. Project related news has included the ongoing geotechnical investigations, Kempsey-Armidale Road traffic notifications, community grant applications and local events such as the Saltwater Freshwater Festival 2024. Another Project update on the Project website is planned to coincide with the lodgement of the Submissions Report and Amendment Report to DPHI.
- OMPS is exploring the potential of establishing a biodiversity stewardship site to meet a portion of the Project's biodiversity offset credit liability.

The Proponent will continue to develop productive working relationships with the local community. This will include Project updates and briefings in person and via their social media platforms.

If the Project is approved, a Community Consultation Committee (CCC) will be established in accordance with DPHI Guidelines. To demonstrate impartiality towards key stakeholder concerns, an independently chaired CCC will facilitate structured engagement between the Project and Kempsey and Armidale Council and community representatives.

A summary of the community engagement undertaken post-submission of the EIS on the Project, the matters raised and how these matters have been addressed, is provided in Table 6.13 of the Amendment Report.

6.1.2 First Nations engagement

Consultation has also been carried out with the Project's Registered Aboriginal Parties (RAPs) throughout the response to submissions phase of the Project regarding the Addendum ACHA. Due to the time that had lapsed since previous engagement with RAPs for the EIS, the consultation process was re-started ensuring all interested parties were able to register their interests in the Project and have the opportunity to be involved in the response to submissions process.

Separate to the consultation requirements for the purposes of the ACHA, GIRA Advisory (a First Nations owned and operated business) has been engaged since the exhibition of the EIS as a First Nations advisor to the Project to assist with development of specific programs and cultural benefits, such as Aboriginal Ranger program, a Project Aboriginal Advisory Group, Heal Country initiatives and health, housing and accommodation services. Through on-site engagement and focused discussions with primary stakeholders, GIRA has supported the ACHA process (which is focussed on the prescribed process for that assessment). At the same time, GIRA has undertaken a broader First Nations consultation process to enable community engagement and participation with the Project, adopting the International Association for Public Participation (IAP2) Public Participation Spectrum. Since September 2023, this has:

- 414 hours working within the community (on Country)
- 28 meetings with Project leads and First Nations primary stakeholders
- 1139 interactions with Project leads and First Nations primary stakeholders.

Overall, as part of the EIS the Project had been liaising with 19 RAP organisations and/or individuals since its inception in early September 2021. Some six of these RAP organisations participated in face-to-face meetings, field investigations (survey and test excavations) and interviews with a highly experienced anthropologist to discuss cultural values. Since EIS submission, extensive discussions on who speaks for Country, who should participate in the on-site activities, and who the key knowledge holders are within the community were undertaken. This consultation included many individuals and organisations not included previously during the EIS on-site activities in order to improve equity and fairness across the Project.

i Planned engagement

In partnership with Aboriginal stakeholders, their communities, or nominated representatives, OMPS and GIRA will work collaboratively to co-create a tailored Action Plan. This plan will adhere to the methodologies outlined in the New South Wales Government's Connecting with Country Framework (July 2023), which focuses on benefits sharing, capacity building, economic equity, and excellence throughout the Project's duration. Key components of this plan include the following:

- Developing an Aboriginal Participation Plan to promote educational and sustainable employment outcomes with an emphasis on equity and excellence.

- Establishing an Aboriginal Advisory Group to integrate the voices, knowledge, values, and perspectives of Aboriginal stakeholders, ensuring cultural authority in the responsible management of land, cultural heritage, and land use agreements. The plan will also assess and develop opportunities for Aboriginal and Torres Strait Islander education, employment, supply chain, and procurement to support improved, sustainable economic and social outcomes.
- Establishing an Engagement Hub, which will provide multi-channel communication and integrate with social media, webinars, and virtual events. This platform will facilitate engagement with Aboriginal and Torres Strait Islander stakeholders and provide iPads pre-loaded with the Engagement Hub, allowing participants to register and provide feedback with necessary support.

6.1.3 Government agency consultation

Consultation with government agencies has also been ongoing since the public exhibition of the EIS. Key agency consultation is summarised in Table 6.1.

Table 6.1 Summary of government agency consultation

Stakeholder	Consultation method	Key matters discussed
DCCEEW [Commonwealth]	Meeting (online); email	Project update; amendment of the controlled action to align with the amended project
DCCEEW Water	Meeting (online); email/letter	Project update; water licensing
BCSD	Meeting (online); email/letter	Project update; response to key issues raised
National Parks and Wildlife Service (NPWS)	Meetings (in-person and online); emails	Ongoing groundwater monitoring; initial mobilisation and access via Carrai; co-ordination with NPWS road works
DPHI	Meetings (online); phone calls; emails	Project update; key issues raised in submissions; project amendments; engagement with other agencies
Heritage NSW	Meetings (online); phone calls; emails	Project update; key issues raised during First Nations engagement; agreed approach to updated ACHA
TfNSW	Meetings (in-person and online); emails; Phone calls	Upgrade of Kempsey Armidale Road and integrated approach with Council delivery; information availability; design and schedule
RFS	Meetings (online); phone calls; emails	Emergency access and egress/ movement and evacuation of workers during bushfire; planning for site visit
Kempsey Shire Council	Meetings (in-person and online); phone calls; emails	Project updates; Kempsey Armidale road works; community benefits; funding agreements (VPA)
Armidale Regional Council	Meetings (in-person and online); phone calls; emails	Project updates; Kempsey Armidale road works; community benefits; funding agreements (VPA)

6.2 SIA engagement

This section outlines the engagement methods and activities as part of SIA engagement.

6.2.1 Participation

A total of 142 representative stakeholders were invited to engage in an in-depth interview to directly inform the SIA, with 83 interviews conducted.

The SIA engagement consisted of various in-person field visits including:

- attendance at three Community Information Sessions held in Armidale, Bellbrook and Kempsey in January 2022
- attendance at the Aboriginal Cultural Heritage Assessment (ACHA) meeting and Registered Aboriginal Parties (RAPs) community lunch in Bellbrook in March 2022
- in-depth interview with the Thunggutti LALC in Bellbrook in March 2022
- site visit to Lower Creek including in-depth interviews with nearby neighbours in Lower Creek, in-person in-depth interviews with Armidale and Kempsey Councils and local businesses in Bellbrook and Willawarrin in May/June 2022
- service provider workshop including emergency services, indigenous employment provider and accommodation provider in Kempsey in June 2022.

Other activities included:

- two community surveys (administered online)
- in-depth interviews with landowners and community members in the local and regional area (conducted via telephone and videoconference)
- in-depth interviews with key service providers in Armidale (education/TAFE, local community groups)
- (conducted via telephone and videoconference)
- in-depth interviews with National Parks and Wildlife and the Bicentennial National Trail (conducted via telephone and videoconference)
- In-depth interviews with RAPs and Aboriginal elders/cultural knowledge holders (conducted via telephone and videoconference).

6.2.2 Summary of key findings

Key themes, issues and findings emerging from engagement in relation to the amendment are summarised in Table 6.2.

Table 6.2 Summary of engagement key findings

Themes	Issues
Locality	<ul style="list-style-type: none"> • The Project’s location in the remote rural area of Lower Creek is characterised by a mix of national parks, conservation areas and nature reserves with very low population density. • Social impacts in the local area will primarily be felt during the construction phase. • Stakeholders expressed that Project impacts may include increased stress and anxiety of local residents caused by changes to the rural character of the area and construction activity producing noise, dust, vibration and visual disturbances. • Increased population including up to 600 construction workers residing in a workforce accommodation camp at the Project site and a further up to 220 workers at peak travelling from Kempsey and Armidale to the Project site for construction. • An increase in the number of onlookers expected around the Project site may result in local residents experiencing reduced privacy and security. The local community perceive a potential reduction in local property values due to proximity. • During construction, local tourism businesses may benefit from an increase in population in the local area. Once operational, the Project may also provide local social benefits such as additional firefighting capacity from the Project.
Infrastructure and services	<ul style="list-style-type: none"> • Infrastructure and community services in the local area are extremely limited. Residents of the local area need to travel between 30–90 minutes by car to access health and community services predominantly located in key urban areas. • Infrastructure and services in the regional area are mainly concentrated in Armidale and Kempsey townships and these services experience high demand. • The regional area experiences a higher proportion of vulnerable groups including people with long-term health conditions and mental illness compared to the NSW average. This results in increased demand on health and mental health services. • The Project workforce may compete for limited rental housing potentially reducing the availability of short-term accommodation and affordable rental housing. • The Project may provide social benefits including improved infrastructure and services due to increased population moving to the area and potentially improved telecommunications.
Recreation and environment	<ul style="list-style-type: none"> • The locality provides a variety of highly valued recreational opportunities including camping, fishing, kayaking, swimming, bushwalking, mountain biking, 4WD touring, hiking and picnicking in the surrounding national parks and declared wilderness areas. Walkers, cyclists and horse riders use the National Trail, a nationally significant walking trail over 5,000 km long which runs adjacent to the Project site for 8 kms. • The local community expressed concern regarding the Project potentially restricting access to recreational areas including the Macleay River, Georges Junction campground, the Carrai Plateau and the National Trail during construction. • Potential housing impacts from the Project workforce may affect the availability of accommodation for tourists. • Perceived visual impacts on the East Kunderang Homestead, Mary’s View and National Trail were also queried by local stakeholders. • Potential benefits from the Project include increased access to recreational and tourism opportunities due to improved road conditions.

Themes	Issues
Traffic	<ul style="list-style-type: none"> • Construction of the Project requires the movement of a significant volume of heavy and oversized components and may present safety risks due to the amount of material and equipment and the number of buses and vehicles transporting workers to the Project site. • Most of the Project area contains undulating and steep terrain and dense vegetation and can experience extreme weather events increasing the risk of road accidents. • The main vehicular access point to the Project is via the Kempsey Armidale Road which runs through the Project area. • Project workforce will also be bussed in from Kempsey generating additional local traffic volume. • The Project may require temporary closures of the Kempsey-Armidale Road for road upgrades resulting in a further reduction in access to services for local residents, and potentially reduced income and access to services for local agricultural and tourist businesses. • It is noted that sections of the Kempsey Armidale Road have been closed during 2022. • During construction and operation, social benefits of the Project may include improvements to the Kempsey-Armidale Road potentially improving access to services and markets for local residents and local businesses and access to employment. Improved health and wellbeing of the local community may also result from these benefits.
Water	<ul style="list-style-type: none"> • The Macleay River is a significant river with a catchment area of approximately 11,400 square kilometres (km²) • running from the New England Tablelands to the Pacific Ocean. The Macleay River runs adjacent and through the project area and provides access to water for agricultural and tourism businesses, local residents, recreational users and Aboriginal people. • Local residents and businesses shared concerns regarding how the Project will source water from the river during construction and operation, and the effect of the Project's demand for water on water security in the region. • Other local community concerns include water quality impacts from potential construction waste, aquifer damage and disturbance of naturally occurring arsenic and antimony in the river.
Culture	<ul style="list-style-type: none"> • Aboriginal People experience a spiritual and cultural connection to the Project area and the land surrounding the Project area. The Aboriginal Community frequently travel to and stay in the Project area and in the area surrounding the Project area for cultural reasons and to maintain connection to country. The Aboriginal Community expressed concerns regarding the potential of the Project to limit access to the Project area and the surrounding area resulting in potential restrictions on the ability of Aboriginal People to connect to country and perform cultural activities. • A number of cultural artefacts and sites were found during Aboriginal cultural heritage surveys. Local Aboriginal People shared concern of potential disturbance of cultural artefacts and sites during construction of the Project. • The Project will draw upon water from the Macleay River to fill up the reservoir and periodically top up the water levels of the reservoir. Aboriginal People expressed fear that this drawing of water may change the downstream flows affecting ongoing use of the river for cultural purposes. • Aboriginal and non-Aboriginal community members expressed concern that historic heritage sites and the cultural landscape values of such sites may be disturbed. This includes potential visual impacts on East Kunderang Homestead.
Livelihood	<ul style="list-style-type: none"> • Multiple livelihood benefits for the local and regional area may be experienced including improved access to employment, markets and services for the local workforce and local businesses. • Employment and training opportunities, regional business procurement opportunities and employment and training pathways including for Aboriginal and Torres Strait Islander peoples during both construction and operation may also benefit the local and regional community.

Themes	Issues
Engagement	<ul style="list-style-type: none"> • Local and regional residents and other stakeholders perceived insufficient community consultation and engagement during the pre-construction phase resulting in a lack of trust in the Project. • Multiple indigenous groups and individuals confirmed reduced social cohesion between local indigenous groups as a result of the perceived extent of consultation with all key groups and independence of information provided by the Project. • Local and regional stakeholders expressed concern regarding the foreign ownership of the Project including perceived lack of project governance and transparency. • Noting the high levels of disadvantage experienced in the Kempsey Shire LGA, multiple Kempsey residents expressed fear that social impacts of the Project may be disproportionately experienced by the Kempsey LGA and that Project resources and benefits may be distributed unequally because the Project is located in the Armidale Regional LGA.

7 Assessment of social impacts and benefits

7.1 Overview

This section discusses potential social impacts associated with Project amendments and provides an assessment of relative social risk utilising the methodology outlined in Section 2.3 of the SIA Guideline Technical Supplement (DPE 2023b).

Findings from technical reports and stakeholder perceptions have been used to capture expert and local knowledge in the identification and assessment of social impacts, and to develop appropriate impact mitigation, and enhancement strategies.

Assessment of social impacts considers a range of factors and potentially competing interests. The impact assessment is reflective of this and has:

- assessed some aspects of the project as both negative and positive as they relate to different groups of people
- included potential impacts and benefits on local communities and the broader region
- considered potential impacts on vulnerable sectors of affected communities
- considered community access to services such as housing and health care.

Social impacts have been assessed on a worst-case scenario initially and then the residual impact is assessed on the basis that proposed mitigation or enhancement measures are effectively implemented. The assessment uses the terms unmitigated and mitigated when referring to negative impacts and un-enhanced or enhanced when referring to positive impacts (benefits).

The following data and information have been used to identify the impacts and their associated risks:

- data collected as part of the social baseline
- findings from community and stakeholder engagement activities
- findings from technical studies
- academic research
- relevant high-quality government and agency reports.

Application of the likelihood and magnitude framework as outlined in Section 3.2 of this report informs assessment of the level of significance of a social impact as being low, moderate, high, or very high. Both impacts and benefits have been assessed.

While risk assessments have been made on a worst-case scenario and in consideration of the most accurate information available to date, the assessment may not represent the perspectives or experiences of every individual within the community.

7.2 Impact themes

During the preparation of the SIA, impact themes were developed. Impact themes were based on the characteristics of the local area, SEARs requirements, feedback provided by stakeholders during engagement for the SIA and the logical grouping of potential social impacts and benefits of the Project.

Impact themes are described below.

7.2.1 Locality

The Project's location in the remote rural area of Lower Creek is characterised by a mix of national parks, conservation areas and nature reserves with very low population density. Social impacts in the local area will primarily be felt during the construction phase. Impacts may include increased stress and anxiety of local residents caused by changes to the rural character of the area and construction activity producing noise, dust, vibration and visual disturbances. Increased population including up to 600 construction workers residing in a workforce accommodation camp at the Project site and a further up to 172 workers at peak travelling from Kempsey and Armidale to the Project site for construction. An increase in the number of onlookers expected around the Project site may result in local residents experiencing reduced privacy and security. The local community perceive a potential reduction in local property values due to proximity. Once operational, the Project may also provide local social benefits such as additional firefighting capacity from the Project.

7.2.2 Infrastructure and services

Infrastructure and community services in the local area are extremely limited. Residents of the local area need to travel between 30–90 minutes by car to access health and community services predominantly located in key urban areas. Infrastructure and services in the regional area are mainly concentrated in Armidale and Kempsey townships and these services experience high demand. The regional area experiences a higher proportion of vulnerable groups including people with long-term health conditions and mental illness compared to the NSW average. This results in increased demand on health and mental health services. The Project workforce may compete for limited rental housing potentially reducing the availability of short-term accommodation and affordable rental housing. The Project may provide social benefits including improved infrastructure and services due to increased population moving to the area and potentially improved telecommunications.

7.2.3 Recreation and environment

The locality provides a variety of highly valued recreational opportunities including camping, fishing, kayaking, swimming, bushwalking, mountain biking, 4WD touring, hiking and picnicking in the surrounding national parks and declared wilderness areas. Walkers, cyclists and horse riders use the National Trail, a nationally significant walking trail over 5,000 km long which runs adjacent to the Project site for 8 kms. The local community expressed concern regarding the Project potentially restricting access to recreational areas including the Macleay River, Georges Junction campground, the Carrai Plateau and the National Trail during construction. Potential housing impacts from the Project workforce may affect the availability of accommodation for tourists. Perceived visual impacts on the East Kunderang Homestead, Mary's View and National Trail were also queried by local stakeholders. Potential benefits from the Project include increased access to recreational and tourism opportunities due to improved road conditions.

7.2.4 Traffic

Construction of the Project requires the movement of a significant volume of heavy and oversized components and may present safety risks due to the amount of material and equipment and the number of buses and vehicles transporting workers to the Project site. Most of the Project area contains undulating and steep terrain and dense vegetation and can experience extreme weather events increasing the risk of road accidents. The main vehicular access point to the Project is via the Kempsey Armidale Road which runs through the Project area. Where there is a shortfall of onsite accommodation, construction workers will be bussed in from Kempsey generating additional local traffic volume.

7.2.5 Water

The Macleay River is a significant river with a catchment area of approximately 11,400 square kilometres (km²) running from the New England Tablelands to the Pacific Ocean. The Macleay River runs adjacent and through the Project area and provides access to water for agricultural and tourism businesses, local residents, recreational users and Aboriginal people.

Local residents and businesses shared concerns regarding how the Project will source water from the river during construction and operation, and the effect of the Project's demand for water or water security in the region. Other local community concerns include water quality impacts from potential construction waste, aquifer damage and disturbance of naturally occurring arsenic and antimony in the river.

7.2.6 Culture

First Nations People experience a spiritual and cultural connection to the Project area and the land surrounding the Project area. The First Nations Community frequently travel to and stay in the Project area and in the area surrounding the Project area for cultural reasons and to maintain connection to country. The First Nations Community expressed concerns regarding the potential of the Project to limit access to the Project area and the surrounding area resulting in potential restrictions on the ability of Aboriginal People to connect to country and perform cultural activities. A number of cultural artefacts and sites were found during Aboriginal cultural heritage surveys. Local Aboriginal People shared concern of potential disturbance of cultural artefacts and sites during construction of the Project.

The Project will draw upon water from the Macleay River to fill up the reservoir and periodically top up the water levels of the reservoir. Aboriginal People expressed fear that this drawing of water may change the downstream flows affecting ongoing use of the river for cultural purposes.

Aboriginal and non-Aboriginal community members expressed concern that historic heritage sites and the cultural landscape values of such sites may be disturbed. This includes potential visual impacts on East Kunderang Homestead.

7.2.7 Livelihood

Multiple livelihood benefits for the local and regional area may be experienced including improved access to employment, markets and services for the local workforce and local businesses. Employment and training opportunities, regional business procurement opportunities and employment and training pathways including for Aboriginal and Torres Strait Islander peoples during both construction and operation may also benefit the local and regional community.

During construction, local tourism businesses may benefit from an increase in population in the local area and improved road conditions may benefit local agricultural businesses.

7.2.8 Engagement

Local and regional residents and other stakeholders perceived insufficient community consultation and engagement during the pre-construction phase resulting in a lack of trust in the Project.

Multiple indigenous groups and individuals confirmed reduced social cohesion between local indigenous groups as a result of the perceived extent of consultation with all key groups and independence of information provided by the Project. Local and regional stakeholders expressed concern regarding the foreign ownership of the Project including perceived lack of project governance and transparency. Noting the high levels of disadvantage experienced in the Kempsey Shire LGA, multiple Kempsey residents expressed fear that social impacts of the Project may be disproportionately experienced by the Kempsey LGA and that Project resources and benefits may be distributed unequally because the Project is located in the Armidale Regional LGA.

Potential social impacts and benefits are outlined in Table 7.1 below, according to the impact themes, along with the related category as listed in the SIA Guideline.

Table 7.1 Impact themes

SIA Guideline social impact category	Social Impact Theme	ID	Impact on people	Affected parties	Duration	Extent
Community, way of life	Locality	L01	Impacts related to sense of community and social cohesion	Local residents Local businesses	Construction Operation	Local area
Community, way of life		L02	Perceived impacts to privacy during construction	Local residents Local businesses	Construction	Local area
Community, Surroundings		L03	Changes to the character of the landscape in the local area	Local residents Visitors	Construction Operation	Local area
Way of life, health and wellbeing		L04	Impacts from noise and vibration in the local area	Local residents Visitors	Construction	Local area Transport affected communities
Way of life, health and wellbeing		L05	Impacts from dust and decreased air quality in the local area.	Local residents Local businesses Visitors	Construction	Local area
Livelihood		L06	Perceived decrease in property values	Local residents	Construction Operation	Local area
Way of life, health and wellbeing, surroundings		L07	Perceived risk to public safety (potential bushfire risk due to workforce behaviour and transmission lines).	Local residents Local businesses Tourists and visitors	Construction Operation	Local area
Livelihood	L11	Benefits of opportunities for local businesses.	Local and regional businesses	Construction Operation	Regional area	
Way of life, accessibility	Infrastructure and services	I03	Decline in rental affordability and availability for residents.	Vulnerable groups Broader community Accommodation and homelessness service providers Local government	Construction Operation	Local area Key urban areas
Way of life, accessibility, surroundings		I04	Reduced supply of short-term and emergency accommodation for vulnerable groups.	Vulnerable groups Broader community Accommodation and homelessness service providers Local government	Construction Operation	Local area Key urban areas
Accessibility, surroundings	Recreation and environment	R01	Reduced access to recreational areas and facilities.	Local residents Tourism businesses Tourists	Construction Operation	Local area
Accessibility, surroundings		R02	Reduced amenity at recreational areas and facilities	Local residents Tourists	Construction Operation	Local area

SIA Guideline social impact category	Social Impact Theme	ID	Impact on people	Affected parties	Duration	Extent
				Tourism businesses		
Way of life, accessibility, livelihood		R04	Reduced availability of tourist accommodation.	Tourists Visitors Tourism businesses	Construction Operation	Local area Armidale city Kempsey
Accessibility, health and wellbeing		T01	Traffic impacts related to public safety risk due to road conditions during construction.	Local residents Local businesses Tourists and visitors	Construction	Local area Transport affected communities Kempsey
Accessibility, way of life, health and wellbeing	Traffic	T02	Impacts related to traffic congestion and road delays.	Local residents Local businesses Tourists and visitors	Construction	Local area Transport affected communities Kempsey
Health and wellbeing, surroundings		T03	Benefit related to improved road conditions as a result of the Project (addressed in cumulative assessment).	Local residents Local businesses Tourists and visitors	Construction Operation	Local area Transport affected communities Regional area
Health and wellbeing, surroundings	Water	W02	Concerns regarding water quality due to construction waste and disturbance of existing metals.	Local residents downstream of the Project site	Construction	Local area Regional area
Health and wellbeing, surroundings		W04	Concerns regarding access to water during drought.	Local residents Regional residents	Construction Operation	Local area Regional area
Culture, Health and wellbeing		C01	Potential disturbance or destruction of Aboriginal cultural artefacts and sites.	Local Aboriginal groups	Life of Project	Local area Regional area
Culture, way of life, surroundings, Health and wellbeing	Culture	C03	Impacts to social cohesion between First Nations groups	Aboriginal groups	Construction Operation	Local area
Livelihood	Livelihood	L02	Livelihood benefit of regional business procurement opportunities (benefit).	Regional businesses	Construction Operation	Local area Regional area
Decision making systems	Engagement	E01	Perceived insufficient community consultation and engagement resulting in lack of trust (including ownership).	Local community	Construction Operation	Local area

7.3 Locality

This section provides an assessment of Project benefits and impacts related to the theme of locality which refers to those impacts only likely to be experienced by people in areas immediately surrounding the Project area and associated activities.

Impacts to locality include:

- impacts related to sense of community and social cohesion
- changes of the character of the landscape in the local area
- impacts from noise and vibration in the local area
- impacts from dust and decreased air quality in the local area
- perceived decrease in property values
- perceived impacts to public safety during construction.

Benefits relating to locality include:

- opportunities for local businesses.

The Project's location in the remote rural area of Lower Creek is characterised by the key features of the Macleay River, a scenic landscape of valleys, undulating peaks and ridgelines and the high plateau of the Carrai Tablelands. The Project area sits amongst a mix of private farm holdings, National Parks, Conservation Areas, and World Heritage Areas with very low population density. By virtue of being reserved under the NPW Act, the lands surrounding the Project area have significant cultural value. The area provides a range of visitor accommodation including unique options such as the East Kunderang Homestead and various lodges and campgrounds. The local area is known for its a range of highly valued recreational activities such as fishing, camping, mountain biking as well as hiking along the National Trail. The community places high value on the area's remoteness, scenic landscape, and community cohesion. Infrastructure and services are very limited in the local area.

7.3.1 Locality impacts related to sense of community and social cohesion

This section describes the potential social impacts on the community in the local area as a result of a changed sense of community and social cohesion, due to the temporary change in population generated by the Project.

Population changes often associated with large scale development Projects, which require construction and operations workforces to be accommodated and serviced, can result in a range of social impacts such as changes to the sense of community and social cohesion.

Population change underpins many of the social impacts associated with State significant developments. According to established population change benchmarks developed by Burdge (R. Burdge 2015), population change above or below a threshold of 5% may result in impacts on social cohesion due to:

- the limited capacity of the communities to absorb newcomers (i.e. housing availability)
- the loss of social capital and connections
- the ability of a community's physical and social infrastructure to provide required social services.

This benchmark has been referenced in assessing the extent of predicted population change attributable to the Project.

During SIA engagement, multiple community members in the local area described the community as resilient, generous and supportive, and explained how the community can be resourceful in times of crisis. Engagement feedback also indicated strong social cohesion in the Lower Creek and Bellbrook communities. Both communities value their ‘isolated’, ‘quiet’, and ‘peaceful lifestyle’ with residents noting they are a ‘tight knit’ community that have the same common passion for the land and the environment. Multiple residents noted that “the people feel connected and bonded” through these shared values.

i Construction

The EIS SIA assessed impacts on sense of community and social cohesion as a result of the Project as **very high**. After the application of recommended mitigations, the impact was assessed as **high** (EMM 2023). This was due to significant population change with the addition of up to 600 construction workers residing in the main accommodation camp at the Project site, in the local area with a population of 882 people.

The amendment provides increased accommodation capacity for the construction workforce with the addition of three fly camps. Each temporary camp will have a room capacity of between 30 and 90 Project staff. In total, 205 workers will be accommodated onsite through the fly camps, prior to the construction of the main accommodation camp. Section 2 provides detailed capacity and scheduling for the respective accommodation facilities.

It is assumed that only non-local workers will require on site accommodation. At peak, in year 4 there will be 247³ local workers commuting to the Project site daily. Where there is a shortfall of onsite accommodation for non-local workers, these workers would reside in local accommodation.

According to established population change benchmarks developed by Burdge (2015), population change above a threshold of 5% may result in impacts on social cohesion due to the limited capacity of the communities to absorb newcomers. Given the proposed crossover between the operation of two fly camps with the main accommodation camp, it is estimated there will be a peak of 735 workers residing onsite in year 3 of construction. During peak period of onsite accommodation availability, the influx of construction workers is likely to contribute a temporary 89% increase at peak to the population of the local area.

It is expected that there will be frequent worker-resident interaction during the early stages of the construction phase. However, once the main accommodation camp is fully established, during shift cycles, worker movements will be lessened due to the majority of workers residing in onsite accommodation.

The unmitigated significance of locality impacts related to sense of community and social cohesion remains **very high**. The likelihood of the impact related to sense of community and social cohesion occurring is assessed as being **almost certain**, and the magnitude of the impact is assessed as **major**.

Given the Project will be part of the community throughout the entire life cycle, there is a vested interest to ensure that the workforce contributes to the social fabric and development of the local area.

The following mitigation measures are proposed:

- increasing the number of locally hired workers through upskilling and training
- development and effective implementation of a Community Engagement Plan including initiatives to contribute to maintaining social cohesion in the local area

³ Calculated based on 30% of a peak workforce of 822 workers.

- development of a Construction Management Plan which includes a comprehensive Worker Code of Conduct consistent with the NSW Code of Practice for Construction Work, in particular site safety rules such as:
 - no littering
 - no alcohol or drugs (other than prescription medication) to be consumed on site
 - no fighting, bullying, harassment or aggressive behaviour by anyone on site.
- encourage volunteerism and community involvement
- establish a comprehensive community benefits program specific to the needs of the local area.

The mitigated significance of locality impacts related to sense of community and social cohesion is assessed as **high**. The likelihood of the impact related to sense of community and social cohesion occurring is assessed as being **likely**, and the magnitude of the impact is assessed as **major**.

ii Operation

During the 100-year period when the Project is operational, between 30–50 workers will be employed to operate and maintain the scheme. The proposed workforce for the operation phase remains unchanged. The Project will be operated and monitored remotely and maintenance will be periodically required. Several houses may remain at the accommodation camp to house workers as needed. It is assumed that 20% of workers will be locally hired and 80% will move to Kempsey or the local area for the duration of their employment. It is assumed that this population increase would occur over several years. This would result in an increase of 0.3% of the population in Kempsey and the local area.

The EIS SIA assessed impacts on sense of community and social cohesion as a result of the Project during operation as **medium**. After the application of recommended mitigations, the impact was assessed as **medium** (EMM 2023c).

The unmitigated significance of impacts related to sense of community and social cohesion during operation remains **low**. The likelihood of the impact occurring is **possible**, and the magnitude of the impact is **minor**.

To reduce the risk of the impact further, it is proposed that the Project encourage operation workers to contribute to the local community through volunteerism or other initiatives.

The mitigated significance of impacts related to sense of community and social cohesion is assessed as **low**. The likelihood of the impact occurring is **possible**, and the magnitude is assessed as **minimal**.

iii Perceived impacts to privacy during construction

An issue raised by local residents engaged as part of the SIA was the potential for the presence of the Project construction workforce and public onlookers to impact on privacy. In particular, local landowners expressed that the Project may attract onlookers driving around the local area trying to view the Project trespassing, resulting in perceived privacy risks and the potential for littering, trespassing or more serious crime being committed.

The EIS SIA assessed the perceived impacts to privacy during construction as **medium**. After the application of recommended mitigations, the impact retained a rating of **medium** (EMM 2023c).

The amendment will increase the number of construction workers residing in onsite accommodation from a peak of 600 to up to 735 workers during the crossover between the fly camps and the main accommodation camp (depending on the ultimate configuration of the fly camps and the timing of their demobilisation once the main accommodation camp is operational). The location of onsite accommodation is disbursed within the Project site. Section 2.1.2 provides the location of each accommodation facility within the Project site and the distance to the nearest local residence or tourism accommodation. Onsite accommodation facilities are proposed to be located on the outskirts of the Project area, neighbouring a number of tourist accommodation facilities and local residences. The nearest local residence or tourist accommodation to a Project accommodation facility is 700 km, which is the distance between Fly Camp 2 and George’s Junction campground.

This change has the potential to further impact privacy of local residents and nearby neighbours in the local area with more workers residing onsite and travelling around the area surrounding the Project site.

The unmitigated significance of perceived privacy and public safety risk related to worker behaviour and onlookers is assessed as **medium**. The likelihood of the impact occurring is **possible**, and the magnitude of the impact is **moderate**.

As noted in sense of community and social cohesion impacts, increasing the number of locally hired worker, implementation of comprehensive Community Engagement Plan and Worker code of Conduct could mitigate perceived privacy risk. Further, the project could coordinate with community services such as police and emergency services to familiarise relevant services with the Project in case of an incident.

The mitigated significance of perceived privacy and public safety risk related to worker behaviour is assessed as **medium**. The likelihood of the impact occurring is **unlikely**, and the magnitude of the impact is **moderate**.

A summary of the assessment is presented in Table 7.2.

Table 7.2 Summary of locality impacts related to sense of community and social cohesion

Impact category	Matter	Affected parties	Duration	Extent	Unmitigated	Mitigated
Community	Impacts related to sense of community and social cohesion	Local residents and businesses	Construction	Local area	Very High	High
Community	Impacts related to sense of community and social cohesion	Local residents and businesses	Operation	Local area	Medium	Low
Community	Perceived risk to privacy	Local residents and businesses	Construction	Local area	Medium	Medium

7.3.2 Changes to the character of the landscape in the local area

This section describes the potential social impacts on the local community as a result of changes to the character of the landscape in the local area.

Project infrastructure could change the character of the landscape and potentially affect views enjoyed by local residents. Visitors to the area may also experience changes to the landscape from certain viewpoints in the local area. As noted above, the community place high value on the visual character of the landscape. The dark sky is also a valued quality of the rural landscape. The Project is located in an appealing locality which could be disrupted by the construction and operation, potentially causing stress and anxiety for residents and visitors.

The EIS SIA assessed changes to the character of the landscape in the local area as a result of the Project as **medium** (construction) and **high** (operation). After the application of recommended mitigations, the impact was assessed as **low** for both construction and operation (EMM 2023c).

The Landscape and Visual Impact Assessment (LVIA) undertaken for the EIS (EMM 2023d) examined the three key components of the Project: the pumped hydro-electric and generation works (PHGW), the transmission connection works, and ancillary development including new access roads and construction workforce accommodation camp. The LVIA assessed potential visual impacts from construction such as vehicle dust, traffic movements, earthworks, and clearing and trimming of vegetation.

The LVIA also assessed the impacts from night lighting during construction. The assessment concluded that night lighting impacts may be visible from some areas. Night lighting would be unlikely to be experienced indoors but would likely be experienced by people outdoors. Further, this may be compounded by few existing light sources in the area.

The LVIA was not updated for this Amendment as visual impacts as a result of the amended Project were not expected to materially change.

A total of 12 submissions identified concerns regarding potential landscape and visual impacts of the Project.

i Construction

Changes to potential visual impacts as a result of the amendment could result from the construction and operation of the fly camps during construction. Construction is proposed to occur 24 hours, 7 days a week, 365 days per year.

Locations of the fly camps are displayed in Section 2.1.2. It is noted that the proposed fly camps are situated close to the edge of the Project footprint.

As noted in the EIS SIA, there are approximately 38 local residences within a 2 km (direct line) of the Project area. Of these residences, approximately 23 are within 1 km, and around 12 are within 700 m from the Project area. It should be noted that the majority of nearby residences are inhabited. Only one residence, East Kunderang Homestead, is located within 2 km of the pumped hydro generation works.

Fly camp 1 is situated 1 km from residences and tourist accommodation including Riverside Rapids, Crackenback Campground and The Wild River camping cabin. Fly camp 2 is situated 500 m from George's Junction Campground and Bass Lodge and residences. Due to the close distance, it is expected that visual impacts will be experienced due to the presence of the fly camps during construction. Night lighting from the fly camps may be experienced by people outdoors near these locations.

The unmitigated significance of changes to the character of the landscape during construction is assessed as **medium**. The likelihood of the impact occurring is **possible**, and the magnitude **moderate**.

The LVIA recommended that the visual impact of the transmission line and towers may be mitigated through effective placement of the transmission lines along ridgelines in the final design.

It is proposed that night lighting including that emanating from Project accommodation facilities should be inwardly focused and shielded so it would not result in light spilt impacts to neighbouring properties or the night sky.

Ongoing consultation with surrounding landowners during the finalisation of the design would serve to further ensure the final design minimises visual impacts on local residents.

The mitigated significance of changes to the character of the landscape during construction is assessed as **medium**. The likelihood of the impact occurring is **possible**, and the magnitude **moderate**.

ii Operation

Changes to potential visual impacts from the amendment could result from the change to the shape of the waste stockpile. The amendment will change the shape of the waste stockpile, flattening and widening the structure, and integrating it more effectively into the landscape.

The LVIA conducted for the EIS (EMM 2023d) assessed a visibility impacts of the Project as moderate from a variety of viewpoints including Marys View within Carrai National Park, Georges Junction campground, along the National Trail, Kempsey-Armidale Road and Macleay River directly across from the lower reservoir. The LVIA also noted the visual impact of the transmission line and potentially 24 sets of transmission towers.

Two submissions were received regarding change to the local landscape during operation. One submission mentioned that the Project site is adjacent to the National Trail route and Mary’s View. Concerns related to the potential visual changes to the rural character of the landscape from the proposed Project infrastructure located adjacent to Section 8 of the National Trail, the walking route from East Kunderang Homestead to Marys View, and visibility of transmission towers and overhead power lines from Mary’s View, a lookout of significance that provides enjoyment to the local community and visitors.

The unmitigated significance of changes to the character of the landscape during operation is assessed as **high**. The likelihood of the impact occurring is **almost certain** and the magnitude **moderate**.

Ongoing consultation with surrounding landowners during the finalisation of the design would serve to further ensure the final design minimises visual impacts on local residents.

The mitigated significance of changes to the character of the landscape during operation is assessed as **medium**. The likelihood of the impact occurring is **possible** and the magnitude **minor**.

A summary of the assessment is presented in Table 7.3.

Table 7.3 Summary of changes to the character of the landscape in the local area

Impact category	Matter	Affected parties	Duration	Extent	Unmitigated	Mitigated
Community	Changes of the character of the landscape in the local area	Local residents and businesses	Construction	Local area	Medium	Medium
Community	Changes of the character of the landscape in the local area	Local residents and businesses	Operation	Local area	High	Medium

7.3.3 Impacts from noise and vibration in the local area

This section describes the potential impacts from noise and vibration from construction in the local area.

Noise and vibration can disrupt local residents particularly because the Project is located in a remote area where residents are more sensitive to noise impacts due to the baseline noise level being low. Noise and vibration impacts could change the character and amenity of the local area.

Construction is proposed to occur 24 hours, 7 days a week, 365 days per year.

The EIS SIA assessed the potential impacts due to noise and vibration from Project construction in the local area as a result of the Project as **medium**. After the application of recommended mitigations, the impact retained a rating of **medium** (EMM 2023).

The amendment includes three fly camps to be located at disbursed locations within the Project site. Section 2.1.2 displays the location of the proposed Project accommodation facilities. The nearest residence or tourist accommodation is situated within 700 m of a Project accommodation facility. The amendment also includes the addition of blasting as a construction technique.

Certain aspects of construction and operation of the fly camps, road traffic movements and construction activities including blasting, may have a direct effect on rural amenity experienced by nearby receivers through the generation of noise and vibration. It is expected that blasting will occur along the length of the Eastern Access Road.

The Noise and Vibration Impact Assessment (NVIA) (EMM 2024c) prepared for this Amendment (noted there are 10 residences located within 370 m of the northern transmission access roads (seven residences), Eastern Access Road (one residence) and the temporary Western Access (two residences) and six residences within 235 m of these roads (EMM 2024c). The NVIA noted that most residential receivers surrounding the Project are well outside the blast offset distances required to maintain acceptable emission levels from construction blasting activities.

The amended construction noise, sleep disturbance, operational noise and road traffic noise assessments present no material change to the predictions as outlined in the NVIA.

Despite the proximity of the accommodation facilities to several private residences and tourist accommodation, the NVIA prepared for this amendment noted the potential increased impacts from noise and vibration in the local area during construction to be minor.

The NVIA also noted increased noise impact due to construction traffic at two residences (R2 and R27) near the entrance to the Northern access tracks to transmission towers. The NVIA noted that given the location of these residences, the surrounding terrain and the transient nature of these noise sources (i.e. intermittent light and heavy vehicles), it may be difficult to apply appropriate mitigation strategies and/or controls that would provide noise mitigation benefits in a cost-effective manner. It is noted that impacts relating to the construction phase are short term in nature.

The unmitigated significance of impacts from noise and vibration from construction in the local area is assessed as **high**. The likelihood of potential impact occurring is assessed as being **likely** and the magnitude of the impact is assessed as being **major**.

Due to the relative increase in noise levels in the local area as a result of the proximity of the fly camps and access tracks to local residences during construction, it is proposed that further mitigations may be required to meet the expectations of residents. This includes regular notification via letterbox drops or emails/phone calls for all residents in the local area and traffic affected communities (as defined in Section 4.1) of upcoming construction activities that will impact on the amenity of the area.

The mitigated significance of impacts from noise and vibration from construction in the local area is assessed as **medium**. The likelihood of potential impacts due to noise and vibration from construction in the local area occurring is assessed as being **possible** and the magnitude of the impact is assessed as being **minor**.

A summary of the assessment is presented in Table 7.4.

Table 7.4 Summary of impacts from noise and vibration from construction in the local area

Impact category	Matter	Affected parties	Duration	Extent	Unmitigated	Mitigated
Way of life	Impacts from noise and vibration from construction in the local area	Local residents and visitors	Construction	Local area, transport affected communities	High	Medium

7.3.4 Impacts from dust and decreased air quality in the local area

Air quality impacts during the construction of the Project due to material handling, haulage and wind erosion were raised by some members of the local community as potentially impacting on health and wellbeing. These concerns related to emissions of various air pollutants from combustion sources, dust, and wind carrying particles from exposed surfaces and storage piles.

The EIS SIA assessed the potential impacts from dust and decreased air quality from construction in the local area as a result of the Project as **low**. After the application of recommended mitigations, the impact retained a rating of **low** (EMM 2023).

The amendment includes the use of helicopters for construction and the addition of blasting as a construction technique. The use of blasting and helicopters may increase dust in the Project area, neighbouring properties and surrounding areas including along the Kempsey-Armidale Road. It is also noted that the amended project would result in additional road traffic movements during the construction period (EMM 2024c)

The Air Quality and Greenhouse Gas Assessment (AQA) undertaken for the EIS (EMM, 2024f) assessed the air quality impacts of the amended Project. Predicted cumulative air quality impacts including dust deposits at all assessment locations were the same or lower for the Amended Project compared to the EIS.

It is noted that impacts relating to the construction phase are short term in nature.

The unmitigated significance of potential impacts from dust and decreased air quality from construction in the local area is assessed as **low**. The likelihood of potential impact occurring is assessed as being **possible** and the magnitude of the impact is assessed as being **minimal**.

The AQA recommended that air quality impacts due to construction activities may be effectively mitigated by watering exposed areas including sections of unpaved roads within work areas. Due to the relatively low level of potential impact, no further mitigations are proposed.

The mitigated significance of potential impacts from dust and decreased air quality from construction in the local area is assessed as **low**. The likelihood of the potential impact occurring is assessed as being **unlikely** and the magnitude of the impact is assessed as being **minimal**.

A summary of the assessment is presented in Table 7.5.

Table 7.5 Summary of impacts from dust and decreased air quality in the local area

Impact category	Matter	Affected parties	Duration	Extent	Unmitigated	Mitigated
Way of life	Impacts from dust and decreased air quality in the local area	Local residents and visitors	Construction	Local area	Low	Low

7.3.5 Perceived decrease in property values

Some stakeholders engaged as part of the SIA (EMM 2023c) perceived that there could be a reduction in the value of properties located close to the Project due to visual impacts and noise disturbances during construction. Additionally, the negative visual impact of transmission towers and noise impacts from increased traffic could have a negative effect on property prices post construction.

The EIS SIA assessed the perceived decrease in property values as a result of the Project as **medium**. After the application of recommended mitigations, the impact was assessed as **low** (EMM 2023c).

The changes to the Project from this amendment have the potential to negatively impact visual amenity and noise disturbance further during construction. This is due to the use of blasting and helicopters during construction and the amenity impacts from additional construction workers residing on site.

Property prices in rural and regional NSW have generally increased in recent years. On balance it would seem most plausible that if the Project were to have a negative influence on property values it would only be associated with the construction phase and therefore of a short duration. Subsequent benefits associated with road improvements, while removed from the Project, would likely have a positive effect on property values post construction.

The unmitigated significance of perceived decrease in property values is assessed as medium. The likelihood of the impact occurring is **possible** and the magnitude is **moderate**.

Possible mitigation could include continued regular engagement with local landowners to ensure landowners near the Project site are kept abreast of upcoming Project activities.

The unmitigated significance of impacts related to perceived property values during construction is assessed as **low**. The likelihood of the impact occurring is **unlikely** and the magnitude is **minor**.

Operation of the Project is not expected to impact property values in the local area.

A summary of the assessment is presented in Table 7.6.

Table 7.6 Summary of impacts related to perceived decrease in property values

Impact category	Matter	Affected parties	Duration	Extent	Unmitigated	Mitigated
Livelihood	Perceived decrease in value of nearby properties	Local landowners	Construction	Local area	Medium	Low
Livelihood	Perceived decrease in value of nearby properties	Local landowners	Operation	Local area	Low	Low

7.3.6 Perceived impacts to public safety during construction

This section describes the potential impacts on the local community as a result of perceived public safety risks.

i Bushfire risk due to workforce behaviour and transmission power lines

The Bushfire Assessment (BA) prepared for this EIS (EcoLogical 2023e) noted potential for increased bushfire ignition sources during construction and operation including transmission power lines. Transmission lines will be installed between the upper and lower dams and reservoirs to provide electricity and communications to facilities at the upper dam and reservoir. Transmission lines can cause fire due to surrounding bushland touching power lines and igniting a fire. The EIS SIA assessed the perceived risk to public safety due to workforce behaviour and transmission power lines in the local area as a result of the Project as **medium**. After the application of recommended mitigations, the impact was assessed as **medium** (EMM 2023c).

The establishment of the three fly camps reduces the proportion of construction workers travelling from the Project site to private accommodation after each shift. More workers will reside at onsite accommodation instead of in local accommodation. This arrangement is likely to reduce the likelihood of workforce behaviour impacting bushfire risk due to the potential for littering of cigarette butts.

The unmitigated significance of the perceived risk to public safety due to workforce behaviour and transmission power lines in the local area as is assessed as **medium**. The likelihood of potential impact occurring is assessed as being **unlikely** and the magnitude of the impact is assessed as being **major**.

There is an opportunity to reduce bushfire risk further during the final design phase by adjusting placement of transmission lines.

In relation to emergency bushfire response, the EIS (EMM 2023c) noted that the Project will develop and maintain a full-time internal firefighting capacity at the main accommodation camp including a fully trained onsite emergency response team equipped to deal with potential bushfire events.

The Project will also liaise with NSW Police and NSW SES to ensure they are aware of potential resource requirements and negotiate provisional arrangements.

In relation to workforce social behaviour, as noted in the EIS, the proponent will implement Worker Code of Conduct which includes a no littering policy. In addition, outside of shift times, workers must remain within the Project site.

The mitigated significance of the perceived risk to public safety due to workforce behaviour and transmission power lines in the local area as is assessed as **medium**. The likelihood of the potential impact occurring is assessed as being **very unlikely** and the magnitude of the impact is assessed as being **major**.

A summary of the assessment is presented in Table 7.7.

Table 7.7 Summary of impacts related to perceived risk to public safety

Impact category	Matter	Affected parties	Duration	Extent	Unmitigated	Mitigated
Way of life	Potential bushfire risk from transmission lines	Local residents and businesses, Project workforce Tourists and visitors	Construction & Operation	Local area	Medium	Medium

7.3.7 Opportunities for local businesses

The EIS SIA assessed the benefits of opportunities for local businesses as a result of the Project as **high**. After the application of recommended enhancements, the impact was assessed as **high** (EMM 2023c).

The presence of the construction workforce in the local area could provide benefits for local businesses. The amendment includes the establishment and operation of up to three fly camps. A portion of the Project workforce may utilise tourist accommodation within the local and regional area which would increase revenue. However this would only be prior to the worker accommodation camp becoming available. The five-year construction period may be sufficient to stimulate additional investment in local businesses, particularly tourism related businesses.

Interviews with local landholders, service providers, and businesses conducted during the EIS SIA identified that the Project would provide opportunities for businesses associated with tourism and agriculture.

The unenhanced significance of benefits of opportunities for local businesses as a result of the Project as is assessed as **high**. The likelihood of potential impact occurring is assessed as being **likely** and the magnitude of the impact is assessed as being **moderate**.

To enhance this benefit, it is proposed that the Project develop a local procurement strategy to target local businesses. As local businesses are likely to be small, longer lead time may be required. The Project will continue to undertake direct engagement with local business to provide regular project updates including on timelines and upcoming procurement opportunities.

The enhanced significance of benefits of opportunities for local businesses is assessed as **high**. The likelihood of the potential impact occurring is assessed as being **likely** and the magnitude of the impact is assessed as being **major**.

A summary of the assessment is presented in Table 7.8.

Table 7.8 Summary of benefits related to opportunities for local businesses

Impact category	Matter	Affected parties	Duration	Extent	Unenhanced	Enhanced
Livelihood (benefit)	Benefit of opportunities for local businesses	Local businesses	Construction & Operation	Local area	High	High

7.4 Infrastructure and Services

This section provides an assessment of Project benefits and impacts upon infrastructure and services.

Impacts on infrastructure and services include:

- decline in rental affordability and availability for residents
- reduced supply of short-term and emergency accommodation for vulnerable groups.

7.4.1 Decline in rental affordability and availability for residents

The EIS SIA assessed the decline in rental affordability and availability for residents as a result of the Project as **very high**. After the application of recommended mitigations, the impact was assessed as **high** (EMM 2023c).

The EIS SIA noted that the Project will require a total of 822 workers at peak, 70% of which will require rental accommodation in the local area, or in Kempsey or Armidale. The main accommodation camp will provide up to 600 rooms. The amendment includes three fly camps within the Project site with up to a total of an additional 205 rooms.

Updated modelling for onsite worker accommodation demand and supply during the construction phase is provided in Section 2.1.2. The analysis shows a potential undersupply of onsite accommodation of 172 Project staff in year 1 (Q2, 2026), prior to the establishment of the main accommodation camp. This influx of people will increase the competition for any affordable rental accommodation in the area, and hence reduce the supply available to local residents.

Communities particularly affected include vulnerable group such as low-income earners, homeless people, victims of crime and First Nations Peoples. According to the 2021 Census estimates on homelessness, rates of homelessness in Armidale and Kempsey LGA are higher than NSW rates, with 51 and 63 persons per 10,000 people compared to the NSW average of 43 persons per 10,000 people.

Renting is more common in Kempsey township and Armidale city than the regional area and NSW. In April 2024, residential vacancy rates for postcodes 2350 (Armidale and surrounds) and 2440 (Kempsey and surrounds) were 1.7% and 0.7% respectively. This is much lower than the market equilibrium of 3.0%. While Armidale LGA's level of housing stress is on par with the NSW average at 35.5%, Kempsey LGA had a much higher proportion of the population experiencing housing stress (45.2%).

Rent payments in Bellbrook (\$150) and Willawarrin (\$200) are low compared to the rest of the local area and regional area, and significantly lower than NSW. This suggests that any increase in rental prices may impact particular groups.

The updated social baseline also identified an existing lack of available rental housing. On 30 April 2024, there were no residential properties available for rent and one residential property for sale within the local area (REA Group 2024). As noted in Section 5.3.1., there were 14 rental properties available in Kempsey township which equates to approximately 38 rooms and 62 rental properties or approximately 143 rooms available in Armidale township (181 rooms).

Armidale and Kempsey townships will host a peak of 172 non-local Project workers during year 1 of Project construction.

During SIA engagement, residents highlighted difficulties securing rental housing and noting the potential impact of external workers creating housing shortages. These concerns were also reflected in the community surveys. Access to housing and accommodation was also a core concern raised in the second survey, with 66.2% of responses raising affordable rental housing as an issue.

Two agency and several community submissions identified the potential impact of the Project on the supply of housing within the local and regional area including the potential impact, of greater demand for affordable rental accommodation, on local service workers such as teachers and nurses. Due to the six-year construction period, it is possible that a small proportion of construction workers will prefer to take up rental accommodation and bring their families to live in the local area, rather than residing in the accommodation camp.

Given the high levels of housing stress in the regional area, high level of disadvantage in Kempsey LGA, and that demand for housing in Kempsey and Armidale is stretched (below market equilibrium) in addition to demands from the tourism and education sectors, it is expected that the Project may significantly impact on rental affordability and availability, despite the changes proposed in the amendment. The addition of the fly camps reduces the significance of this impact.

The unmitigated significance of decline in rental affordability and availability for residents as a result of the Project as is assessed as **high**. The likelihood of potential impact occurring is assessed as being **likely** and the magnitude of the impact is assessed as being **moderate**.

In developing the Construction and Environmental Management Plan, the following elements should be considered to lessen the decline in rental affordability and availability for residents:

- bring forward the establishment of the main accommodation camp by four months
- increase the capacity of the main accommodation camp
- extend the operation of the fly camps
- increase the capacity of the fly camps for the critical four-month period.

The above proposed mitigations may also make onsite accommodation available for a portion of local workers, those who will travel to site daily from within Armidale and Kempsey LGAs.

The mitigated significance of decline in rental affordability and availability for residents as a result of the Project as is assessed as **medium**. The likelihood of the potential impact occurring is assessed as being **likely** and the magnitude of the impact is assessed as being **moderate**.

Due to the relatively small number of operation workers and the expected number of locally hired workers, it is not expected that rental affordability and availability will be impacted during the operation phase.

A summary of the assessment is presented in Table 7.9.

Table 7.9 Summary of impacts from decline in rental affordability and availability for residents

Impact category	Matter	Affected parties	Duration	Extent	Unmitigated	Mitigated
Accessibility	Decline in rental affordability and availability for residents	Vulnerable groups, broader community, accommodation and homelessness service providers, local Government	Construction	Local area, key urban areas	High	Medium
Accessibility	Decline in rental affordability and availability for residents	Vulnerable groups, broader community, accommodation and homelessness service providers, local Government	Operation	Local area, key urban areas	Low	Low

7.4.2 Reduced supply of short-term and emergency accommodation for vulnerable groups

The EIS SIA assessed the reduced supply of short-term and emergency accommodation for vulnerable groups during construction as **very high**. After the application of recommended mitigations, the impact was assessed as **high** (EMM 2023c).

The amendment adds an additional capacity for 205 staff in onsite accommodation. The updated analysis shows a potential undersupply of onsite accommodation for 172 Project staff in year 1 (Q2, 2026), prior to the establishment of the main accommodation camp. This influx of people will increase the competition for short-term accommodation in the area, and hence reduce the supply available to vulnerable groups.

As noted in Section 5.3.2, it is estimated there are a total of 129 rooms available in Kempsey township and 203 in Armidale city. Prior to the completion of the accommodation camp, the predicted shortfall of accommodation during year 2 of construction is 172 rooms. This leaves an excess of 160 rooms available in Kempsey and Armidale. It is assessed that the current supply of short-term accommodation is sufficient to meet Project requirements.

In addition, a proportion of local workers may choose to source short-term accommodation closer to the site rather than driving to site daily, to reduce fatigue. Considering potential demand from local workers for short term accommodation, and due to the high level of disadvantage in Kempsey LGA and the strong competition for short term accommodation in Armidale LGA, it is expected that the Project will contribute to a reduction in supply which could impact on the ability of vulnerable groups to access this accommodation.

Further analysis of other projects in the area is provided in Section 8.

The unmitigated significance of infrastructure and services impacts related to reduced supply of short-term and emergency accommodation for vulnerable groups during construction is assessed as **high**. The likelihood of the impact occurring is **likely**, and the magnitude of the impact is **major**.

As outlined in decline in rental affordability and availability above (Section 7.3.1), in developing the Construction and Environmental Management Plan, the Project should consider increasing the capacity of accommodation facilities, including bringing forward and extending the operation of the accommodation facilities.

Short term accommodation requirements can be reduced by hiring more local workers. This can be achieved by focussed recruitment strategies and providing training to upskill more local workers.

The mitigated significance of reduced supply of short-term and emergency accommodation for vulnerable groups during construction is assessed as **medium**. The likelihood of the impact occurring is **likely**, and the magnitude of the impact is **moderate**.

Due to the relatively small number of operation workers and the expected number of locally hired workers, it is not expected that the supply of short-term and emergency accommodation will be impacted during the operation phase.

A summary of the assessment is presented in Table 7.10.

Table 7.10 Summary of impacts from reduced supply of short-term and emergency accommodation

Impact category	Matter	Affected parties	Duration	Extent	Unmitigated	Mitigated
Accessibility	Reduced supply of short-term and emergency accommodation for vulnerable groups	Vulnerable groups, accommodation and homelessness service providers, local Government	Construction	Local area, key urban areas	High	Medium
Accessibility	Reduced supply of short-term and emergency accommodation for vulnerable groups	Vulnerable groups, accommodation and homelessness service providers, local Government	Operation	Local area, key urban areas	Low	Low

7.5 Recreation

This section provides an assessment of potential Project benefits and impacts on the social impact theme – recreation.

Project derived impacts on recreation include:

- reduced access to recreational areas and facilities
- reduced amenity at recreational areas and facilities
- environmental impacts related to the Project
- reduced availability of tourism accommodation.

7.5.1 Reduced access to recreational areas and facilities

During engagement conducted for the SIA, the local community expressed concern regarding the Project potentially restricting access to recreational areas including the Macleay River, Georges Junction campground, East Kunderang Homestead, the Carrai Plateau and the National Trail during construction and operation.

The EIS SIA assessed impacts related to reduced access to recreational areas and facilities during construction as **medium**. After the application of recommended mitigations, the impact was assessed as **low** (EMM 2023c).

One submission was received with regard to access to the Bicentennial National Trail. The submission noted that as well as forming a part of the Bicentennial National Trail, the Macleay River Trail is a registered fire trail and should not be impeded.

The official Bicentennial National Trail (BNT) map of Section 8, Map 4 Georges Junction – Left Hand Hut shows the National Trail runs predominantly along the east of Macleay River from Georges Junction to Peach Tree Crossing (Bicentennial National Trail 2021). Section 4.2 displays the location of the National Trail route.

The Trail is situated within the disturbance footprint for large portions of the 8 km route between Georges Junction and Peach Tree Crossing where it crosses the river to East Kunderang Homestead.

i Construction

As noted in the Project Description, public access to the disturbance footprint will be restricted during both the construction and operation phases of the Project in order to allow the Project to proceed in an efficient and safe manner.

The Project Description confirms that design of the infrastructure elements has considered existing environment values, as well as maintaining public access during construction and operation to valued areas such as the National Trail along the Macleay River and Georges Junction campground.

The Project has committed that access to section 8 of the National Trail will be retained throughout the construction and operational phases of the Project.

In regards to the Macleay River, a safety exclusion zone surrounding the Macleay River pumping facility and intake (or equivalent measure) will be implemented to ensure the safety of river users. The remainder of the river will be accessible to the public during construction.

The unmitigated significance of reduced access to recreational areas and facilities during construction is assessed as **medium**. The likelihood of potential impact occurring is assessed as being **possible** and the magnitude of the impact is assessed as being **moderate**.

It is proposed that no access restrictions are applied to recreational areas and facilities during construction as a result of the Project. To maintain access to recreational areas and facilities during construction, the Project should:

- Construct signage near construction works and access roads close to the National Trail, and recreational areas and facilities to inform visitors of the presence of the Project and any changes to access.
- Fence/secure construction works at key points where safety and security are warranted.
- Notify the local community and visitors of upcoming road closures/temporary changes in access arrangements including the Project's stakeholder list and key tourism agencies such as the National Trail organisation, National Parks and Wildlife Service (NPWS), Airbnb and DestinationNSW. It is noted that users of the Bicentennial Trail plan their journey via the National Trail website which is the main means of communicating any issues affecting the use of the Trail. This would be a key avenue for communication during construction of the project.
- Establish wooden fencing along the construction footprint where the National Trail route runs parallel to the Project site, to ensure visitors are aware of restricted access and consider information panels to engage and inform visitors.

The mitigated significance of reduced access to recreational areas and facilities during construction is assessed as **low**. The likelihood of potential impact occurring is assessed as being **possible** and the magnitude of the impact is assessed as being **minor**.

ii Operation

Once commissioned, the Project is not expected to impact access to recreational areas and facilities.

In regards to the Macleay River, a safety exclusion zone surrounding the Macleay River pumping facility and intake (or equivalent measure) will be implemented during periodic operational top-up, to ensure the safety of river users.

The unmitigated significance of impacts related to reduced access to recreational areas and facilities during operation is assessed as **low**. The likelihood of the impact occurring is **unlikely**, and the magnitude of the impact is **minor**.

The Project could establish a viewing platform such as in Carrai where there are views of Project infrastructure. The viewing platform could include signage with key Project information. While this does not change access, the platform could inform the local community and visitors of the purpose of the Project.

The mitigated significance of recreation and environment impacts related to reduced access to recreational areas and facilities during operation is assessed as **low**. The likelihood of the impact occurring is **unlikely**, and the magnitude of the impact is **minor**.

A summary of the assessment is presented in Table 7.11.

Table 7.11 Summary of impacts from reduced access to recreational areas and facilities

Impact category	Matter	Affected parties	Duration	Extent	Unmitigated	Mitigated
Surroundings	Reduced access to recreational areas (including rivers and trails)	Local residents, tourism businesses, tourists	Construction	Local area	Medium	Low
Surroundings	Reduced access to recreational areas (including rivers and trails)	Local residents, tourism businesses, tourists	Operation	Local area	Low	Low

7.5.2 Reduced amenity at recreational areas and facilities

The Project may impact local residents and visitors using recreational areas and facilities near the Project site as a result of changes to landscape views, and noise, dust and vibration during construction.

The EIS SIA assessed impacts related to reduced amenity at recreational areas and facilities during construction as **high**. After the application of recommended mitigations, the impact was assessed as **medium** (EMM 2023c).

With respect to recreational areas and facilities, the National Trail runs adjacent to the Project site and construction envelope passing along the lower reservoir and transmission line to the north for 8 km.

High value is placed on the landscape by visitors to the area, in particular recreational areas and facilities primarily Marys View, Georges Junction campground, the National Trail and the Macleay River.

The amendment proposes the addition of three fly camps within the Project site. Section 2.1.2 displays the location of the respective Project accommodation facilities within the Project site and the nearest recreational area. The main accommodation camp is situated approximately 1 km from Oxley Wild Rivers National Park. Fly camp 2 is situated approximately 500 m from Georges Junction Campground. Fly camp 3 at the upper reservoir is located approximately 1 km from Carrai State Conservation Area.

The nearest recreational area or facilities is 500 m from a Project accommodation facility.

The accommodation facilities have the potential to reduce amenity due to generation of noise and dust, and changed visual landscape including night lighting.

One submission received related to amenity impacts at recreational areas such as NPWS estate, Oxley Wild Rivers and Carrai National Parks, and Carrai State Conservation Area, and the East Kunderang Homestead.

One agency submission noted concerns regarding the potential impact on local tourism amenity such as night works, lighting and stockpile areas. The submission was also concerned with how the potential impacts will be communicated to tourists utilising areas such as the Georges Junction Campground. A second agency submission was received relating to the potential amenity impacts on the recreational use of Macleay River and associated tributaries. *“Fishing, water sports and leisure activities, also use of the river by local communities, is significant to them.”* Unauthorised access to National Parks and Wildlife Service (NPWS) areas, including measures to prevent unauthorised such access, was also identified as a concern.

The unmitigated significance of amenity impacts at recreational areas and facilities during construction is assessed as **high**. The likelihood of the impact occurring is **likely**, and the magnitude of the impact is **major**.

Given the significance of the impact and to mitigate further impacts, it is proposed that notification of amenity impacts be communicated to potential visitors including the Project’s stakeholder list and key tourism agencies such as the National Trail organisation, NPWS, Airbnb and Destination NSW.

The LVIA conducted for the EIS advised that the visual impacts from vehicle dust, earthworks, and clearing and trimming of vegetation as well as from night lighting during construction can be minimised through mitigation measures such as locating laydown areas in areas of limited visibility, restoring or remediating any earthworks during construction, and minimising dust creation from vehicles and wind. Furthermore, the LVIA noted that the impacts from the construction of the Project will be temporary. Vegetation retention on ridges, road corridors and along the Macleay River is also recommended to provide screening from the river and the National Trail.

Mitigation measures have also been identified to be included as part of a Workforce Management Plan to ensure on-site workers do not participate in unauthorised use of NPWS parks and declared wilderness, thereby reducing the potential for reduced amenity at recreational areas and facilities. Proposed measures to prevent unauthorised access to NPWS areas include signage and fencing, and implementation of Worker Code of Conduct.

The mitigated significance of amenity impacts at recreational areas and facilities during construction is assessed **medium**. The likelihood of the impact occurring is **possible**, and the magnitude of the impact is **moderate**.

The unmitigated significance of amenity impacts at recreational areas and facilities during operation is assessed as **low**. The likelihood of the impact occurring is **unlikely**, and the magnitude of the impact is **minor**.

No further mitigations are proposed during operation.

The mitigated significance of amenity impacts at recreational areas and facilities during operation is assessed as **low**. The likelihood of the impact occurring is **unlikely**, and the magnitude of the impact is **minor**.

A summary of the assessment is presented in Table 7.12.

Table 7.12 Summary of impacts from reduced amenity at recreational area and facilities

Impact category	Matter	Affected parties	Duration	Extent	Unmitigated	Mitigated
Surroundings	Reduced amenity at recreational areas and facilities	Local residents, tourism businesses, tourists	Construction	Local area	High	Medium
Surroundings	Reduced amenity at recreational areas and facilities	Local residents, tourism businesses, tourists	Operation	Local area	Low	Low

7.5.3 Impacts on environmental values related to the Project

The construction of the Project will cause environmental impacts in the Project area. This was raised as a concern by local residents and other stakeholders engaged during SIA consultation. As noted, the local environment and scenic landscape are highly valued by local residents and visitors alike. The area is used by the community for a range of recreational activities including camping, fishing, kayaking, swimming, bushwalking, hiking, mountain biking and picnicking. Due to its remoteness, the natural environment of the Project area is largely intact but also supports a wide range of rural and agricultural practices including grazing and logging.

The EIS SIA assessed environmental impacts related to the Project as **high**. After the application of recommended mitigations, the impact was assessed as **medium** (EMM 2023).

The amendment reduces the proposed size of the construction footprint from 788 ha to 762 ha. The amendment has increased the disturbance footprint from approximately 300 ha to approximately 365 ha and increased the operational footprint from approximately 270 ha to approximately 280 ha.

Three threatened ecological communities (TECs) occur within the Project area. The amended disturbance footprint contains:

- 3.8 ha of Subtropical Coastal Floodplain Forest of the New South Wales North Coast Bioregion
- 0.9 ha of Lowland Rainforest on Floodplain in the New South Wales North Coast Bioregion
- 5 ha of Lowland Rainforest in the NSW North Coast and Sydney Basin Bioregions.

The Biodiversity Assessment (BDAR) prepared for this amendment (EMM 2024d) assessed that without any measures to avoid, minimise or mitigate impacts, the Project would result in an increase in land clearing which includes native vegetation and threatened species habitat of 362.8 ha.

The amendment also includes realignment of the Upper Dam Access Road (UDAR) (including removal of a large north-south connecting section of road) in response to regulator feedback to avoid known habitat and potentially significant impacts to the threatened Brush-tailed Rock Wallaby.

The construction envelope has been reduced to align to the disturbance footprint in key locations:

- Along the UDAR to avoid critical habitat for the Brush-tailed rock-wallaby. This includes the complete removal of a north-south road linking the Main Access Road and the UDAR, an area which recorded a population of Brush-tailed rock-wallaby and associated denning habitat.
- Upper PSE and Carrai access area to avoid individuals and microhabitat for *Pultanaea rubescens*. No flexibility is provided to the design in these areas to ensure direct impacts are avoided.

It has been assessed that no additional flora species, fauna listed as species credit species or fauna species listed as ecosystem credit species listed under the *Biodiversity Conservation Act 2016* (BC Act) were recorded within the Project area since the EIS was submitted. An additional one flora species listed under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) was recorded within the Project area. This species may be impacted by the Project.

A temporary bridge is required at Georges Junction as part of the early works stage. The location of this bridge was selected to avoid the large area of suitable habitat for Wandering Pepper Cress.

Overall, the changes due to the amendment have resulted in a reduced impact for serious and irreversible impacts (SAII) candidate species Brush-tailed Rock-wallaby and *Pultanaea rubescens* and increased clearing of habitat that supports Wandering Pepper Cress. The changes in design during the response to submission increased impacts to all other threatened species recorded within the construction envelope.

The unmitigated significance of environmental impacts related to the Project during construction and operation is assessed as **high**. The likelihood of the impact occurring is **likely**, and the magnitude of the impact is **major**.

The BDAR suggested a range of strategies can be implemented to avoid, minimise, or mitigate the impacts mentioned above.

The Project requires a total of 9,330 ecosystem credits and 49,531 species credits to compensate for impact on native vegetation and species habitat.

Mitigation for the direct impact of the removal of native vegetation and threatened species habitat include measures such as consideration of biodiversity values during final Project design to avoid impacts, the minimisation of clearing during construction wherever possible, and the collection of native seeds for propagation for use in rehabilitation works to mitigate impacts. For the other direct impact of injury of native animals during construction, the BDAR proposed a detailed design of the Project to minimise impacts as well as the translocation of less mobile animals to more vegetated sites to mitigate impacts.

The mitigated significance of environmental impacts related to the Project during operation is assessed as **medium**. The likelihood of the impact occurring is **possible**, and the magnitude of the impact is **moderate**.

A summary of the assessment is presented in Table 7.13.

Table 7.13 Summary of recreation impacts related to environmental impacts

Impact category	Matter	Affected parties	Duration	Extent	Unmitigated	Mitigated
Surroundings	Environmental impacts from the Project	Local residents, tourism businesses, tourists, broader community	Construction & Operation	Local area	High	Medium

7.5.4 Reduced availability of tourist accommodation

i Construction

Tourism is an important contributor to the regional economy. Supply of short-term accommodation in the local and regional area is largely taken up by the tourism industry.

The EIS SIA assessed impacts related to reduced availability of tourist accommodation during construction as **high**. After the application of recommended mitigations, the impact retained a rating of **high** (EMM 2023).

The majority of tourist accommodation and services are located in Armidale township and within the broader Kempsey LGA. In 2020/21 Kempsey LGA received 1,600,145 domestic overnight visitors. Within the same period Armidale LGA received 914,912 domestic visitors. In the last five years to 2020/21 there were an average of 7,976 visitors and 8,364 visitors from overseas visiting Kempsey LGA and Armidale LGA respectively. This generated \$69.2 million in tourism sales and added \$36.8 million to the Kempsey economy. For Armidale, the totals were also significant: \$109.7 million in tourism sales and a total of \$60.5 million value add.

It is noted that there a number of regional events in Armidale that attract a range of tourists and visitors. More than 4,000 people attended the annual The Big Chill family music event at Dumaresq Dam in May 2024 (Armidale Regional Council 2024). It is estimated that The Big Chill event generated \$2.3 million in the local economy including \$1.4 million of visitor expenditure. According to Regional Development Australia Northern Inland NSW, the event attracted 1,140 visitors, most of whom stayed for two nights and attended the festival on both days (ibid, 2024).

In addition, sporting events such as Gymnastics NSW Country Championships are held each July in Armidale where more than 40 clubs and 1,000 athletes compete at the Winter Invitational. Agricultural shows are held each year in numerous towns including Glen Innes, Walcha and Uralla. The Guyra TroutFest is also held each October. It is noted that there are no advertised recurring events in the local area.

The amendment adds up to an additional 205 rooms to onsite accommodation. The updated analysis shows a potential undersupply of onsite accommodation of 172 rooms in year 1 (Q2, 2026), prior to the establishment of the main accommodation camp. This influx of people will increase the competition for short-term accommodation in the area including tourist accommodation, and hence reduce the supply available to tourists and visitors.

As noted in Section 5.3.2, it is estimated there are 38 affordable short term accommodation rooms available in Kempsey township and 142 rooms in Armidale city. This includes tourist accommodation such as hotels, motels, holiday parks and caravan parks. It is also estimated there are 242 rooms of homestay (Airbnb) accommodation available in Kempsey township and Armidale city. While there may be additional short-term accommodation available throughout the two LGAs, it is assumed that workers would prefer to stay in a central location such as Kempsey or Armidale due to distance to site.

It is estimated there will be a peak shortfall of onsite accommodation of 172 rooms. Given there are approximately 180 rooms available in Kempsey township and Armidale city, it is expected that for several months during the first year of construction, Project construction workers will take up most tourist accommodation capacity in the local area.

Although this arrangement provides income for tourism accommodation providers it limits the accommodation available for recreational users, tourists and visitors. The resulting sustained increase in demand may push up prices and discourage tourists from travelling to the local area due to a lack of available or affordable accommodation. If this arrangement remains in place for several years, it could result in a market shift where tourists choose other areas to visit.

Two agency submissions were received noting concerns regarding the potential impact on local tourism such as business, sporting and cultural events and the long term viability of the local tourism industry.

The unmitigated significance of impacts related to reduced availability of tourist accommodation during construction is assessed as **high**. The likelihood of the impact occurring is **likely**, and the magnitude of the impact is **major**.

During construction, mitigation measures are proposed to reduce the impact of reduced availability of tourist accommodation due to increased competition from the Project. As outlined in decline in rental affordability and availability above (Section 7.3.1), in developing the Construction and Environmental Management Plan, the Project should consider increasing the capacity of accommodation facilities, including bringing forward and extending the operation of the accommodation facilities.

Emphasis on local hiring and upskilling of local workforce is proposed.

The mitigated significance of impacts related to reduced availability of tourist accommodation during construction is assessed as **high**. The likelihood of the impact occurring is **likely**, and the magnitude **moderate**.

ii Operation

Between 30–50 workers will operate and maintain the Project once commissioned. The Project will be operated and monitored remotely and maintenance will be periodically required. Several rooms may remain at the accommodation camp on site to house workers as needed. It is assumed that the majority of workers will either be locally hired or will move to Armidale, Kempsey or the local area for the duration of their employment. Some short term accommodation may be used as transit accommodation for workers moving to Armidale or Kempsey.

However, it is assumed that operation workers will look to rent or purchase property and would therefore not impact the tourism accommodation market.

The unmitigated significance of recreation impacts related to reduced availability of tourist accommodation during operation is assessed as **low**. The likelihood of the impact occurring is **very unlikely**, and the magnitude of the impact is **minimal**.

Due to the low risk of the impact occurring during operation, no further mitigations are proposed.

The mitigated significance of recreation impacts related to reduced availability of tourist accommodation during operation is assessed as **low**. The likelihood of the impact occurring is **very unlikely**, and the magnitude of the impact is **minimal**.

A summary of the assessment is presented in Table 7.14.

Table 7.14 Summary of impacts from reduced availability of tourist accommodation

Impact category	Matter	Affected parties	Duration	Extent	Unmitigated	Mitigated
Accessibility	Reduced availability of tourist accommodation	Tourism businesses, tourists and visitors	Construction	Local area, Armidale and Kempsey township	High	High
Accessibility	Reduced availability of tourist accommodation	Tourism businesses, tourists and visitors	Operation	Local area, Armidale and Kempsey township	Low	Low

7.6 Traffic

This section provides an assessment of potential impacts and benefits due to traffic. The Project-derived traffic impacts include:

- traffic impacts related to increased public safety risk
- impacts related to traffic congestion and delays.

Project derived benefits relating to traffic include:

- improved road conditions as a result of the Project.

This benefit will be assessed under cumulative impact assessment.

7.6.1 Traffic impacts related to public safety risk during construction

The Kempsey-Armidale Road upgrades will be addressed under a separate EIS or Council approval pathway.

Residents of the local and the regional area including traffic affected communities may experience increased safety risks due to Project-related increases in traffic on roads surrounding the Project site and along transport haulage routes. While it is assumed that all required road upgrades to Kempsey-Armidale Road will occur prior to commencement of construction, increased traffic may impact public safety through road damage and dust resulting in an increase risk of road accidents.

The EIS SIA assessed impacts related to public safety risk due to road conditions during construction as **high**. After the application of recommended mitigations, the impact was assessed as **high** (EMM 2023).

The amendment includes the addition of three fly camps to be located within the Project site. The amendment will result in a greater proportion of construction workers residing in onsite accommodation facilities and a reduced proportion of workers will travel to site from accommodation in Kempsey and surrounding areas on a daily basis.

Initially, the Project will transport workers to site via minibus from Kempsey at the beginning and end of each shift. Prior to the accommodation camp being completed, at peak, 172 workers will need to be transported to and from the Project site. Once the main accommodation camp is constructed, the Project will maintain the transfer service to/from Kempsey to the Project site for locally hired workers (247 at peak). Non-locally hired workers will remain at the onsite accommodation during an average 10 shifts per cycle and four days off. Non-locally hired workers may travel to Armidale, Port Macquarie or Coffs Harbour when transiting to/from leave breaks. Section 2.1.7 details proposed transportation of workers to/from the Project site.

Updated crash statistics revealed in 2022, there were 83 crashes causing 78 fatalities or injuries in Kempsey LGA. In 2022, there were 67 accidents causing 66 fatalities or injuries in Armidale LGA. In 2022, there were four accidents along Kempsey-Armidale Road in the Kempsey LGA section. There was one accident each in Bellbrook, Temagog, Skillion Flat and Hickeys Creek. The accidents in Bellbrook, Temagog and Skillion Flat caused serious injury while the accident in Hickeys Creek caused moderate injury. In 2022, there was one accident in Lower Creek, in Armidale LGA causing minor injury.

Five submissions were received relating to traffic impacts including traffic generation and road safety. One submission was received from the local area. The submission expressed concern centred around the anticipated increase in traffic near the submitter's residence. Two community submissions were received relating to road safety, including capacity of local roads to accommodate over size over mass (OSOM) vehicles on main roads through townships and road safety in school zones.

School bus services in the Kempsey region are operated by Busways. There are over 30 dedicated school bus routes running in the Kempsey region covering Kempsey town centre and surrounding suburbs and townships. The Traffic Impact Assessment prepared for this amendment (EMM 2024e) noted that along Kempsey-Armidale Road, school bus stops near the Project site are associated with Bellbrook Public School and Willawarrin Public School. A bus service collects children from nearby Lower Creek to attend school. The school bus operating times are from 7:40 am to 9:02 am in the morning and 3:00 pm to 4:51 pm in the afternoon.

The unmitigated significance of traffic impacts related to public safety is assessed as **high**. The likelihood of the impact occurring is **likely**, and the magnitude of the impact is **major**.

The TIA recommends various mitigation measures addressing all key traffic impacts including impacts related to hazards and heavy vehicle movements in school zones. In addition to the mitigations recommended in the TIA, it is proposed the Project restricts construction heavy vehicles within school zones on Kempsey-Armidale Road between Kempsey and Bellbrook during school bus operating hours i.e. between 7:30 am to 9:30 am and 2:30 pm to 4:30 pm. Additionally, construction heavy vehicles will not operate on Kempsey-Armidale Road between Bellbrook and the Eastern Access Road (EAR) (main access road entry point) during school bus operating hours, that is, between 7:30 am to 9:30 am and 2:30 pm to 4:30 pm. Due to the proposed cease in operation of construction heavy vehicles during the school pick-up and drop-off time, traffic impacts on school buses and school zones relating to traffic congestion and road delays would be significantly reduced.

While the likelihood of impacts to public safety is reduced, the magnitude remains **major**.

The mitigated significance of traffic impacts related to public safety is assessed as **high**. The likelihood of the impact occurring is **possible**, and the magnitude of the impact is **major**.

A summary of the assessment is presented in Table 7.15.

Table 7.15 Summary of impacts related to public safety risk during construction

Impact category	Matter	Affected parties	Duration	Extent	Unmitigated	Mitigated
Health and wellbeing	Concerns related to increased public safety risk	Landowners/residents near the Project site	Construction	Local area, particularly closest to the site	High	High

7.6.2 Impacts related to traffic congestion and road delays

The EIS SIA assessed impacts related to traffic congestion and road delays during construction as **high**. After the application of recommended mitigations, the impact was assessed as **medium** (EMM 2023).

The increased proportion of workers residing onsite will increase traffic internal to the Project site. There will be a smaller proportion of workers travelling to and from local accommodation which will result in reduced traffic volumes on local roads during construction.

The TIA for this amendment assessed that at the peak of Project construction, there would be 213 daily vehicle movements from 155 light and 58 heavy vehicles each day. Of this traffic, there would be no daily vehicle movements passing through the Kempsey town centre (via the Belgrave Street/River Street route). Instead, all traffic will be traveling through Frederickton (via the Macleay Valley Way/Second Lane route), where there would be 183 daily vehicle movements from 137 light and 46 heavy vehicles each day. For the Armidale route, there would be **30** daily vehicle movements from 18 light vehicles and 12 heavy vehicles.

All Project vehicles will bypass Kempsey town centre. Project vehicles will travel via the Pacific Highway, Macleay Valley Way, Second Lane and North Street to avoid traffic congestion at the Macleay River bridge in Kempsey town centre at the intersection of Smith Street and Lord Street.

Five submissions were received relating to traffic impacts related to traffic generation and road delays. There was one submission from the local area. This submission centred around the anticipated rise in traffic near the submitter's residence. The submitter requested the provision of a crossing at George's Junction so project traffic is reduced past their residence.

The unmitigated significance of traffic impacts related to traffic generation and road delays is assessed as **high**. The likelihood of the impact occurring is **almost certain**, and the magnitude of the impact is **moderate**.

As proposed above, in addition to the mitigations recommended in the TIA, Project construction heavy vehicles will not operate in school zones during school zone times. It is also proposed that Project OSOM vehicles operate only at night time to minimise traffic congestion. It is also recommended that SMS notifications to the local community on the timing and frequency of road closures, OSOM vehicle movements and other key traffic movements in the local and regional area.

The mitigated significance of traffic impacts related to traffic generation and road delays is assessed as **medium**. The likelihood of the impact occurring is **likely**, and the magnitude of the impact is **minor**.

A summary of the assessment is presented in Table 7.16.

Table 7.16 Summary of traffic impacts related to traffic congestion and road delays

Impact category	Matter	Affected parties	Duration	Extent	Unmitigated	Mitigated
Accessibility	Concerns related to traffic congestion and road delays	Landowners/residents near the Project site	Construction	Local area, particularly closest to the site	High	Medium

7.7 Water

This section provides an assessment of potential impacts relating to water.

Project derived impacts on water include:

- perceived concerns regarding water quality due to construction waste and disturbance of existing metals
- concerns regarding access to water during drought.

7.7.1 Concerns regarding water quality due to construction waste and disturbance of existing metals

SIA engagement identified community concerns around how wastewater from the Project may affect water quality.

The EIS SIA assessed concerns regarding water quality due to construction waste and disturbance of existing metals as **medium**. After the application of recommended mitigations, the impact was assessed as **low** (EMM 2023c).

Construction waste will be stored onsite in permanent waste emplacement areas. Construction waste includes material excavated during construction. While rock will be reused in dam walls, all other material will be stored in the spoil stockpile. This has the potential to impact surface water quality through leakage and through rainfall shifting waste into the Macleay River.

The amendment includes blasting as a construction technique for road works. Blasting increases the risk of nitrates from explosives forming part of construction waste. Nitrates could leach into soils and rainfall could shift excavation waste (spoil) away from emplacements into the Macleay River.

Discharge water such as processed water from underground workings, concrete batching, spoil emplacements and sediment basins will be treated before being released into the Macleay River. Sewerage and wastewater from onsite accommodation facilities will be collected in holding tanks before being transported to nearby processing plants.

Approximately 3.55 Mm³ of excavated material (spoil) will be generated through construction activities.

It is assessed that the amendment does not change the potential risk relating to disturbance of existing metals as a result of construction or operation activities.

It was noted in the EIS SIA that the Kempsey Shire Council has engaged with key interest groups regarding concerns relating to potential contamination due to sediment run off contaminating the river.

Water quality impacts due to the release or leaching of construction waste requires careful management. The existing high levels of contamination and high community values around water quality and the environment increase the social risks associated with wastewater.

Mitigations recommended by the Surface Water Assessment EMM 2024) prepared for this amendment include:

- contaminated wastewater collection and treatment
- isolating or stockpiling, covering and bunding potentially hazardous activities/materials
- ongoing water quality monitoring and reporting.

The unmitigated significance of concerns regarding water quality due to construction waste and existing metals is assessed as **medium**. The likelihood of the impact occurring is **possible**, and the magnitude of the impact is **moderate**.

It is proposed that spoil will be managed appropriately on site including the retention of any contaminant materials and lining of such spoil emplacements to avoid leaching. Wastewater discharged into the Macleay River will be treated.

The Project should work with the Kempsey Shire Council to engage key interest groups and disseminate detailed information regarding mitigations to be instituted.

The mitigated significance of concerns regarding water quality due to construction waste and existing metals is assessed as **low**. The likelihood of the impact occurring is **unlikely**, and the magnitude of the impact is **minor**.

A summary of the assessment is presented in Table 7.17.

Table 7.17 Summary of impacts regarding water quality due to construction waste and disturbance of existing metals

Impact category	Matter	Affected parties	Duration	Extent	Unmitigated	Mitigated
Health and wellbeing	Concerns regarding water quality due to construction waste and disturbance of existing metals	Local residents downstream of the Project site	Construction	Local area, regional area	High	Medium

7.7.2 Concerns regarding access to water during drought

The Project will extract water from the Macleay River for construction and operation requirements.

The EIS SIA assessed concerns regarding access to water during drought as **high**. After the application of recommended mitigations, the impact was assessed as **medium** (EMM 2023).

The amendment removes the drought reserve from the upper reservoir in order to reduce construction waste. This means during operation, water extraction needs to occur more often. As a result of the amendment, general construction requirements will increase from 365 megalitres (ML)/year to 1,000 ML/year. The initial fill volume will remain the same. More frequent top ups mean reduced quantity of water per top up. Operational top ups are expected to reduce from 700 ML/year to 200 ML/year.

The amendment also includes lining of the reservoirs which reduces water leakage.

Water allocation conditions for initial storage fill and operation top-up remain for the Special Purpose Access Licence (SPAL), including:

- extraction will only occur during high-flow in accordance with water licence conditions
- extraction will not occur during extended dry periods or drought

- no extraction will occur during the first seven day of the first high-flow event following extended dry periods or drought to allow the river to recharge
- as the initial one off fill period represents the highest potential extended impact on flow levels, a longer initial fill period (up to 22 months) may be required if dry or drought conditions are experienced during the construction period to prevent undue impacts to other users and the environment.

The EIS noted that the initial one-off filling of the reservoir will be pumped from the Macleay River during high flow periods. This initial fill will require 6.5 GL which would be extracted in accordance with a Specific Purpose Access License (SPAL) which would condition this activity in a manner which does not compete against downstream users. 6.5 GL is 1% of the average annual streamflow volume in the Macleay River adjacent to the project area.

During operation, it is anticipated that up to 170 ML per year will be required for “top-ups” although this would be infrequent. If needed, this would be extracted at a rate of up to 86.4 ML per day. By comparison to the initial fill, 740 ML is 0.1% of the average annual streamflow volume adjacent to the Project area.

The above changes proposed as part of the amendment result in an overall lower water requirement by the Project than originally modelled in the EIS. Conditions for water extraction in accordance with the Specific Purpose Access License (SPAL) remain the same.

The unmitigated significance of concerns regarding access to water during drought is assessed as **high**. The likelihood of the impact occurring is **likely**, and the magnitude of the impact is **moderate**.

In addition to the above, it is proposed that community updates provide information about steps taken to prevent Project impacts during drought periods. It is noted that concerns or perceptions can remain despite mitigation measures being implemented. Provision of information regarding actions the Project takes to minimise impacts can be effective in reducing concerns.

The mitigated significance of concerns regarding access to water during drought is assessed as **medium**. The likelihood of the impact occurring is **possible**, and the magnitude of the impact is **moderate**.

A summary of the assessment is presented in Table 7.18.

Table 7.18 Summary of concerns regarding access to water during drought

Impact category	Matter	Affected parties	Duration	Extent	Unmitigated	Mitigated
Health and wellbeing	Concerns regarding access to water during drought	Local and regional residents	Construction & Operation	Local area, regional area	High	Medium

7.8 Culture

This section provides an assessment of Project benefits and impacts upon culture.

Impacts on culture include:

- potential disturbance or destruction of cultural artefacts and sites
- impacts to social cohesion between First Nations groups.

7.8.1 Potential disturbance or destruction of Aboriginal cultural artefacts and sites

The EIS SIA assessed concerns regarding potential disturbance or destruction of Aboriginal cultural artefacts and sites as **high**. After the application of recommended mitigations, the impact was assessed as **medium** (EMM 2022a).

Further investigations conducted as part of the Aboriginal Cultural Heritage Assessment (ACHA) undertaken for the amended Project, appended to this Amendment Report (EMM 2024f) have resulted in identification of 44 discrete sites and places, 15 cultural deposits of substantive buried stone artefacts, and a discontinuous and complex distribution of surface and shallowly buried stone artefacts distributed across the Project area.

Additional desktop and field investigations were undertaken, which resulted in:

- the identification of previously undocumented culturally modified trees and a stone arrangement
- the identification of four further areas of high density buried stone artefacts, or areas of foci
- the de-classification of several previously documented Aboriginal sites that through further desktop analysis and/or specialist investigations have indicate that they are unlikely to be of anthropogenic and/or cultural origin
- some modification to Aboriginal site values due to changes and refinements of the Project area and construction envelope since the EIS ACHA.

The construction envelope includes 31 identified sites including two of high cultural significance, 28 of cultural moderate significance and one site of low cultural significance. This compares closely with the EIS ACHA that identified 15 of high value, 44 of moderate value and one of low significance, noting that several sites were de-classified, are now outside the Project area following refinements, and/or the consideration of only sites within the Project area rather than further afield.

Of the 12 discrete Aboriginal sites within the construction envelope, seven are within the disturbance footprint and would be adversely affected. This includes two stone arrangements, five culturally modified trees, and an artefact scatter. Of these, one is considered of high significance.

While not within the Project area, as per the EIS ACHA, a number of cultural and archaeological sites are within the general environment of the Project.

According to the ACHA report, there have been some concerns over impacts to the cultural landscape with the site being situated within a highly ceremonial (male) region that includes an artefact scatter at Georges Junction within the Project area. In the case of this site, its significance has only recently been identified as having gender specific (male) restrictions despite being documented in the EIS ACHA.

The preliminary findings of the EIS ACHA contributed to the iterative design and refinement of the Project to avoid and minimise impacts to Aboriginal heritage, where feasible, during EIS preparation. This included design refinements to avoid significant Aboriginal sites and places. No further avoidance or risk minimisation has resulted from the ACHA Addendum report.

Further cultural mapping has also been conducted since EIS submission. Unfortunately, indigenous people who participated in interviews have since passed away, so it was felt not appropriate to complete the process.

Overall, it is assessed that, as a result of the amendment, there is a slight decrease in the potential for disturbance or destruction of Aboriginal cultural artefacts or sites.

The unmitigated significance of potential disturbance or destruction of Aboriginal cultural artefacts and sites is assessed as **high**. The likelihood of the impact occurring is **likely**, and the magnitude of the impact is **moderate**.

The effectiveness of mitigation measures will be dependent upon thorough and ongoing stakeholder engagement with the local First Nations community. The effective implementation of the proposed Aboriginal Cultural Heritage Management Plan (ACHMP), as outlined in the ACHA for the amended project, is key to effective mitigation of the disturbance to culturally important places, sites and artefacts.

Further cultural mapping may contribute to mitigating this impact as a community benefit initiative.

The mitigated significance of potential disturbance or destruction of Aboriginal cultural artefacts and sites is assessed as **medium**. The likelihood of the impact occurring is **possible**, and the magnitude of the impact is **moderate**.

A summary of the assessment is presented in Table 7.19.

Table 7.19 Summary of potential disturbance or destruction of Aboriginal cultural artefacts and sites

Impact category	Matter	Affected parties	Duration	Extent	Unmitigated	Mitigated
Culture	Potential disturbance or destruction of Aboriginal cultural artefacts and sites	Local Aboriginal groups	Life of Project	Local area, regional area	High	Medium

7.8.2 Impacts to social cohesion between First Nations groups

Section 6 outlines engagement with the Aboriginal community undertaken by OMPS since the EIS was submitted including engagement conducted for the Aboriginal Cultural Heritage Assessment.

The EIS SIA assessed impacts to social cohesion between First Nations Groups as **very high**. After the application of recommended mitigations, the impact was assessed as **medium** (EMM 2023c).

Engagement conducted as part of the ACHA for the amended Project indicated that social cohesion of the local Aboriginal community declined. There has been disagreement between groups relating to who should be involved in cultural heritage activities.

Due to a gap of more than six months, in late 2023, Aboriginal consultation was re-started in accordance with Heritage NSW guidelines in early 2024. This afforded the opportunity to include stakeholders who had not previously been involved in field work for the Project. Since the finalisation of the EIS ACHA and the exhibition of the EIS, consultation has extended a further ~80 interactions between March 2024 and July 2024, and included a further 15 days of on-Country activity. To address criticism in the EIS ACHA, organisations associated with Anaiwan and Dhungutti traditional owners who had had only limited involvement previously, were prioritised for this phase of work, and included Armidale LALC, Dhungutti Elders Council and Iwatta Aboriginal Corporation. According to the ACHA report for the amended Project, “overwhelmingly, there is significant disagreement in the local Aboriginal community about who speaks for Country, and who has the right to be involved in the Project” (ACHA 2024f). Ultimately, a range of Thungutti, Dhungutti and Anaiwan representatives have been involved throughout the Project.

The unmitigated significance of impacts related to social cohesion between First Nations groups is assessed as very **high**. The likelihood of the impact occurring is **almost certain**, and the magnitude of the impact is **major**.

Agreement on and effective implementation of the proposed Aboriginal Cultural Heritage Management Plan (ACHMP), as outlined in the ACHA for the amended Project, is key to improving social cohesion between Aboriginal groups. The Plan includes detailed information regarding Aboriginal community consultation and participation through the remainder of the Project including a grievance mechanism that is readily available and designed for use by the local Aboriginal community.

In addition to commitments made in the EIS ACHA, additional mitigations include a cultural values mitigation offset package to be developed in consultation with relevant Elders and key knowledge-holders, a cultural flow management plan must be developed in consultation with the RAPs and consent authority to provide the post approval framework for management and monitoring of water regimes in the vicinity of key Aboriginal sites, objects and/or places within the Project area, notably focussing upon Georges Creek Junction. Other activities include the development and implementation of a Heritage interpretation strategy and plan to explore, develop and present Aboriginal heritage values of the Project area. Consultation should be maintained with the RAPs during the finalisation of the assessment process and throughout the Project.

The mitigated significance of impacts related to social cohesion between First Nations groups is assessed as **very high**. The likelihood of the impact occurring is **likely**, and the magnitude of the impact is **moderate**.

A summary of the assessment is presented in Table 7.20.

Table 7.20 Summary of impacts related to social cohesion between First Nations groups

Impact category	Matter	Affected parties	Duration	Extent	Unmitigated	Mitigated
Culture	Declining social cohesion between First Nations Groups regarding the perceived extent of consultation with all key groups	Aboriginal groups	Life of Project	Local area, regional area	Very High	High

7.9 Livelihood

This section provides an assessment of Project benefits upon livelihood.

Project benefits on livelihood include:

- local and regional employment and training opportunities.

7.9.1 Benefit of regional business procurement opportunities

Note that opportunities for local businesses is addressed in Section 7.2.7, whilst this section addresses opportunities for regional businesses.

i Construction

The EIS SIA assessed impacts related to livelihood benefit of regional business procurement opportunities during construction as **medium**. After the application of recommended enhancements, the impact was assessed as **high** (EMM 2022a).

The amendment includes the addition of three fly camps. The Project will generate additional local supply opportunities for the procurement of accommodation services and facility management.

Prior to construction phase, procurement packages for supply and installation of modular camps, construction camp maintenance services and design, and supply of camp accommodation will be procured. Ongoing support for camp accommodation facilities including catering, cleaning and waste disposal will also be required.

The unenhanced significance of livelihood benefit of regional business procurement opportunities is assessed as **medium**. The likelihood of the benefit occurring is **likely**, and the magnitude of the impact is **minor**.

Given the limited capacity of regional businesses, it is proposed that the Project develop and implement a regional procurement strategy to target procurement at the regional level. It is proposed that the Project undertake direct engagement with regional businesses to provide regular project updates including on timelines and upcoming procurement opportunities.

ii Operation

During operation, the requirement for ongoing management and regular maintenance and repairs remains the same. The unenhanced benefit of livelihood benefit of regional business procurement opportunities during operation is assessed as **low**.

As for Project construction, it is proposed that the Project develop and implement a regional procurement strategy and target to focus procurement at the regional level. It is proposed that the Project undertake direct engagement with regional businesses to provide regular project updates including on timelines and upcoming procurement opportunities.

The enhanced livelihood benefit of regional business procurement opportunities from Project operation is assessed as **medium**. The likelihood of the impact occurring is **possible**, and the magnitude is **moderate**.

A summary of the assessment is presented in Table 7.21.

Table 7.21 Summary of livelihood benefit of regional business procurement opportunities

Impact category	Matter	Affected parties	Duration	Extent	Unenhanced	Enhanced
Livelihood	Local and regional business procurement opportunities	Labour force and their families, businesses	Construction	Local area, regional area	Medium (benefit)	High (benefit)
		Labour force and their families, businesses	Operation	Local area, regional area	Low (benefit)	Medium (benefit)

7.10 Engagement

This section provides an assessment of Project benefits and impacts upon engagement.

Engagement impacts include:

- perceived insufficient community consultation and engagement resulting in lack of trust (including ownership concerns).

7.10.1 Perceived insufficient community consultation and engagement resulting in lack of trust

During the EIS, the community expressed concerns related to community consultation and engagement processes including the limited availability of detailed Project information to the community and perceived lack of transparency, resulting in a lack of trust.

The quality of community consultation and Project trust and transparency were identified as key themes raised by community members, landowners and service providers as part of the SIA field visits and during the second online community survey. As more people learned about the Project, dissatisfaction with the lack of community consultation also increased.

During engagement for the SIA, several community members raised concerns related to the foreign ownership of the Project as a key infrastructure asset. Concerns related to perceived lack of accountability of a foreign owned company and perceived less consideration for the environment.

The EIS SIA assessed perceived insufficient community consultation and engagement during construction as **high**. After the application of recommended mitigations, the impact was assessed as **medium** (EMM 2022a).

Section 6 details the engagement conducted since EIS submission including engagement with First Nations stakeholders.

Ten submissions were received regarding the perceived lack of consultation and the difficult in finding information about the Project.

The unmitigated significance of impacts related to perceived insufficient community consultation and engagement is assessed as **high**. The likelihood of the impact occurring is **likely**, and the magnitude of the impact is **moderate**.

It is proposed that the Project develop and implement a comprehensive Communication and Engagement Plan (CEP). The CEP should outline an effective approach to communication and engagement underpinned by a proactive issues-management approach, open and transparent two-way communication processes and responsiveness to the communication needs and expectations of key stakeholders and the broader community. The CEP should also include an adequate grievance policy and mechanism.

The mitigated significance of impacts related to perceived insufficient community consultation and engagement is assessed as **medium**. The likelihood of the impact occurring is **possible**, and the magnitude of the impact is **moderate**.

A summary of the assessment is presented in Table 7.22.

Table 7.22 Summary of impacts related to perceived insufficient community consultation and engagement

Impact category	Matter	Affected parties	Duration	Extent	Unmitigated	Mitigated
Engagement	Perceived insufficient community consultation and engagement resulting in lack of trust (including ownership)	Local community	Construction & Operation	Local area	High	Medium

8 Cumulative impacts

8.1 Overview

In acknowledgment of the number of energy projects being advanced in the New England REZ, there is a focus on understanding and planning for cumulative impacts across a number of key impact areas. Cumulative impacts are a key concern raised by communities and stakeholders.

This section provides consideration of the project's potential to generate cumulative impacts and/or benefits in the region related to the context and existing trends within the local and regional study areas. A community may experience cumulative impacts when multiple projects occur in a similar timeframe or will be located in a similar geography to other projects.

The *Cumulative Impact Assessment Guidelines for State Significant Projects* (DPE 2022a) are part of the Rapid Assessment Framework introduced in 2021, aimed at improving the assessment of major projects in NSW.

The Project is located within the Armidale Regional LGA, adjacent to the Kempsey Shire LGA, with cumulative impacts potentially extending to Uralla, Walcha and Tamworth LGA. The cumulative impact assessment has considered other projects (as listed on the DPE Major Projects Planning Portal (EnergyCo, 2024) that have the potential to interact with the Project. Projects considered in the identification of cumulative impacts were identified on the basis that there would be a likely scheduled overlap with the construction phase of the Project. It must be noted that the estimated timing of projects is based on the best information available but is subject to change. It is assumed that construction for the Project will commence in Q3, 2025.

Projects within a one-hour commute of Armidale and Kempsey have been included in this assessment. Whilst not within these parameters, the Coffs Harbour Bypass was also included in the assessment due to its overlapping construction timeframe with the Project and sizable construction workforce.

The road upgrades to Kempsey-Armidale Road and the upgrade of transmission Line 965 will be addressed in a separate EIS or Council approval pathway. These elements have been separated out due to different elements being controlled by different proponents, with design, engineering and constructability assessments are timed differently between different proponent processes. As such, these projects are addressed in the cumulative impact section. The upgrades to Kempsey-Armidale Road are required for this Project to proceed and it is assumed that the upgrades will be predominantly completed prior to the commencement of Project construction. The upgrade of transmission Line 965 will occur during construction of this Project.

Cumulative impacts are expected to be related to demand for construction workforce, accommodation of the construction workforce, population change and social cohesion, demand for services, traffic impacts and employment and economic growth.

There were 16 projects identified within these parameters. Six projects are in the Armidale Regional LGA, four are in Uralla, and two are in Tamworth LGA. One project each is in Walcha, Glen Innes, Inverell and Coffs Harbour LGAs.

Table 8.1 below provides a summary of the key projects that may result in cumulative impacts with the Project and which may proceed around the same timeframe (2025-2030), particularly in terms of workforce and workforce accommodation. These are arranged by distance to Armidale and provide a summary of anticipated impacts and/or benefits.

Table 8.1 Cumulative impacts with future projects

Project	Approximate straight-line distance from project	Distance from Armidale city	Project status	Indicative construction timing	Indicative operational timing	Indicative construction workforce	Indicative operational workforce	LGA	Accommodation strategy	Nearby communities with short-term accommodation
Kempsey-Armidale Road upgrade (Alinta Energy) – upgrade of the road between Lower Creek and Bellbrook.	0 km. KAR runs adjacent to Project site	65 km	Scoping	12 months 2025-2026	2026	Unknown	Maintenance to be undertaken by respective local council.	Armidale LGA and Kempsey LGA	Unknown	Lower Creek Bellbrook Willawarrin
Upgrade to Line 965 (Transgrid) - upgrade of 62 km of existing transmission line between Armidale and Lower Creek	0 km. Line 965 connects to Project substation	0 km	Scoping	4 years 2026-2029	2029	Unknown	Maintenance to be undertaken by Transgrid.	Armidale LGA	Unknown	Lower Creek, Jeogla, Wollomombi, Hillgrove, Metz, Armidale
Doughby Wind Farm	31 km north	40 km north-east	Prepare EIS	24 months 2026-2028	30 years	Up to 300 FTE workers (peak)	12 FTE	Armidale LGA	Will be further detailed in the EIS.	Wongwibinda
Winterbourne Wind Farm	37 km south-west	32 km north	Response to submissions	30-months 2025-2028	30 years	Up to 400 FTE workers (peak)	39 FTE	Walcha LGA	To use nearby accommodation in Walcha LGA	Walcha
Oxley Solar Farm	47 km north-west	14 km south-east	Under Construction	2 years 2024-2025	30 years	Up to 300 FTE workers (peak)	5 FTE	Armidale LGA	Utilise local areas for accommodation throughout construction	Metz Armidale
Earthope Battery Energy Storage System	52 km west	6 km west	Prepare EIS	12–18 months 2025-2027	20 years	100 FTE workers	3 FTE	Armidale LGA	Unknown	Armidale
Armidale Battery Energy Storage System	52 km north-west	7 km west	Response to submissions	9 months 2027	20 years	150 FTE workers (peak)	0 FTE (remote operation)	Armidale LGA	Temporary relocation to Armidale for non-local workers	Armidale
New England Solar Farm	61 km north-west	9 km south	Under Construction	36 months 2024-2027	30 years	700 FTE (peak)	15 FTE	Uralla LGA	Onsite workforce accommodation camp	Uralla Armidale Tamworth

Project	Approximate straight-line distance from project	Distance from Armidale city	Project status	Indicative construction timing	Indicative operational timing	Indicative construction workforce	Indicative operational workforce	LGA	Accommodation strategy	Nearby communities with short-term accommodation
Deeargee Solar Farm	60 km north-west	23 km south-west	Prepare SEARs	24 months *2026-2028	30 years	400 (peak)	5-10 FTE	Uralla LGA	Possibility of off-site accommodation, use of available student accommodation, an on-site facility or use of other EnergyCo facilities.	Uralla Armidale
Thunderbolt Energy Hub wind Farm	72 km west	40 km north-east	In Progress (IPC)	18-24 months *2024-2026	30 years	190 FTE (peak)	9 FTE	Tamworth LGA	Short-term use of local accommodation suppliers	Armidale, Tamworth
Bendemer Solar Farm	92 km west	60 km north-east	Response to submissions	18 months 2024-2026	30 years	300 FTE (peak)	15 FTE	Tamworth LGA	Short-term accommodation to be utilised by non-local staff	Tamworth, Armidale, Uralla and Walcha
Stuarts Point Sewerage Scheme	80 km east	230 km	Prepare EIS	30 months 2024 - 2026	Ongoing from late 2026	unknown	unknown	Kempsey LGA	Unknown	Stuarts Point, Grassy Head, Fishermans Reach
Coffs Harbour Byass	94 km north-east	140 km south-west	Under Construction	5 years Expected to be operational by late 2027	Ongoing	520 FTE (peak)	Maintenance to be undertaken by Transport for NSW.	Coffs Harbour LGA	Short-term accommodation in Coffs Harbour.	Coffs Harbour
Rangoon Wind Farm	93 km north-west	60 km north	Prepare EIS	18 months *2026-2028	30 years	Est. 200 FTE	Est. 15 FTE	Glen Innes Severn LGA	Unknown	Glen Innes, Armidale
Sundown Solar Farm	122 km north	80 km north	Response to submissions	21 months 2025-2027	30 years	400 FTE (peak)	3 FTE	Inverell Shire LGA	Use of existing short-term accommodation	Glen Innes, Inverell
Hillview Solar Farm	50 km west	30 km north	Request SEARs	24 months *2027-2029	30 years	300 FTE (peak)	15 FTE	Uralla LGA	Unknown	Uralla

Project	Approximate straight-line distance from project	Distance from Armidale city	Project status	Indicative construction timing	Indicative operational timing	Indicative construction workforce	Indicative operational workforce	LGA	Accommodation strategy	Nearby communities with short-term accommodation
Hillview Wind Farm	50 km west	30 km north	Request SEARs	30 months *2027-2030	35 years	210 FTE	17FTE	Uralla LGA	Unknown	Uralla
TOTAL						4,550 workers				

*Assumed timeframe based on previous project timeframes and planning stage.

8.2 Workforce

The Project will require a peak construction workforce of up to 822 personnel. High unemployment rates including youth unemployment and low workforce participation rates in the local and regional area relative to the NSW average supports the viability of the Project employing a significant local and regional workforce. It is estimated that 30% of the workforce will be drawn from the regional area, that is, Armidale and Kempsey LGAs. It is anticipated that 70% of the workforce will be drawn outside of this area.

The anticipated peak construction workforce associated with the project and the expected workforce associated with concurrent projects, based on the information provided in Table 8.1, is 4,550 full-time personnel, assuming each project workforce peaks at the same time. Whilst it is unlikely that all of these employees will be sourced from outside the regional area, the total has been used as it is not possible to predict the level of in migration resulting from other projects. It is assumed that 10% of construction workforces for the cumulative projects listed in Table 8.1 can be sourced locally.

It is assumed that demand for workers will be centred on the following sectors, which employ the below number of existing workers in the region according to Industry of Employment data (ABS 2021a):

- Manufacturing (1,042 workers)
- Electricity, gas, water and waste (212 workers)
- Construction (1,793 workers)
- Transport, postal and warehousing (676 workers)
- Professional, scientific and technical services (942 workers).
- Administrative and support services (786 workers).

In 2021, across the regional area there were a total of 5,451 people (23.3% of the total workforce employed across the six industries of employment). Across the area of reference, there was a total of 42,841 people (25.8%) employed in the six construction-related industries.

There were 1,542 unemployed people of working age (15 years and above) in the regional area which equates to 6.2% of the total labour force. This compares to a NSW rate of 4.9% and is a relatively small proportion of the population compared to other parts of NSW. Of these, it is assumed 50% (771 people) are unlikely to be able to take up positions with the projects due to a range of prohibitive factors. This leaves 771 workers who may be available for employment with renewable projects in the region.

Across the area of reference, there was a total of 9,359 unemployed people of working age (15 years and above).

This means up to 545 workers would be employed from relevant sectors in the existing regional workforce and 771 from existing unemployed persons which equates to 28.9% (1,316 workers) of the cumulative workforce demand for projects. Factoring in the anticipated numbers to service worst-case cumulative demand, up to 3,640 workers would be sourced from outside the region.

8.3 Workforce accommodation

The amended project will include the addition of three fly camps. This change will reduce the demand for local accommodation by Project construction workers. However, it is estimated that Project demand for onsite accommodation will exceed number of rooms available at the Project accommodation facilities in year 1 of construction phase. Projected Project demand for accommodation does not include local workers. As such there will be some requirement for local accommodation, as displayed in Section 2.1.2.

Table 8.1 shows the proposed accommodation strategy for each cumulative project. Apart from New England Solar Farm which has an onsite accommodation camp, accommodation strategy for all other projects is either unknown or proposing to use local short-term accommodation. Assuming a 10% local workforce, this means up to 4,550 workers will require accommodation in the regional area during the construction phase for this Project. With limited affordable rental and short-term accommodation available in the region, this arrangement has the potential to put extreme pressure on the regional housing and short-term accommodation sector.

Two local council submissions were received with regard to the impact of Project construction workers on the availability and affordability of local housing and short-term accommodation including tourism accommodation. One council submission noted the potential impact on regional sporting, music and agricultural events in Armidale and surrounding areas.

8.4 Population change and social cohesion

Potential temporary cumulative population increase in the regional area could be up to 3,640 people⁴. This represents an 6.1% increase in total population of the regional area, based on the 2021 population figure of 59,812.

According to population change benchmarks (R. Burdge 2015), population change above a threshold of 5% may result in impacts on social cohesion due to the limited capacity of the communities to absorb newcomers.

While this 5% benchmark assumes that the additional population are living in the community, this would not be the case for most of the renewable projects as the highly restricted accommodation market means that a majority would be accommodated in temporary accommodation facilities. Furthermore, the relatively short-term nature of individual contracts and limited housing and social services (such as education and childcare) means that workers are unlikely to bring their families. A 6.1% cumulative increase in population is likely to generate social impacts associated with worker-resident interactions within key social hubs (e.g. retail outlets, pubs and other public facilities) throughout the construction phase of the Project. While most communities are generally resilient to natural population change, a rapid or large-scale change can be a source of adverse social impact particularly for small and isolated communities. In some cases, the influx of population can place pressure on local community networks and associations, and potentially create a social divide between established community members and non-resident workers.

Community members raised concerns regarding the potential cumulative population change which could occur during construction of renewable projects. Additional onsite workforce accommodation will ameliorate the potential for these impacts to occur, although it is noted that the addition of the fly camps, that form part of this amendment, are unlikely to have the full provision of onsite facilities (medical centre, gym and cafeteria with diverse food options, and amenities) which reduce worker- community interactions. It is recognised that workforce interaction with the community will generate economic benefits for local businesses. Regular engagement with business representatives, such as local and regional business chambers, would inform monitoring and adaptive management measures during the progression of cumulative projects.

⁴ Based on 80% of 4,550, estimated cumulative project workforce in Table 8.1.

8.5 Demand for services

Increased population, even though the population increase is temporary, has the potential to create increased service demand. While the project endeavours to reduce the potential for direct impacts to service provision by providing onsite services as much as possible (e.g. onsite medical and recreational services for workers and implementation of Work Health and Safety controls) certain aspects of cumulative effect on demand for additional service capacity in Armidale will need to be addressed at a state and local government level. The NSW government and particularly EnergyCo have a role in ensuring impacts on communities, including cumulative impacts are sufficiently considered, as per the Renewable energy generation and agriculture in NSW's rural landscape and economy report (NSW Agriculture Commissioner, 2022).

8.6 Employment and economic growth

The New England REZ is expected to generate up to \$10.7 billion in private sector investment, and approximately 830 operational jobs and 1,250 construction jobs. Having multiple projects in the area could exacerbate existing skill shortages in the region. However, it could also provide more procurement opportunities for local businesses, expanding economic growth.

In the EIS SIA, engagement with the local community identified renewable projects as a primary source of employment. As such, some service providers recognised significant employment benefits associated with a large number of ongoing projects and developments. During in-depth interviews, stakeholders also identified potential indirect flow-on benefits arising from use of local goods and services by employees and contractors, such as spending in local retail shops and use of local services (public and private).

Table 8.1 presents a conservative estimate of the proportion of required labour able to be sourced from the region, equating to 910 workers, or 20% of the total workforce requirement. This demand for employees may cause potential impacts on the availability of skilled labour across the region, should construction periods overlap substantially. To reduce the effect of this outcome, projects can offer training to young local workers to assist the region in building capacity, and to support generation of skills which can be applied to other industry types. Approaches to enhance opportunities for older workers and to target upskilling of younger workers, women and indigenous people would serve to further reduce project contributions to strain on the existing labour force, and create opportunities for vulnerable community members. Upskilling opportunities also enables existing workers to transition from non-growth industries and into growth industries in the region, which include the renewables sector.

8.7 Traffic

Cumulative traffic often impacts on social conditions through deteriorating the level of amenity experienced by communities, levels of safety (including perceived safety) and the ease of day-to-day movements.

The Traffic Impact Assessment (TIA) for this amendment identified several developments along Waterfall Way in Armidale LGA that have the potential to generate cumulative traffic impacts with the Project. These include:

- Armidale Battery Energy Storage System
- Olive Grove Solar Farm
- Stringybark Solar Farm
- Oxley Solar Farm
- Doughboy Wind Farm

The estimated cumulative traffic impacts in the Armidale LGA are considered insignificant as use of this route is secondary to the main Project access route from Kempsey.

9 Mitigation and management

This section provides a summary of the identified social impacts along with the corresponding perceived stakeholder risk rankings and mitigated technical risk rankings. In addition, key potential stakeholder partners have been identified to participate in the monitoring and management of impacts, along with a range of proposed social impact mitigation and management strategies.

Not all of the potential impacts will be the responsibility of the applicant to mitigate or manage, their role may be to cooperate or inform the mitigation, provide data and information, through to direct responsibility for mitigation and management of the identified potential social impacts and the opportunity for partnerships.

This section assumes implementation of the monitoring and management framework from the EIS SIA.

Table 9.1 Summary of mitigation and management strategies for the amended project

ID	Social impact theme	Matter (Impact on people)	Impact previously assessed in the EIS	Perceived risk (Unmitigated/Unenhanced)	Proposed mitigation and management strategies	Residual impact significance (Mitigated/Enhanced) of the amended project
L01	Locality	Impacts related to sense of community and social cohesion (Construction)	Community impact related to social cohesion during construction. <ul style="list-style-type: none"> • Unmitigated: Very High • Mitigated: High 	Very High	<p>The following mitigation measures are proposed:</p> <ul style="list-style-type: none"> • Increasing the number of locally hired workers through upskilling and training. • Development and effective implementation of a Community Engagement Plan including initiatives to contribute to maintaining social cohesion in the local area. • Development of a Construction Management Plan which includes a comprehensive Worker Code of Conduct consistent with the NSW Code of Practice for Construction Work, in particular site safety rules such as: <ul style="list-style-type: none"> – no littering; – no alcohol or drugs (other than prescription drugs) to be consumed on site; and – no fighting, bullying, harassment or aggressive behaviour by anyone on site. – outside of shift times, workers must remain within the Project site. • Encourage good performance by offering incentives such as vehicle access privileges. • Encourage volunteerism and community involvement. • Establish a comprehensive community benefits program specific to the needs of the local area. 	High
		Impacts related to sense of community and social cohesion (Operation)	Community impact related to social cohesion during operation. <ul style="list-style-type: none"> • Unmitigated: Medium • Mitigated: Medium 	Medium	<p>To reduce the risk of the impact further, it is proposed that the Project encourage operation workers to contribute to the local community through volunteerism or other initiatives.</p> <p>Further growth and development in the local area may be managed by the Armidale Regional Council through the application of land use planning controls to maintain existing land use and limit further tourism developments.</p>	Medium

ID	Social impact theme	Matter (Impact on people)	Impact previously assessed in the EIS	Perceived risk (Unmitigated/Unenhanced)	Proposed mitigation and management strategies	Residual impact significance (Mitigated/Enhanced) of the amended project
L02		Perceived impacts to privacy during construction	Way of life impacts (changes in local population) related to privacy <ul style="list-style-type: none"> • Unmitigated: Medium • Mitigated: Medium 	Medium	As noted in sense of community and social cohesion impacts, increasing the number of locally hired workers, implementation of comprehensive Community Engagement Plan and Worker Code of Conduct could mitigate perceived privacy and public safety risk. Further, the Project could coordinate with community services such as police and emergency services to familiarise relevant services with the Project in case of an incident.	Medium
L03		Changes to the character of the landscape in the local area (construction)	Changes to the character of the landscape in the local area. <ul style="list-style-type: none"> • Unmitigated: Medium • Mitigated: Low 	Medium	The LVIA recommended that the visual impact of the transmission line and towers may be mitigated through effective placement of the transmission lines along ridgelines in the final design. Ongoing consultation with surrounding landowners during the finalisation of the design would serve to further ensure the final design minimises visual impacts on local residents.	Medium
		Changes to the character of the landscape in the local area (operation)	Changes to the character of the landscape in the local area. <ul style="list-style-type: none"> • Unmitigated: High • Mitigated: Low 	High	It is proposed that night lighting including that emanating from Project accommodation facilities should be inwardly focused and shielded so it would not result in light spilt impacts to neighbouring properties or the night sky. Ongoing consultation with surrounding landowners during the finalisation of the design would serve to further ensure the final design minimises visual impacts on local residents.	Medium
L04		Impacts from noise and vibration in the local area (construction)	Way of life impacts (increase in noise and existence of vibration) resulting from construction activities. <ul style="list-style-type: none"> • Unmitigated: Medium • Mitigated: Medium 	High	Due to the relative increase in noise levels in the local area during construction, it is proposed that further mitigations may be required to meet the expectations of residents. This includes regular notification via letterbox drops or emails/phone calls for all residents in the local area and traffic affected communities (as defined in Section 4.1) of upcoming construction activities that will impact on the amenity of the area.	Medium
L05		Impacts from dust and decreased air quality in the local area (construction)	Way of life impacts (generation of dust resulting in decreased air quality) from construction activities. <ul style="list-style-type: none"> • Unmitigated: Low • Mitigated: Low 	Low	The AQA recommended that air quality impacts due to construction activities may be effectively mitigated by watering exposed areas including sections of unpaved roads within work areas. Due to the relatively low level of potential impact, no further mitigations are proposed.	Low

ID	Social impact theme	Matter (Impact on people)	Impact previously assessed in the EIS	Perceived risk (Unmitigated/Unenhanced)	Proposed mitigation and management strategies	Residual impact significance (Mitigated/Enhanced) of the amended project
L06		Perceived decrease in property values (construction, operation)	Livelihood impacts due to changes in rural property values during construction.	Medium	Mitigations could include continued regular engagement with local landowners to ensure landowners near the Project site are kept abreast of upcoming Project activities.	Low
			<ul style="list-style-type: none"> • Unmitigated: Medium • Mitigated: Low 			
			Livelihood impacts due to changes in rural property values during operation.	Low	Mitigations could include continued regular engagement with local landowners to ensure landowners near the Project site are kept abreast of upcoming Project activities.	Low
			<ul style="list-style-type: none"> • Unmitigated: Low • Mitigated: Low 			
L07		Perceived risk to public safety (construction).	Way of life impacts related to workforce behaviour during construction.	Medium	<p>There is an opportunity to reduce bushfire risk further during the final design phase by adjusting placement of transmission lines.</p> <p>In relation to emergency bushfire response, the EIS (EMM 2023c) noted that during bushfire season the Project will develop and maintain a full-time internal firefighting capacity at the main accommodation camp including a fully trained onsite emergency response team equipped to deal with potential bushfire events.</p> <p>The Project will also liaise with NSW Police and NSW SES to ensure they are aware of potential resource requirements and negotiate provisional arrangements.</p> <p>In relation to criminal or anti-social behaviour, as noted in the EIS, the proponent will implement drug and alcohol testing, Project bus services facilitating daily access from site to Kempsey to prevent safety concerns such as drunk or sleep-deprived driving, and ensure all staff have access to phone and internet services at the accommodation camp. The Project will also implement a Worker Code of Conduct which includes:</p> <ul style="list-style-type: none"> • no littering • no alcohol or drugs (other than prescription drugs) to be consumed on site • no fighting, bullying, harassment or aggressive behaviour by anyone on site • outside of shift times, workers must remain within the Project site. 	Medium

ID	Social impact theme	Matter (Impact on people)	Impact previously assessed in the EIS	Perceived risk (Unmitigated/Unenhanced)	Proposed mitigation and management strategies	Residual impact significance (Mitigated/Enhanced) of the amended project
L10		Benefits of opportunities for local businesses (construction, operation).	Livelihood benefit related to opportunities for local business. <ul style="list-style-type: none"> • Unenhanced: High • Enhanced: High 	High	To enhance this benefit, it is proposed that the Project develop a local procurement strategy to target local businesses. As local businesses are likely to be small, longer lead time may be required. The Project will continue to undertake direct engagement with local business to provide regular project updates including on timelines and upcoming procurement opportunities.	High
I03	Infrastructure and Services	Decline in rental affordability and availability for residents (construction).	Way of life impacts (personal disadvantage) related to access to affordable housing during construction. <ul style="list-style-type: none"> • Unmitigated: Very High • Mitigated: High 	Very High	In developing the Construction and Environmental Management Plan, the following elements should be considered to lessen the decline in rental affordability and availability for residents: <ul style="list-style-type: none"> • bring forward the establishment of the main accommodation camp by four months • increase the capacity of the main accommodation camp • extend the operation of the fly camps • increase the capacity of the fly camps for the critical four-month period. The above proposed mitigations may also make onsite accommodation available for a portion of local workers, those who will travel to site daily from within Armidale and Kempsey LGAs.	Medium
		Decline in rental affordability and availability for residents (operation).	Way of life impacts (personal disadvantage) related to access to affordable housing during operation. <ul style="list-style-type: none"> • Unmitigated: Low • Mitigated: Low 	Low	Due to the relatively small number of operation workers and the expected number of locally hired workers, it is not expected that rental affordability and availability will be impacted during the operation phase.	Low
I04		Reduced supply of short-term and emergency accommodation for vulnerable groups (construction).	Accessibility impacts due to capacity of short-term accommodation during construction. <ul style="list-style-type: none"> • Unmitigated: Very High • Mitigated: High 	Very High	As outlined in decline in rental affordability and availability above (I03), in developing the Construction and Environmental Management Plan, the Project should consider increasing the capacity of accommodation facilities, including bringing forward and extending the operation of the accommodation facilities. Short term accommodation requirements can be reduced by hiring more local workers. This can be achieved by focussed recruitment strategies and providing training to upskill more local workers.	High

ID	Social impact theme	Matter (Impact on people)	Impact previously assessed in the EIS	Perceived risk (Unmitigated/Unenhanced)	Proposed mitigation and management strategies	Residual impact significance (Mitigated/Enhanced) of the amended project
		Reduced supply of short-term and emergency accommodation for vulnerable groups (operation).	Accessibility impacts due to capacity of short-term accommodation during operation. <ul style="list-style-type: none"> • Unmitigated: Low • Mitigated: Low 	Low	Due to the relatively small number of operation workers and the expected number of locally hired workers, it is not expected that rental affordability and availability will be impacted during the operation phase.	Low
R01	Recreation	Reduced access to recreational areas and facilities (construction).	Accessibility impacts related to access to recreational areas during construction. <ul style="list-style-type: none"> • Unmitigated: Medium • Mitigated: Low 	Medium	It is proposed that no access restrictions are applied to recreational areas and facilities during construction as a result of the Project. To maintain access to recreational areas and facilities during construction, the Project should: <ul style="list-style-type: none"> • Construct signage near construction works and access roads close to the National Trail, and recreational areas and facilities to inform visitors of the presence of the Project and any changes to access • Fence/secure construction works at key points where safety and security are warranted • Notify the local community and visitors of upcoming road closures/temporary changes in access arrangements including the Project's stakeholder list and key tourism agencies such as the National Trail organisation, NPWS, Airbnb and DestinationNSW. It is noted that users of the Bicentennial Trail plan their journey via the National Trail website which is the main means of communicating any issues affecting the use of the Trail. This would be a key avenue for communication during construction of the project. • From operation, establish wooden fencing along the construction footprint where the National Trail route runs parallel to the Project site, to ensure visitors are aware of restricted access and consider information panels to engage and inform visitors. 	Low
		Reduced access to recreational areas and facilities (operation).	Accessibility impacts related to access to recreational areas during operation. <ul style="list-style-type: none"> • Unmitigated: Low • Mitigated: Low 	Low	The Project could establish a viewing platform such as in Carrai where there are views of Project infrastructure. The viewing platform could include signage with key Project information. While this does not change access, the platform could inform the local community and visitors of the purpose of the Project.	Low

ID	Social impact theme	Matter (Impact on people)	Impact previously assessed in the EIS	Perceived risk (Unmitigated/Unenhanced)	Proposed mitigation and management strategies	Residual impact significance (Mitigated/Enhanced) of the amended project
R02		Reduced amenity at recreational areas and facilities (construction).	Way of life impacts related to amenity at recreational areas and facilities during construction. <ul style="list-style-type: none"> • Unmitigated: High • Mitigated: Medium 	High	<p>Given the significance of the impact and to mitigate further impacts, it is proposed that notification of amenity impacts be communicated to potential visitors including the Project’s stakeholder list and key tourism agencies such as the National Trail organisation, NPWS, Airbnb and Destination NSW.</p> <p>The LVIA conducted for the EIS advised that the visual impacts from vehicle dust, earthworks, and clearing and trimming of vegetation as well as from night lighting during construction can be minimised through mitigation measures such as locating laydown areas in areas of limited visibility, restoring or remediating any earthworks during construction, and minimising dust creation from vehicles and wind. Furthermore, the LVIA noted that the impacts from the construction of the Project will be temporary. Vegetation retention on ridges, road corridors and along the Macleay River is also recommended to provide screening from the river and the National Trail.</p> <p>Mitigation measures have also been identified to be included as part of a Workforce Management Plan to ensure on-site workers do not participate in unauthorised use of NPWS parks and declared wilderness, thereby reducing the potential for reduced amenity at recreational areas and facilities. Proposed measures to prevent unauthorised access to NPWS areas include signage and fencing, and implementation of Worker Code of Conduct.</p>	Medium
		Reduced amenity at recreational areas and facilities (operation).	Way of life impacts related to amenity at recreational areas and facilities during operation. <ul style="list-style-type: none"> • Unmitigated: Low • Mitigated: Low 	Low	No further mitigations are proposed during operation.	Low

ID	Social impact theme	Matter (Impact on people)	Impact previously assessed in the EIS	Perceived risk (Unmitigated/Unenhanced)	Proposed mitigation and management strategies	Residual impact significance (Mitigated/Enhanced) of the amended project
R03		Environmental impacts related to the Project (construction & operation).	<p>Surroundings impacts due to destruction of habitat of endangered species.</p> <ul style="list-style-type: none"> • Unmitigated: High • Mitigated: Medium 	High	<p>The BDAR suggested a range of strategies can be implemented to avoid, minimise, or mitigate the impacts mentioned above.</p> <p>The Project requires a total of 9,330 ecosystem credits and 49,531 species credits to compensate for impact on native vegetation and species habitat.</p> <p>Mitigation for the direct impact of the removal of native vegetation and threatened species habitat include measures such as consideration of biodiversity values during final Project design to avoid impacts, the minimisation of clearing during construction wherever possible, and the collection of native seeds for propagation for use in rehabilitation works to mitigate impacts. For the other direct impact of injury of native animals during construction, the BDAR proposed a detailed design of the Project to minimise impacts as well as the translocation of less mobile animals to more vegetated sites to mitigate impacts.</p>	Medium
R04		Reduced availability of tourist accommodation (construction).	<p>Accessibility impacts related to tourist accommodation during construction</p> <ul style="list-style-type: none"> • Unmitigated: High • Mitigated: High 	High	<p>During construction, mitigation measures are proposed to reduce the impact of reduced availability of tourist accommodation due to increased competition from the Project. As outlined in decline in rental affordability and availability above (I03), in developing the Construction and Environmental Management Plan, the Project should consider increasing the capacity of accommodation facilities, including bringing forward and extending the operation of the accommodation facilities.</p> <p>Emphasis on local hiring and upskilling of local workforce is proposed.</p>	High
		Reduced availability of tourist accommodation (operation).	<p>Accessibility impacts related to tourist accommodation during operation.</p> <ul style="list-style-type: none"> • Unmitigated: Low • Mitigated: Low 	Low	<p>Due to the low risk of the impact occurring during operation, no further mitigations are proposed.</p>	Low

ID	Social impact theme	Matter (Impact on people)	Impact previously assessed in the EIS	Perceived risk (Unmitigated/Unenhanced)	Proposed mitigation and management strategies	Residual impact significance (Mitigated/Enhanced) of the amended project
T01	Traffic	Public safety risks caused by construction traffic.	Public safety related to increased traffic movements on the local road network and haulage routes. <ul style="list-style-type: none"> • Unmitigated: High • Mitigated: High 	High	The TIA recommends various mitigation measures addressing all key traffic impacts including impacts related to hazards and heavy vehicle movements in school zones. In addition to the mitigations recommended in the TIA, it is proposed the Project restricts construction heavy vehicles within school zones on Kempsey-Armidale Road between Kempsey and Bellbrook during school bus operating hours i.e. between 7:30 am to 9:30 am and 2:30 pm to 4:30 pm. Additionally, construction heavy vehicles will not operate on Kempsey-Armidale Road between Bellbrook and the Eastern Access Road (EAR) (main access road entry point) during school bus operating hours, that is, between 7:30 am to 9:30 am and 2:30 pm to 4:30 pm. Due to the proposed cease in operation of construction heavy vehicles during the school pick-up and drop-off time, traffic impacts on school buses and school zones relating to traffic congestion and road delays would be significantly reduced.	High
T02		Impacts related to traffic congestion and road delays (construction)	Accessibility impacts related to increased traffic movements on the local road network. <ul style="list-style-type: none"> • Unmitigated: High • Mitigated: Medium 	High	As proposed above, in addition to the mitigations recommended in the TIA, Project construction heavy vehicles will not operate in school zones during school zone times. It is also proposed that Project OSOM vehicles operate only at night time to minimise traffic congestion. It is also recommended that SMS notifications to the local community on the timing and frequency of road closures, OSOM vehicle movements and other key traffic movements in the local and regional area.	Medium
W02	Water	Concerns regarding water quality due to construction waste and disturbance of existing metals.	Health and wellbeing impacts related to water quality from the Project. <ul style="list-style-type: none"> • Unmitigated: Medium • Mitigated: Low 	High	It is proposed that spoil will be managed appropriately on site including the retention of any contaminant materials and lining of such spoil emplacements to avoid leaching. Wastewater discharged into the Macleay River will be treated. The Project should work with the Kempsey Shire Council to engage key interest groups and disseminate detailed information regarding mitigations to be instituted.	Medium
W04		Concerns regarding access to water during drought (construction & operation).	Surroundings impact related to access to water. <ul style="list-style-type: none"> • Unmitigated: High • Mitigated: Medium 	High	Conditions for water extraction in accordance with the Specific Purpose Access License (SPAL) remain the same. It is proposed that community updates provide information about steps taken to prevent Project impacts during drought periods. It is noted that concerns or perceptions can remain despite mitigation measures being implemented. Provision of information regarding actions the Project takes to minimise impacts can be effective in reducing concerns.	Medium

ID	Social impact theme	Matter (Impact on people)	Impact previously assessed in the EIS	Perceived risk (Unmitigated/Unenhanced)	Proposed mitigation and management strategies	Residual impact significance (Mitigated/Enhanced) of the amended project
C01	Culture	Potential disturbance or destruction of Aboriginal cultural artefacts and sites (life of Project)	Cultural impacts related to potential disturbance of Aboriginal cultural artefacts. <ul style="list-style-type: none"> • Unmitigated: High • Mitigated: Medium 	High	The effectiveness of mitigation measures will be dependent upon thorough and ongoing stakeholder engagement with the local First Nations community. The effective implementation of the proposed Aboriginal Cultural Heritage Management Plan (ACHMP), as outlined in the ACHA for the amended project, is key to effective mitigation of the disturbance to culturally important places, sites and artefacts. Further cultural mapping may contribute to mitigating this impact as a community benefit initiative.	Medium
C04		Declining social cohesion between First Nations groups (Life or Project)	Cultural impacts related to increased conflict due to the perceived extent of consultation with all key groups. <ul style="list-style-type: none"> • Unmitigated: Very High • Mitigated: Medium 	Very High	The effective implementation of the proposed Aboriginal Cultural Heritage Management Plan (ACHMP), as outlined in the ACHA, is key to improving social cohesion between Aboriginal groups. The Plan includes detailed information regarding Aboriginal community consultation and participation through the remainder of the Project including a grievance mechanism that is readily available and designed for use by the local Aboriginal community. Commitments include on-Country discussion with Elders and key-knowledge holders to discuss impacts to any key view-lines from identified sites and identify suitable mitigations to reduce the impacts where feasible. Other activities include the development and implementation of a Heritage interpretation strategy and plan to explore, develop and present Aboriginal heritage values of the Project area. An Aboriginal Stakeholder Engagement Plan will also be developed by the Project separate to the ACHMP. This will include engagement with the broader Aboriginal community such as key-knowledge holders, not just Registered Aboriginal Parties (RAPs). Activities will include holding regular Project briefings to provide updates on Project activities and upcoming activities, Aboriginal employment and opportunities to be directly involved in the Project.	High
LH02	Livelihood	Benefit of regional business procurement opportunities (construction)	Livelihood benefit related to regional business opportunities <ul style="list-style-type: none"> • Unenhanced: Medium • Enhanced: High 	Medium	Given the limited capacity of regional businesses, it is proposed that the Project develop and implement a regional procurement strategy to target procurement at the regional level. It is proposed that the Project undertake direct engagement with regional businesses to provide regular project updates including on timelines and upcoming procurement opportunities.	High

ID	Social impact theme	Matter (Impact on people)	Impact previously assessed in the EIS	Perceived risk (Unmitigated/Unenhanced)	Proposed mitigation and management strategies	Residual impact significance (Mitigated/Enhanced) of the amended project
		Benefit of regional business procurement opportunities (operation).	Livelihood benefit related to regional business opportunities <ul style="list-style-type: none"> • Unenhanced: Low • Enhanced: Medium 	Low	As for Project construction, it is proposed that the Project develop and implement a regional procurement strategy and target to focus procurement at the regional level. It is proposed that the Project undertake direct engagement with regional businesses to provide regular project updates including on timelines and upcoming procurement opportunities.	Medium
E01	Engagement	Perceived insufficient community consultation and engagement resulting in lack of trust (including ownership) (construction, operation).	Decision making systems related to lack of trust and ownership. <ul style="list-style-type: none"> • Unmitigated: High • Mitigated: Medium 	High	It is proposed that the Project develop and implement a comprehensive Communication and Engagement Plan (CEP). The CEP should outline an effective approach to communication and engagement underpinned by a proactive issues-management approach, open and transparent two-way communication processes and responsiveness to the communication needs and expectations of key stakeholders and the broader community. The CEP should also include an adequate grievance policy and mechanism.	Medium

10 Conclusion

This SIA Amendment report identifies and evaluates the potential social impacts and benefits of the Project. It has involved the detailed review of impacts and benefits identified in the SIA (EMM 2023c) to consider the effect of the Project amendments and updated community feedback. The SIA was completed in compliance with applicable legislation and guidelines, including the SIA Guideline (DPE 2021a).

The SIA study areas were defined to reflect the geographic distribution of different types of social impacts and benefits. The local study area and transport affected communities may experience both direct and indirect social impacts from the project. Key urban areas, primarily Kempsey township, and to some extent Armidale city, are expected to act as service hubs for the Project. The regional study area are the Kempsey and Armidale Local Government Areas, which are likely to experience few direct and more indirect social impacts of the Project.

Through primary and secondary research, this SIA Amendment has sought to identify social impacts and benefits associated with the construction and operation of the amended Project. Project impacts and benefits accrue particularly in the local area and will also be experienced in key urban areas and the regional study area.

The assessment of impacts and benefits associated with the amendment concludes that the addition of the accommodation facility substantially reduces the significance of key social impacts which would otherwise be experienced by the community. It would also further enhance a number of social benefits associated with the Project and generate new benefits.

The assessment of impacts and benefits associated with the amended project concludes that the addition of the fly camps substantially reduces the significance of key social impacts which would otherwise be experienced by the community. It would also further enhance a number of social benefits associated with the project. Specifically, the amended Project:

- reduces the impact on local housing affordability and availability during the construction phase of the Project- previously High (negative), now Medium (negative) mitigated risk
- reduces the impact on availability of short-term and emergency accommodation - previously High (negative), now Medium (negative) mitigated risk
- reduces the impact on sense of community and social cohesion during operation– previously Medium (negative), now Low (negative) mitigated risk.

High’ and ‘medium’ mitigated impacts associated with the amended Project are outlined in Table 10.1.

Table 10.1 Social impacts of the amended Project

ID	Category	Impact	Original project – Relevant impacts and significance (mitigated)	Amended project – Significance (mitigated)
L01	Community, way of life	Impacts related to sense of community and social cohesion (construction, operation)	Construction Significance (mitigated): High Operation Significance (mitigated): Medium	Construction High Operation Low
L02	Community, way of life	Perceived impacts to privacy during construction	Significance (mitigated): Medium	Medium

ID	Category	Impact	Original project – Relevant impacts and significance (mitigated)	Amended project – Significance (mitigated)
L03	Community, surroundings	Changes to the character of the landscape in the local area (construction, operation)	Construction Significance (mitigated): Medium Operation Significance (mitigated): Low	Construction Medium Operation Low
L04	Way of life, health and wellbeing	Impacts from noise and vibration in the local area (construction)	Way of life impacts (increase in noise and existence of vibration) resulting from construction activities. Significance (mitigated): Medium	Medium
L06	Livelihood	Perceived decrease in property values (construction, operation).	Construction Significance (mitigated): Medium Operation Significance (mitigated): Low	Construction Medium Operation Low
L07	Way of life, health and wellbeing, surroundings	Perceived risk to public safety (construction).	Significance (mitigated): Medium	Medium
I03	Way of life, accessibility	Decline in rental affordability and availability for residents (construction).	Construction Significance (mitigated): High Operation Significance (mitigated): Low	Construction Medium Operation Low
I04	Way of life, accessibility	Reduced supply of short-term and emergency accommodation for vulnerable groups (construction).	Construction Significance (mitigated): High Operation Significance (mitigated): Low	Construction Medium Operation Low
R02	Accessibility, surroundings	Reduced amenity at recreational areas and facilities (construction, operation).	Significance (mitigated): Low	Construction Medium Operation Low
R03	Surroundings	Impacts on environmental values related to the Project (construction, operation).	Significance (mitigated): Medium	Construction Medium Operation Medium
R04	Accessibility, surroundings	Reduced availability of tourist accommodation (construction, operation).	Construction Significance (mitigated): High Operation Significance (mitigated): Low	Construction High Operation Low
T01	Accessibility, health and wellbeing	Public safety risks caused by construction traffic.	Significance (mitigated): High	High
T02	Accessibility, health and wellbeing	Impacts related to traffic congestion and road delays (construction)	Significance (mitigated): Medium	Medium

ID	Category	Impact	Original project – Relevant impacts and significance (mitigated)	Amended project – Significance (mitigated)
W04	Health and wellbeing, surroundings	Concerns regarding access to water during drought (construction, operation).	Construction/Operation Significance (mitigated): Medium	Medium
C01	Culture, health and wellbeing	Potential disturbance or destruction of Aboriginal cultural artefacts and sites (Life of Project)	Significance (mitigated): Medium	Medium
C04	Community, culture, health and wellbeing	Declining social cohesion between First Nations groups (Life of Project)	Significance (mitigated): High	High
E01	Decision making systems	Perceived insufficient community consultation and engagement resulting in lack of trust (including ownership) (construction, operation).	Significance (mitigated): Medium	Medium

The social benefits of the amended project are presented in Table 10.2.

Table 10.2 Social benefits of the amended Project

ID	Category	Benefit	EIS SIA Benefit and Significance (enhanced)	Significance (enhanced)
L10	Livelihood, health and wellbeing	Benefits of opportunities for local businesses (construction, operation).	Significance (Enhanced): High	High
T03	Accessibility, way of life, health and wellbeing	Benefit related to improved road conditions as a result of the Project (construction, operation).	Addressed in cumulative assessment section. Significance (Enhanced): Very High	Very High
LH02	Livelihood	Benefit of regional business procurement opportunities (construction, operation).	Construction Significance (Enhanced): High Operation Significance (Enhanced): Medium	Construction High Operation Medium

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Australia

SYDNEY

Ground floor 20 Chandos Street
St Leonards NSW 2065
T 02 9493 9500

NEWCASTLE

Level 3 175 Scott Street
Newcastle NSW 2300
T 02 4907 4800

BRISBANE

Level 1 87 Wickham Terrace
Spring Hill QLD 4000
T 07 3648 1200

CANBERRA

Suite 2.04 Level 2
15 London Circuit
Canberra City ACT 2601

ADELAIDE

Level 4 74 Pirie Street
Adelaide SA 5000
T 08 8232 2253

MELBOURNE

Suite 9.01 Level 9
454 Collins Street
Melbourne VIC 3000
T 03 9993 1900

PERTH

Suite 3.03
111 St Georges Terrace
Perth WA 6000
T 08 6430 4800

Canada

TORONTO

2345 Yonge Street Suite 300
Toronto ON M4P 2E5
T 647 467 1605

VANCOUVER

422 Richards Street Unit 170
Vancouver BC V6B 2Z4
T 604 999 8297

CALGARY

606 4th Street SW 11 Floor
Calgary Alberta T2P 1T1



[linkedin.com/company/emm-consulting-pty-limited](https://www.linkedin.com/company/emm-consulting-pty-limited)



emmconsulting.com.au