

# Waratah Super Battery – Munmorah

## Appendix K - Social Impact Assessment

November 2022

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# Waratah Super Battery – Munmorah



## Appendix H - Water Impact Assessment

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November 2022

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S4	0	L Harding	G Marshall		D Chubb		2.11.22

## GHD

133 Castlereagh Street, Level 15

Sydney, NSW 2000, Australia

**T** +61 2 9239 7100 | **F** +61 2 9239 7199 | **E** [sydmal@ghd.com](mailto:sydmal@ghd.com) [sydmal@ghd.com](mailto:sydmal@ghd.com) | **ghd.com**

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# 1. Introduction

## 1.1 Overview

The Energy Corporation of NSW (EnergyCo), which forms part of NSW Treasury, propose to develop a lithium-ion battery energy storage system capable of discharging up to 850 megawatts (MW). The battery energy storage system would be supported by connecting transmission and related infrastructure, including a switchyard and overhead transmission line, to connect the proposed battery to the National Energy Market (NEM) via the existing Munmorah Substation. The proposed battery energy storage system, connecting transmission and related infrastructure, and ancillary infrastructure is referred to as 'the project' or 'the Waratah Super Battery'.

Additional ancillary infrastructure would also be required to support the project including access roads, site services, an administration building, maintenance building and storage yard, and signage and site security. The purpose of the proposed battery energy storage system is to reduce the chances of unscheduled power outages by reserving and then deploying power to support the electricity grid. It would form part of a System Integrity Protection Scheme (SIPS) for NSW.

The proposed battery energy storage system would be located on a site within the former Munmorah Power Station at Colongra on the Central Coast of New South Wales (NSW).

## 1.2 Proposal overview

### 1.2.1 Location

The Waratah Super Battery would be located on part of Lot 10/DP1201414 within the former Munmorah Power Station at Colongra on the Central Coast of NSW (refer to Figure 1.1).

The project site is mostly cleared (except for some small patches of native vegetation) and heavily disturbed from its previous use as a coal stockpile and loading area to transfer coal to the former Munmorah Power Station. The project site is currently vacant and subject to rehabilitation, remediation, and maintenance works by Generator Property Management Pty Ltd (GPM).

### 1.2.2 Proposed infrastructure

The following is proposed to be developed as part of the Waratah Super Battery:

- A 850 MW battery energy storage system (including batteries, inverters, transformers, and switchgear):
  - Approximately 300 collector segments and 2.600 battery units (modular enclosures)
  - The size of the individual battery units would be dependent on the selected suppliers but could be as large as 3.3 metres high, 1.6 metres wide, and 2.5 metres deep
- Connecting transmission and related infrastructure including:
  - Switchyard.
  - Overhead transmission line.
- Ancillary infrastructure including:
  - Upgraded construction access road.
  - Site services, including power, water, sewage, stormwater drainage, and telecommunications.
  - Administration building and light vehicle parking.
  - Maintenance building, storage yard, and heavy vehicle parking.
  - Signage and security.





### 1.2.3 Workforce

It is expected that up to approximately 150 full time equivalent people would be employed during construction of the project. Depending on skills and availability, the construction workforce may be sourced locally, regionally, or from interstate (if required). Most of the workforce is likely to be based on the Central Coast or in Sydney or Newcastle.

Operation of the project would largely be undertaken remotely, however, 10 to 15 maintenance personnel are likely to be required to attend the project site on a regular basis to perform a variety of maintenance and operational activities. Depending on skills and availability, the workforce may be sourced locally, regionally, or from interstate or further abroad, if necessary. The maintenance workforce would likely to be based on the Central Coast or in Sydney or Newcastle. Specialist skills for particular equipment maintenance (e.g., batteries and inverters) may be sourced from further afield, as required.

### 1.2.4 Construction hours

The majority of construction activities would be carried out during the following hours:

- 7am-6pm Monday to Friday.
- 8am-1pm Saturdays.
- No work on Sundays or Public Holidays.

### 1.2.5 Operation hours

The proposed operations would be undertaken 24 hours per day, seven days per week, 365 days per year.

### 1.2.6 Timing

Construction would occur over approximately 18 months and is planned to commence in June 2023. Operation is planned to commence in December 2024.

### 1.2.7 Related development

Generator Property Management is in the process of undertaking rehabilitation, remediation and maintenance works in accordance with existing approvals within the project site and surrounds.

## 1.3 Purpose and scope of this assessment

The purpose of this report is to document the results of the assessment of the potential social impacts during the construction and operation of the project. This report supports the EIS for the project, and has been prepared to address the relevant environmental assessment requirements of the Secretary of the Department of Planning and Environment (the SEARs) (see Table 1.1).

The report:

- describes the existing social baseline conditions of potentially affected communities and groups
- assesses the potential social impacts and benefits of constructing and operating the project
- recommends measures to enhance, mitigate and manage the identified social impacts, and enhance social benefits where possible.

**Table 1.1** SEARs relevant to this SIA



Requirements	Where addressed in this report
<b>Key issues</b>	
Social Impact – including an assessment of the social impacts in accordance with Social Impact Assessment Guideline (DPIE, 2021), including:	This report
Consideration of construction workforce accommodation	Section 6



## 1.4 Author declaration

Information about the authors and a signed declaration is provided in Table 1.2

Table 1.2 SIA author declaration

SIA Author declaration		
Name	Lauren Harding	Stephanie Munns
Position	Technical Director – Social Sustainability and Engagement	Social Sustainability Consultant
Project role	Reviewer	Author
Qualifications	Masters Social Science (Social Planning), University of Queensland, 2007 Bachelor of Arts (Anthropology), University of Queensland, 2005 Internal Association of Public Participation (IAP2) certification	Bachelor of Regional and Town Planning, University of Queensland, 2019
Memberships	Member International Association for Impact Assessment (IAIA) Member, International Association of Public Participation (IAP2) Member, Planning Institute of Australia (PIA)	Member International Association for Impact Assessment (IAIA)
Declaration	I declare that this SIA contains all available information that is relevant to the social impact assessment and that the information is not false or misleading.	I declare that this SIA contains all available information that is relevant to the social impact assessment and that the information is not false or misleading.
Signature		
Name	Lauren Harding	Stephanie Munns
Date	31.10.22	31.10.22

## 1.5 Report structure

The report is comprised of the following sections:

- **Section 1 – Introduction:** provides background information and an overview of the project and assessment
- **Section 2 – Legislative and policy context:** outlines the planning and policy context relevant to this SIA
- **Section 3 – Assessment methodology:** summarises the steps undertaken in preparing this report
- **Section 4 – Stakeholder consultation:** describes the stakeholder consultation activities and outcomes which have informed this assessment
- **Section 5 – Social baseline:** summarises the existing socio-economic environment for the social study area
- **Section 6 – Social impact assessment:** identifies and describes the potential social impacts arising from the construction and operation of the project.
- **Section 7 – Mitigation and management measures:** provides recommendations of proposed mitigation options for the social impacts of the project

- **Section 8 – Summary and Conclusion:** presents a summary of the social impact assessment findings and sets out the principal conclusions for the study
- **Section 9 – References:** provides the list of references used throughout the report.

## 1.6 Assumptions and limitations

*This report: has been prepared by GHD for Energy Corporation of NSW and may only be used and relied on by Energy Corporation of NSW for the purpose agreed between GHD and Energy Corporation of NSW as set out in section 1.3 of this report.*

*GHD otherwise disclaims responsibility to any person other than Energy Corporation of NSW arising in connection with this report. GHD also excludes implied warranties and conditions, to the extent legally permissible.*

*The services undertaken by GHD in connection with preparing this report were limited to those specifically detailed in the report and are subject to the scope limitations set out in the report.*

*The opinions, conclusions and any recommendations in this report are based on conditions encountered and information reviewed at the date of preparation of the report. GHD has no responsibility or obligation to update this report to account for events or changes occurring subsequent to the date that the report was prepared.*

*The opinions, conclusions and any recommendations in this report are based on assumptions made by GHD described in this report (refer section(s) 1.3 of this report). GHD disclaims liability arising from any of the assumptions being incorrect.*

## 2. Legislative and policy context

Information about legislation and policies relevant to this SIA is provided below in Table 2.1.

Table 2.1 Relevant legislation and policies

Title	Description and relevance to project
<b>Relevant legislation</b>	
<i>Environmental Planning and Assessment Act 1979</i>	<p>The project has been declared Critical State Significant Infrastructure (CSSI) in accordance with Section 5.13 of the EP&amp;A Act and Schedule 5, section 30 of the State Environmental Planning Policy (Planning Systems) 2021 (Planning Systems SEPP). The Minister for Planning is the consent authority, and the project is to be assessed in accordance with the provisions of Division 5.2 of the EP&amp;A Act.</p> <p>The objectives of the EP&amp;A Act relevant to this SIA are (clause 1.3):</p> <ul style="list-style-type: none"> <li>– to promote the social and economic welfare of the community and a better environment by the proper management, development and conservation of the State's natural and other resources</li> <li>– to facilitate ecologically sustainable development by integrating relevant economic, environmental and social considerations in decision-making about environmental planning and assessment</li> <li>– to promote the orderly and economic use and development of land</li> <li>– to promote good design and amenity of the built environment</li> <li>– to promote the proper construction and maintenance of buildings, including the protection of the health and safety of their occupants</li> <li>– to promote the sharing of the responsibility for environmental planning and assessment between the different levels of government in the State</li> <li>– to provide the opportunity for community participation in environmental planning and assessment.</li> </ul> <p>The outcomes of this SIA will contribute to these objects.</p>
<b>NSW regional plans</b>	
<i>Central Coast Regional Plan 2036</i>	<p>The Central Coast Regional Plan 2036 provides a framework for the NSW Government's land use planning priorities and decisions over the next 20 years by identifying economic, social and environmental opportunities.</p> <p>The plan identifies several drivers for economic growth including ensuring economic diversity and an adequate supply of well-located and serviced land for industrial development.</p> <p>The project aligns with the plan by supporting the renewable energy sector through developing battery storage on existing industrial land, contributing to economic diversification.</p>
<b>Local government policies</b>	
<i>Community Strategic Plan 2018 - 2028</i>	<p>The Community Strategic Plan (CSP) 'One – Central Coast' captures the challenges and opportunities of the Central Coast region.</p> <p>The plan identifies a number of opportunities to accommodate future growth in the region, including investment into infrastructure and promoting a diverse economy while maintaining the natural environment.</p> <p>The project aligns with the plan by providing essential electricity infrastructure on existing industrial land to maintain a reliable energy supply for the broader region.</p> <p>The project is part of a program of network upgrades is designed to reinforce electricity supply to Sydney, Newcastle and Wollongong by providing increased transfer capacity and maintain energy supply, security and affordability" is a clearer line of argument.</p>

### 3. Assessment methodology

This section describes the methodology followed to prepare this SIA. Overall, the methodology has been prepared to respond to the SEARs and in line with leading practice for SIA including:

- *Social Impact Assessment Guideline for State Significant Projects* (DPIE 2021a) – hereafter referred to as ‘SIA Guideline’.
- *Technical Supplement - Social Impact Assessment Guideline for State Significant Projects* (DPIE 2021b)
- *International Association for Impact Assessment International Principles for Social Impact Assessment* (Vanclay, F. 2003) and *Social Impact Assessment: Guidance for assessing and managing the social impacts of projects* (Vanclay et al. 2015).

Social impacts involve changes to one or more of the following social values (DPIE 2021a):

- way of life, including how people live, how they get around, how they work, how they play, and how they interact each day
- community, including composition, cohesion, character, how the community functions, resilience, and people’s sense of place
- accessibility, including how people access and use infrastructure, services and facilities, whether provided by a public, private or not-for-profit organisation
- culture, both Aboriginal and non-Aboriginal, including shared beliefs, customs, practices, obligations, values and stories, and connections to Country, land, waterways, places and buildings
- health and wellbeing, including physical and mental health especially for people vulnerable to social exclusion or substantial change, psychological stress resulting from financial or other pressures, access to open space and effects on public health
- surroundings, including ecosystem services such as shade, pollution control, erosion control, public safety and security, access to and use of the natural and built environment, and aesthetic value and amenity
- livelihoods, including people’s capacity to sustain themselves through employment or business
- decision-making systems, including the extent to which people can have a say in decisions that affect their lives, and have access to complaint, remedy and grievance mechanisms.

The following sections describe the legislative and policy context for the SIA and the SIA methodology.

#### 3.1 Scoping of social issues and identification of social locality

The scoping process helps to focus the social impact assessment, by identifying the potential social values that may experience change, and defines the social locality, or the study area for the SIA. The social locality for this SIA includes a local study area and a regional study area. This section describes the scoping process undertaken to inform this SIA, including how the social locality was determined.

The scoping of social issues and social study area have been informed by:

- the project description
- the findings of the Waratah Super Battery Scoping Report (GHD, 2022)
- outcomes of stakeholder consultation activities (Section 4)
- the findings of other technical studies prepared for the EIS (listed in Section 3.2).

The outcomes of the scoping exercise were presented in a SIA Scoping Tool, which was appended to the Waratah Super Battery Scoping Report.

Overall, the initial evaluation of social impacts found there may be minor or no social impacts that have the potential to occur during construction and operation of the project. This is because the site is located more than 600 metres from the nearest residential areas, and 400 metres from the nearest community facility. The site is

separated from these areas by vegetation; therefore construction and operation activities are unlikely to disturb most community members.

The outcomes of the SIA Scoping Worksheet indicated the social impacts and benefits are not likely to require a social impact assessment, or only a minor level of assessment. These include the following potential social impacts:

- Changes to amenity (noise, vibration and dust) for nearby community members
- Increased traffic along haulage routes, which may result in changes to access and connectivity for local communities
- Increased employment opportunities for local residents during construction and operation of the project
- Potential for a small number of local and regional businesses to participate in procurement opportunities during construction of the project
- Increased demand for short term accommodation for non-resident construction workers
- Negative perceptions in the community due to the uncertainty about battery storage technology.

### 3.1.1 Social locality

The social locality for the project considers the communities that have potential to experience changes to social conditions due to direct impacts resulting from location of the project or project infrastructure, construction activities and land use changes. The social locality also considers areas that may potentially supply goods and services and labour to the project, and areas that may be located some distance from the project infrastructure but experience indirect or flow on impacts.

The social locality is described in Table 3.1 and Figure 3.1.

**Table 3.1** Description of social locality

Social locality description	Relevant ABS Census catchments
<p>The social locality comprises:</p> <ul style="list-style-type: none"> <li>– The project area, which includes the project footprint and the suburb of Colongra. The suburb of Colongra does not have a residential population and therefore a demographic summary has not been provided.</li> <li>– The suburb of Halekulani which is the closest residential area to the project site</li> <li>– The Central Coast Local Government Area (LGA). Communities across the LGA may experience some impacts and benefits during construction and operation of the project.</li> </ul>	<ul style="list-style-type: none"> <li>– Halekulani (SSC)</li> <li>– Central Coast LGA</li> </ul>





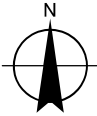
- Legend
- Project Site
  - Central Coast Council
  - Suburb
  - Nature reserve
  - State conservation area
  - Water
  - Roads

Paper Size ISO A4

0 0.2 0.4 0.6 0.8

Kilometers

Map Projection: Transverse Mercator  
Horizontal Datum: GDA 1994  
Grid: GDA 1994 MGA Zone 56



Energy Co  
Waratah Super Battery - Munmorah  
Social Impact Assessment

Project No. 12582669  
Revision No. 0  
Date 26/10/2022

Social locality

FIGURE 3.1



## 3.2 Establishing the social baseline

The social baseline establishes the existing social characteristics for the social locality (described in section 4.2). The social baseline is used as the basis against which the impacts are measured. A social baseline has been prepared for the local study area and regional study area.

The social study area baseline describes:

- Demographic indicators
- Community values and priorities
- Economic and employment profile
- Housing and accommodation availability
- Community facilities and services.

Data has been gathered from the following sources:

- Australian Bureau of Statistics (ABS) Census 2021
- Australian Bureau of Statistics (ABS) Census 2016
- Australian Bureau of Statistics Small Area Labour Markets, Unemployment Rate
- Local, State and Australian Government websites and publications
- Various research reports
- Various online sources
- Information from stakeholder consultations.

Section 3 details the sources that have informed this report.

## 3.3 Stakeholder consultation

EnergyCo has been engaging with community and stakeholders throughout the project planning, scoping, and design process. Chapter 5 of the EIS describes these activities and the stakeholders that have been consulted and provides a summary of the issues raised. An overview of relevant issues that have been considered in the assessment of potential social impacts is provided in Section 4.

## 3.4 Description and assessment of social impacts and benefits

Social impacts have been identified and described using a data triangulation method, whereby multiple sources of information have been used to confirm social impacts. These data sources are summarised below:

- The project description for the EIS to understand the proposed activities that would influence social aspects.
- Baseline conditions against which the social changes / impacts were measured.
- Outcomes of community and stakeholder consultation activities to understand the existing environment and stakeholder views on potential social changes brought about by the project.
- Relevant literature and studies as referenced throughout the report.
- Relevant chapters of the Waratah Super Battery Environmental Impact Statement (EIS). (GHD, 2022).
- Relevant technical studies prepared for the EIS to gather technically sound evidence to identify and assess the social changes resulting from the project:
  - Air Quality Assessment
  - Noise and Vibration Impact Assessment
  - Community and Stakeholder Engagement Plan
  - Relevant chapters of the EIS



The evaluation of the identified social impacts was undertaken using a likelihood and magnitude significance rating, based on the significance criteria outlined in the NSW SIA Guideline and Technical Supplement, and shown in Table 3.3, Table 3.4 and Table 3.5.

**Table 3.2** *Defining likelihood levels of social impacts*

Likelihood level	Meaning
Almost certain	Definite or almost definitely expected (e.g. has happened on similar projects)
Likely	High probability
Possible	Medium probability
Unlikely	Low probability
Very unlikely	Improbable or remote probability

**Table 3.3** *Dimensions of social impact magnitude*

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?
	Severity or scale	What is the likely scale or degree of change? (e.g. mild, moderate, severe).
	Intensity 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.

**Table 3.4** *Defining magnitude levels for social impact*

Magnitude level	Meaning
Transformational	Substantial change experienced in community wellbeing, livelihood, infrastructure, services, health, and/or heritage values; permanent displacement or addition of at least 20% of a community.
Major	Substantial deterioration/improvement to something that people value highly, either lasting for an indefinite time, or affecting many people in a widespread area.
Moderate	Noticeable deterioration/improvement to something that people value highly, either lasting for an extensive time, or affecting a group of people
Minor	Mild deterioration/improvement to something that people value highly, either lasting for an extensive time, or affecting a group of people.
Minimal	Little noticeable change experienced by people in the locality.

Table 3.5

Social impact significance matrix

			Magnitude level				
			1	2	3	4	5
			Minimal	Minor	Moderate	Major	Transformational
Likelihood Level	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

The risk rating then determines if mitigation or management actions are required to address the social impact. Negative social impacts with a risk rating of medium, high or very high require mitigation or management actions.

It should be noted that the degree to which community members would experience social impacts would vary based on factors such as perceptions and individual values, sensitivity to change, distance from the project, and duration people experience the impacts over. The assessment of risks takes this into consideration, and has applied a risk rating for the majority of stakeholders affected by the identified potential impact. However, the risk rating would likely be higher or lower for some stakeholders given the subjective nature of social impacts which varies based on a stakeholder's ability to adapt to impacts.

### 3.5 Recommended social impact mitigation and enhancement measures

The recommended social impact mitigation and enhancement measures provided in this report seek to both enhance the potential social benefits of the project for stakeholders and communities, and manage or mitigate the negative social impacts. Mitigation measures have been developed in addition to those recommended in other technical studies of the EIS, which could also help to manage social impacts.

The recommended social impact mitigation strategies were developed using adaptive management principles, recognising that impacts may change over time, and that ongoing monitoring of impacts would provide the flexibility to accommodate such changes.

Section 7 presents the recommended mitigation measures for each social impact and benefit identified in Section 6 and re-assesses the likelihood and consequences of the impact assuming implementation of the recommended measures.

## 4. Stakeholder consultation

EnergyCo has been engaging with community and stakeholders throughout the project planning, scoping, and design process. Chapter 5 of the EIS describes these activities and the stakeholders that have been consulted and provides a summary of the issues raised.

Community stakeholders were identified as those that may be interested in, or who may be affected by, the Waratah Super Battery. Community stakeholders were divided into three main groups. These were:

- Government and technical stakeholders.
- Landowners.
- The wider community.

Community stakeholders were engaged using a range of tools and techniques including meetings, phone calls, letters, emails, website updates, and newsletters. These were supported by community feedback mechanisms, including a project-specific phone number and email address.

A number of issues were raised by various community stakeholder groups during the preparation of the Scoping Report and the EIS. The key issues raised and the location of where the issue is addressed in the EIS, is provided in Table 4.1.

**Table 4.1**      *Key themes and issues raised in EIS consultation*

Theme or issue	Description	Location addressed in SIA / EIS
Fire	Fire emanating from the battery units and bushfire protection	Section 6 of this report
Contaminated land	Contamination.	Section 6.4 of EIS
Noise	Noise impact on neighbouring communities.	Section 6 of this report
Access	Maintaining access for critical fuel delivery to the Colongra Power Plant.	Section 6.7 of EIS

## 5. Social baseline

This chapter presents the social baseline for the social locality which includes the project site, the suburbs of Halekulani and Colongra, and the Central Coast LGA.

### Overview of the site and surrounds

The project site is located within the former Munmorah Power Station and adjacent to the existing Colongra Power Station in the suburb of Colongra (refer Figure 3-1). There are no residential areas in Colongra, which is largely zoned as Special Purpose (SP1) for Infrastructure Electricity Generation Works. Other land uses in Colongra include Environmental Conservation, National Parks and Nature Reserves, and Environmental Management.

Colongra is boarded by Scenic Drive, which travels along the southern edge of the suburb, bordering the residential suburbs of San Remo, Buff Point, and Halekulani. Scenic Drive is a part of the Central Coast Highway. It is a busy road which provides a connection between the coastal community of Budgewoi and inland to Doyalson, which connects with the Pacific Highway. Halekulani and the broader area is serviced by a local bus network, which has a number of stops along Scenic Drive. There are two recreational facilities located in Colongra, Koala Park and Colongra Swamp Nature Reserve (refer Figure 3-1).

Koala Park is located approximately 400m south west of the project site. It includes a sports field, two tennis courts and a disc golf course which are all unlocked and free for public use (Central Coast Council, 2022). Koala Park contains facilities such as barbeques, toilets, water and picnic tables (Fly Spot, 2022).

Koala Park is also used for local events and festivals organised by the community. The GOATS Family Festival is an annual festival held during April in Koala Park which hosts free live entertainment, market stalls, and performers (Central Coast Council, 2019). The festival is organised by the Epicentre San Remo, a not-for-profit, charitable organisation supported by Central Coast Council.

Colongra Swamp Nature Reserve is located approximately 650 meters from the proposed site on the north eastern edge of the suburb along Lake Munmorah. Nearby waterways include Hammond Canal, Lake Munmorah, Colongra Creek, and Lake Colongra. The Lake Munmorah and Colongra Swamp Nature Reserve walking track is a 14 kilometre out-and-back trail which is utilised by walkers and cyclists. The nature reserve is also used for birdwatching and fishing. The Colongra Swamp Nature Reserve bush regeneration group meet once per month on a Sunday morning to engage in weeding and vegetation activities, and record observations of habitat and natural wildlife within the reserve (National Parks and Wildlife Service, 2022).

The closest residential areas to the proposed facility are in the western portion of Halekulani. The closest residents are located in Halekulani are approximately 600 meters from the project site area. There are also two retirement villages located 700 metres from the site area on the shore of Lake Munmorah, known as Ingenia Lifestyle Lake Munmorah and Lakeside Leisure Village.

### Community profile

The Central Coast LGA is characterised by its laid-back and liveable setting and is valued for its natural environment. The region has a number of challenges and opportunities as it grows, including promoting a diverse economy and industry, investing in infrastructure and affordable housing and conserving the environment (Central Coast Council, 2018).

Appendix A provides a summary of key demographic indicators for the suburb of Halekulani and Central Coast LGA.

The analysis of the social locality found that overall, the social study area is characterised by:

- A higher proportion of Aboriginal and Torres Strait Islander population living in the local study area (7.2 per cent, or 194 people) compared to Central Coast LGA (4.9 per cent, or 17,047 people).
- A lower proportion of people who speak a language other than English at home compared to Central Coast LGA.
- A low rental vacancy rate in the Central Coast LGA, which has experienced considerable decline since 2019. As of August 2022, the rental vacancy rate was 0.9 per cent.

- A limited supply of short-term accommodation available in Halekulani is likely to be occupied during the warmer months (December, January and February) and school holiday periods when tourism is at its peak.
- A higher proportion of certificate level education attainment in both Halekulani (52.1 per cent), compared to Central Coast LGA (40.2 per cent).
- A lower labour force participation (47.2 per cent) when compared to Central Coast LGA (56.0 per cent). This may be attributed to the higher median age in Halekulani when compared to Central Coast LGA, and higher proportion of retirees and senior age cohorts which would likely not be in the workforce.
- Health care and social assistance is the predominant industry of employment in Halekulani, which is consistent with Central Coast LGA.
- A higher proportion of technician and trade workers in Halekulani, compared to Central Coast LGA.
- A lower median weekly individual income and median weekly household income in Halekulani, compared to Central Coast LGA.

Halekulani has higher proportions of vulnerable indicators in the community compared to Central Coast LGA including: a lower labour force participation, a lower median weekly individual income and median weekly household income, and a higher proportion of the population who require assistance. In addition to these indicators, Halekulani is placed in decile 1 of the Index of Relative Socio-Economic Advantage/Disadvantage (IRSAD), indicating the highest level of disadvantage.

## Housing and accommodation

The rental vacancy rates in the Central Coast LGA have experienced consistent decline over the last five years. As of August 2022, the rental vacancy rate was between 0.9 per cent. The tightening rental vacancy rate in the Central Coast is reflected in the small number of properties available for rent in Halekulani. A search of realestate.com.au found that as of 20 September 2022, there are four properties available for rent in Halekulani (REA Group, 2022). The limited number of rental properties in Halekulani is reflected across surrounding suburbs with six properties available for rent in Budgewoi.

The *Central Coast Council Tourism Opportunity Plan 2019* indicates a low availability of a range of short-term accommodation variety and stock in the region (Central Coast Council, 2019). A search on Google Maps identified that short term accommodation is limited in Halekulani, with only one caravan park located within the suburb. Table 5.1 outlines the number of short-term accommodation facilities (hotel/motel/holiday parks) within the neighbouring towns of Budgewoi, Lake Haven, Gorokan, Tourkley and Canton Beach.

**Table 5.1** Short-term accommodation availability

Suburb	Number of short-term accommodation facilities (hotel/motel/holiday parks)
Halekulani	1
Budgewoi	3
Gorokan	1
Tourkley	4
Lake Haven	2
Canton beach	1

Source: Google Maps. (2022)

The limited supply of short-term accommodation available in Halekulani and surrounding suburbs is likely to be occupied during the warmer months (December, January and February) and school holiday periods when tourism is at its peak.

## 6. Social impact assessment

This section assesses the social impacts associated with the construction and operation of the project. The sensitivity and magnitude have been determined in accordance with the methodology outlined in Section 3. The significance rating shown in Section 3.4 has been applied to each social impact based on the outcome of this assessment.

**Table 6.1** Social impact summary - construction

Potential change as a result of the project	Impact description	Stakeholders affected	Social impact category	Magnitude	Likelihood	Initial significance	Mitigation measure	Residual significance
<b>Amenity and character</b>								
Changes to local amenity (increased noise, dust, vibration, and visual impacts).	The nearest residential area is Halekulani, located more than 600 metres from the site, which is separated from the project site by a large, vegetated buffer. This reduces the likelihood that most local residents would experience changes to local amenity due to construction activities (e.g. increased noise, dust and vibration, and visual impacts). However, some residents living along Scenic Drive may experience a negligible increase in noise due to construction vehicles travelling to and /from the site. This may disturb some residents along this road.	Local residents of Halekulani	Way of life	Minimal	Unlikely	Low Negative	Community and Stakeholder Engagement strategy Communication management plan Construction Environmental Management Plan	Low Negative
	Users of Koala Park and Colongra Swamp Trail have the potential to experience changes to local amenity during construction.  The Koala Park recreation area is located approximately 400 metres from the project site on Koala Street and is accessed via Station Road, which is the main access road to the project site.	Users of Koala Park and Colongra Swamp Trail	Way of life	Minor	Possible	Low Negative	Community and Stakeholder Engagement strategy Communication management plan Construction Environmental Management Plan	Low Negative

Potential change as a result of the project	Impact description	Stakeholders affected	Social impact category	Magnitude	Likelihood	Initial significance	Mitigation measure	Residual significance
	<p>Parts of Colongra Swamp Trail are located approximately 220 metres from the site.</p> <p>While some users of the park and trail may hear construction activities at times, this is not expected to deter most users from visiting/using the facilities.</p>							
<b>Access and connectivity</b>								
Increased traffic during construction along haulage routes	<p>Scenic Drive and Station Road would be used as haulage routes during construction, which would be used by construction traffic. This has the potential to result in intermittent minor delays for people travelling along these routes, however, this is expected to be negligible.</p> <p>This may inconvenience some road users.</p>	Local residents of Halekulani	Accessibility	Minor	Possible	Low Negative	<p>Community and Stakeholder Engagement strategy</p> <p>Communication management plan</p> <p>Construction Traffic Management Plan</p>	Low Negative
	<p>Users of Koala Park and Colongra Swamp may experience delays or detours when accessing these areas due to changed traffic conditions and increased construction traffic. Most users of Koala Park are not expected to be deterred, however this could disrupt community events held at the park (e.g. GOATS family festival held in April).</p> <p>Users of Colongra Swamp may not be able to access the Colongra Swamp Trail from the north eastern access point, and may need to use the western access point, which may increase travel time. This has the potential to deter some recreational users from visiting Colongra Swamp.</p>	Users of Koala Park and Colongra Swamp	Accessibility	Minor	Possible	Low Negative	<p>Community and Stakeholder Engagement strategy</p> <p>Communication management plan</p> <p>Construction Traffic Management Plan</p>	Low Negative



Potential change as a result of the project	Impact description	Stakeholders affected	Social impact category	Magnitude	Likelihood	Initial significance	Mitigation measure	Residual significance
	Changes to perceptions of safety for some road users due to increased heavy vehicle traffic along local roads, which may lead to feelings of decreased safety for pedestrians walking along these routes and walking to Koala Park.	Local residents of Halekulani Recreation users at Koala Park	Accessibility	Minor	Possible	Low Negative	Community and Stakeholder Engagement strategy Communication management plan Construction Traffic Management Plan	Low Negative
<b>Housing and accommodation</b>								
Increased demand for short term accommodation during construction	<p>Approximately 150 full time equivalent people would be employed during construction of the project.</p> <p>It is expected that most construction workers would be sourced from the Central Coast, Sydney or Newcastle. These workers are not expected to require accommodation, as they would likely travel to the project site each day for their shifts.</p> <p>A small number of workers with specialist skills may be sourced from further afield. These workers may require temporary accommodation in the local area.</p> <p>Due to the short-term nature of construction contracts, these workers are likely to be accommodated in short term accommodation options such as tourist parks and holiday accommodation.</p> <p>The social baseline identified that there is limited availability of short-term accommodation in the social locality, and availability is likely to fluctuate depending on tourism demands.</p>	Accommodation providers	Livelihoods	Minor	Possible	Low Negative	Workforce accommodation approach	Low Negative

Potential change as a result of the project	Impact description	Stakeholders affected	Social impact category	Magnitude	Likelihood	Initial significance	Mitigation measure	Residual significance
	While the workforce needs of the project have the potential to result in minor reduced availability for tourists, use of short-term accommodation by construction workers would also be a short-term benefit for local accommodation providers.	Accommodation providers	Livelihoods	Minor	Possible	Low Positive	Workforce accommodation approach	Low Negative
<b>Economy and business</b>								
Local spend	<p>The project would result in direct capital investment of approximately \$1 billion in the state of NSW, which is further increased through the multiplier effect when considering flow-on economic benefits.</p> <p>There is potential for a small number of local and regional businesses to participate in procurement opportunities during construction.</p> <p>Local businesses may also benefit from construction workers spending wages at local businesses, particularly retail and food and beverage businesses located in nearby suburbs such as Budgewoi which may be visited by workers during their breaks and is located approximately 9 minutes' drive from the project. This may increase revenue at these businesses in the short term.</p>	Local and regional businesses	Livelihoods	Minor	Possible	Low Positive	Local procurement plan	Low Positive
Employment opportunities	<p>Approximately 150 full time equivalent people would be employed during construction of the project.</p> <p>Increased demand for skilled and unskilled workforce during construction of the project, which may lead to increased temporary employment opportunities for local and regional residents.</p>	Skilled and unskilled residents	Livelihoods	Minor	Possible	Low Positive	Local procurement plan	Low Positive

Table 6.2 Social impact summary – operation

Potential change as a result of the project	Impact description	Stakeholders affected	Social impact category	Magnitude	Likelihood	Initial significance	Mitigation measure	Residual significance
<b>Amenity and character</b>								
Changes to local amenity (increased noise and visual impacts).	<p>While there would be visual changes to the landscape as well as changes to amenity (including increased noise and visual impacts), this is not expected to be noticeable for most local residents given the distance between the site and residential areas.</p> <p>Further, the project is located within an existing industrial area, therefore these visual changes would be consistent with the existing character and is therefore not expected to result in a social impact.</p>	Local community	Way of life	Minor	Possible	Low Negative	Community and Stakeholder Engagement strategy Communication management plan	Low Negative
<b>Economy and business</b>								
Employment opportunities	Operation of the project would largely be undertaken remotely, however, 10-15 maintenance personnel are likely to be required, which may lead to minor increased employment opportunities for local and regional residents	Skilled workforce	Livelihoods	Minor	Possible	Low Positive	Local procurement plan	Low Positive
<b>Community wellbeing</b>								
Uncertainty of new technology	<p>Potential for some local community members to experience stress resulting from concerns about:</p> <ul style="list-style-type: none"> <li>– Uncertainty about battery storage technology</li> <li>– Bushfire risk associated with potential battery overheating</li> </ul>	Local community	Health and wellbeing	Minor	Possible	Low Negative	Community and Stakeholder Engagement strategy Communication management plan	Low Negative

## 7. Mitigation and management measures

The social impacts and opportunities identified and assessed in this report would be managed and mitigated through a range of measures and strategies recommended in both this report, and by those recommended in other EIS specialist studies (referenced throughout Sections 6).

The management strategies primarily focus on the social impacts with a higher significance rating, or those with potential to have higher significance if appropriate management strategies are not in place. The management strategies have been developed based on industry standards, practices and guidelines, reference to the measures implemented on other comparable projects, and feedback from stakeholders during consultations.

### 7.1 Recommended social impact mitigation and enhancement measures

**Table 7.1** Recommended mitigation and enhancement measures

Mitigation measure	Description
Community and Stakeholder Engagement strategy	<p>EnergyCo will continue to manage and deliver community and stakeholder engagement in the lead up to construction of the project. This will help to ensure that:</p> <ul style="list-style-type: none"> <li>– The community and stakeholders have a high level of awareness of all processes and activities.</li> <li>– The community and stakeholders are made aware of any potential disturbances and/or disruptions well in advance of them occurring.</li> <li>– Accurate and accessible information is made available.</li> <li>– A timely response is given to issues and concerns raised by the community.</li> <li>– Feedback from the community is encouraged.</li> <li>– Opportunities for input are provided.</li> </ul>
Communication management plan	<p>A project-specific communication management plan would be developed by the service provider in accordance with the Community and Stakeholder Engagement Strategy and implemented to define the specific requirements for engagement during delivery of the project.</p> <p>This would be developed and implemented to ensure that residents and stakeholders are notified in a timely manner about works activities and potential for impacts, accurate information is accessible, and enquiries and complaints are managed in a timely manner.</p> <p>The communication management plan would define the requirements for the complaints management system to be implemented throughout the duration of the project, including 24-hour, seven days a week phone line, postal and email address for written enquiries, and publication of contact details.</p>
Workforce accommodation approach	<p>EnergyCo would prepare an accommodation strategy for the project to plan for the accommodation needs of any non-resident workers.</p> <p>EnergyCo would share information about workforce and accommodation requirements in a timely manner in line with the Community and Stakeholder Engagement Strategy.</p>
Local and Indigenous employment and procurement	<p>EnergyCo would develop and implement an industry and Aboriginal participation plan in its contract with the service provider.</p>

## 8. Conclusion

This SIA has assessed the potential social and economic benefits and impacts resulting from the construction and operation of the proposed Waratah Super Battery.

During construction, potential social benefits include:

- Direct and indirect procurement opportunities for local and regional businesses
- Potential employment opportunities for up to 150 workers in the local and regional area
- Increased patronage and expenditure at some local and regional businesses, particularly food and beverage businesses in Budgewoi

However, construction activities are also expected to result in minor potential social impacts, outlined below:

- Reduced amenity from an increase in noise, vibration and dust and visual changes, which has the potential to affect recreational users of Koala Park and some local residents' wellbeing
- Increase in traffic volumes for local residents and road users
- Potential increased demand for local accommodation

Most social impacts that occur during construction are temporary in nature and are expected to be minimised by the recommended mitigation measures.

Some impacts may be experienced by residents as a result of operation of the project, including:

- Changes to local amenity (increased noise and visual impacts).
- Negative perception due to the uncertainty about battery storage technology and bushfire risk associated with potential battery overheating may lead to stress and worry for some residents in the area.

Mitigation and management measures have been recommended to avoid, minimise and manage potential social impacts, and enhance social benefits. This includes targeted and ongoing engagement with local and regional residents and stakeholders, accommodation strategy and a local procurement and Indigenous employment plan.

## 9. References

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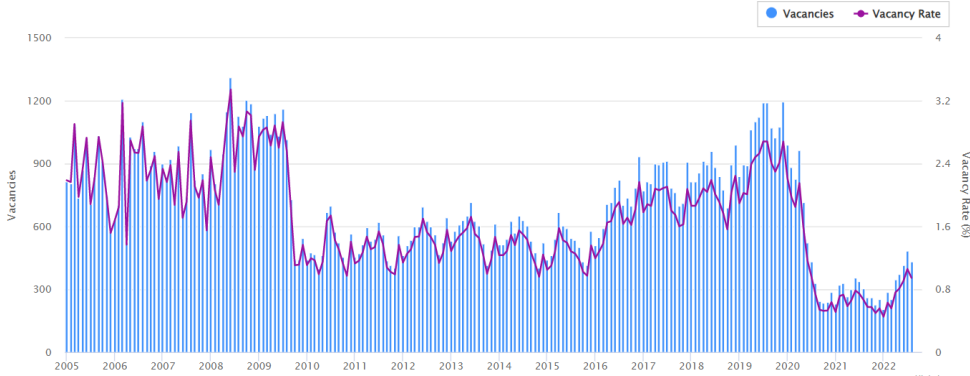
# Appendix A

## Demographic data summary

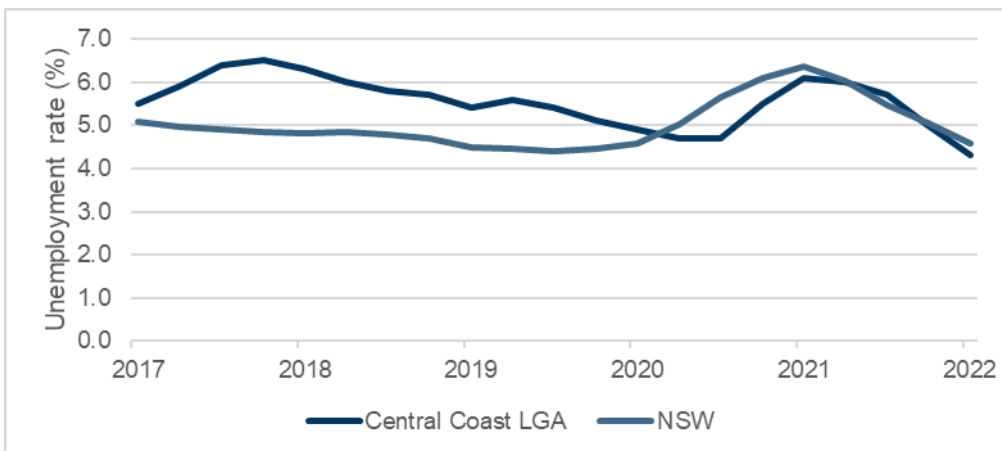


Table A.1 provides a demographic profile of the social locality.

**Table A.1**      *Demographic profile*

Indicator	Description
<b>Demographic profile</b>	
Population	<p>Halekulani is located in the north of the Central Coast LGA. At the time of the 2021 Census the suburb had a population of 2,677 people, increasing by 5.5 per cent since 2016.</p> <p>The Central Coast LGA had a population of 346,596 people in 2021, increasing by 5.75 per cent since 2016.</p> <p>In 2021, 7.2 per cent of people (194 people) in Halekulani identified as Aboriginal and/or Torres Strait Islander, which is higher than the Central Coast LGA (4.9 per cent, or 17,047 people). In comparison, in 2016 6.1 per cent of people (155 people) in Halekulani identified as Aboriginal and/or Torres Strait Islander, which was higher than the Central Coast LGA (3.8 per cent, or 12,485 people).</p>
Age profile	<p>Halekulani had a median age of 49 years, which is older than Central Coast LGA at 43 years. In 2021, Halekulani had a higher population of retirees (65 to 74 years) at 16.8 per cent compared to Central Coast LGA at 11.7 per cent. Halekulani also had a higher population of seniors (75 to 84 years) at 10.3 per cent compared to Central Coast LGA at 7.4 per cent.</p>
Cultural diversity	<p>In 2021, Halekulani had a low proportion of people who speak a language other than English at home (2.4 per cent) compared to Central Coast LGA (7.1 per cent).</p>
<b>Family and housing</b>	
Family and household composition	<p>In 2021, Halekulani had a high proportion of couple families without children (45.3 per cent) compared to Central Coast LGA (39.6 per cent) and a lower proportion of couple families with children (30.2 per cent) compared to Central Coast LGA (40 per cent). The average household size in Halekulani is 2.2 persons compared to Central Coast LGA at 2.5 persons.</p>
Dwellings	<p>In 2021, 93.9 per cent of dwellings in Halekulani were occupied which is slightly higher than Central Coast LGA (90.1 per cent). 1.9 per cent of dwellings in Halekulani in 2021 were flats, units or apartments. The broader LGA had a higher proportion of flats, units or apartments (8.7 per cent). Halekulani had a higher proportion of separate houses at 91.1 per cent compared to Central Coast LGA (78.4 per cent).</p>
Rental availability	<p>Figure B.2 shows that rental vacancy rates in Central Coast LGA have declined since 2019. The August 2022 vacancy rate was recorded as 0.9 per cent which is lower than the August 2019 vacancy rate (2.7 per cent).</p> <p style="text-align: center;">Residential Vacancy Rates Source: SQM Research</p>  <p><b>Figure B.2</b>      <i>Residential vacancy rates, Central Coast</i></p>
Short term accommodation	<p>Short-term tourist accommodation such as hotels, motels and holiday parks are important in regional areas to provide accommodation for visitors and to support regional tourism and economic activity. The <i>Central Coast Council Tourism Opportunity Plan 2019</i> indicates a low availability of a range of short-term accommodation variety and stock in the region (Central Coast Council, 2019). A search on Google Maps identified that short term accommodation is limited in Halekulani, with only one caravan park located within the suburb. Table B.2 outlines the number of short-term accommodation facilities (hotel/motel/holiday parks) within the neighbouring towns of Budgewoi, Lake Haven, Gorokan, Toukley and Canton Beach and indicates limited supply.</p>

Indicator	Description														
	<p><b>Table B.2 Short-term accommodation availability</b></p> <table> <tr> <th>Suburb</th><th>Number of short-term accommodation facilities (hotel/motel/holiday parks)</th></tr> <tr> <td>Halekulani</td><td>1</td></tr> <tr> <td>Budgewoi</td><td>3</td></tr> <tr> <td>Gorokan</td><td>1</td></tr> <tr> <td>Tourkley</td><td>4</td></tr> <tr> <td>Lake Haven</td><td>2</td></tr> <tr> <td>Canton beach</td><td>1</td></tr> </table> <p>Source: Google Maps. (2022).</p>	Suburb	Number of short-term accommodation facilities (hotel/motel/holiday parks)	Halekulani	1	Budgewoi	3	Gorokan	1	Tourkley	4	Lake Haven	2	Canton beach	1
Suburb	Number of short-term accommodation facilities (hotel/motel/holiday parks)														
Halekulani	1														
Budgewoi	3														
Gorokan	1														
Tourkley	4														
Lake Haven	2														
Canton beach	1														
<b>Education</b>															
Highest level of schooling completed	In 2016, 38.5 per cent of the population of Halekulani reported that they have completed year 10 or equivalent as their highest level of school completed, 26.9 per cent have completed year 12 or equivalent, and 11.2 per cent have completed year 9 or equivalent.														
Highest-level of postgraduate qualification	<p>In 2016, the population of Halekulani reported that the predominant level of post-graduate qualification obtained in Halekulani was Certificate level representing 52.1 per cent of persons with a qualification. 20.8 per cent of the population inadequately described or did not state their level of postgraduate qualification and 15.0 per cent of the population in Halekulani reported they had an Advance diploma and diploma level as their highest level of post-graduate qualification.</p> <p>Halekulani levels of qualification were similar to the population of Central Coast LGA where 40.2 per cent reported Certificate level was highest, 17.5 per cent inadequately described or did not state their level of postgraduate qualification, 16.9 per cent reported Bachelor degree, and 15.2 per cent reported Advance diploma and diploma level.</p>														
<b>Economic profile</b>															
Labour force	In 2016, 89.9 per cent of the population in Halekulani was employed which was lower than that of Central Coast LGA (93.3 per cent). The proportion of unemployed persons in Halekulani (10.1 per cent) was higher than Central Coast LGA (6.8 per cent). Halekulani had a lower labour force participation (47.2 per cent) when compared to Central Coast LGA (56.0 per cent).														
Industry of employment	<p>Figure B.3 shows the key industry of people in the local study area in 2016. Within the social locality, the predominant industry in terms of contribution to employment was health care and social assistance which accounted for 14.6 per cent of the workforce. This is consistent with the broader LGA where health care and social assistance was also the largest sector in terms of employment at 15.3 per cent of the labour force. Retail trade is also a significant industry in the area, comprising of 12.9 per cent of the labour force in Halekulani, which is slightly higher than Central Coast LGA (11.1 per cent). Similarly, construction is also a significant industry in the area, comprising of 12.7 per cent of the labour force in Halekulani, which is slightly higher than Central Coast LGA (11.3 per cent).</p> <p>Source: ABS (2017) 2016 Census of Population and Housing. General Community Profile</p> <p><b>Figure B.3 Key Industry, 2016</b></p>														
Occupation	Figure B.4 shows the occupation of people in the local study area in 2016. Halekulani had a higher proportion of technicians and trade workers at 20.3 per cent compared to Central Coast LGA (15.5 per cent). Halekulani had a lower proportion of professionals at 9.8 per cent compared to Central Coast LGA (18.6 per cent).														

Indicator	Description
	<p>Source: ABS (2017) 2016 Census of Population and Housing. General Community Profile</p> <p><b>Figure B.4 Occupation, 2016</b></p>
Income	<p>In 2016, the median weekly individual income in Halekulani was \$476. This was lower than Central Coast LGA which had a median weekly individual income of \$600. The median weekly household income in Halekulani was \$852, which was also lower than that of Central Coast LGA at \$1,258.</p>
Unemployment rate	<p>From 2017 to 2020, the unemployment rate in Central Coast LGA has been predominantly above that of NSW. From 2020 onwards, the unemployment rate has fluctuated, remaining relatively consistent with the State.</p>  <p>Source: Source: Australian Government (2021) Small area labour markets publication. ABS (2022) 6291.0.55.001 – RM1 – Labour force status by Age, Labour market region (ASGS) and Sex, October 1998 onwards</p> <p><b>Figure B.5 Unemployment rate, Central Coast LGA, 2017-2022</b></p>
<b>Community health and wellbeing</b>	
Need for assistance	<p>In 2016, the proportion of the population who require assistance in Halekulani was 8.5 per cent, which was higher than Central Coast LGA at 6.4 per cent.</p>
Socio-Economic Indexes for Areas (SEIFA)	<p>The ABS produces four socio-economic indices for areas (SEIFA) based on Census data, which identify areas of relative advantage and disadvantage. The Index of Relative Socio-Economic Advantage/Disadvantage (IRSAD) was examined for the local and regional study areas. Socio-economic advantage and disadvantage are defined broadly by the IRSAD in terms of 2016. In order to capture this broad definition, the IRSAD includes a range of data points, including income, education, employment, occupation, and housing.</p> <p>Within the social locality:</p> <p>Halekulani suburbs was placed within decile 1, indicating the highest level of disadvantage</p> <p>Central Coast LGA was placed within decile 7, indicating a level of moderate advantage.</p>

Indicator	Description
Community values	<p>The Central Coast Council consulted the community to develop the <i>One – Central Coast Community Strategic Plan</i>. Consultation identified five key themes that reflect the needs and values of the people who live in the region, these are: belonging, smart, green, responsible and liveable. Consultation identified that the community need to navigate challenges and opportunities around:</p> <ul style="list-style-type: none"> <li>– the growing population</li> <li>– maintaining the laid-back friendly environment of the area</li> <li>– conserving the environment</li> <li>– decision making around new developments</li> <li>– investing in infrastructure to meet the needs of future generations</li> <li>– industry, diversity, business and employment growth to ensure prosperity of the region, and</li> <li>– addressing climate change.</li> </ul>
<b>Access and connectivity</b>	
Roads	Key transport routes in Halekulani near the proposed site include Scenic Drive (A49), Pacific Highway (A43), Doyalson Link Road (A43) and Pacific Motorway (M1). Scenic Drive is a tourist road that connects the suburb of Doyalson to the suburb of Budgewoi.
Public transport	Halekulani is serviced by a local bus network. The broader area is serviced by Wyee Train Station, located nine kilometres from Halekulani.

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EnergyCo

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GPO Box 5469,  
Sydney, NSW 2001.

E: [contact@energyco.nsw.gov.au](mailto:contact@energyco.nsw.gov.au)

W: [www.energyco.nsw.gov.au](http://www.energyco.nsw.gov.au)

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