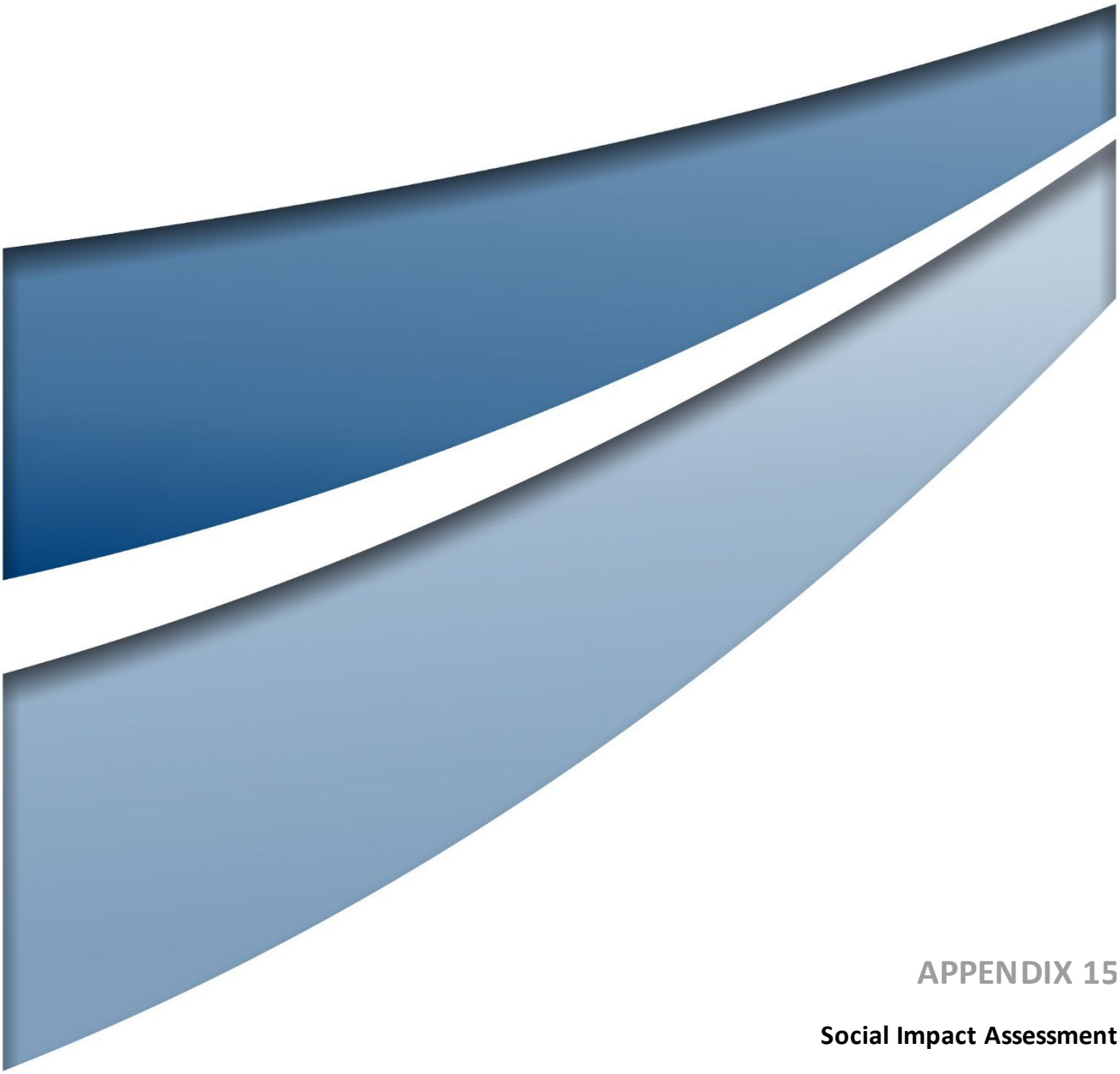


APPENDIX 15

Social Impact Assessment

umwelt
Environmental & Social Consultants

AUSTRALIAN RESOURCE DEVELOPMENT GROUP PTY LIMITED

STONE RIDGE QUARRY PROJECT

Social Impact Assessment

FINAL

May 2023

AUSTRALIAN RESOURCE
DEVELOPMENT GROUP PTY LIMITED

STONE RIDGE QUARRY PROJECT

Social Impact Assessment

FINAL

Prepared by
Umwelt (Australia) Pty Limited
on behalf of
Australian Resource Development Group Pty Ltd

Project Director: David Holmes
Project Manager: Penelope Williams
Technical Director: Dr Sheridan Coakes
Report No. R13/4158
Date: May 2023

umwelt
Environmental & Social Consultants

Acknowledgement of Country

Umwelt would like to acknowledge the traditional custodians of the country on which we work and pay respect to their cultural heritage, beliefs, and continuing relationship with the land. We pay our respect to the Elders – past, present, and future.

Document Status

Rev No.	Reviewer		Approved for Issue	
	Name	Date	Name	Date
V1	Karen Lamb	24/03/2023	Penelope Williams	24/03/2023
Final	Sarah Bell	15/05/2023	Penelope Williams	15/05/2023

Author Declaration

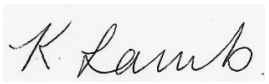
As outlined in Appendix B of the SIA Guideline, (DPIE, 2023), suitably qualified and experienced practitioner/s should be involved in the preparation of the SIA scoping report and the SIA report. A suitably qualified person must have:

- Suitable qualifications in a relevant social science discipline.
- Proven experience over multiple years and substantial competence in social science research methods and SIA practices.

This SIA has been prepared by Karen Lamb (the SIA Project Manager) under the guidance and review of Dr Sheridan Coakes (the SIA Project Director). We declare that this SIA, completed on 15 May 2023:

- was prepared by a team that has suitable qualifications, proven experience and competence in SIA practice, and relevant professional memberships as outlined in **Table 1**
- that the authors understand their legal and ethical obligations in the preparation of the SIA
- that none of the information included in the SIA is false or misleading; and
- that the SIA contains all relevant information.

Project Manager **Karen Lamb**



Project Director **Dr Sheridan Coakes**

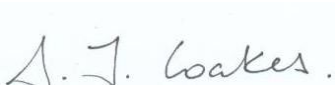


Table 1 Author Qualifications

Requirement	SIA Project Manager – Karen Lamb	SIA Project Director – Dr Sheridan Coakes
Suitable qualifications	Bachelor of Science (Resource and Environmental Management) Masters – International and Community Development Masters – Environmental Law Graduate Diploma – Environmental Law	Bachelor of Applied Science – Psychology Honours First Class – Psychology Doctor of Philosophy – Psychology
Proven experience in SIA practice	18 years	25 years
Professional memberships	International Association for Impact Association	Environmental Institute of Australia and New Zealand – Co-convenor of the SIA Community of Practice Board Member - Certified Environmental Practitioner Scheme

Abbreviations

Abbreviation	Description
ABS	Australian Bureau of Statistics
ARDG	Australian Resource Development Group
CCC	Community Consultative Committee
DA	Development Application
DPE	Department of Planning and Environment, NSW
EIA	Environmental Impact Assessment
EIS	Environmental Impact Statement
EPA	Environmental Protection Agency
EP&A	Environmental Planning and Assessment Act 1979, NSW
FCNSW	Forestry Corporation of New South Wales
FML	Forest Materials license
FTE	Full-time Equivalent
GP	General Practitioner
Ha	Hectare
IAIA	International Association for Impact Assessment
LALC	Local Aboriginal Land Council
LGA	Local Government Area
NSW	New South Wales
PHIDU	Public Health Information Development Unit
REINSW	Real Estate Institute of NSW
PSC	Port Stephens Council
SAL	Suburbs and Localities
SEARs	Secretary's Environmental Assessment Requirements
SEIFA	Socio-economic Index for Areas
SIA	Social Impact Assessment
SIMP	Social Impact Management Plan
SSCs	State Suburbs
SSD	State Significant Development
TfNSW	Transport for NSW
Tpa	Tonnes per annum

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1.0 Introduction

This Social Impact Assessment (SIA) Report documents the process and outcomes of the SIA undertaken by Umwelt (Australia) Pty Ltd (Umwelt) for the Stone Ridge Quarry Project (hereafter referred to as the Project). The SIA forms part of the Project's Environmental Impact Statement (EIS) that will be lodged with the New South Wales (NSW) Department of Planning and Environment (DPE) on behalf of Australian Resource Development Group Pty Ltd (ARDG), as part of the Project's State Significant Development (SSD) application under Part 5, Division 5.2 of the *Environmental Planning and Assessment Act 1979* (EP&A Act).

This Report has been prepared in alignment with the Social Impact Assessment Guideline for State Significant Projects (DPE, 2023) (the Guideline) and in accordance with the project specific Secretary's Environmental Assessment Requirements (SEARs) relating to social impact assessment.

1.1 Project Overview

The proponent, ARDG is seeking planning approval for a new hard rock quarry within the Wallaroo State Forest at Balickera, NSW, approximately 30 kilometres (km) north of Newcastle, within the Port Stephens Local Government Area (LGA). Wallaroo State Forest is located on the northern side of the Pacific Highway, and extends from Italia Road in the west, to the Karuah River in the east.

The Project is seeking to access a high quality, hard rock resource suitable for producing a wide range of quarry products. The Project is well positioned to supply the Lower Hunter, Central Coast and northern Sydney construction materials markets.

The Project Area is located on land managed by the Forestry Corporation of New South Wales (FCNSW). In accordance with section 11 of the *Forestry Act 2012* (Forestry Act), FCNSW is responsible for "carrying out or authorising the carrying out of forestry operations on Crown-timber land or land owned by the Corporation". An additional function of FCNSW under section 11 of the Forestry Act is to "take or authorise the taking of forest materials" from this land. Forest materials are defined in the Forestry Act as "rock, stone, clay, shell, earth, sand, gravel or any like material". At present there are over 20 licenced quarry operations on FCNSW land, all of which pay FCNSW a royalty for materials taken from the land.

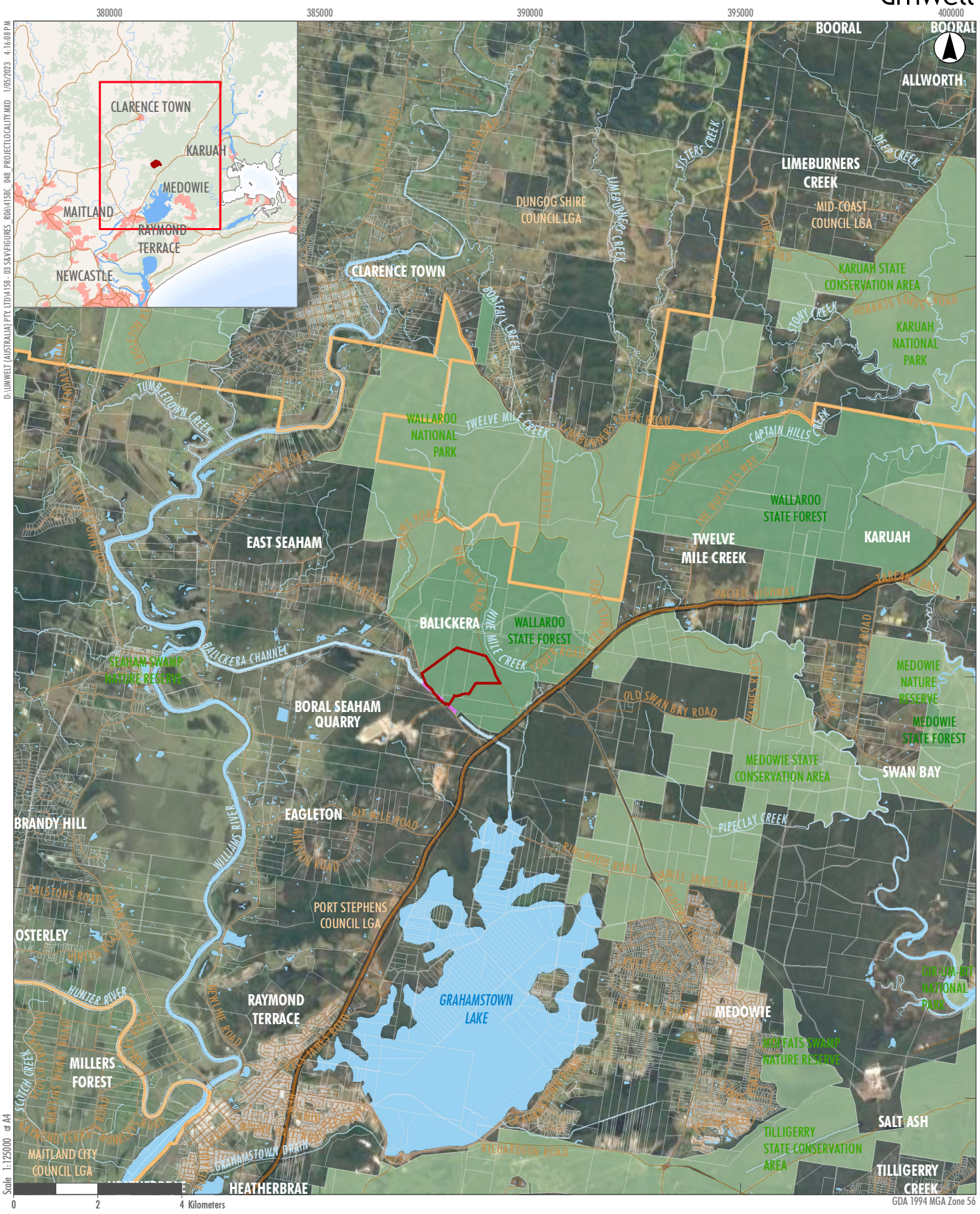
ARDG holds a Deed of Agreement (Deed) for a Forest Materials Licence (FML) with FCNSW under section 42 of the Forestry Act. The Project disturbance area where operations are proposed is approximately 79 hectares (ha) and is located fully within the boundary of the Licence Area (**Figure 1.1**). Should consent for the Project be granted, upon receipt of all necessary planning approvals and licences, FCNSW will issue a FML to ARDG that will enable the company to develop and operate the Project. Under the terms of the FML, ARDG will pay FCNSW a royalty for each tonne of quarry product sold from the Project.

Figure 1.2 provides details of the proposed site layout.

The Project is expected to generate up to 10-15 full time equivalent (FTE) direct jobs during construction and approximately 10 FTE direct jobs during the operation. The Project would have an initial operational lifespan of 30 years.

Key components of the Project include:

- an extraction area with sufficient resources to support the extraction and processing of material to enable the transport of up to 1.5 Mtpa over 30 years
- processing and stockpiling area
- storage area for overburden/plant and equipment
- product loading area
- surface water management infrastructure
- weighbridge and administration area (offices, parking, amenities)
- site access and internal roadways
- buffer areas.



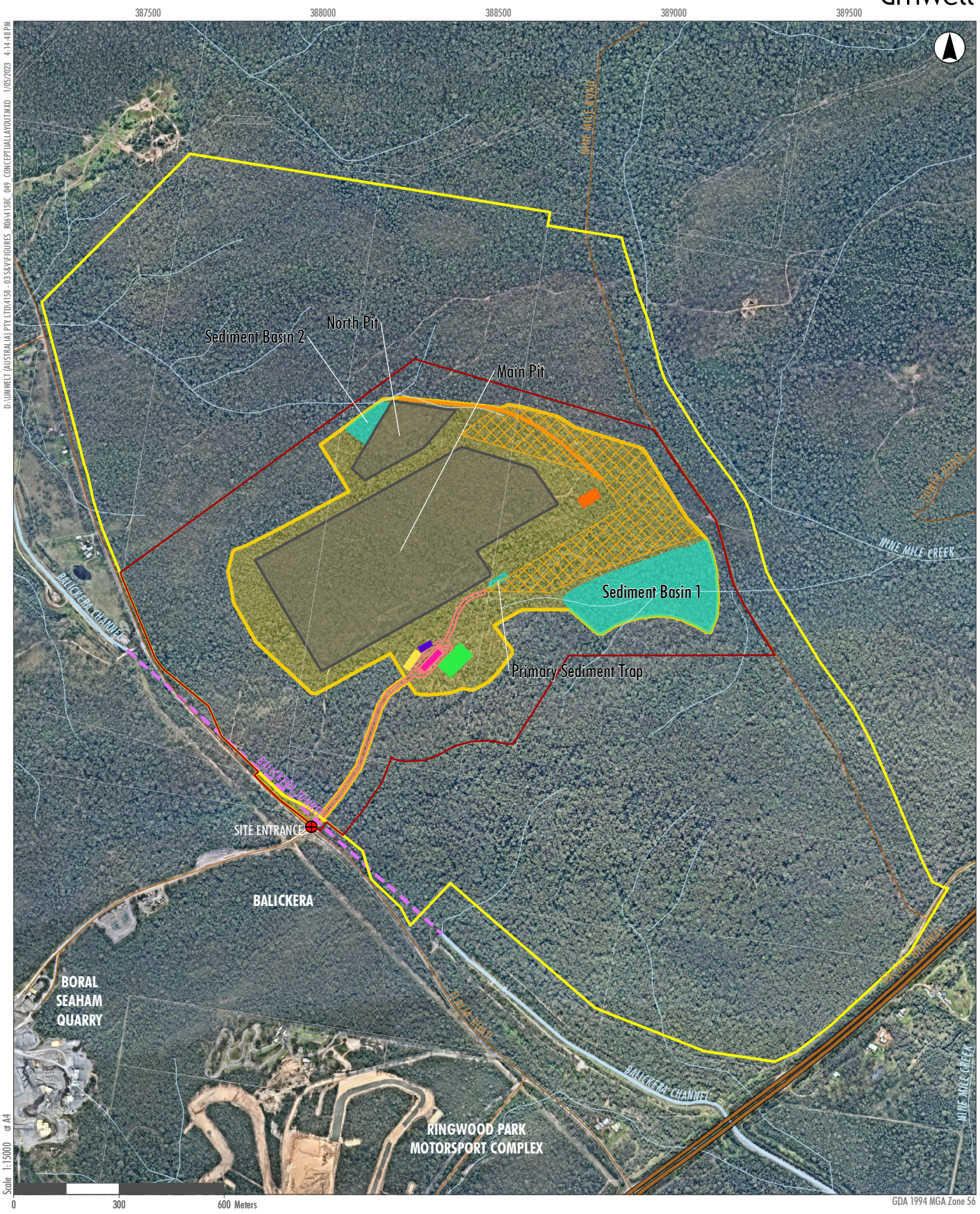
Legend

- Project Area
- LGA Boundary
- National Park / SCA / Nature Reserve
- State Forest
- Pacific Highway
- Road
- Balickera Tunnel
- Drainage Line
- Waterbody
- Lot Boundaries

Image source: ESRI Basemap (2021) Data source: NSW FSDF (2022)

FIGURE 1.1

Project Locality



Legend

- Project Area
- Disturbance Area
- Licence Area
- Pacific Highway
- Road
- Balickera Tunnel
- Drainage Line
- Lot Boundaries
- Pit Outlines (Stage 9)
- Office
- Weighbridge
- Access Road
- Northern Haul Road
- Workshop
- Truck Parking
- Light Vehicle Parking
- Stockpile and Plant Area
- Dams

Image Source: Nearmap (2022) Data source: NSW FSDF (2022)

FIGURE 1.2

Conceptual Project Layout

2.0 Methodology

SIA is an approach to predicting and assessing the likely social consequences of a proposed action and developing options and opportunities to improve outcomes for people. Best practice SIA is participatory and involves understanding impacts from the perspectives of those involved in a personal, community, social or cultural sense, to provide a complete picture of potential impacts, their context, and implications. This section outlines the approach taken in the development of the SIA.

2.1 Assessment Requirements

The SEARs for the Project identify key issues and guidelines that must be addressed in the preparation of the Environmental Impact Statement (EIS). **Table 2.1** presents the assessment requirements relevant to the SIA and outlines where these have been addressed in this report.

Table 2.1 Addressing SEARs Requirements

Key Issue	Requirement	Location in SIA
Social	A detailed assessment of the potential social impacts of the development that builds on the findings of the Social Impact Assessment Scoping Report, in accordance with the social impact assessment guideline for State significant mining, petroleum production and extractive industry development[1], paying particular consideration to: - how the development might affect people's way of life, community, access to and use of infrastructure, services and facilities, culture, health and wellbeing, surroundings, personal and property rights, decision-making systems, and fears and aspirations; - the principles in Section 1.3 of the guideline; - the review questions in Appendix D of the guideline.	**Sections 4.0** and **5.0**
Consultation	During the preparation of the EIS, you must consult with relevant local, State and Commonwealth Government authorities, service providers, Aboriginal stakeholders, community groups and affected landowners. In particular you must: • Consult with: - affected landowners; - community groups; - Port Stephens Council; - Biodiversity and Conservation Division within the Department - Heritage Council of NSW; - Environment Protection Authority; - Regional NSW – Mining, Exploration & Geoscience; - Department of Primary Industries (including Agriculture and Fisheries); - Forestry Corporation of NSW; - Crown Lands and Water Division within the Department; - Hunter Local Land Services;	**Sections 2.2, 2.3, 3.2.4** and **5.3**

[1] This SIA Guideline has since been updated to the current 2023 SIA Guideline that is referenced in the Section 1 of this report. The 2023 version of the Guideline has been referred to in the preparation of this SIA.

Key Issue	Requirement	Location in SIA
	- NSW Health; - Hunter Water; - NSW Rural Fire Service; and - Transport for NSW. • establish and operate a Community Consultative Committee for the project in accordance with the Community Consultative Committee Guidelines for State Significant Projects, and consult with the committee during the preparation of the EIS;	

This SIA has been prepared in accordance with the NSW Government's Social Impact Assessment Guideline (DPIE, 2023) for SSD, as part of the EIS, as illustrated in **Figure 1.1**, with **Figure 2.2** providing an overview of the key SIA Program phases. This 2023 Guideline supersedes the 2017 SIA Guideline for State significant mining, petroleum production and extractive industry development released by the then DPE and referred to in the SEARs.

Commensurate to the requirements of the Guideline, **Appendix C** outlines the SIA review questions to confirm that the requirements of this Guideline have been fulfilled in considering the social impacts of the project.

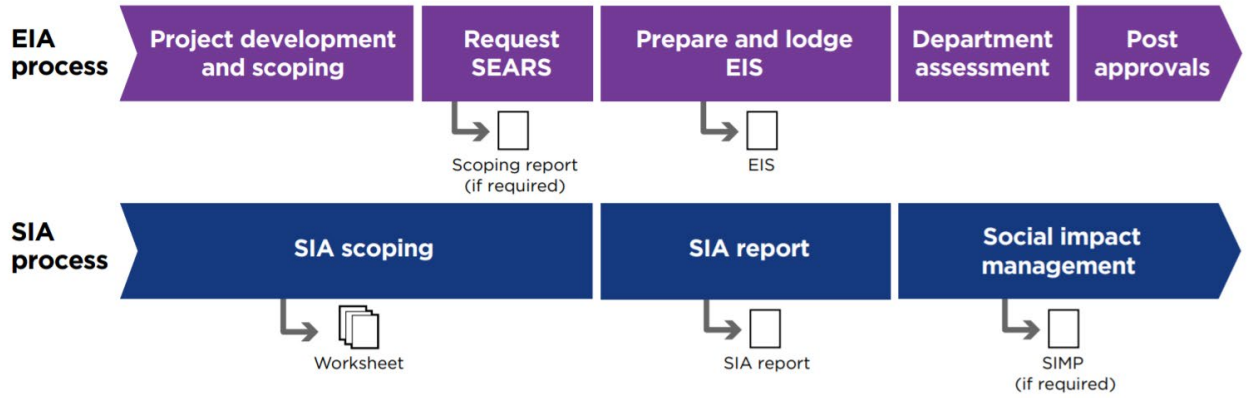


Figure 2.1 SIA and EIA Process Alignment

Source: DPIE, 2023

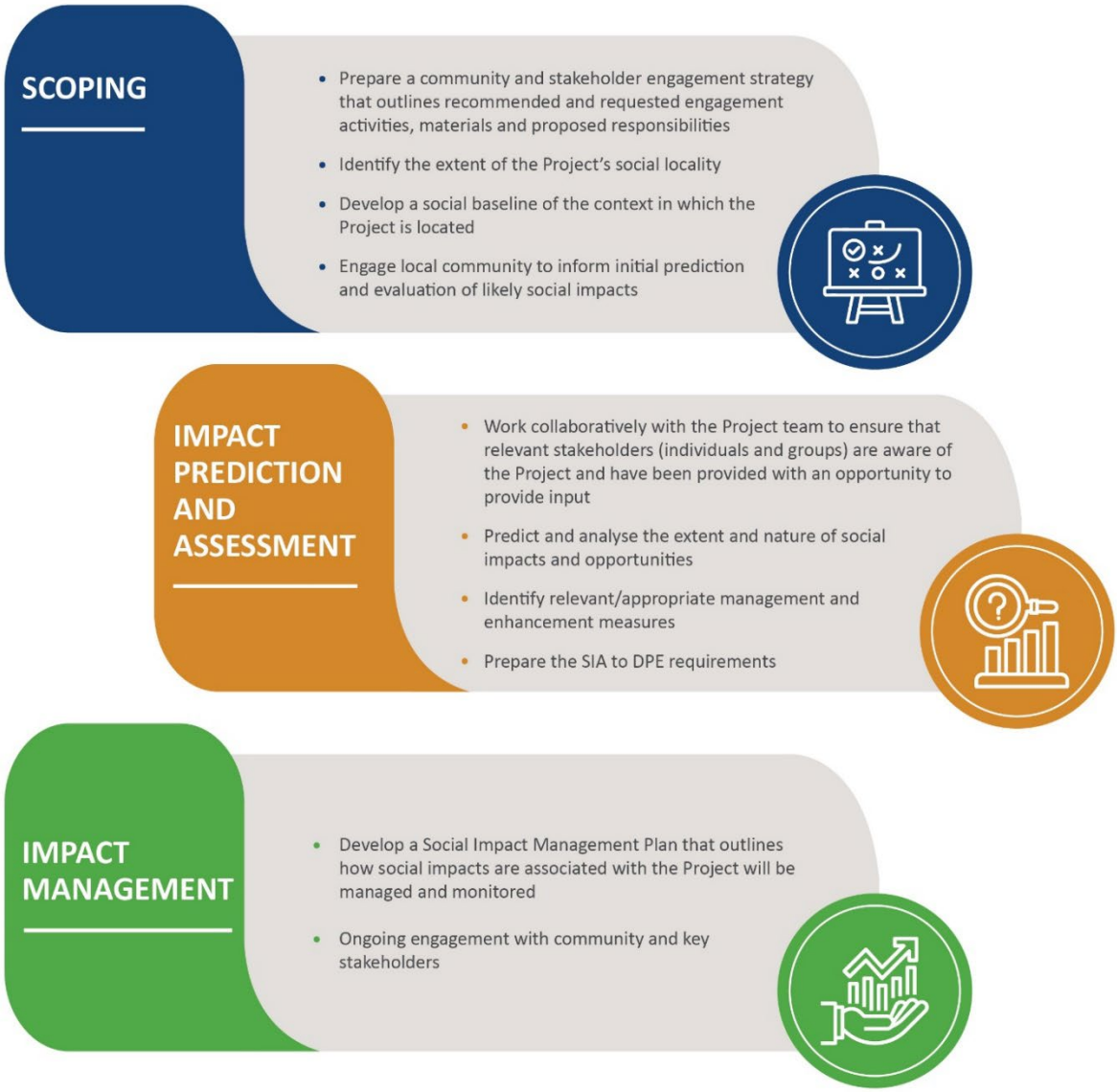


Figure 2.2 SIA Program Phases

Source: Umwelt, 2022.

According to the SIA Guideline, and as outlined in **Figure 2.3**, social impacts can be grouped into several different categories and may involve impacts and changes to people's way of life, community, accessibility, culture, health and wellbeing, surroundings, livelihoods, and decision-making systems.

Figure 2.3 Social Impact Categories

Source: Umwelt, 2022.

An SIA, informed by community and stakeholder engagement, affords the opportunity to effectively integrate social outcomes within Project planning, design and assessment phases. As is the case with any type of change, some individuals or groups within the community may benefit, while others may experience negative impacts. If negative impacts are predicted, it is the role of the SIA to determine how such impacts may be addressed effectively to reduce the degree of disruption to those affected. If positive impacts are predicted, the aim of the SIA is to maximise these opportunities and identify how they might be further enhanced and realised.

Monitoring and evaluation are also a key component of a SIA process and should involve developing a plan to monitor and adaptively manage social impacts. Such a plan should identify processes to identify any unanticipated impacts that may arise because of the Project, ensure that appropriate strategies are in place to monitor predicted impacts against actual impacts, that relevant mechanisms are in place to identify and report on incidents and complaints, that ongoing social risks and opportunities are identified and analysed, and that appropriate mechanisms are in place to facilitate data sharing.

The SIA report includes an assessment and prediction of impacts and the development of relevant strategies to mitigate any negative social impacts and enhance positive impacts associated with the Project. Consideration of relevant management measures are also included.

2.2 Stakeholder Identification

Social impact assessment involves the cooperation and coordination of a number of '*social partners*' or '*stakeholders*'. As Burdge (2004) outlines, stakeholders may be affected groups or individuals that:

- live nearby the resource or Project
- have an interest in the proposed action or change
- use or value a resource
- are interested in the use of the resource
- are forced to relocate as a result of the Project.

A stakeholder identification process was undertaken for the Project to support the planning and delivery of community and stakeholder consultation to inform the SIA. This process involved identifying stakeholders with an interest, or those directly and indirectly affected by the Project, including any potentially vulnerable, marginalised or potentially under-represented groups. Further definition of the stakeholder identification process is outlined in the Community and Stakeholder Engagement Plan (CSEP) in **Appendix B**. The CSEP was developed during the Scoping Phase of the Project to guide engagement during the scoping and EIS phases.

As part of the SIA program for the Project, several categories of stakeholders were identified as important to engage throughout the SIA and EIS process (refer to **Figure 2.4**).

Figure 2.4 Stakeholder Groupings

Source: Umwelt, 2022

Key stakeholder groups relevant to the Project are further defined by the following:

Near Neighbours - residents and landholders (approximately 19 households) residing within 2 km of the Project site.

Wider Community - Residents and landholders in the surrounding suburbs and localities of Balickera Suburb and Locality (SAL); Eagleton SAL, East Seaham SAL and Ferodale SAL (approximately 210 households), and residents located along the transport route.

Aboriginal Stakeholders - including Registered Aboriginal Parties (RAP), Native Title and Aboriginal Land Council claimants.

Local Businesses – businesses operating along the proposed transport route and located within the surrounding state suburbs of Balickera, Eagleton, East Seaham and Ferodale.

Employees – ARDG employees and contractors.

Service Providers - service providers located within the surrounding suburbs and localities of Balickera, Eagleton, East Seaham and Ferodale and along the transport route.

Local, State and Federal Government – relevant government agencies.

In consideration of the above stakeholder groups, the following stakeholders have been identified as important to engage throughout the SIA process (refer to **Table 2.2**).

Table 2.2 Identification of Project Stakeholders

Stakeholder Group	Stakeholders
Near Neighbours	Residents of Italia Road, East Seaham (southeast of Caswells Creek) Residents of Nine Mile Creek Road, Ferodale
Wider Community	Residents of the state suburbs of Balickera, East Seaham, Eagleton and Ferodale
Community Groups	Local Community Groups: • Voice of Wallalong, Woodville (VOWW) and Surrounds • Ironstone Community Action Group (ICAG) inc.
Aboriginal Groups	Worimi Local Aboriginal Land Council
Local Businesses	Local businesses within 2 km of the Project site: • Boral Seaham Quarry • Port Stephens Gardenland • MG Car Club • Hunter Valley Paintball • MX Central – Motor Cross • Circuit Italia Other interested local businesses in East Seaham, Ferodale and Eagleton
Service Providers	Seaham Rural Fire Service Essential Energy Hunter Water Corporation
Local Government	Port Stephens Council (PSC)
State Government	Department of Planning and Environment (DPE) Biodiversity and Conservation Division (BCD) Forestry Corporation of NSW (FCNSW) NSW Resource Regulator (RR) Environment Protection Agency (EPA) Department of Planning and Environment – Water Transport for NSW (TfNSW) [formerly Roads and Maritime Services (RMS)] Other Government Agencies (as required)
Federal Government	Department of Climate Change, Energy the Environment and Water Science (DCCEEW)
Employees	ARDG employees Contractors

2.3 Community Consultation

Stakeholder engagement has been undertaken over two main rounds as part of the SIA program:

- **Round 1:** to inform the scoping phase of the SIA and the development of the Scoping Report. This Round, undertaken from November to December 2020 sought to identify the perceived issues/impacts to near neighbours and key stakeholders in the Project Area.

- **Round 2:** to further inform the evaluation and prediction of social impacts to support the preparation of the SIA, including the development of relevant mitigation and enhancement strategies. Round 2 engagement took place from September to December 2022.

A range of mechanisms have been utilised to obtain the input of various stakeholder groups. **Table 2.3** outlines the mechanisms that were utilised to engage with each stakeholder group in both the scoping phase and assessment phase of the EIS.

Table 2.3 Stakeholder Consultation and Engagement Undertaken During Scoping Phase and for the EIS Phase

Mechanism	Targeted Stakeholder	Description	First Round of Consultation (scoping)	Second Round of Consultation (SIA / EIS phase)
Community Information Sheets	Near Neighbours Businesses Broader Community	Community information sheet detailing the proposed Project and contact details for the project team. Delivered to mailboxes of near neighbours and business stakeholders. Three businesses received the Community information sheet via email communications.	**No. 1** - Project overview, overview of the assessment process and invitation to participate in the SIA. Distributed in February 2020. Information sheet distributed to 19 near neighbours	**No. 2 -** Provide a Project update and validate the feedback received from community received during the scoping phase. Distributed in August 2022. **No. 3** - Provide a Project update and disseminate key findings from the technical assessment studies. Overview of the assessment process and invitation to participate in the SIA. Distributed in October 2022.
Door Knocking	Near Neighbours	Door knocks undertaken to inform near neighbours of the Project and invite them to participate in a SIA personal interview.	19 households	Two follow up phone calls received from community members following Community Information Session held on 2 November 2022.
Telephone calls to invite participants to participate in personal interviews	Near Neighbours	Proactive contact with landholders/residents (where contact details were available). Scheduling of personal interviews (face-to-face or telephone) according to stakeholder preference. Individual meetings held in person or via telephone, utilising a semi-structured interview guide/questionnaire (refer to Appendix 1).	Follow up phone calls completed with households who were unavailable at the door knocking. Six (6) surveys completed over the telephone.	Follow up phone calls completed with near neighbours (19 near neighbours). Near neighbours were also notified of the Community Information Session and Information Sheet 3 at this time.
Personal Meetings and Project Briefings	Federal Government Local Government State Government	Targeted meetings and briefings with key local and state government agencies as required	Project briefings were held, including: DPE Hunter Water Port Stephens Council	Project briefings were held, including: DPE DCCEEW Hunter Water

Mechanism	Targeted Stakeholder	Description	First Round of Consultation (scoping)	Second Round of Consultation (SIA / EIS phase)
			TFNSW FCNSW	Port Stephens Council TFNSW FCNSW BCD DPE Water
Project phone number/email	Broader Community	ARDG have a dedicated project phone number and email address to enable community members to obtain information and/or provide feedback on the project.		Four phone calls with members of the community. Six email interactions with members of the community.
Community Information Session (Drop-in Session)	Broader community Community groups Local businesses and service providers	Multi-hour time period when stakeholders can drop in to speak to the Project team and experts, view documents and plans and ask questions.	Not held due to COVID-19 restrictions.	One session held at Seaham School of Arts Hall on 2 November 2022 between 3pm and 6pm to summarise the draft results of the technical studies and seek input into the SIA. Twenty (20) stakeholders attended the session. Surveys were made available for attendees to complete as this session with many taking away surveys / link to online survey for this purpose but choosing not to complete.

Mechanism	Targeted Stakeholder	Description	First Round of Consultation (scoping)	Second Round of Consultation (SIA / EIS phase)
Online Survey	Broader Community	Online or offline surveys to validate social impacts and mitigation measures, obtain input and feedback on Project decision-making, as well as specific information about the needs, desires and impacts on stakeholders related to the Project. A link to an online survey was included in Community Information Sheet No. 3.	Not held at scoping phase	4 completed online surveys (9 commenced but not completed)
Community Consultative Committee (CCC)	CCC Members	CCC established and to undertake ongoing meetings to discuss and monitor social impacts.	Not required at scoping phase	First meeting held 23 February 2023. Meeting Chair determined that meetings to be held on a quarterly basis.

2.4 Social Baseline Profile

A social baseline profile gathers knowledge from both primary and secondary data sources to inform an understanding of the existing social environment in which a project is proposed and of potentially affected communities. The social baseline profile is a foundational component of SIA as it provides the basis for which social impacts associated with the Project may be predicted, assessed, monitored, and managed over time.

Key components of a social baseline profile include:

- The scale and nature of the project.
- Who may be affected, including identification of any vulnerable or marginalised groups.
- Any built or natural features on or near the project.
- Relevant social, cultural, and demographic trends and other change processes.
- The history of the proposed project and/or development in the area, including community response to previous change.

2.4.1 Sustainable Livelihoods Approach

To better understand the communities of interest to the Project and to evaluate their resilience and adaptive capacity to change, the social baseline has utilised the Sustainable Livelihoods Approach (U.K. Department for International Development (DFID, 2001), and the community capitals outlined in the IAIA SIA Guidance (IAIA, 2015).

According to the Sustainable Livelihoods framework, people seek to maintain their livelihood within a context of vulnerability (Coakes & Sadler, 2011). Specifically, threats to their livelihood including shocks (such as sudden onsets of natural disasters, health problems, conflicts, and economic crises), trends (for instance, those relating to the economy, health, resources, and governance) and seasonality (such as cyclical fluctuations in prices or employment with people drawing on these assets to build and maintain their livelihood. Consequently, a livelihood is considered sustainable '…*when it can cope with and recover from stresses and shocks and maintain or enhance its capabilities and assets both now and in the future, while not undermining the natural resource base*' (DFID, 2001).

The DFID approach draws on broad categories of community capitals as a fundamental basis to identifying and further enhancing community capacity and resilience and has been used in many SIA studies (Coakes & Sadler, 2011; IAIA, 2015). The vulnerability in each capital area can be assessed through the selection of a suite of indicators selected to assess a community's vulnerability to change, or conversely, their adaptive capacity. Elements of each capital area are further outlined in **Figure 2.5**.

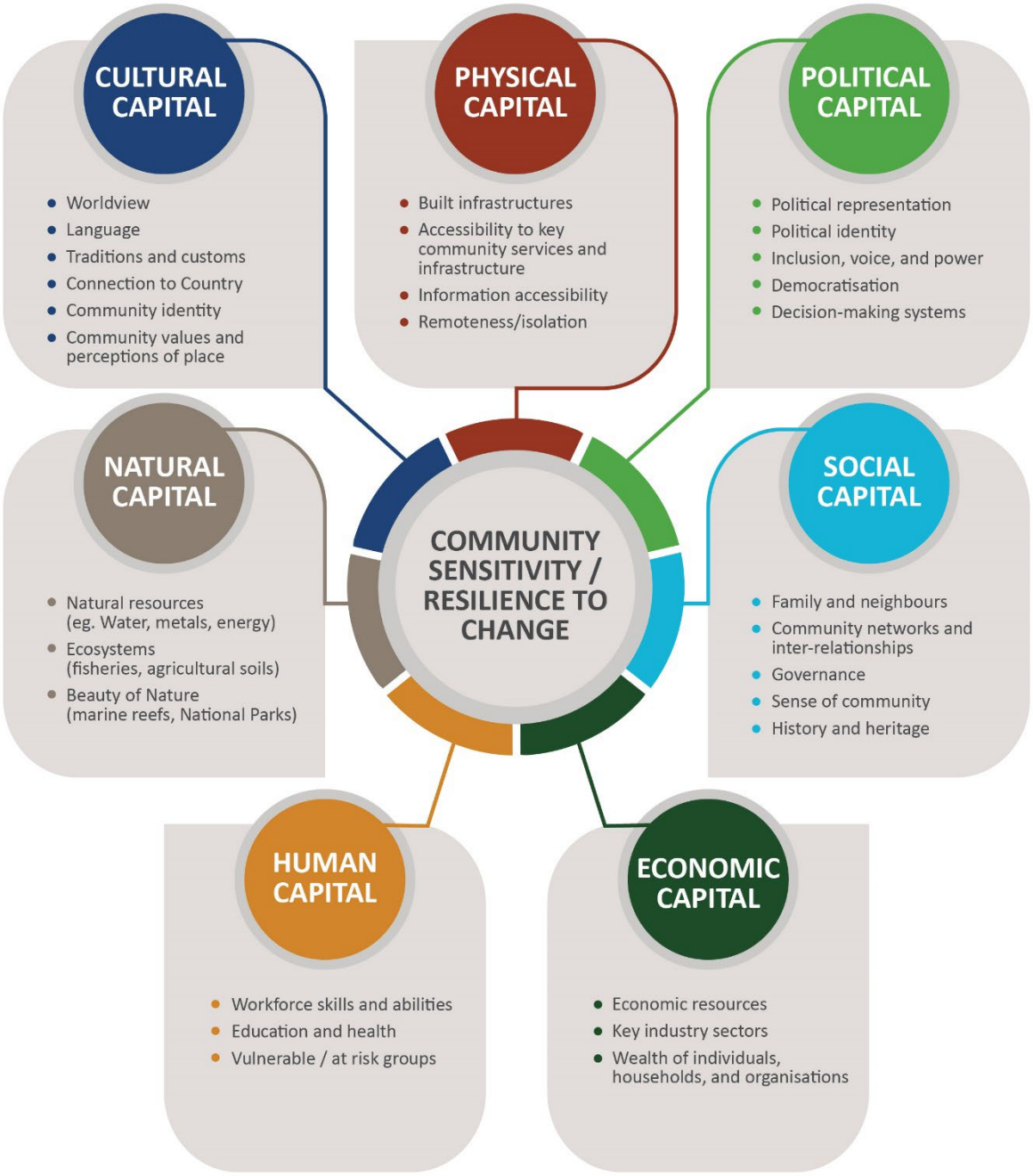


Figure 2.5 Community Capitals Framework

Source: Coakes & Sadler, 2011, Designed by Umwelt, 2021

This methodology has been further developed to reflect an additional two capital areas – cultural and political capital (IAIA, 2015).

The vulnerability or conversely the adaptive capacity of the social locality can be assessed through the selection of a suite of socio-economic indicators. Elements of each capital area are further outlined in **Figure 2.5,** with the following sections summarising key community strengths and vulnerabilities of the social locality with additional information provided in **Figure 2.5.**

2.4.2 Data Sources

The social baseline within this report has made use of a range of data sources to understand the socio-economic, cultural, and demographic characteristics of the communities within the Project's locality. The social profile is used as a basis to determine how the Project may affect different aspects of people's lives - the Project's social impacts.

Data for the social baseline profile has been gathered and summarised from publicly available secondary datasets, including the most recent Australian Census (2021), as well as through a review of local media, government plans and strategies and other literature as it relates to the social locality.

Statistical and comparative analysis using ABS data has been undertaken at the LGA level to capture key characteristics and trends across local communities. Suburbs and Localities (SALs) level data has also been utilised, with key indicators compiled and data sources utilised outlined at **Appendix D.**

2.5 Impact Validations and Evaluation

Quantitative and qualitative information collected through engagement activities has informed the identification and assessment of the Project's potential or perceived social impacts (refer to **Section 4.0**) and the identification of management and enhancement measures and Project refinements.

Potential impacts on people are defined for each project component and activity. The assessment of these impacts considers whether previous investigation of the impact has been undertaken, the potential for cumulative impacts, and includes identification of mitigation and/or enhancement measures to reduce negative impacts and enhance positive impacts.

Section 5.0 assesses and ranks the Project's social impacts according to defined criteria, as outlined in the SIA Guideline (DPIE, 2023) with the inclusion of perceived social risk, as identified through stakeholder consultation. The criteria are described at **Appendix D.**

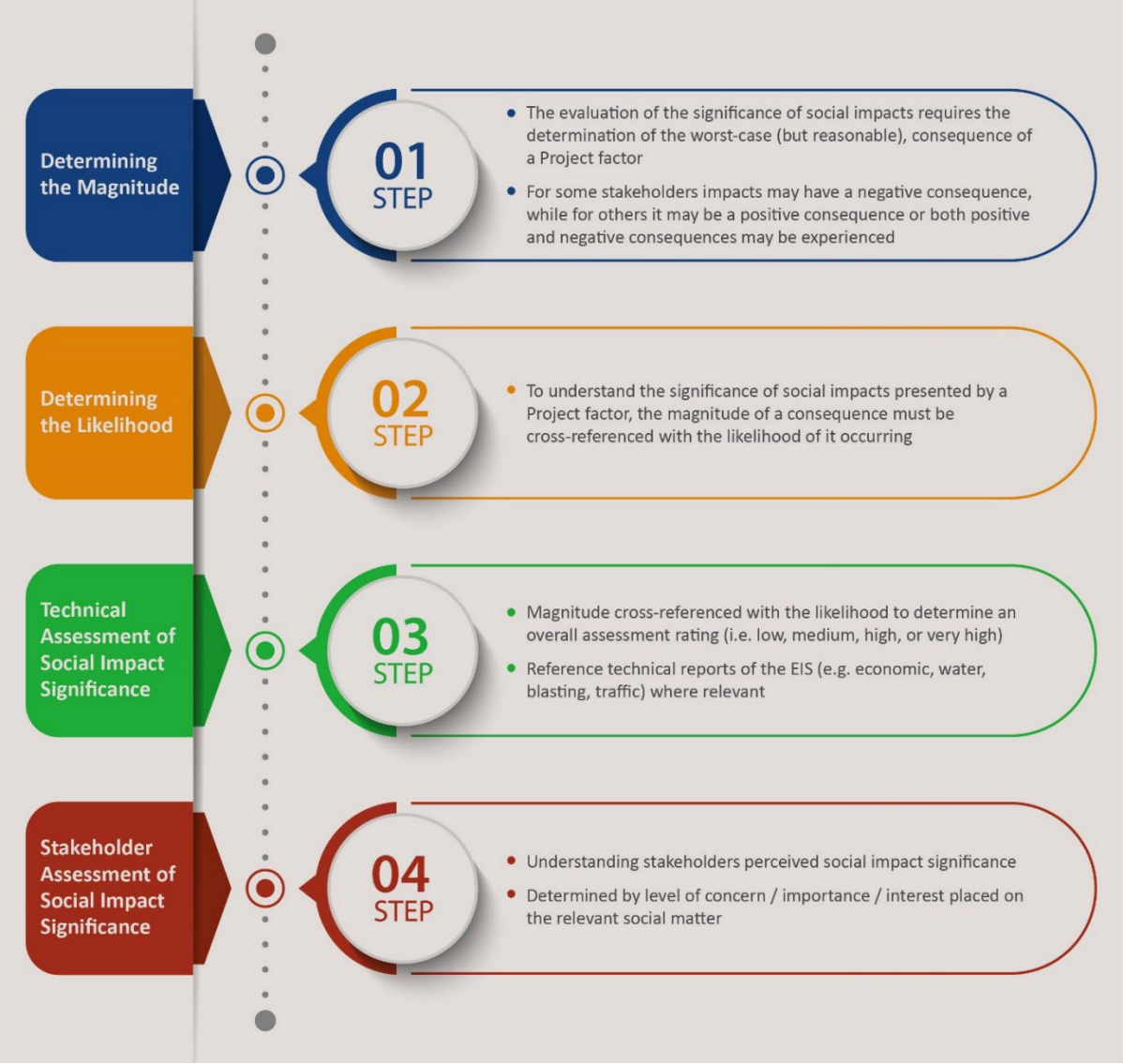


Figure 2.6 Social Impact Evaluation Process

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Section 5.0 provides an evaluation of the significance of each of the Project's potential social impacts. The assessment is undertaken using the criteria noted at **Appendix D** and through the application of the consequence and likelihood framework, as identified in the SIA Guideline (DPIE, 2023) (and summarised in Figures 2.6 of **Appendix D**).

2.6 Assessment Limitations

It is important to note a potential limitation of this SIA is that a limited number of stakeholders chose to be involved in consultation activities during the second round of consultation (SIA / EIS phase) and complete an interview or survey. It is possible that this is due to a lack of notable concern with regards to the Project proposal.

Information to inform the SIA therefore also draws heavily on issues and opportunities identified during the scoping phase of the SIA.

3.0 Social Baseline Profile

This section describes the profile of the communities located within the Project's social locality/social area of influence. It details the defining characteristics of the communities, considering a range of demographic, social and economic indicators. Further, it describes the natural and physical attributes of the social locality and an understanding of how people currently live, work and recreate in the area, and how they value the area.

A baseline social profile gathers knowledge from both primary and secondary data sources to understand the existing social environment in which a project is proposed, and of potentially affected communities. The social baseline is a critical component of SIA as it provides the foundation from which social impacts associated with the Project may be assessed and predicted, with the following components considered:

- ***Development context*** – a review of the recent history of communities, including cultural characteristics and community values.
- ***Geographic and spatial*** – identification of communities and relevant stakeholders.
- ***Socio-political setting*** – an understanding of the relevant governance structures, including those of Traditional Owners and Local Aboriginal Land Councils, and local, State and Federal government authorities.
- ***Community capital/assets*** – an assessment of the social, cultural, and demographic characteristics of the communities and their resilience and adaptive capacity to respond to change.
- ***Key community values, issues, and concerns*** – documentation of current community issues as identified in key strategic planning documents, regional plans and/or community studies, as well as through analysis of local and regional media sources.

3.1 Defining the Social Locality

The term 'social locality' or 'area of social influence' is commonly used in SIA practice. There is no fixed meaning or predefined geographic boundary to a social locality (e.g., the local suburb, or 'within 500m'). Instead, the scale of the social locality should be established on a case-by-case basis, having regard to the nature of the project and its impacts (DPIE, 2023). For further direction, the Guideline states that the social locality is defined by:

- the scale and nature of the project
- who may be affected by the project
- whether any vulnerable or marginalised people may be affected by the project
- built or natural features on or near the project that could be affected, and the intangible values that people may associate with these features
- relevant social, cultural, demographic trends or social change processes occurring now or in the past near the project site and in the broader region

- the history of the proposed project and the area, and any similar experiences people near the project have had, including change prior to, or created by, the planning assessment process.

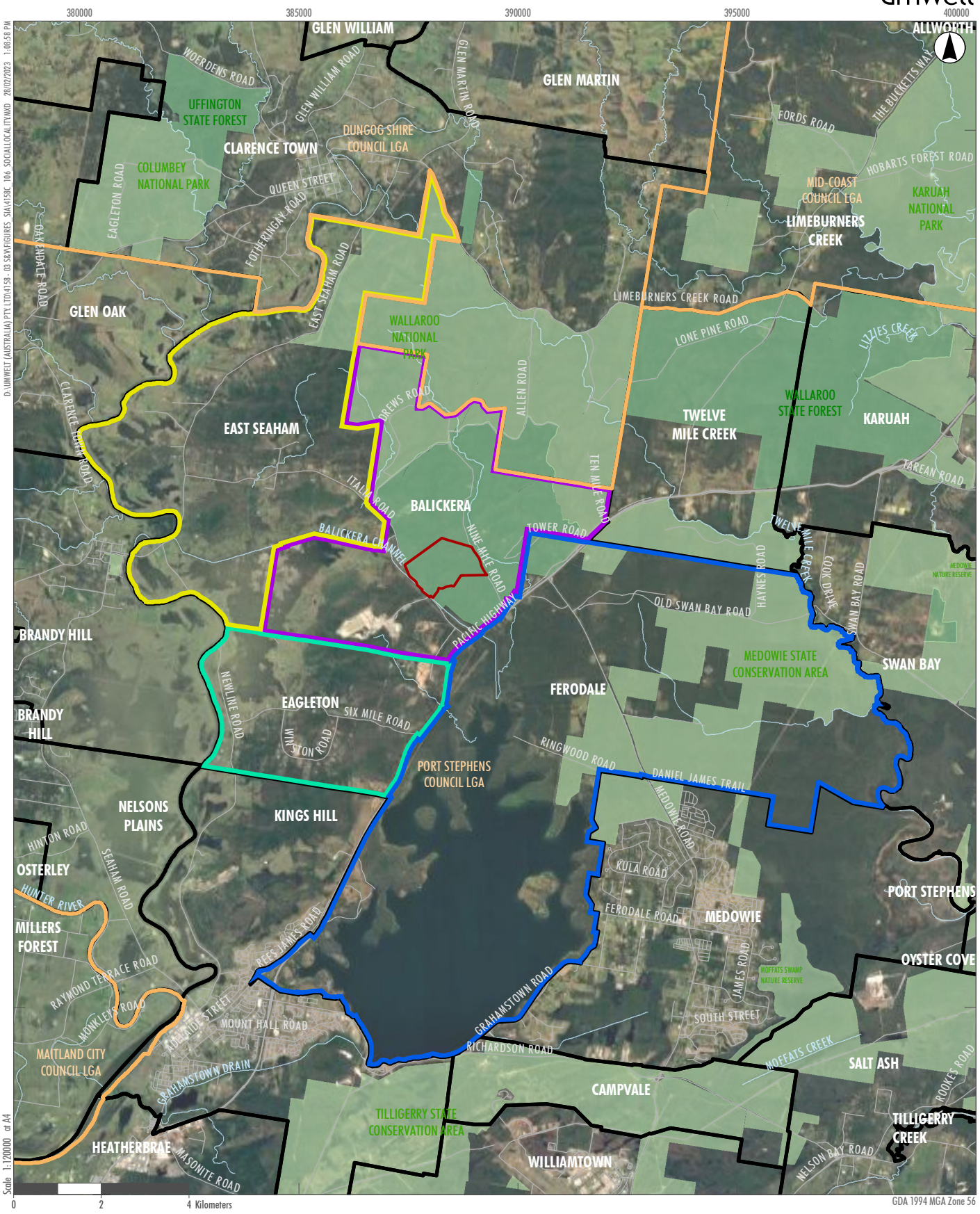
In defining the social locality for Project, statistical areas prescribed by the Australian Bureau of Statistics (ABS), as well as the land tenure composition of properties in or nearby the Project Area have also been used to determine the social locality (or 'area of social influence'). The primary communities of interest that comprise the social locality for the purpose of this assessment are outlined in **Table 3.1** , with **Figure 3.1** visually representing the area of social influence.

Table 3.1 Communities of Interest in the Social Locality

Community of interest and purpose	Statistical area
Suburbs and Localities	Balickera SAL[2] Eagleton SAL East Seaham SAL Ferodale SAL
Local Government Area (LGA)	Port Stephens LGA
Region	Lower-Hunter
State	NSW

The extent of influence of a project, its impacts, and associations may change as projects and communities develop and evolve over time. Consequently, the social locality may be adapted, minimised, or extended beyond the parameters identified in **Table 3.1** at subsequent stages of project planning and assessment, to include locations where construction workforces may be based and where suppliers and/or materials may be sourced for the Project.

[2] Suburbs and Localities (SALs), formerly referred to as State Suburbs (SSCs), are an ABS Mesh Block approximation of the officially recognised boundaries of suburbs (in cities and larger towns) and localities (outside cities and larger towns) as defined by the State and Territory governments of Australia. Suburbs and Localities are created to enable the release of ABS data on areas that approximate the official localities. This allows for the comparison of ABS data with other data collected using localities as the geographic reference. ABS approximations of administrative boundaries do not match official legal boundaries and should only be used for statistical purposes.



Legend

- Project Area
- LGA Boundary
- National Parks (NPWS Estate)
- State Forest
- Road
- Drainage Line

SAL Boundaries (2021)

- Balickera
- Eagleton
- East Seaham
- Ferodale
- Other SALs

FIGURE 3.1

Social Locality

Image source: ESRI Basemap (2021) Data source: NSW FSDF (2022), ABS (2022)

3.2 Local and Regional Context

This section draws on several data sources to build an understanding of the development context of the region and the social locality in which the Project is based. Understanding the social localities' historical response to change will assist with predicting how the Project may be perceived and accepted locally; and the degree to which the Project aligns with community values and sentiment.

3.2.1 Regional Setting

The Project is located approximately 8km east from the town of Seaham, 10 km south of Clarence Town, and 11 km northeast of Raymond Terrace. It is located within the lower Hunter Valley Region of NSW, a diverse and productive region with key transport infrastructure and transport systems connecting Newcastle, Sydney, the Central West, the Northwest, and the Northern Tablelands. The population of the Hunter region is projected to reach 862,250 by 2036 and has consequently been identified as the State's fastest metropolitan growth area (DPIE, 2016). Strategically important transportation and infrastructure networks include the Pacific Highway, the Hunter Expressway, rail infrastructure associated with the Hunter Valley Coal Chain, key energy transmission infrastructure and pipelines.

According to the Hunter Regional Plan 2041 (DPE, 2022), the Project Area is located within the 'hinterland district', so described as it consists of "the rural landscapes connected to metropolitan Greater Newcastle and the World Heritage listed natural areas". The areas rural areas and non-urban character are further defined by:

- rural enterprises, rural residential, tourism, environmental and outdoor recreation uses;
- the predominance of natural landscape over buildings and structures; and
- limited, dispersed buildings and structures that are integrated with the natural landscape.

3.2.2 Historic Context

The inhabitants of the Port Stephens area prior to European settlement were the Worimi people, who lived on the water's edge surrounding the port. The area remains important for the Worimi and possesses many sites of Aboriginal heritage significance, the most prominent being the Canoe Trees at Little Beach. Currently, no native title claims have been recognised in the Port Stephens LGA, however on several occasions the Worimi Aboriginal Land Council has submitted applications for title claim, with no success (National Native Title Tribunal, n.d.).

Port Stephens was first noted by Europeans in May 1770. At this time Captain James Cook described the area as 'an opening forming a bay', with the area in its early settler history, known as a haven for convicts escaping Sydney.

The area continued to grow throughout the 1800's as new colonies settled in the area. A century after the earliest leasehold was advertised in 1838 near Wallaroo National Park and prior to their dedication as conservation reserves, timber was removed from the Karuah, Medowie and Wallaroo State Forests for the use of pit props and other mining timber. Historic sites within in the Wallaroo National Park include cattle yards on Ripley's and Callaghans trails, an old sawmill site, bridges along Drews and Ten Mile Roads and a post-and-rail fence line (Port Stephens Council, 2020).

3.2.3 Development History and Existing Quarry Operations

This section outlines stakeholder attitudes pertaining to local quarrying operations or proposed developments in the area. Further, a review of other existing and proposed quarrying developments has also been undertaken to better understand potential community issues associated with these projects.

3.2.3.1 Boral Seaham Quarry

Boral Seaham Quarry, located in bushland near the Wallaroo State Forest, Balickera and approximately 1.2 km from the Project, is a hard rock quarry that has been operating since 1991 following the approval of development consent (DA 2683_85) by the Port Stephens Council in September 1985. Operations are largely protected from public view by thick vegetation. The quarry extracts hard rock materials, such as ignimbrite and igneous rock, used in the manufacture of concrete and asphalt. Quarrying activities take place between 6.00 am and 10.00 pm weekdays, 6.00 am to 5.00 pm Saturdays and operations cease on Sundays. On average, the quarry has produced up to 800,000 tonnes per annum of aggregates since operations commenced (Boral, 2020).

DA 2683_58 has been successfully modified a total of four times to account for some minor production changes, and an amendment to the site's hours of operation (2005).

The consent and its modifications set out the operating, environmental and reporting conditions the quarry must comply with throughout its 'life'. The quarry is currently approved to operate to 2035.

In September 2020, a modification proposing to lower the quarry's pit floor to extend its life was voted against unanimously by Port Stephens Councillors. Traffic safety concerns regarding the intersection of Italia Road and Pacific Highway were raised by both the Council and Transport for NSW (TfNSW) and were identified as the reason for rejection for the development application to expand the life of Seaham Quarry.

3.2.3.2 Eagleton Quarry

Eagleton Rock Syndicate Pty Ltd (Eagleton Rock) proposed the development in 2015 (SSD-7332) for a 30-year hard rock quarry operation located on Barleigh Ranch Way, Eagleton. The site is approximately 1.5 km from the Project area, It is approximately 2 km southwest of the Pacific Highway and Italia Road intersection, with access to the proposed quarry via Barleigh Ranch Way and Italia Road. The Eagleton Rock project is seeking approval to extract and process up to 600,000 tonnes of igneous and sedimentary rock per annum over an area of approximately 30 ha. Quarrying activities are proposed between 7.00 am and 6.00 pm weekdays and 7.00 am to 4.00 pm Saturdays.

Community consultation was undertaken by Umwelt in 2016 with residents from the Eagleton area, local businesses and government agencies, regarding the proposed Eagleton Quarry. Responses revealed that noise from quarrying equipment was the most frequently raised issue of concern, followed by dust and potential property damage due to blasting.

The Eagleton Quarry proposal was lodged in 2017 and was publicly exhibited between 3 February 2017 and 6 March 2017. A total of 59 submissions were received for the project, with 50 from residents and special interest groups and nine from government agencies. The most frequently identified social impacts identified during the submissions phase included:

- Traffic and transport
- Social impacts

- Water management
- Noise and vibration (including blasting)
- Air quality and dust
- Biodiversity
- Economic impacts
- Rehabilitation
- Heritage.

Public submissions revealed that traffic and transport concerns were of particular concern for local road users (68% of public submissions), with safety of the Italia Road - Pacific Highway intersection questioned, and suggestions made regarding a potential intersection upgrade. Traffic risks associated with speed and limited visibility of oncoming traffic and congestion were also raised as high concerns.

Water management issues were raised in 52% of public submissions during the submissions phase, with DPE requiring sufficient evidence that the proposed site's water management system was sufficient to store water without spillage, up to and including a 1:500-year rainfall event. A media article in the Newcastle Herald outlined the NSW Environmental Protection Authority's (EPA) concerns that the Hunter's largest drinking water source, the Grahamstown Dam, must be protected from discharge of polluted water associated with the proposed quarry development.

A Project amendment was requested and accepted with DPE in September 2022 with some revised requirements to be provided including further biodiversity assessment and consultation.

3.2.3.3 Brandy Hill Quarry

The Port Stephens Council granted development consent for the Brandy Hill Quarry which is located approximately 11km from the Project area in 1983. Since 2001, Hanson Construction Materials Ptd Ltd (Hanson) has been operating the quarry. In July 2020, Hanson received approval from the Independent Planning Commission of NSW under SSD-5899 to expand extraction to 1.5 million tonnes per annum, doubling their former consent of 700,000 tonnes per annum.

During the approvals process, several social impact concerns were raised, including road safety, noise (especially at night), vibration caused by heavy vehicles, access to private property, air quality and dust, road condition and water concerns. Ecological impacts were raised in September 2019, when an injured koala was found on the boundary of the Brandy Hill Quarry, raising community concerns regarding the 46ha required to be removed, should the Expansion Project be approved.

The Brandy Hill/Seaham Action Group was formed due to a lack of communication regarding the Quarry's plans for expansion. Social impact concerns relating to the proposed expansion included an increase in the number of quarry truck movements and their website encourages the public to report any truck movements outside the hours of 6.00 am to 6.00 pm, questioning the validity of the 24 hours a day, 7 days a week operation. The article further outlines the need for the provision of information to the community by other means, other than only through the Community Consultative Committee (CCC).

At the time of its' approval, the expansion project received significant national media coverage with regards to the strength of the State's biosecurity framework to assess koalas, in light of the habitat destruction during the summer 2019-20 bushfires (Millington, 2020).

3.2.3.4 Martins Creek Quarry

Martins Creek Quarry is an existing hard rock quarry located within the Dungog LGA, approximately 24 km from the Project area and approximately 7 kilometres (km) north of Paterson, in the Upper Hunter region

of New South Wales (NSW). The Quarry was established in 1914 by the NSW Government, primarily for the purpose of supplying ballast and other quarry materials to the rail industry. It was operated continuously by various NSW Government entities until late 2012, when Buttai Gravel Pty Ltd (part of the Daracon Group, Daracon) commenced operations at the site.

In September 2016, Daracon submitted a SSD application for the Martins Creek Quarry Project (SSD 6612). The application sought approval for the consolidation of the existing development consents and expansion of the quarry into new areas to extract, process and transport up to 1.5 million tonnes per annum (Mtpa) of hard rock material over a 30-year period.

In May 2021, in response to government and community feedback, Daracon revised the Project and completed an updated environmental assessment, and submitted an amended development application, reducing the proposed extraction rate, operating hours and truck movements.

During the public exhibition period in 2021, 686 submissions were made on the Revised Project including 636 submissions objecting to the Revised Project. Stakeholder concerns associated with the Project and documented in submissions largely related to impacts on the community, including impacts of traffic and heavy truck movements on social amenity (particularly within the villages of Paterson and Martins Creek), noise, air quality, blasting, public health and safety, visual, economic, biodiversity, impacts to heritage, cumulative impacts due to proximity to other quarrying operations, impacts on water resources, rehabilitation and greenhouse gases.

In February 2023 the NSW Independent Planning Commission (IPC) determined the refusal of the revised Project due to significant adverse impacts of increased truck movements on residential amenity, tourism, local businesses and road, and pedestrian safety affecting the nearby community.

3.2.4 Community Values, Needs, and Aspirations

Near neighbours consulted during engagement of the Stone Ridge SIA were long-term residents of the area, residing in their respective properties for on average 23 years, or in the area (including Raymond Terrace) for 38 years. The quiet, rural outlook, lack of immediate neighbours, proximity to nature and the forest that affords activities such as birdwatching, horse riding, 4-wheel driving, motorbike riding and camping, and access to local shops and services were lifestyle aspects that were highly valued by those consulted.

> *Close to everything. It's still close to services, it's ten minutes to the shops, ten minutes to the school, thirty minutes to the beach.*
>
> *We will never have neighbours.*
>
> *We liked that we would never have the possibility of being built out.*
>
> *I like it here for the forestry. Been here 26 years and enjoy horse riding, motorbike riding, 4WDing, camping, exploring the State Forest. We have peace and quiet all the time.*
>
> *Lack of noise. No neighbours.*
>
> *Quiet, rural atmosphere. I have a strong interest in nature, local vegetation, flora and fauna. It is a hobby and I can indulge it quite easily here. We love living here.*
>
> *Bird watching, nature.*

Stakeholders were particularly interested in the protection and maintenance of their rural amenity, often citing the increased illegal disposal of household waste through the State Forest and the dumping of vehicles noted as a regular occurrence. Some near neighbours valued the presence of deer in the forest, while others spoke of the need for the population to be controlled and wanted to see improved maintenance of fire trails and access roads. There was also a desire to see increased recreational facilities throughout the State Forest and improved public transport services to main towns e.g. Raymond Terrace and Maitland.

3.2.5 Political Capital

Political capital refers to the individuals, institutions, and systems that contribute to a community's ability to maintain a governance structure. Political capital can determine the extent to which people are able to participate in decisions that affect their lives, the level of democratisation within a community and the resources provided for this purpose. A summary of the political capital relating to the social locality is provided in **Table 3.2.**

Table 3.2 Political Capital

Key Aspects	Description
Electoral Governance	Project is located in the Port Stephens State Electorate which has been represented by the Australian Labor Party Member Kate Washington since 2015. Federally, the Project is located in the Federal seat of Lyne, and is represented by the Nationals member David Gillespie. The suburbs of Eagleton, and Ferndale are represented by the adjacent seat of Paterson, who is represented by Labour member Meryl Swanson. Port Stephens LGA is represented by the Port Stephens Council and consists of 10 councillors, including the Mayor. The LGA is divided into three Wards — West Ward, Central Ward and East Ward. The Mayor, Ryan Palmer and three Councillors elected from each of the three wards, form the governing body of the Council and each hold office for a term of four years. The study areas of Balickera, East Seaham, Eagleton and Ferodale are located within the West Ward and is governed by Cr Giacomo Arnott, Cr Peter Francis, and Cr Peter Kafer.
Traditional Owners and Aboriginal Governance	The Project Area is located in the traditional lands of the Worimi Nation. The Worimi (Warrimay) have always been and remain today the traditional custodians of a large area of land, "The Worimi Nation" oral history passed down by the Elders record that the Worimi Nation was originally bounded by four rivers, Hunter River to the south, Manning River to the north, the Allyn and Patterson Rivers to the west. The Worimi Nation was home to 18 clan groups or 'ngurras', with the Worimi Conservation Lands falling within the area of the Maiangal ngurra. All spoke the Gathang language (Worimi Conservation Lands, 2022) The Project is located in the modern-day NSW Local Aboriginal Land Council's (LALC) of Worimi. There are no registered native title claims in or surrounding the Project Area.

3.2.6 Natural Capital

Natural capital refers to the natural assets and resources that contribute to community sustainability. Natural capital can include resources such as minerals, land, forests, and waterways, which provide benefit to the community, as well as environmental assets that provide social, cultural, or recreational value.
A summary of the natural capital in the area of social influence is provided in **Table 3.3.**

Table 3.3 Natural Capital

Key Aspects	Description
The broader Port Stephens LGA includes many nature-based tourism and recreation opportunities, including in sites proximal to the Project.	In the Port Stephens LGA, there are a variety of recreational and tourist attractions, particularly near the more coastal towns of Nelson Bay and Salt Ash. The Wallaroo State Forest covers an area of approximately 6,200 ha, and the Wallaroo National Park is approximately 2780 ha (National Parks and Wildlife Service, 2020). The Wallaroo National Park is located adjacent to the Project Area and was formerly part of Wallaroo State Forest (reserved in 1922) until gazetted as Wallaroo Nature Reserve by the Forestry and *National Parks Estate Act 1998,* then reclassified as Wallaroo National Park under the *National Park Estate (Lower Hunter Region Reservations) Act 2006* (Office of Environment and Heritage, 2016). The southern portion of the forest remains categorised as Wallaroo State Forest which adjoins the Project Area. The State Forest is used by visitors for a number of recreational activities such as bushwalking, camping, picnicking, and recreational activities such as dirt bike riding and four-wheel driving. William Hind Picnic Area located within the State Forest has picnic tables, toilets, BBQ facilities and parking.
The social locality contains rich sources of hard rock resources suitable for quarrying activities	The area is also rich in resources with numerous sand and hard rock quarries located in the Port Stephens LGA, including the proposed Eagleton quarry and Boral Seaham quarry which has been in operation since 1991 and is located in close proximity to the Project Area. The Karuah, Medowie and Wallaroo Group Plan of Management (Office of Environment and Heritage, 2016) outlines the existence of several quarry operations within the National Park and proposes to endorse and manage resource development alongside historic heritage, ecological sustainability and visitor and recreational uses.

3.2.7 Human Capital

The level of human capital within a community is assessed by considering population size, age distribution, education and skills, general population health, and the prevalence of vulnerable, marginalised, or at-risk groups within the community. The following provides a summary of the key characteristics of the study areas from a human capital perspective and a more extensive profile can be found in **Appendix A**.

Table 3.4 Human Capital

Key Aspects	Description
The broader LGA contains a large population, proportional to the study communities.	At the time of the 2021 census, there were 75,276 people residing in the Port Stephens LGA (Refer **Appendix A**), 674 (<1%) of whom live within the study areas of Balickera, East Seaham, Eagleton, and Ferodale. Across the LGA, 7% of the population identified as Aboriginal and/or Torres Strait Islander.
The social locality is experiencing an ageing population	The study communities show signs of an aging population, with the exception of Balickera where the population size is too small to determine any trends. The ageing population is more prominent in the Port Stephens LGA as a whole, with a median age greater than the NSW median (47 years compared to 39 years for NSW). As part of Council's push for increased community diversity, a key delivery target is the provision of support for the needs of the aging population as well as provision of facilities and services for children and support to encourage young people to engage in their communities (Port Stephens Council, 2020).

Key Aspects	Description
The broader LGA is projected to record strong population growth	The Port Stephens LGA population is projected to increased to 93,658 persons by 2041 (Refer **Appendix A**). The largest population increase, proportional to the age of the population, is expected to occur amongst those aged 75+ years. Conversely, decreases in the proportion of the population aged below 44 years of age are expected to 2041.
Lower rates of high school completion, and lower rates of higher education achievement	The study communities recorded lower rates of the population completing year 12 as their highest level of schooling, and lower rates of completion of bachelor degrees compared with broader NSW figures. The lower rates of higher education achievement are offset by a higher completion rate of certificate level accreditations when compared to the broader NSW figures.
Higher burden of disease experienced in the social locality	Overall, people residing in the study communities, and the broader Port Stephens LGA experience a higher burden of disease, as indicated through higher rates of selected long-term health conditions, when compared with the broader NSW averages (Refer **Appendix A**). The three most commonly reported health conditions in the study communities were mental health condition (10.9% of population), any other long-term health condition (9.4% of population), and arthritis (8.8% of population).

3.2.8 Social Capital

Various indicators can be used to examine and assess social capital. Such indicators include the level of volunteering, population mobility, crime rates and the demographic composition of the community. **Table 3.5** provides a summary of the key characteristics of the study areas from a social capital perspective (refer to **Appendix A** for relevant indicators).

Table 3.5 Social Capital

Key Aspects	Description
Higher rates of volunteerism	There were higher proportions of volunteerism across all the study communities when compared with Port Stephens LGA (14%) and the NSW average (13%). Eagleton had the highest proportion with 22% of people having done voluntary work through an organisation or group at the time of the 2021 census. High rates of volunteering are often used as an indicator of connection, cohesion and sense of community in the local area.
Lower levels of population transience amongst residential populations	The 2021 census showed that higher proportions of people in the study communities had lived at the same address for 5 years or more (refer **Appendix A**) indicating a generally more established, and less transient population. Most households in the study communities are also family households, which tend to maintain higher rates of establishment in a location, and higher rates of ongoing community involvement and engagement.
Community wellbeing focus	A key focus of Port Stephens Council, as outlined in their Community Strategic Plan 2022-2032, includes community wellbeing, which they aim to achieve by providing facilities and learning options for children and families, providing recreational and leisure activities, encouraging inclusivity and supporting local Aboriginal and Torres Strait Islander People, and providing support for volunteers who deliver community services.

3.2.9 Cultural Capital

Cultural capital refers to underlying factors that provide human societies with the means and adaptions to maintain themselves in their environment (Cochrane, 2006). It includes the way people know and understand their place within the world. It may also refer to the extent to which the local culture, traditions, or language, may promote or hinder wellbeing, social inclusion and development (IAIA, 2015). **Table 3.6** provides a summary of the key characteristics of the social locality from a cultural capital perspective.

Table 3.6 Cultural Capital

Key Aspects	Description
Lower proportion of the population born overseas	There are significantly fewer people born overseas in the study communities when compared to the NSW average (30%), indicating lower rates of ethnic and/or ancestral diversity in the community.
Historic Heritage	An assessment of the potential impacts of the Project on historic heritage values was undertaken by Umwelt. One registered heritage item is located over 1,100 metres west of the Project Area. This consists of the locally-listed 'Balickera' House (LEP I3), a nineteenth century convict-built homestead located at 303 Italia Road (Lot 530 DP1128672

3.2.10 Economic Capital

Examining a community's economic capital involves consideration of several indicators, including industry and employment, workforce participation and unemployment, income levels and cost of living pressures, such as weekly rent or mortgage repayments. **Table 3.7** provides a summary of the key characteristics of the study areas from an economic capital perspective (refer to **Appendix A** for more detailed information).

Table 3.7 Economic Capital

Key Aspects	Description
Lower rates of full-time employment	Of those working, the proportion of persons employed full-time was lower than the NSW average of 55.2%, in East Seaham (54.0%), and the Port Stephens LGA more broadly (51.5%), and higher in the suburb of Eagleton (57.1%) (refer to **Appendix A**). Lower rates of full-time employment are offset by higher rates of part-time employment relative to the broader NSW figures.
Unemployment rates are low across the study communities and have been trending downward	Unemployment rates across the study communities varies. East Seaham and Eagleton were shown to have unemployment rates below the State average (4.0% and 3.3% respectively, compared to 4.9% in NSW), while the LGA recorded a comparable rate of unemployment (5.5%) compared with the State. Recently published Small Area Labour Data for the March Quarter 2022, indicates that the unemployment rate in Port Stephens LGA has reached a nine-year low of 4.3%, after trending down from a peak of 9.8% in September 2015 (refer to **Appendix A**).
Top industry of employment	The top industries of employment within the study communities are health care and social assistance (13.9%), construction (13.6%), and retail trade (10.2%). Health care and social assistance is also the top industry of employment in Port Stephens LGA (15.1%), and the broader state (15.1%). Construction (13.6%), manufacturing (9.9%), and mining (2.0%) recorded notably higher rates of employment in the study communities, when compared to NSW figures (9.0%, 5.7%, and 1.0% respectively).

Key Aspects	Description
Median incomes in the study communities are higher than the broader LGA	The median total household weekly income in East Seaham ($2,250/week), and Eagleton ($1,421/week) is higher than Port Stephens LGA ($1,372/week). For NSW, median household weekly income was $1,829/week, lower than in East Seaham, but higher than Eagleton.
High median household costs with lower mortgage rates	Median weekly household rent varies across communities, with the lowest in Eagleton ($310) and the highest in East Seaham ($400), compared to a median of $340 across NSW. Median mortgage repayments ($1,733/month) in Port Stephens LGA, are lower than the NSW average ($2,167/month).
Tourism, and in particular, nature-based tourism is a key industry for the broader Port Stephens LGA	Tourism is also a key industry for the LGA, with approximately 1.8 million visitors to Port Stephens LGA from 2018 to 2019 (Port Stephens Council, 2019). Tourism provides support to numerous industries through expenditure, with approximately $435.6 million was generated from tourism in the LGA. ABS (2016) data shows a total of 2,140 (7.8%) jobs are supported by tourism in Port Stephens LGA, proportionally this is higher than in Newcastle (6.1%) and NSW (6.1%). Furthermore, 1436 (55%) jobs in the largest industry of employment subsector, accommodation and food services, are supported by tourist expenditure (REMPLAN, 2020). A key objective of the Council's Community Strategic plan 2022-2032 under the focus area of 'Our Place', is to support businesses that attract sustainable visitation and events to the LGA.

3.2.11 Physical Capital

Physical or built capital includes provision of infrastructure and services to the community. Within this capital area, it is important to consider the type, quality, and degree of access to public, built and community infrastructure (including amenities, services, and utilities), as well as housing. The Project's area of social influence can be characterised as having a wide range of community services (refer to **Table 3.9**). **Table 3.8** provides a summary of the key characteristics of the social locality from a physical capital perspective.

Table 3.8 Physical Capital

Key Aspects	Description
High rates of home ownership compared to the State	At the time of the 2021 Census, there were 8 dwellings recorded in Balickera, 134 in East Seaham, 83 in Eagleton, 33 in Ferodale. This totals 258 dwellings, or roughly 0.78% of the total housing stock in Port Stephens LGA. Low population figures for Balickera, and Ferodale mean that household ownership data is unreliable from the ABS Census. Notwithstanding, the rates of outright home ownership for East Seaham, and Eagleton are 39.8% and 58.4% respectively, which is higher than the State average figure of 31.5%. Rates of home ownership via a mortgage were 44.2%, and 32.5% for East Seaham and Eagleton, compared with 32.5% for NSW. Higher rates of home ownership rare conversely offset by lower rates of households occupied through a rental agreement.
Social and community services in the study communities are limited	As shown in **Table 3.9**, there is a limited range of community services in the study communities, with residents often having to travel to townships such as Seaham, Medowie or Raymond Terrace to access different services. The closest primary school to the Project is Seaham Public School and the closest secondary schools are the Medowie Christian School and Irrawang High School in Raymond Terrace (refer to **Table 3.9**).

<table>
<tr><th>Key Aspects</th><th>Description</th></tr>
<tr><td></td><td>Childcare services are located in Seaham, Medowie and Raymond Terrace service and include those provided at the Seaham Public School and Seaham Preschool. Similarly, Seaham, Medowie and Raymond Terrace Rural Fire Brigades and Fire stations service the area (refer to Table 3.9).
During consultation, for the scoping phase of the SIA, participants revealed that Raymond Terrace was the main location to access health services, groceries and retail shopping, with some residents utilising Seaham, Maitland (Greenhills) and Medowie as well. Education facilities were most utilised in Seaham.</td></tr>
<tr><td>Main transport routes in the LGA include the Pacific Highway, and Nelson Bay Road</td><td>There are two main highways that run through the Port Stephens LGA. The Pacific Highway runs south-west from the Mid-Coast through to Newcastle where it meets up with Maitland Road. The other is Nelson Bay Road which connects Newcastle to Nelson Bay.</td></tr>
<tr><td>A majority of the study community travels by private cars to commute to work</td><td>The majority of people in the study community travel to work in a car as a driver (refer to Appendix A), and compared to NSW, rates of motor vehicles per household are higher. These statistics suggest a high level of road use in the area and is consistent with ABS (2016) data that shows there are a high proportion of people traveling between 10-30 kilometres or 30-50 kilometres to get to work across all study areas. There were also a small proportion of people living in East Seaham and Ferodale travelling up to 250 kilometres to get to work.
According to TfNSW ((Transport for NSW, 2022), no regular bus services exist for those living in Balickera and there is no official school bus route allocated for school children travelling to and from Seaham Public School or to Irrawang High school. Anecdotal evidence provided by near neighbours during the scoping phase however, suggests that there is an unofficial bus service that provides pick up and drop off for children in Balickera going to and from Seaham Public School, along several points of Italia Road.</td></tr>
<tr><td>There are ongoing transport concerns surrounding road safety, particularly in relation to the Italia Road / Pacific Highway intersection</td><td>As the Project will involve the movement of quarry product by truck along the Pacific Highway toward Newcastle, the Central Coast and the Lower Hunter, it is important to consider the current baseline for incidents of casualties from crashes in the area and along these roads.
The latest data from TfNSW (Transport for NSW, 2022) indicates the number of casualties from crashes by LGA. This data for Port Stephens LGA is indicated below:
<table>
<tr><th>Crashes</th><th>2017</th><th>2018</th><th>2019</th><th>2020</th><th>2021</th></tr>
<tr><td>Fatal</td><td>4</td><td>7</td><td>8</td><td>4</td><td>4</td></tr>
<tr><td>Serious Injury</td><td>54</td><td>53</td><td>43</td><td>35</td><td>37</td></tr>
<tr><td>Moderately Injury</td><td>64</td><td>50</td><td>38</td><td>48</td><td>37</td></tr>
<tr><td>Minor Injury</td><td>25</td><td>20</td><td>17</td><td>33</td><td>9</td></tr>
<tr><td>Total</td><td>147</td><td>130</td><td>106</td><td>120</td><td>87</td></tr>
</table>
In 2021, Port Stephens LGA recorded 87 crashes, 37 of which resulted in serious injuries, and 4 fatalities. In comparison to other LGAs, Port Stephens has a low to moderate number of crashes and causalities.
In the ten-year period prior, there were 6 heavy vehicle incidents recorded along the Pacific Highway, all located north of the Project Site (Transport for NSW, 2021).
The Social Impact Assessment for the Project reported ongoing transport concerns for people who utilise the Italia Road / Pacific Highway intersection. Similarly, the Social Values Review for the proposed Eagleton Quarry Project (Kleinfelder, 2017) reported transport concerns for those who access Italia Road and the Pacific Highway.
• Italia Road - Residents reported concerns around limited visibility when turning right onto the Pacific Highway from Italia Road. This caused some people to avoid the</td></tr>
</table>

Key Aspects	Description
	intersection all together and use East Seaham and Newline Roads towards Raymond Terrace. Others choose to only turn left at the intersection and either make a U-turn or travel south through Medowie. • **Pacific Highway -** The highway is used by heavy vehicles to avoid local roads and to varying degrees by local residents depending on traffic, time and preference. The Pacific Highway is used when travelling north from Raymond Terrace given the simplicity of the left-hand turn into the local road network. Turning right across the highway to travel south has more varied use largely based on the individuals perceived additional risk. Where holiday traffic is heavy, some will opt to use other local roads to avoid the additional traffic.

Table 3.9 Summary of Infrastructure and Services

Service	Seaham	Medowie	Raymond Terrace
School	Seaham Public School	Medowie Christian School – Combined Medowie Public School Wirreanda Public School	Irrawang High School Grahamstown Public School Irrawang Public School Raymond Terrace Public School St Bridgid's Primary School
Childcare	Seaham Public School Seaham Preschool	Little Miracles Medowie Little Big Futures Medowie Community Pre-School The Medowie Gumnut Preschool United Early Learning Busy Owl Family Day Care	KiddyHawk Family Day Care and Preschool TLC Early Learning Centre Steps to Starting School Raymond Terrace Early Education St Nicholas Early Education
Fire Service	Seaham Rural Fire Brigade	Medowie Fire Station	Raymond Terrace rural Fire Brigade Fire and Rescue NSW Raymond Terrace
Police Station	-	-	Raymond Terrace Police Station

3.3 Challenges and Opportunities for Local Development

Table 3.10 identifies development challenges and opportunities currently being experienced across the social locality relevant to the Project, as gathered from the social baseline profile and through community consultation.

In summary, the key challenges faced by the area include the need to increase access to services for the local population and to address concerns regarding road infrastructure and the potential risk on the natural environment. On the other hand, the expansion of resourcing projects (**Section 3.2.3**) place the Port Stephens LGA in a good position to further grow the local and regional economy.

To further support regional development, issues such as the emerging strain on local service provision need to be addressed, as well as upgrades to road infrastructure. Some of these identified constraints are already being considered by the Port Stephens Council.

Table 3.10 Challenges and Opportunities for Local Development

Challenges	Capital	Opportunities
• Shifting levels of community acceptance for new projects.	Political	• Government support for a general Economy growth.
• Social locality and broader region vulnerable to natural disasters such as drought, flooding, and bushfires. • Cumulative impacts of numerous existing quarry operations on natural environment.	Natural	• Area has a variety of recreational and tourist attractions. • Strong community values associated with the natural environment and rural landscape. • Access to National Park for recreational uses. • Area is rich in natural resources.
• Ageing population. • Area has high rates of selected long-term health conditions, when compared with the broader NSW.	Human	• Proportion of residents undertaking certificate level accreditation is increasing.
• Increasing number of Quarry projects could cause a sense of loss of community.	Social	• Strong sense of community with high levels of volunteerism. • Council focus on providing facilities and learning options for children and families • Established and less transient residents resulting in sustained sense of community. • Strong ties to community groups and local engagement.
	Cultural	• Strong desire of local government to support and promote local cultural activities.
• Potential difficulty and sourcing local workforce due to a low unemployment rate. • Increasing retirement-age population leading to decrease in skilled employee base.	Economic	• Region has a strong industry including mining, construction and retail trade. • High median weekly household income resulting in a potential spending in the local economy. • Investment into public recreational infrastructure targeting tourism.
• Limited range of community services, including primary and secondary school, health services and retail shops. • Limited public transport. • Road infrastructure requiring repairs.	Physical	• Highly valued rural character of region.

4.0 Perceived Social Impacts

This section documents the perceived impacts (positive and negative) in relation to the Project, as identified through both rounds of stakeholder and community consultation and provides a more detailed pre-mitigation evaluation of these impacts and their significance. **Section 5.0** provides the post-mitigation rankings once social impact management strategies have been considered.

Figure 4.1 provides a summary of the perceived impacts (positive and negative) raised during engagement with stakeholders during the scoping phase of engagement.

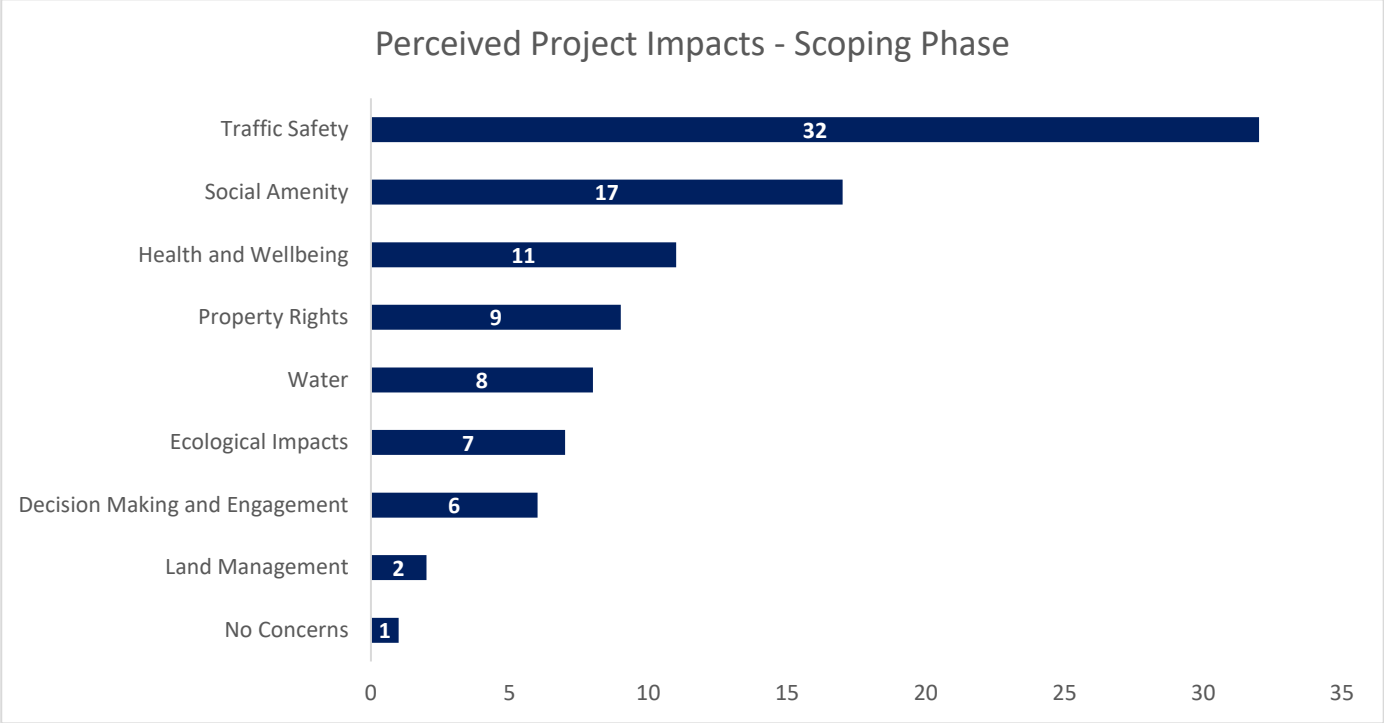


Figure 4.1 Perceived Project Impacts – Scoping Phase (frequencies)

n=16; multiple responses allowed.

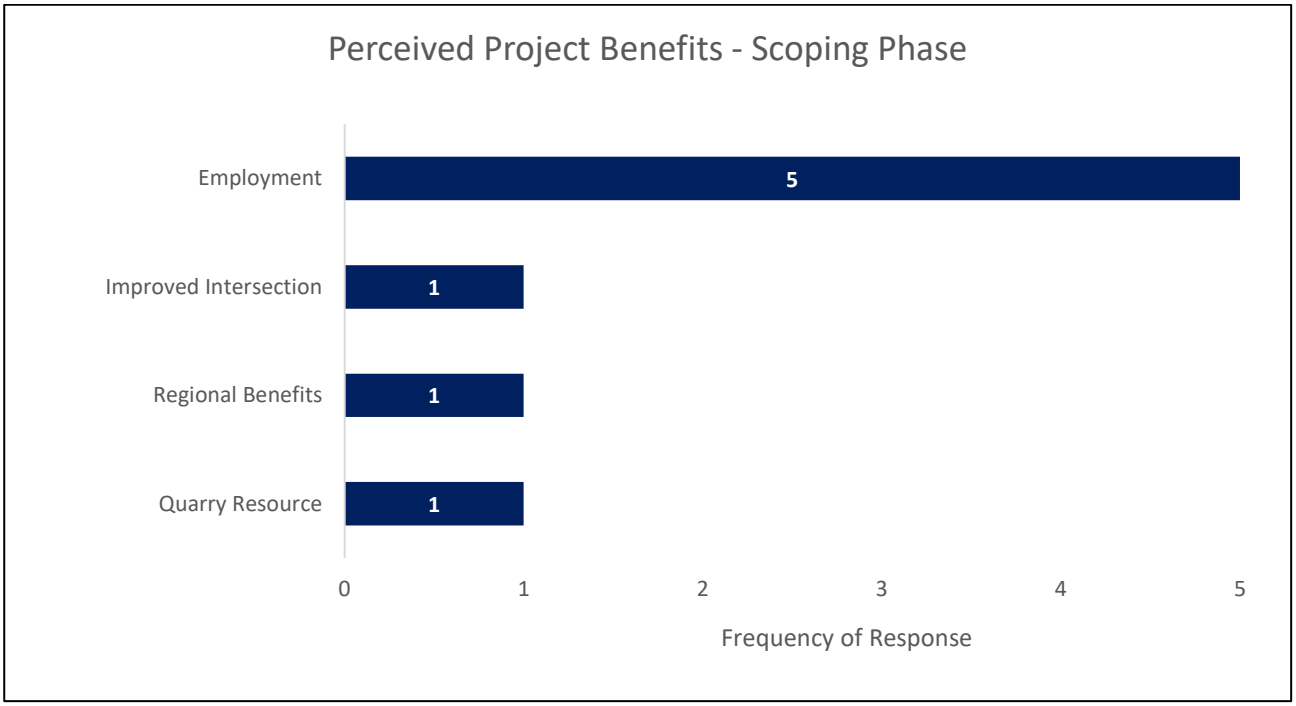


Figure 4.2 Perceived Project Benefits – Scoping Phase (frequencies)

n=16; multiple responses allowed.

During the second round of engagement, participating stakeholders were asked to rank a number of potential negative and positive impacts that may be associated with the Project according to their perceived magnitude/significance, on a scale of 1 to 5 (*1 being of 'minimal' impact* and *5 being 'extreme'*) with this list having been informed by the outcomes of the scoping phase consultation. **Figure 4.3** presents average ratings for perceived significance for the negative impacts by theme while **Figure 4.4** presents average ratings for perceived significance for project opportunities.

It is important to note that while only four complete responses were received to the community survey provided during the SIA engagement phase, there were twenty attendees at the community information session held during that time with outcomes of discussions with attendees also informing the impacts and opportunities discussed below. The main point of concern raised during discussions at this session was with regards to the potential for the Project to cause impacts on local road conditions, and in particular, deteriorate road safety conditions at the Pacific Hwy/Italia Road intersection. These are detailed further at **Section 4.1.1**.

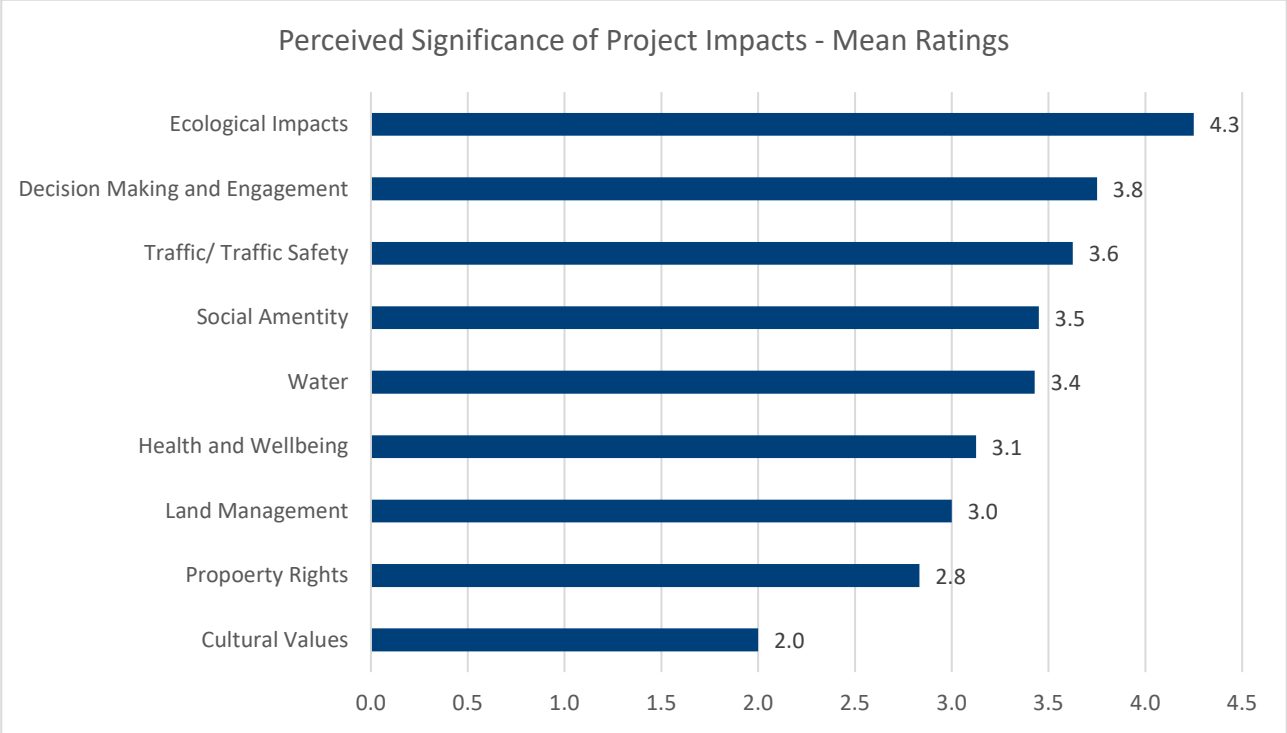


Figure 4.3 Perceived Significance for Negative Impacts – SIA Phase (mean significance rating on a scale of 1-5)

n=4; multiple responses allowed.

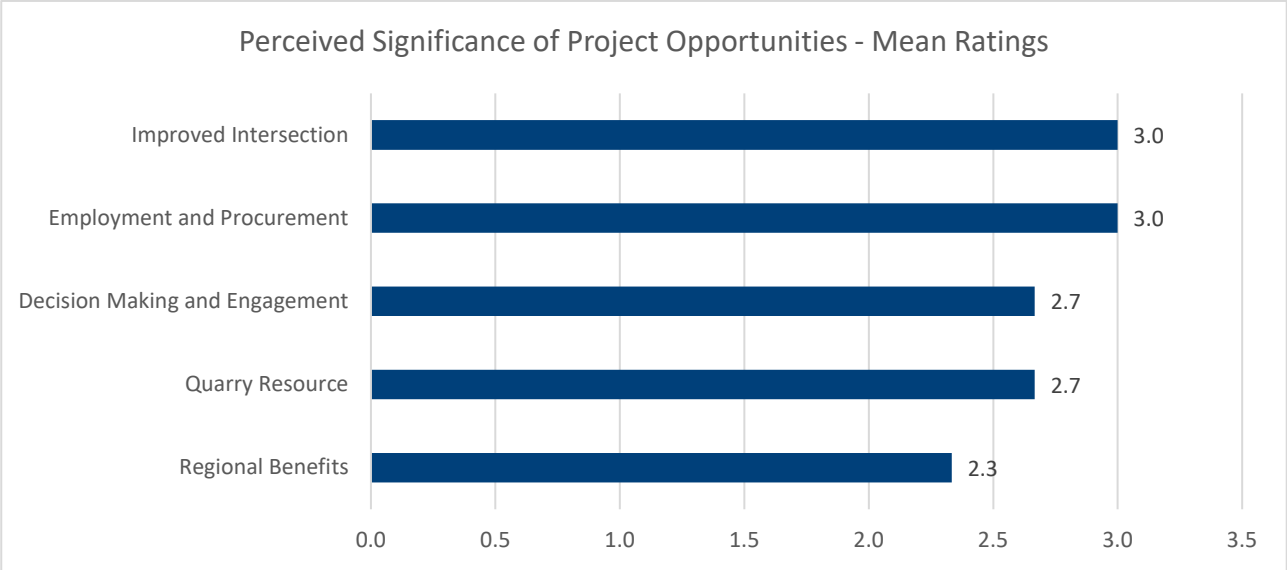


Figure 4.4 Perceived Project Significance – Project Opportunities (SIA Phase)

n=4; multiple responses allowed.

Therefore when considering both rounds of engagement, traffic impacts were a key concern, with these largely related to traffic safety as a result of increased traffic congestion and individual property access. Impacts on ecology and biodiversity also were raised more prominently at round 2.

The views of the four participants during round 2 were spread with regards to project opportunities, as was the case in per round 1 with procurement and employment opportunities seen as key benefits. There was also recognition of the intersection improvements. The supporting discussion provided throughout the following sections also includes the qualitive outcomes of consultation that continued throughout the SIA phase.

4.1 Surroundings and Social Amenity

As outlined in the SIA Guideline (DPIE 2023), indicators of surroundings and social amenity include 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. Potential Project impacts on social amenity and surroundings include the following, and are further detailed in the sections below:

- Impacts on public safety due to increases in traffic movements and changed traffic conditions.
- Disruption to social amenity due to noise, dust, heavy vehicle movements, vibration, blasting and visual impacts.

4.1.1 Road Safety and Cumulative Road Impacts

Traffic safety impacts were top of mind for near neighbours consulted along Italia Road and Nine Mile Creek Road, with responses dependent on the location of residents along either of these two roads. Changes to safety at road intersections as a result of an increase in traffic resulting from the Project were also noted as a concern.

Several themes emerged during engagement with near neighbours in relation to traffic safety and are summarised in **Figure 4.5**. Safety impacts, most notably, traffic congestion and intersection safety, were the most frequently raised traffic concerns for near neighbours. It was reported that these were impacts that were already currently being experienced with the concern being that these could potentially be exacerbated by the Project.

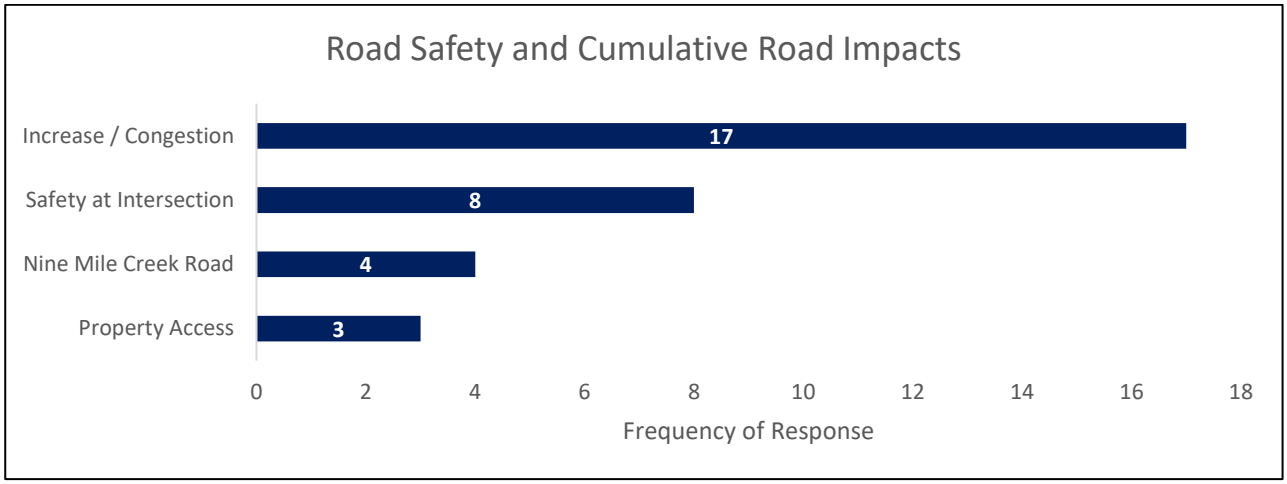


Figure 4.5 Perceived Social Impacts – Road Safety and Cumulative Road Impacts

n=16; multiple responses allowed.

Proximal neighbours were also concerned for broader community safety when traversing the Italia Road - Pacific Highway intersection. As visual access to the south is limited due to a rise in the road, near neighbours expressed their fears relating to oncoming traffic speeding up and over the hill. It was reported that in order to get across the intersection and join the flow of traffic toward Newcastle, trucks trying to exit Italia Road frequently have to pull into oncoming traffic to stop the flow.

The intersection between Italia Road and the Pacific Highway was particularly reported as a high concern for near neighbours with cumulative traffic impacts of residential and business traffic applying additional pressure to the road and intersection. Additional traffic on Italia Rd and potential for queuing at the Pacific Highway / Italia Road intersection was raised again by stakeholders during the first CCC meeting.

Traffic was reported as increasing over the years along Italia Road due to an increase in commercial and residential traffic preferring to use Italia Road as an alternative to the Pacific Highway when travelling toward Medowie and Maitland in order to avoid crossing the intersection onto the Pacific Highway.

> *If you want to get onto the Highway, we need to leave very early to get across to go to Newcastle.*
>
> *To get out onto the highway, you can't get across quick enough. A woman was killed on the Highway a few years ago.*
>
> *On a Thursday/Friday afternoon they come tearing down the hill, they flash their lights at you, but they continue to speed, and no one can get across.*

The approved entry and exit route for contractor trucks and suppliers of current local businesses along Italia Road is toward the intersection of Italia Road – Pacific Highway, however near neighbours reported that several trucks tend to traverse Italia Road to avoid the intersection and to improve their transport times. Speeding along Italia Road by local businesses contractors was also raised as a concern for residents along the route.

> *The traffic, including quarry trucks, is out of control. Speed limits too high.*
>
> *All day trucks are on the horn waiting to get across.*
>
> *People all come this way to miss the Hexham Bridge. It was once a quiet rural road and now it's quite busy.*
>
> *We have trucks, gravel trucks, they always do 100m/hr, always speeding.*
>
> *No one slows down.*

When referencing the frequency of heavy vehicle traffic along Italia Road, a near neighbour commented that the road condition was poor and stated that *'the roads are always falling apart; the workers only patch the roads, they don't fix them'.* This stakeholder expressed that any proper road maintenance along Italia Road, should the Project be approved, would be beneficial. Another proximal landholder also expressed similar concerns regarding the road usability:

> *Increased traffic on a road that is already under pressure. Unable to cope with heavy vehicles – utilities, small trucks, large trucks & support vehicles. Dangerous road degradation. Inability to use road by pedestrian and cyclists.*

Similarly, residents consulted along Nine Mile Creek Road held concerns that this road would be utilised for truck movements and resource transport. These concerns appeared to be driven by the experience of a water cart accessing the Project Area during exploration drilling in previous months. Concerns of consulted stakeholders were alleviated when informed that all access associated with the Project would be via Italia Road with travel towards the Pacific Highway only to transport quarry product.

> *What road will the trucks come down? Will there be trucks coming past?*
>
> *I don't want any trucks down this road. We have had water trucks coming in and out already.*

ARDG recognise that there are existing concerns regarding the Italia Road intersection with the Pacific Highway. To address this safety issue, ARDG, Boral and Eagleton Quarry have all been involved in an extensive consultation process with TfNSW and Port Stephens Council between 2020 and 2022, regarding the intersection and safety concerns.

ARDG, Boral and Eagleton have resolved with TfNSW to submit a separate Development Application (to be lodged by Boral) for an upgrade of the existing Italia Road-Pacific Highway intersection to meet TfNSW requirements. The upgrades will include an extension to the northbound deceleration lane for left turns into Italia Road and a northbound acceleration lane for left turns onto the Pacific Highway, which will essentially remove the current merged left-turn movement with a safer downstream merge movement.

All outbound trucks will exit the site via a left turn towards the Pacific Highway. No associated heavy vehicles will be permitted to travel west from the quarry access point toward Seaham. At the Italia Road-Pacific Highway intersection, all heavy vehicles associated with the quarry will turn left onto the Pacific Highway. Should heavy vehicles have a destination to the south, after turning left out of Italia Road onto the Pacific Highway these vehicles would utilise the existing Tarean Road interchange (approximately 11 km to the north) to undertake a U-turn before continuing their journey south. This approach to accessing the Pacific Highway from Italia Road has the in-principle agreement of TfNSW. Consultation regarding detailed design and the separate approval for the works is currently in progress with TfNSW and Port Stephens Council. It is intended that a condition of consent will be applied (should the Project be approved) that the upgrade works to the intersection will be required to be complete prior to the transportation of any product associated with the Project.

The Transport Impact Assessment (TIA) indicates that that the impact of the Project (in isolation) on the intersection would be minimal with the anticipated 2032 traffic growth in general expected to have a bigger impact on the capacity of the Italia Road-Pacific Highway intersection. The assessment also concluded that the intersection upgrade would generally improve its performance by reducing delays through the prioritisation of the right turn into Italia Road. Under this scenario it is expected that the performance of the left turn out of Italia Road improves, despite the increased heavy vehicle traffic generated by the Project. In addition, the TIA results for all traffic scenarios modelled at the Tarean Road interchange, resulted in a satisfactory level for the Project`s operation (GHD, 2022).

Furthermore, the Project is not expected to impact any pedestrian, cyclist or public transport users, as there are no public transport routes or pedestrian or cycle paths along Italia Road or the Pacific Highway in the vicinity of the Project area (GHD, 2022).

Consulted stakeholders have also noted an increasing concern related to the cumulative road impacts of heavy vehicle movements proposed to be generated by the Project in combination with the existing Boral Seaham Quarry and the proposed Eagleton Quarry.

The cumulative impacts of heavy vehicle movements generated by the Project, the Boral Seaham Quarry and the proposed Eagleton Quarry have been assessed and results indicate that the external road network can comfortably accommodate the level of traffic associated with all three operations (GHD, 2022).

To address the potential traffic impacts associated with the Project, the following management and mitigation measures are proposed:

- All inbound truck movements to turn left into Italia Road from the Pacific Highway to access the quarry.
- No heavy vehicles to be permitted to travel west on Italia Road past the quarry access point toward Seaham.
- A new site access point to be constructed directly opposite the existing Boral Seaham Quarry on Italia Road. A Channelised Right Turn (CHR) treatment is to be provided on Italia Road at the site access, to enable safe right turns into the Project Area.
- To prevent conflicts on the road network, heavy vehicles should only be permitted to turn left out of Italia Road onto the Pacific Highway with an acceleration lane to be provided onto the Pacific Highway (as part of a separate development application process), essentially removing the left-turn movement in favour of a downstream merge movement.

Refer to Section 6.9 of the EIS for further detail.

4.1.2 Social Amenity – Noise, Dust and Visual

During engagement, concerns were raised related to social amenity relating to the quarry's operational noise; cumulative impacts of dust; and visual impacts associated with the proposed intersection upgrade of Italia Road and the Pacific Highway (**Figure 4.6**).

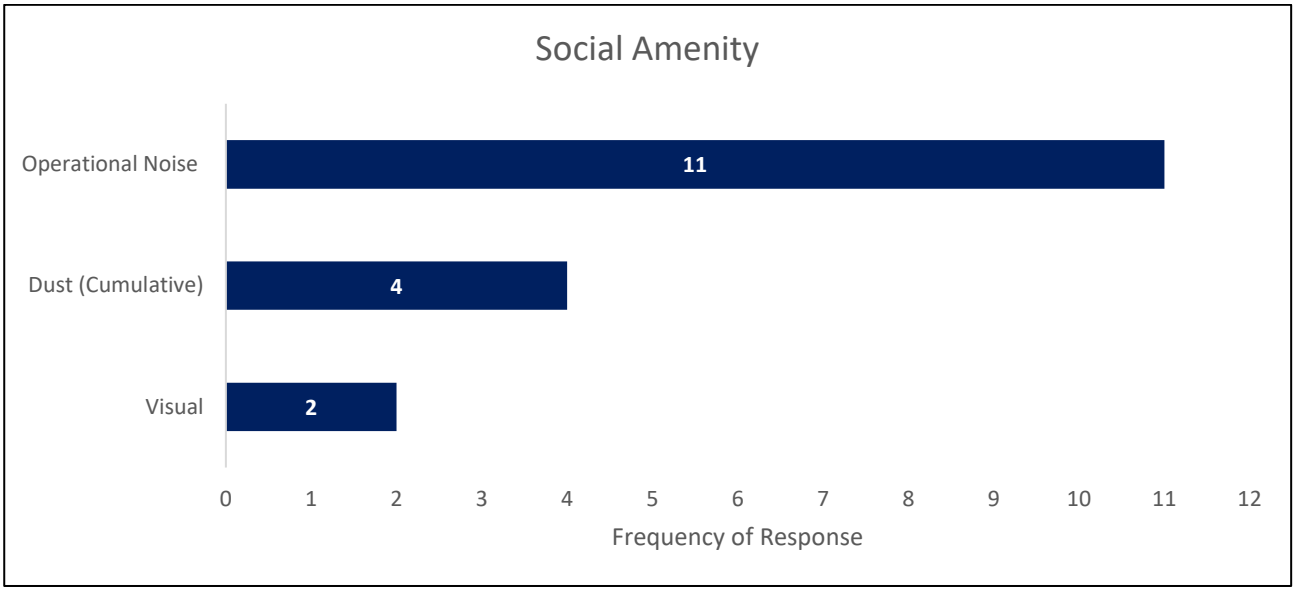


Figure 4.6 Perceived Social Impacts - Social Amenity

n=16; multiple responses allowed.

4.1.2.1 Loss of Amenity due to Noise

Traffic Noise

The primary route to and from the Project will be via the Pacific Highway and Italia Road with no Project-related heavy vehicles expected to travel along Italia Road north of the site's proposed access point. Some nearby residents expressed their concern regarding the noise generated from traffic on Italia Road.

> *If you can stop all non local traffic and all the trucks using Italia Road you will have more residents on your side as we will have our peace and quiet back.*

The Noise Impact Assessment (NIA) has identified the nearest and potentially most affected road traffic noise receiver as 16 Italia Road, Balickera, which is located approximately 50 m from the carriageway of Italia Road and 155 m from the carriageway of the Pacific Highway. The NIA has concluded that given the existing traffic volumes on the Pacific Highway, Project-related traffic noise impacts at receivers along this road are anticipated to be negligible. As the operational road traffic noise levels are predicted to comply with the Road Noise Policy (RNP) criteria, it is also assumed that the noise levels associated with the lower volumes of construction road traffic will also comply (Umwelt, 2022).

Noise from Project Construction and Operations

During consultation some near neighbours also raised concern regarding operational noise with one consulted landholder recalling that they have already heard drilling activities during the exploration stage of the development. One landholder also noted that at times the machinery from a neighbouring quarry could be heard. It was also noted that neighbouring quarry operations could be heard until 10.00 pm and there were therefore concerns that the Project may operate in a similar manner.

As a result, consulted proximal neighbours were interested to understand the Project's proposed hours of operation and levels of noise that they could expect to hear in the future.

> *Will there be noise? What are the hours of operation?*
>
> *Will there be much noise impacts where we are living?*
>
> *We did hear the drilling.*
>
> *I can hear the crushing plant sometimes which is annoying to hear crushing until 10.00pm.*
>
> *I don't think you'll make too much noise; I worked in quarries.*

When proximal neighbours were advised that the Project intends to operate from 6.00 am to 6.00 pm only, with the processing facility also not operational after 6.00 pm; the limited operational hours appeared to satisfy some residents.

> *'Ok, I'm happy with that'.*

The NIA assessed the potential noise associated with both construction and operational activities under a range of different scenarios and meteorological conditions. The results from each construction scenario are predicted to comply with the daytime (standard hours) noise management levels. The NIA also found that operational noise levels are predicted to comply with the established noise management levels in all modelled scenarios to all receivers when taking into consideration proposed mitigation measures.

Potential sleep disturbance impacts were also assessed and the Project is predicted to comply with the sleep disturbance criteria at all receivers under both standard and noise-enhancing meteorological conditions. Furthermore, NIA results show there will be no exceedances of the cumulative noise criteria (Umwelt, 2022). Refer to Section 6.2 of the EIS for further detail.

ARDG is committed to adopting feasible and reasonable noise mitigation and management strategies to minimise noise as much as possible in accordance with best practice (Umwelt, 2022).

The mitigation measures proposed to be adopted to manage noise related impacts during construction include:

- All sensitive receivers likely to be affected by noise to be notified at least 7 days prior to commencement of any works associated with the activity.
- All employees, contractors and subcontractors are to receive an environmental induction that includes hours of work; any limitations on high noise-generating activities; location of nearest sensitive receivers; designated parking areas; relevant approval conditions and incident procedures.
- Unnecessary noise to be kept to a minimum, including limiting the use of loud stereos/radios, shouting on site and car door slams. Where practical, no dropping of materials from height or throwing of metal items will be undertaken.
- Noise emitting plant should be directed away from sensitive receivers and to be throttled down or shut down when not in use.
- Non-tonal reversing beepers should be fitted and used on construction vehicles and mobile plant used regularly on site and for any out of hours work.
- The use of engine compression brakes should be limited.

ARDG sought to reduce noise impacts associated with the Project through design and optimisation of operational and engineered noise controls to support noise levels during the operational phase to a minimal, including:

- cutting the processing area and the initial relative height of the North Pit into the existing surface level to increase acoustic shielding to the nearest sensitive receivers
- locating the site entrance as far as practicable from the nearest sensitive receivers
- the sequence of extraction in 15 m bench heights, to always maintain a face between the nearest sensitive receivers and the extraction area
- commitment to only undertake product loading, transportation and maintenance activities during the morning shoulder and evening periods i.e. no extraction or processing to be undertaken at these times
- regular equipment and internal road maintenance
- strategic placement of stockpiles along the southern side of the processing area.

4.1.2.2 Loss of Amenity due to changes to Air Quality

Cumulative dust exposure was raised as a concern by near neighbours in regard to existing and proposed quarry development in the area. A proximal neighbour recounted their previous experience of living near coal mines in the Hunter Valley region and held concerns that further quarry developments would create cumulative impacts for landholders, including air and water quality concerns - health and wellbeing concerns associated with dust.

> *We cop a lot of dust as it is, and we are on tank water.*
>
> *We already have one quarry, and another is proposed also. I don't want to end up like in Singleton where I was in between Mt Thorley and Warkworth. I feel this would be similar.*
>
> *Have you been here on a still day? The air doesn't move, it [the dust] will come in and just sit.*

Air quality concerns were also raised, and centred around respiratory health, particularly for those suffering respiratory illnesses such as asthma and the potential inhalation of blasting fumes.

> *The air quality, asthma issues.*
>
> *The plume that is created from blasting can't be good for your health.*

An Air Quality and Greenhouse Gas Assessment (AQGGA) has been prepared to assess the potential air quality impacts in different meteorological scenarios and phases of the Project, including impacts on air quality due to traffic movements, construction and operational dust and operational blast fumes.

The AQGGA has determined that impacts on air quality during the construction phase would largely result from dust generated during vegetation clearing, earthworks and Project construction activities as a result of wind erosion and excavated materials transport/handling. The AQGGA has concluded that it is unlikely that the construction phase of the Project will cause adverse air quality impacts. Nonetheless, measures to minimise and effectively control emissions during construction will be implemented.

With regards to operations, all modelled scenarios used to assess the impacts of operational dust indicate that the Project will not result in any exceedance of relevant dust criteria at neighbouring sensitive receivers even under a worse-case scenario (Jacobs, 2022).

The AQGGA also concluded that additional traffic associated with the Project along the public road network is unlikely to result in adverse air quality impacts (Jacobs, 2022).

Proposed control measures are recommended in the AQGGA to minimise any potential impacts on air quality include:

- Minimising activities when excessive visible dust is generated.
- Watering of unsealed haul routes/roads.
- Restricting vehicle speeds on haul routes.
- Clearly marked haul routes.
- Enclosures on crushing and screening machinery.

- Water sprays (as required) at crushing and screening and conveys between process units.
- Stabilising and minimising the extent of materials stored on-site and progressive rehabilitation of exposed areas to minimise wind erosion.

4.1.2.3 Loss of visual amenity

Visual amenity was raised as an issue by a near neighbour in relation to the potential intersection upgrade. As discussed in **Section 3.2.4**, residents value the rural amenity of the area and were concerned that their outlook had the potential to change dramatically with infrastructure works and that any raised intersection could pose privacy concerns if traffic were able to look into their property from above. In this regard, this stakeholder requested further information regarding visual impacts associated with the development of the intersection overpass.

> *We don't want to live, having to look at an overpass. What will it look like? Will it have pillars? Will it be a wall? If it's raised up, then people could be looking into our property?*

As noted in **Section 4.1.1,** an upgrade of the existing Italia Road-Pacific Highway intersection is proposed under a separate approval process and is not proposed as part of this Project. These separate works do not include an overpass, any associated visual impact will be assessed as part of the approval process relevant to the works.

4.1.3 Land Management

Concerns were raised by several near neighbours with regards to flooding risk events and whether the Project would contribute to more water in the Nine Mile Creek catchment. Stakeholders noted a flood event that had occurred in 2015, inundating one property, with fears that similar events could occur if the Project injected excess run off into the catchment. Similar water management concerns were raised by DPE during the Response to Submissions (RTS) phase of the proposed Eagleton Quarry.

> *Seaham weir through to Balickera Channel – will that be impacted? There is a tunnel upgrade to allow more water, but will there be more water from the quarry as well?*
>
> *Worried about the water catchment area. Flooding is really bad. If we have rain, there's nothing to stop the water overflowing and anything that is washed into the creek from the quarry.*
>
> *Would it impact the water here? Would it affect the creek?*

Flood mapping in the Port Stephens LEP 2013 indicates that the Project Area, including the quarry access off Italia Road, is not located in a flood planning area. The Project Area is located on a ridgeline with no upslope catchment and therefore no local flooding issues are expected either on-site or downstream of the Project.

During engagement, there was also a strong sentiment expressed by near neighbours regarding the lack of land management and maintenance provided by NSW National Parks and Wildlife Services to fire trails, access roads and in relation to pest and weed management within the Wallaroo State Forest. Should the Project be approved, near neighbours suggested that the Project could contribute to land management issues, particularly fire risk at associated with the Project Area and in offset areas.

Risk of fire from the quarry machines, it's a small risk but it is there.

The Project Area is identified as bushfire prone land by the Port Stephens Council bushfire prone land mapping (Bushfire Prone Vegetation Category 1). While the surrounding vegetation represents a potential bushfire threat, the land is managed by Forestry Corporation of NSW (FCNSW) and National Parks and Wildlife Service (NPWS) who provide for planned emergency response to bushfire events.

A Bush Fire Risk Assessment has been undertaken for the Project and has concluded that the Project itself will not increase the potential for, or the severity of bushfires, within the locality, as the risk of onsite activities igniting fire or the spread of bushfire across the Project Area will be managed through the implementation of appropriate bushfire protection measures including but not limited to:

- All weather access directly to the Project site via Italia Road with appropriate width to allow for firefighting vehicles.
- Proposed haul roads will also provide access for firefighting across the operational areas should it be required.
- An appropriate dedicated water supply for bushfire protection will also be provided on site with additional water available via the site's surface water management system if required.

The State Forest and National Park also have existing fire trails which provide access through the adjoining vegetation for both hazard reduction management and firefighting activities.

Additionally, a preliminary risk screening was undertaken for the Project which includes identification and assessment of the storage of specific dangerous goods classes that have the potential for significant off-site effects. Based on the assessment results, it was concluded that none of the hazardous materials to be stored during construction and operations are above screening thresholds. Vehicle movements for the transport of hazardous materials to the site will also be well below transportation screening thresholds (Umwelt, 2022), concluding that the Project does not represent a risk for fire increase in the area.

The biodiversity offset strategy for the project will be developed during the assessment process in consultation with the NSW Department of Planning and Environment, part of that strategy includes the establishment of a land-based offsets (potentially within the Wallaroo State Forest). The establishment of any offset area will require a commitment to ongoing management of the land including management of any associated bushfire risk.

4.1.4 Ecological Values

As previously identified in **Section 3.2.4**, protection and maintenance of their rural amenity is an important aspect for local community. A stakeholder explained that the quiet, rural outlook and proximity to nature and the forest affords specific activities such as birdwatching.

Living in proximity to the Wallaroo State Forest, consulted near neighbours stressed the importance of wildlife and ecological health. Several near neighbours raised concern for the local fauna and flora, including kangaroos, wallabies, koalas, snakes, birdlife, frogs and deer. Although a proposed mitigation strategy of offsetting a portion of the Wallaroo State Forest was discussed with landholders, some remained dubious that these measures were enough to accommodate the loss of ecological values.

If you want to clear such a vast amount of land and decimate the habitat for so many animals, could you please tell us how you will do that with harm minimisation.

This project is going to cause irreparable damage to the environment causing further extinction of native flora and fauna.

A near neighbour suggested that traffic increases would contribute to more roadkill, whilst another was concerned blasting vibrations and operational noise would increase snake activity near homes. During the first CCC meeting, one stakeholder reinforced concerns of residents about impacts on the existing wildlife, and whether the Project was consistent with Section 11 of Forestry Act.

There were also concerns raised that the Project would deplete water resources in the Nine Mile Creek, affecting the wildlife.

The impact on the wildlife is not just from the site clearing, it's the noise and vibration when operating too.

There are black cockatoos and koalas here. There is a pygmy possum (which was denied as being here, but I have seen it many years ago). We also have lyre birds and frogs.

There is lots of wildlife over there (In the Wallaroo State Forest), we get Koala's there, there will be more roadkill.

We've got kangaroos, koalas and wallabies. What about the animals and the environment? The animals are already starving, and we hardly have any water for them.

How will it impact the animals? I don't believe in the process of off-setting. People will/do clear the forest even when they are not allowed to.

As previously identified in **Section 3.2.6** and also in the Biodiversity Development Assessment Report (BDAR), the Project Area is surrounded by large areas of intact native vegetation within the Wallaroo State Forest, with direct connection to Wallaroo National Park, Karuah National Park and Karuah State Conservation Area. The Project Area is part of a regional fauna corridor, which narrows beyond the site to the south-west.

Taking into consideration the high importance of the natural environment of the area for the local community, the biodiversity assessment commenced during the early stages of Project design. This allowed for the early identification of the Project`s Disturbance Area, which was in turn further refined to minimise biodiversity impacts, particularly in areas with higher ecological values. Early identification and refinement of the Disturbance Area has avoided impacts to over 60 ha of native forest and woodland within the Project area (Umwelt, 2023).

The BDAR also identified the following impact avoidance and minimisation strategies:

- The Project has been designed to make use of the existing access track from Italia Road and is located to reduce the extent of excavation required to access the quarry resource.
- Areas which provide suitable wildlife corridors around the development footprint and along the Italia Road interface to be retained.

Despite the above minimisation strategies reducing the likely extent of impacts, the BDAR concluded that the Project will result in direct impacts to native vegetation communities and threatened species habitats within the Disturbance Area as a result of clearing works for infrastructure and quarry establishment. Potential indirect impacts on ecological values include:

- Increased site occupation which is likely to result in a reduction in habitat suitability for threatened fauna in adjoining areas.
- Reduced habitat connectivity due to loss of vegetation and installation of security fencing.
- Light spill, noise and air quality impacts which may result in alteration of fauna behaviour and reduction of habitat suitability for fauna species.
- Water impacts due to altered hydrology and sedimentation, although these will be appropriately managed through erosion and sediment controls and retention of intercepted water.
- Weed invasion, particularly in edge areas adjoining the Disturbance Area and increase in presence of pest animal species.

Further details on impacts on ecological values are outlined at Section 6.6 of the EIS or the BDAR provided in Appendix 12 of the EIS.

The BDAR has outlined a range of management measures to mitigate predicted impacts on ecological values associated with the Project. These include:

- Workforce Education and Training to create awareness of key ecological issues and understand policies being implemented to protect biodiversity and responsibilities relating to weed management.
- Creation of Vegetation Protection Zones for retained vegetation through use of appropriate temporary fencing and clear and visible signage.
- Ecologist pre-clearance survey and supervision of work – i.e pre-clearing relocation survey for fauna, staged clearing work, management of koalas during clearing, ecologist supervision of all hollow tree felling and nest box installation.
- Erosion and Sediment Control – minimising disturbance, erosion and sediment control structures, surface water management structures and stabilisation of disturbed areas.'
- Weed Management – survey and treatment of invasive weeds, ongoing inspections and treatment, cleaning of machinery prior to entering the site.
- Fencing, access control and fauna exclusion – security fencing will assist with limiting fauna access to operational areas.

In addition to the above, ARDG will seek to offset the impact of the Project through biodiversity credits. ARDG has also committed to further investigate the retirement of biodiversity credits through the establishment of a Biodiversity Stewardship Site within the Wallaroo State Forest. Where credits are not generated and retired within the Wallaroo State Forest they will be purchased from the market, or a payment will be made to the Biodiversity Conservation Fund (Umwelt, 2023).

4.2 Accessibility

The SIA Guideline defines accessibility as those impacts of the Project on how people access and use infrastructure, services and facilities, and changes to way of life, including how people live, get around, work, recreate and interact.

Impacts relating to these categories, raised during consultation activities included:

- Restricted access to private properties and business.
- Access to clean water resources.

4.2.1 Property Access

Further to the congestion and safety issues previously discussed along Italia Road, near neighbours voiced concerns that the level of traffic currently experienced impedes their property access and that any further increase to traffic would exacerbate this issue. These near neighbours expressed a need for further clarification from both TfNSW and the Project team as to what intersection upgrades would occur and how these changes would affect their property access.

> *Trucks bank up in my driveway*
>
> *Where will it [the proposed road for an intersection change] start to make an extra lane?*
>
> *I'm concerned about safety, my kid's safety, trying to get out of my driveway.*

As noted in **Section 4.1.1** ARDG, Boral and Eagleton have resolved with TfNSW to submit a separate Development Application to address the exiting safety and access issues associated with the Italia Road/Pacific Highway intersection. The intersection upgrade is proposed to address safety concerns and support the increased volume of traffic through reducing waiting times queuing at the intersection.

Safety concerns relating to school bus pick up and drop off access was also identified as an issue that was currently being experienced along Italia Road. It was noted that currently, the school bus sets children down in a driveway close to the Italia Road – Pacific Highway intersection, impeding access to one residential and business property during peak school times. This issue is further exacerbated by family members attempting to park and pick up their children in the same location. A resident raised concerns that school bus stops located along Italia Road are inadequate as safe set down/pick up zones for school children, with the provision of sheltered bus stops and bus pull-in areas identified as a way of providing safer pick up and drop off areas for school aged children.

> *The nearest bus stop is opposite the motorbike entrance. The next one is near the wooden bridge, past the Wallaroo State Forest entrance where someone has made a park bench, but there's no pull off areas for the Bus. I have mums parking in my driveway as it's the only place to get off the road.*
>
> *Lack of safety for school bus travellers.*

In addition, during the first CCC meeting, one member raised concern whether access to Wallaroo State Forest and whether Nine Mile Creek Road would be closed.

The TIA notes that bus services for four schools have been identified with routes along Italia Road an no material impacts are anticipated to these existing bus routes based on the following:

- Morning bus movements head west along Italia Road and will follow vehicles associated with the Project along Italia Road who then turn right into the Project Area. There may be minor incidental delays due to truck movements required to give way to oncoming traffic for the right turn, however these would not be significant given the estimated traffic volumes.
- Afternoon bus movements will have priority heading east along Italia Road with trucks exiting the Project Area yielding to traffic along Italia Road. Minor improvements in travel time may also be experienced associated with the intersection upgrades. These upgrades will also improvement movement through the intersection and reduce delay and queuing. It is not proposed for trucks to queue on Italia Road for entry into the site, additionally no heavy vehicles associated with the Project will travel west along Italia Road.

The Project will not result in any impact to Nine Mile Creek Road and will not affect access to the surrounding Wallaroo State Forest.

4.2.2 Water Resources

Concerns regarding impacts on water were raised by eight (8) proximal neighbours (**Figure 4.7**).

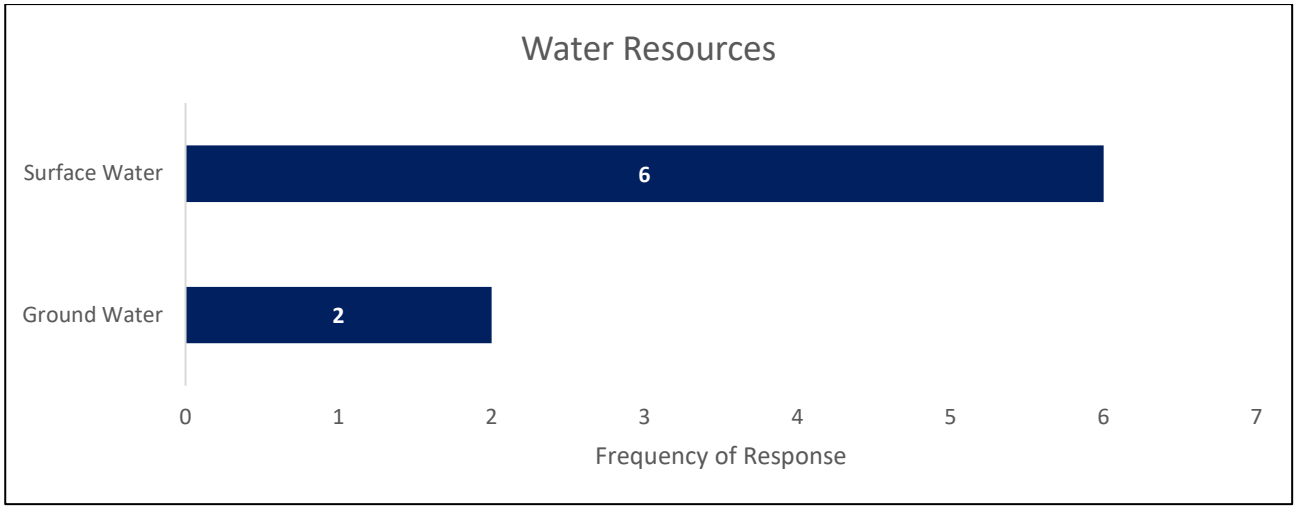


Figure 4.7 Perceived Social Impacts – Water Resources

n=16; multiple responses allowed.

Some proximal neighbours also expressed concerns for their private bores and wanted to better understand how groundwater would be affected by the Project.

We have bore water on the property, how will that be affected?

The Groundwater Impact Assessment (GWIA), indicates the Project is not predicted to result in significant change in groundwater quality or in the beneficial use of the groundwater, meeting the NSW Aquifer Interference Policy (AIP) Level 1 Minimal Impact Considerations for landholder bores, GDEs and groundwater quality (GHD, 2022).

A Surface Water Impact Assessment (SWIA) has also been undertaken to assess the potential impacts of the Project on surface water. The assessment concluded that the Project would maintain an adequate water quality level provided based on adequate water storage capacity being made available for all stages of the Project operation. Appropriate water treatment will also be implemented to ensure controlled discharge water quality targets are achieved, and an appropriate water inventory management is implemented to minimise the volume and frequency of uncontrolled discharges (Umwelt, 2022).

The SWIA also indicated that rainfall runoff and groundwater bore imports will provide an adequate and reliable supply of water to meet operational water demands for all stages of the Project limiting any potential impacts on existing water supplies. In the event of any temporary restrictions on access to groundwater entitlements, it is intended that the Project would scale operations to an appropriate level to reduce operational water demands while, as far as practicable, ensuring environmental controls are maintained (Umwelt, 2022).

4.3 Health and Wellbeing

Health and wellbeing impacts include impacts to both physical and mental health and may include psychological stress resulting from uncertainty, financial and/or other pressures, as well as anticipated changes to individual and public health.

As shown in **Figure 4.8**, potential Project impacts raised by stakeholders during consultation relating to health and wellbeing included potential exposure to dust and blast fumes produced from quarrying activities and subsequent impacts on water quality and respiratory health. These impacts have also been addressed at **Sections 4.1.2** and **4.2.2.**

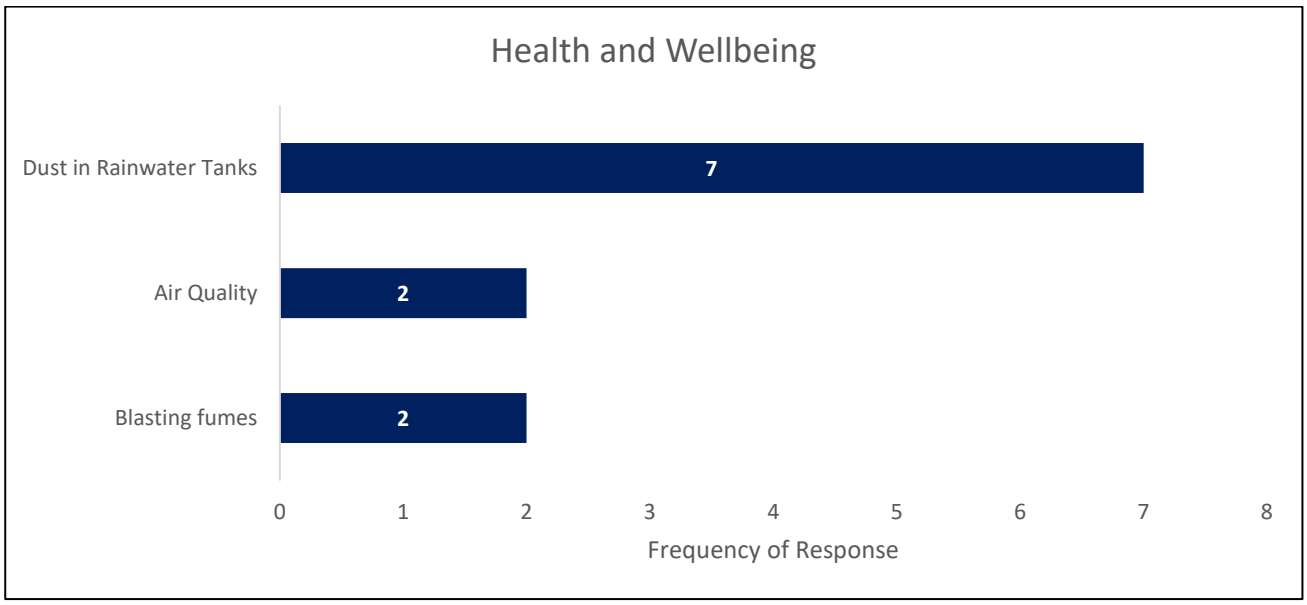


Figure 4.8 Perceived Social Impacts - Health and Wellbeing

n=16; multiple responses allowed.

During engagement activities concern was noted regarding the potential contamination of drinking water (7). The majority of concerns centred around dust being deposited in rainwater tanks and affecting water quality, as all consulted landholders rely on rainwater tanks for their water supply. One landholder also raised a concern the health of their livestock may also be affected by water quality. Another landholder

recalled coal dust accumulating in rainwater tanks when living near coal mine sites, leaving a thick residue in their tanks and expressed concerns that this would occur again in light of the Project.

> *Dust is currently settling in tanks.*
>
> *We're on drinking water and we get south westerly winds.*
>
> *I used to live in Singleton and the amount of sludge you get out of your rainwater tank.*
>
> *With the wind direction and the proximity to us, we have concerns for dust in our rainwater. If we were on town water it wouldn't be a problem, but we have tanks.*
>
> *The livestock suffer.*

Some nearby neighbours expressed concern for their private bores and wanted to better understand how groundwater would be affected by the Project.

In addition, the AQGGA recommends a range of measures to decrease the level of dust produced as a result of the Project and therefore minimising the risk of contamination of private water tanks. Such measures include:

- Adopting controls for haul road dust emissions
- Consideration of meteorological conditions in planning the loading and unloading of overburden and product materials
- Applying water and using dust curtains when drilling overburden
- Utilising water sprays and water carts as needed on exposed areas and stockpiled materials.

4.4 Livelihoods

Impacts on livelihoods refer to the Project's effect on people's capacity to sustain themselves through employment or business, and the economic contribution of a project within the community.

4.4.1 Personal and Property Rights

Consulted near neighbours expressed several property-related social impacts, including property damage as a result of blasting, potential property acquisition and decreased property value (**Figure 4.9**).

Figure 4.9 Perceived Social Impacts – Personal and Property Rights

n=16; multiple responses allowed.

Potential blasting vibration impacts to the structural integrity of homes and out-buildings was raised as concern by some near neighbours located on Nine Mile Creek Road. They expressed a desire, should the Project be approved, to receive blasting notifications and asked questions regarding the blasting process and scheduling of blast events.

> *So, there will be blasting? But it's not all the time is it? How much notice would we get?*
>
> *We're not receiving Boral notices about blasts.*
>
> *So, it wouldn't be an earthquake then?*

A proximal neighbour shared their experience of cracks developing throughout their ceiling when the Pacific Highway bypass was constructed twenty years ago. Near neighbours expressed a desire, should the Project be approved, to receive blasting notifications and asked questions regarding the blasting process and scheduling of blast events.

> *Impacts on houses (although we haven't had much vibration from Boral)?*
>
> *There are cracks in my house from when they put in the Bypass (20 years ago). I'm concerned because we're on a concrete slab here.*

A Blasting Impact Assessment (BIA) has been prepared to assess the potential impact of the likely blasting impacts of the development (including ground vibrations, overpressure. flyrock), The AQGGA includes an assessment of potential impacts from blast fumes). The BIA results concluded that all potential ground vibration exposures and airblast overpressure were below the applicable private residential receptors limits (refer to the BIA for further detail). Flyrock impact on nearby residences is considered to be fully manageable, and potential risks mitigated, due to the application of appropriate exclusion zones (ESC,

2022). The AQGGA concludes that, even worst case blast fume events would not result in fume events at residences that would exceed relevant air quality assessment criteria.

Additional management measures that have been identified in the BIA to assist mitigate any potential blasting impacts for nearby neighbours, including:

- Implementation of a Blast Monitoring System.
- Pre-Blast Assessment Protocol – to manage blasting and to minimise the impacts on the surrounding area. The protocol would be reviewed on a regular basis to address the physical changes in the quarry.
- Residence Notification System – to provide information on the dates and times of proposed blasting to the private residences in close proximity.
- Liaison with adjacent quarries – to prevent concurrent blasting times to avoid cumulative blast impacts and to minimise impact on the local community.

In addition, near neighbours suggested ARDG may want to acquire their properties.

> *There is a concern that they could want to acquire some/part of the land. These are issues we now need to think about. For us to move it would have to be of some benefit to us.*
>
> *Buy us out, that's the only way I will agree to it. Buy me out, then lease it back to me and I'll work for them.*

Furthermore, some neighbours held concerns that the Project could impact their property value, should they wish to sell at any stage. One of these near neighbours suggested that plans for renovations could be put on hold, with the Project creating uncertainty as to whether invested capital would be recovered in the future.

> *Our property value is going down yet we aren`t allowed to subdivide out land to recoup some costs.*
>
> *No one wants to buy near a quarry.*
>
> *What will a quarry mean for our resale value?*
>
> *We were going to start doing renovations (an extension), but hearing this maybe we shouldn't?*

It is difficult from a social impact perspective, to specifically ascertain the risks of the Project on property values, and the direct impacts of the quarry, however recent assessments of property value (TEW Property Consultants) in other Project assessment processes in a mining context e.g., Mangoola Continued Operations Project (MCOP EIS/SIA), report that:

- Market data and discussions with local real estate agents indicates that the market for rural lifestyle properties in the Hunter is liquid, with no known evidence of unsaleable properties as a result of the presence of mining (or similar) operations.

- There is evidence to suggest that detrimental impacts on property prices occur as a result of mining operations; however, this impact appears to be limited to the areas where factors such as noise and air quality exceed environmental standards and criteria, thus necessitating acquisitions by the relevant company under the Voluntary Land Acquisition and Mitigation Policy (VLAMP) for State Significant Mining, Petroleum and Extractive Industry Developments (NSW Government 2018). This is not the case in relation to this Project.

4.4.2 Economic Benefits, Employment and Procurement opportunities

As presented previously at **Figure 4.2**, the Project opportunities that were identified during the scoping phase of engagement were primarily related to employment opportunities (5 near neighbours) with regional benefits and the regional benefits relating to employment and procurement and the opportunities associated with extraction of quarry materials for infrastructure development also noted by two (2) stakeholders.

During Round 2, when prompted as to the level of importance attached to procurement and employment opportunities provided by the Project on scale of 1 to 5, the following ratings were noted.

The Economic Assessment included consideration of the economic costs and benefits of the Project (through a cost benefit analysis) and indicated that the Project would have net production benefits to NSW of $290M comprising $278M in quarrying benefits, and $12M in ex quarry transport benefits (Gillespie Economics, 2023).

The estimate of NSW net production benefits of the project includes the costs of water access licences, biodiversity offsets, road intersection upgrades, road pavement maintenance costs and costs of mitigation, monitoring and management of other potential impacts. Consequently, the Economic Assessment estimates that the Project will have a net economic benefit to NSW, and hence is desirable and justified from an economic efficiency perspective.

In addition, the Project will provide 47 direct jobs (12 quarry job and 35 ex-quarry transport jobs), the majority of which are assumed to resident within the local[3] area (97% quarry workers and 94% transport workers). These jobs are estimated to provide local benefits through increased disposable income ($0.7M per annum) (Gillespie Economics , 2023).

The Project is estimated to provide the following annual direct and indirect annual effects to the local economy:

- $102M in output
- $58M in value-added
- $14M in gross wages
- 176 jobs (47 direct, 129 indirect).

[3] The local area as defined in the Economic Assessment includes the LGAs of Port Stephens, Newcastle, Lake Macquarie, Cessnock, Maitland and Central Coast.

4.5 Decision-Making Systems

Impacts in relation to decision-making systems relate to whether people experience procedural fairness, can make informed decisions about a project, can meaningfully influence decisions, and are able to access complaint, remedy, and grievance mechanisms. During engagement for the Project, participants identified concerns relating to decision-making, specifically a lack of trust in the planning and assessment process and reinforcing that they "*wanted to receive everything available*" regarding the Project.

Three (3) consulted nearby neighbours expressed particular concerns at the scoping phase in relation to the uncertainty associated with Project planning, including potential road changes and lifestyle changes. A near neighbour recalled a similar feeling of uncertainty when a development was proposed in 2016 for a motor-racing speedway. Another near neighbour recounted their previous experience of the development approvals process, labelling it as '*not transparent*' and believing that near neighbour engagement rarely influences the approvals outcome.

> *We've been through this before with the Drag Strip they wanted to put in. We sat and waited while they made their decisions.*
>
> *In a few years we will have our house paid off; Boral will be finished in a few more years and we will just have our place, but now this proposal, we just don't want it to impact us.*
>
> *Previous experience it is not transparent, and people just do what they want to do.*

One consulted near neighbour referred to the perceived importance of the Project and ARDG being Australian owned and operated, while another stressed the importance of respectful communications between ARDG staff and contractors and near neighbours and specifically referenced an event that was perceived as discourteous, when asking contractors during drilling explorations to supply further Project information.

> *Is the company Australian owned?*
>
> *When you were completing your core sampling, I was very disappointed when I tried to get some information from the drillers, and they were so rude.*

ARDG is a Newcastle-based Australian owned business. The company is committed to engaging proactively with local and regional community representatives. To address concerns associated with decision making and engagement , ARDG will develop and implement a Community and Engagement Strategy (refer to **Section 5.3** for further detail) which will outline mechanisms to keep the community informed and up to date with the Project and therefore allows for a mechanism to monitor and evaluate the success of mechanisms implemented to manage social impacts. The implementation of this Strategy will be in addition to the ongoing meetings of the CCC that has been already established.

4.6 Culture

Impacts or changes to culture include effects on people's shared beliefs, customs, values, language, and dialect, as well as their local culture, heritage, and ability to access cultural resources.

During community consultation, one proximal neighbour raised a concern about the Project potentially being built in proximity of significant Aboriginal Heritage and the potential identification and destruction of cultural significant artefacts.

An Aboriginal Cultural Heritage Assessment (ACHA) has been prepared by Umwelt in collaboration with Registered Aboriginal Parties (RAPs). The ACHA included site survey undertaken with the RAPs, no Aboriginal objects or areas of archaeological potential were identified during the survey, and the entirety of the Project Area is considered to be of low archaeological potential. As such, the Project is not expected to result in impacts to Aboriginal sites (Umwelt, 2022).

The ACHA also concluded that no registered Historic Heritage items are located within the Project Area and no unregistered potential heritage items were identified. One registered heritage item is located over 1,100 metres west of the Project Area, consisting of the locally-listed 'Balickera' House, a nineteenth century convict-built homestead located at 303 Italia Road, which is outside of the Project Area and therefore would not be impacted by the Project. Targeted blasting assessment confirmed that no additional blast control measures would be required to comply with the ground vibration criteria for heritage sites (Umwelt, 2022).

5.0 Social Impact Evaluation and Management

5.1 Social Impact Evaluation

This section provides an evaluation of the social impacts identified in relation to the Project, with the aim of assessing the anticipated changes to the current social baseline, due to the Project proceeding. Supplementary secondary insights have also been compiled to further contextualise, benchmark, and qualify the matters raised to inform the evaluation of each social impact.

As outlined in **Section 4.0** and **Appendix D**, a range of perceived social impacts have been identified in relation to the Project, that require prioritisation for assessment and appropriate management and/or enhancement. It should also be noted that social impacts are often not mutually exclusive, with higher order impacts such as population change, resulting in second order impacts such as impacts on sense of community and service provision.

As noted in the SIA Guideline, the definitions and scale assigned to each of the likelihood and magnitude categories need to be relevant to the impact that is being evaluated and justified in the SIA; and where possible the consequence scale should be based on established measures and standards. The evaluation of social impact significance has involved four main steps as outlined in **Figure 5.1**.

Figure 5.1 Social Impact Evaluation Process

In line with the process defined above, the following sections assess the technical and perceived social concern/interest in relation to the positive and negative consequences that may be experienced by stakeholders due to anticipated impacts/changes associated with the Project and have been categorised in line with the social impact categories outlined in the SIA Guideline (DPIE, 2023).

Table 5.1 presents a summary of the social impact evaluation with the justification and proposed management and enhancement strategies. The colour blue has been used to represent the Significance Rating of impacts, while light shade of red and green has been used to indicate if an impact is negative or positive, respectively.

It should be noted that the residual social risk ratings represent the risk post implementation of mitigation measures, with proposed mitigation and enhancement strategies outlined at Section 5.2 included to address the residual social impacts.

It is also important to note that unlike in the context of other technical studies undertaken as a part of the environmental impact assessment, there are no thresholds in the social space with the identification of possible consequences largely due to making a qualitative assessment. Therefore, the social risk assessment is also informed by the socio-economic baseline data, outcomes of literature reviews and experiences with other projects, outcomes of consultation and findings of technical studies and a conservative approach has been taken with these ratings.

Table 5.1 Social Impact Evaluation

Impact Category	Project aspect	Impact description	Extent / Affected parties	Duration	+ve/-ve SIA Rating	Perceived Significance	Significance Rating [4] (before mitigation)			Proposed Mitigation or enhancement	Residual significance Rating		
							L	M	S		L	M	S
Surroundings	Project establishment and operation	Decreased road safety (particularly at the Italia Road / Pacific Hwy intersection) as a result of operational truck movements.	Proximal Landholders Local and broader community	C,O	Negative	**Very High**	B	4	**H**	Implementation of a road safety management plan and Traffic and Transport Management Plan (TTMP), including not permitting heavy vehicles to travel west along Italia Road, and must enter Italia Road from the south, and exit to the north (no right turn across the highway). ARDG will provide Section 94 contributions for heavy vehicle road haulage for loaded truck movements on Italia Road to Port Stephens Council No quarry product will be transported from the Project Area until the Italia Road/Pacific Highway Intersection works are complete Implementation of proposed Project Area intersection upgrade Implementation Driver code of conduct	D	3	**M**
	Project establishment construction and operation	Decreased road safety due to Increased heavy vehicles vehicle movement.	Proximal Landholders Local community	C, O	Negative	**High**	B	4	**H**	Implementation of a road safety management plan and Traffic and Transport Management Plan (TTMP). ARDG will provide Section 94 contributions for heavy vehicle road haulage for loaded truck movements on Italia Road to Port Stephens Council No quarry product will be transported from the Project Area until the Italia Road/Pacific Highway Intersection works are complete Implementation of proposed Project Area intersection upgrade Driver code of conduct	D	3	**M**
	Project establishment construction and operation	Decreased road safety due to road deterioration from increased heavy vehicle movements.	Proximal Landholders Local community	C, O	Negative	**High**	B	4	**H**	Implementation of a road safety management plan and Traffic and Transport Management Plan (TTMP). ARDG will provide Section 94 contributions for heavy vehicle road haulage for loaded truck movements on Italia Road to Port Stephens Council Implementation of proposed Project Area intersection upgrade Driver code of conduct	D	3	**M**
	Project establishment construction and operation	Increased traffic congestion particularly between the Project and the Pacific Hwy, and at the Tarean Road (Karuah) turnaround point for southbound heavy vehicles.	Proximal Landholders Local community	C, O	Negative	**Medium**	C	3	**M**	Implementation of a road safety management plan and Traffic and Transport Management Plan (TTMP). ARDG will provide Section 94 contributions for heavy vehicle road haulage for loaded truck movements on Italia Road to Port Stephens Council No quarry product will be transported from the Project Area until the Italia Road/Pacific Highway Intersection works are complete Implementation of proposed Project Area intersection upgrade Driver code of conduct	D	2	**L**
	Project establishment construction and operation	Potential for cumulative impacts on roads due to existing proximal quarry operations.	Proximal Landholders Local community	C, O	Negative	**Medium**	C	3	**M**	Implementation of a road safety management plan and Traffic and Transport Management Plan (TTMP). Keep the local community informed around the construction and operation hours and any subsequent changes. Continue to engage in community engagement and information sharing with relevant stakeholders Driver code of conduct	C	2	**M**
	Project establishment,	Loss of social amenity due to increased noise from heavy vehicle traffic.	Proximal Landholders	C, O	Negative	**High**	C	3	**M**	Implementation of Traffic and Transport Management Plan (TTMP) and appropriate noise controls through implementation of CEMP and OEMP.	D	2	**L**

[4] L = Likelihood (A: Almost Certain, B: Likely, C: Possible, D: Unlikely, E: Very Unlikely); M = Magnitude (1: Minimal, 2: Minor, 3: Moderate, 4: Major, 5: Transformational); S = Significance rating (L: Low, M: Medium, H: High, VH: Very High)

Impact Category	Project aspect	Impact description	Extent / Affected parties	Duration	+ve/-ve SIA Rating	Perceived Significance	Significance Rating [4] (before mitigation)			Proposed Mitigation or enhancement	Residual significance Rating		
							L	M	S		L	M	S
	construction and operation									Limited construction and operation activities to standard working daylight hours. Exceptions to these hours may occur, however would be limited to activities with low noise generation, and would be assessed on a case-by-case basis prior to commencement of those activities. Keep the local community informed around the construction and operation hours and any subsequent changes.			
	Project establishment, construction and operation	Loss of social amenity due to increased dust from heavy vehicle traffic	Proximal Landholders	C, O	Negative	**High**	C	3	**M**	Implementation of Traffic and Transport Management Plan (TTMP). Preparation and implementation of CEMP and OEMP. Keep the local community informed around the construction and operation hours and any subsequent changes.	D	2	**L**
	Project establishment and operation	Loss of social amenity due to increased noise generated by project operation	Proximal Landholders	O	Negative	**High**	C	3	**M**	Implementation of CEMP and OEMP. Limited operation activities to standard working daylight hours. Exceptions to these hours may occur, however would be limited to activities with low noise generation, and would be assessed on a case-by-case basis prior to commencement of those activities.	D	2	**L**
	Project establishment and operation	Potential for increased flood and fire risk on neighbouring properties due to the project operation	Proximal landholders	O	Negative	**Low**	D	2	**L**	Implementation of CEMP and OEMP.	E	1	**L**
	Project establishment construction and operation	Potential for habitat loss as a result of the Project resulting in impacts to existing local koala populations.	Broader community	C, O	Negative	**Very High**	B	3	**H**	Proactive, thorough and transparent consultation process throughout Project planning, assessment and development. Implementation of CEMP and OEMP Development and implementation of a Biodiversity Offset Strategy Creation of Vegetation Protection Zones for retained vegetation. Pre-clearing relocation survey for fauna and staged clearing works Management of koalas during clearing and ecologist supervision of all hollow tree felling and nest box installation.	C	3	**M**
	Project establishment construction and operation	Lack of trust from the community that offset measures would appropriately accommodate the loss of biodiversity.	Broader community	C, O	Negative	**High**	C	3	**M**	Proactive, thorough and transparent consultation process throughout Project planning, assessment and development. Develop and implement biodiversity offset strategy for the project in consultation with the NSW Department of Planning and Environment based on the offset options available under the BC Act, Including a land based offset (potentially within the Wallaroo State Forest), purchasing of credits from the market; and/or payment into the Biodiversity Conservation Fund.	D	2	**L**
Surroundings, Accessibility and Health and Wellbeing	Project establishment, construction and operation	Dust produced from the project impacting on air quality, thereby adversely affecting the health and wellbeing of surrounding landholders	Proximal Landholders	C, O	Negative	**Medium**	C	3	**M**	Proactive, thorough and transparent consultation process throughout Project planning, assessment and development. Implementation of CEMP and OEMP. Provide community with information of the complaints procedure during operations (through OEMP).	D	2	**L**
	Project establishment and operation	Blasting fumes from the Project impacting on air quality, thereby adversely affecting the health and wellbeing of surrounding landholders	Proximal Landholders	O	Negative	**Low**	C	2	**M**	Proactive, thorough and transparent consultation process throughout Project planning, assessment and development. Implementation of CEMP and OEMP. Provide community with information of the complaint procedure during operations (through OEMP).	D	2	**L**

Impact Category	Project aspect	Impact description	Extent / Affected parties	Duration	+ve/-ve SIA Rating	Perceived Significance	Significance Rating [4] (before mitigation)			Proposed Mitigation or enhancement	Residual significance Rating		
							L	M	S		L	M	S
										Blasting notification procedure Road closures (during later stages of the Project – stages 6 – 9) during blasting times to reduce risks for drivers.			
	Project establishment and operation	Potential for increased fire risk due to the presence of the Project within a state forest, operation of machinery and mining practices causing ignition	Proximal Landholders Broader community	O	Negative	**Low**	D	3	**M**	Communicate Fire and Risks Management Plan to community and implement mitigation measures through CEMP and OEMP Implementation of the Asset Protection Zones (APZ) and implementation of appropriate water supply. development and implementation of bushfire management measures in consultation with RFS, Fire and Rescue, NPWS and FCNSW.	E	3	**L**
	Project establishment and operation	Project activities potentially affecting access and use of water due to changes to surface water and groundwater quality and quantity	Broader community	O	Negative	**Low**	D	3	**M**	Proactive, thorough and transparent consultation process throughout Project planning, assessment and development. Implementation of CEMP and OEMP. Provide community with information of the complaint procedure during operations (through OEMP).	E	2	**L**
	Project establishment and operation	Dust produced from the Project resulting in impacts on tank water quality, thereby affecting drinking water quality and resulting in health and wellbeing impacts for proximal landholders	Proximal Landholders	O	Negative	**High**	D	3	**M**	Proactive, thorough and transparent consultation process throughout Project planning, assessment and development. Implementation of CEMP and OEMP. Provide community with information of the complaint procedure during operations (through OEMP).	D	2	**L**
Accessibility	Project construction and operation	Decreased property accessibility due to increased traffic, particularly for landholders located between the Project and the Pacific Hwy	Proximal Landholders	C, O	Negative	**Low**	C	2	**M**	Implementation of a road safety management plan and Traffic and Transport Management Plan (TTMP).	E	2	**L**
	Project establishment and operation	Reduced public access to the Balickera State Forest for recreational use	Broader community	O	Negative	**Low**	D	2	**L**	Proactive, thorough and transparent consultation process throughout Project planning, assessment and development. Implementation of CEMP and OEMP	E	2	**L**
Livelihoods	Project establishment and operation	Potential property damage for nearby residents as a result of blasting from the project	Proximal Landholders	O	Negative	**Low**	D	2	**L**	Implementation of CEMP and OEMP	E	2	**L**
	Project establishment, construction and operation	Potential decline in property values, as a result of the presence of the Project in the area	Proximal Landholders Broader community	C, O	Negative	**Medium**	C	3	**M**	Implementation of CEMP and OEMP	D	3	**M**
	Project establishment, construction and operation	Increased employment / contracting opportunities for the local community	Broader community	C, O	Positive	**Low**	C	1	**L+**	Employment and Procurement Strategy to include targeted and proactive initiatives to maximise local employment and sourcing from local communities, up-skilling and capacity building supports.	C	2	**M+**
	Project establishment, construction and operation	Increased economic and human capital across social locality due to project procurement opportunities	Broader community, local business owners	C, O	Positive	**Medium**	C	1	**L+**	Employment and Procurement Strategy to include targeted and proactive initiatives to maximise local employment and sourcing from local communities, up-skilling and capacity building supports.	C	2	**M+**

Impact Category	Project aspect	Impact description	Extent / Affected parties	Duration	+ve/-ve SIA Rating	Perceived Significance	Significance Rating [4] (before mitigation)			Proposed Mitigation or enhancement	Residual significance Rating		
							L	M	S		L	M	S
	Project construction workforce	Increased spending in local towns bringing about positive growth for local businesses and services	Broader community, local business owners	C	Positive	**Low**	C	1	**L+**	Employment and Procurement Strategy to include targeted and proactive initiatives to maximise the capacity and use of local businesses, and to be developed in collaboration with local business providers.	C	2	**M+**
Decision-making systems	Project establishment	Loss of community trust due to lack of ability to participate meaningfully and influence project decision making	Proximal Landholders Broader community	C	Negative	**Medium**	C	3	**M**	Proactive, thorough and transparent consultation process throughout Project planning, assessment and development.	D	2	**L**
Cultural and Community	Project establishment and construction	Project being built in proximity of significant Aboriginal Heritage causing concern over potential identification and destruction of cultural significant artefacts	Local Aboriginal community Broader community	C	Negative	**Low**	D	3	**M**	Implementation of CEMP and OEMP	E	3	**L**

5.2 Social Impact Management Strategies

This section provides further detail on the proposed strategies to be implemented in response to the predicted social impacts associated with the Project and relates to those impacts (both positive and negative) that have been evaluated as significant. Social impact management planning is a key consideration of SIA and ensures that the impacts identified via the SIA process and through community consultation activities, are managed effectively across the life cycle of the development (Franks & Vanclay, 2013).

The strategies proposed have been developed from the mitigations and enhancement measures raised by the community as well as through industry benchmarking, consideration of the mitigation and management measures from other technical studies undertaken for this Project, and through the application of sound social performance practice.

SIA guidance (DPIE, 2023) outlines that mitigation measures to respond to project impacts may be:

- **Performance-based** – identify performance criteria that must be complied with to achieve an appropriate outcome, but do not specify how the outcome is to be achieved, demonstrating why the performance criteria are appropriate.
- **Prescriptive** – that outlines actions that need to be taken or things that must be done, with justification as to why this approach is appropriate by providing scientific evidence or referencing relevant guidelines or case studies.
- **Management-based** – where potential impacts can be satisfactorily avoided or mitigated by implementing known management approaches.

5.3 Community Engagement Strategy

Consistent and consultative engagement with communities throughout the Project's planning, pre-construction, construction, and operations is critical in ensuring social acceptance, strong local partnerships and overall, more successful, and sustainable Project outcomes. Fairness in the Project development process requires the establishment and management of processes to ensure that people have meaningful opportunities to influence the design, plans, and outcomes of a development as well as in realising the benefits of the Project.

In the case of the Project, proactive consultation, and the formation of strong working partnerships throughout the Project lifecycle with the following stakeholder groups is critical:

- Neighbouring residents.
- Locally active community and environmental groups.
- Local Government.
- Local businesses and service providers.
- The broader community.

It is recommended that in the remaining development phase of the Project, and throughout the pre-construction and construction phases, ARDG prioritise the development and implementation of a Community Engagement Strategy, comprising project-specific stakeholder analysis, mechanisms or methods to be utilised, periodic action plans, targets, and responsibilities for implementation. The strategy would also outline the development of a monitoring and evaluation framework throughout the life of the Project, which will complement the ongoing engagement through the established Community Consultative Committee (CCC).

The approach for community engagement and public participation should be guided by the following industry and government standards and frameworks:

- The International Association for Public Participation (IAP2)'s Spectrum of Public Participation (2018).
- NSW Government's Undertaking Engagement Guidelines for State Significant Projects (DPIE, 2022).

Objectives of the Community Engagement Strategy should at a minimum include:

- To ensure that those potentially affected by a project understand the project and how it will affect them.
- To understand stakeholder interests and how impacts may be experienced (from their perspective).
- To consider the representative views of people in a meaningful way and to use these insights to inform project planning and design.
- To ensure people know how their input has been considered, and what strategies will be put in place to address their concerns.
- To inform the development and implementation of impact management strategies.
- To share regular and transparent information on the Project.

5.3.1 Community-Identified Strategies and Enhancement Opportunities

Through community consultation on the Project to date, members of the community have identified and suggested a range of mitigation and enhancement strategies which, in their view, address the social impacts that they predict the Project may cause.

Community-identified strategies and opportunities are summarised in **Table 5.2** below with those in italics those to which ARDG has already committed to implementing.

Table 5.2 Community-Identified Enhancement Strategies and Opportunities

Category	Community-Identified Strategy or Opportunity
Surroundings	• *Provision of low cost gravel for local driveway. Contribution to safety of the whole of Italia Road.* • *Development of an Overpass (Pacific Highway/Italia Rd Intersection) to reduce traffic congestion and improve traffic safety* • *No trucks/transport of quarry materials on Nine Mile Creek Road* • *Enforce Trucks/transport of materials on Italia Road and turning towards Pacific Highway only*

Category	Community-Identified Strategy or Opportunity
	• *Enforce speed limits for trucks/contractors (e.g. toolbox talks and truck monitoring)* • *Publicise community line to report trucks not applying to transport rules and regulations* • *Undertake dust mitigations on site to reduce airborne dust e.g. water sprays* • *SMS Blasting notifications* • *Signs notifying day and time of blasts* • *Blocking road access during blast to reduce risk of fly-rock to cars* • *Undertake appropriate road maintenance on Italia Road* • *Provide direct contact to RMS* • *No night-time operations e.g. crushing/machinery (after 6pm)* • Community monitoring program – identification of local community monitors • Establish camera monitors along Italia Road • Appointment of traffic directors (e.g. lollipop people) during busy times/weekends/holiday traffic • Apply School zone speed limits • Construct School pick up/drop off areas • Erect bus stops with shelters at school pick up points • Provide noise attenuation to windows for proximal residents • Conduct baseline sampling of water tanks for proximal residents • Supply covers for rainwater tanks • Supply water filters for rainwater tanks • Deer Control • Assist in the maintenance of fire trails and main access roads e.g. grading/earthmoving • Maintain local driveways e.g. grading
Accessibility	• Conduct baseline sampling of private bores
Livelihoods	• *Employ locally, including local contractors* • Provision of a Community bus service for elderly residents to drop off/pickup in Raymond Terrace e.g. once a week. • Clean up illegal dumping • Develop more camp sites in the area • Construct drop box toilets at camp sites e.g. Lone Pine Rest Area • Provision of support for local recreational clubs e.g. 4WD • Further details of the acquisition process (if relevant) • Opportunity to rent back acquired property
Decision-Making Systems	• *Further engagement once assessment studies are complete*

5.4 Local Employment, Training and Procurement

Relating to local participation planning (employment, training, and procurement), the Strategy should contain initiatives to proactively enable the maximisation of local employment and sourcing for the Project's construction and operational needs, and could include the following:

- Investigate options for prioritising the employment of local workers.
- Supplier and servicing opportunities for local businesses.
- Jobs, supplier, and servicing opportunities that target partnerships with local and active social enterprises.

Mechanisms for local businesses, job seekers and services to register their capabilities and interest in working with the Project to be formalised and widely shared within the social locality.

5.5 Other EIS Management Plans

Management of social impacts, relating to environment and amenity impacts have also been identified and addressed in other technical studies undertaken as part of the EIS. Relevant management measures are to be contained within the CEMP and OEMP and are referenced at **Table 5.1** above as relevant.

6.0 Conclusion

This Social Impact Assessment has documented the social baseline, social impacts and social impact management and enhancement measures associated with the Project and forms part of the EIS for the Project.

This social assessment has included the compilation of a social baseline profile for the Project, consolidation of community consultation outcomes to inform the assessment and evaluation of Project-related social impacts and opportunities, and preliminary social impact management planning. The impact evaluation has been undertaken to inform and support the refinement of Project design and plans to reduce negative project impacts and achieve greater positive project benefits and social outcomes.

The assessment concludes that identified negative social impacts of the Project can be reasonably mitigated or managed to reduce their significance, with positive impacts increasing in significance if appropriate enhancement measures are put in place.

A social impact management planning framework has been outlined and includes ongoing engagement via a Community Engagement Strategy and operation of the CCC to monitor the realisation of impacts and community satisfaction with the management measures in place.

A Local Employment, Training and Procurement Strategy and other EIS Management Plans are also key components for the successful development of the Project.

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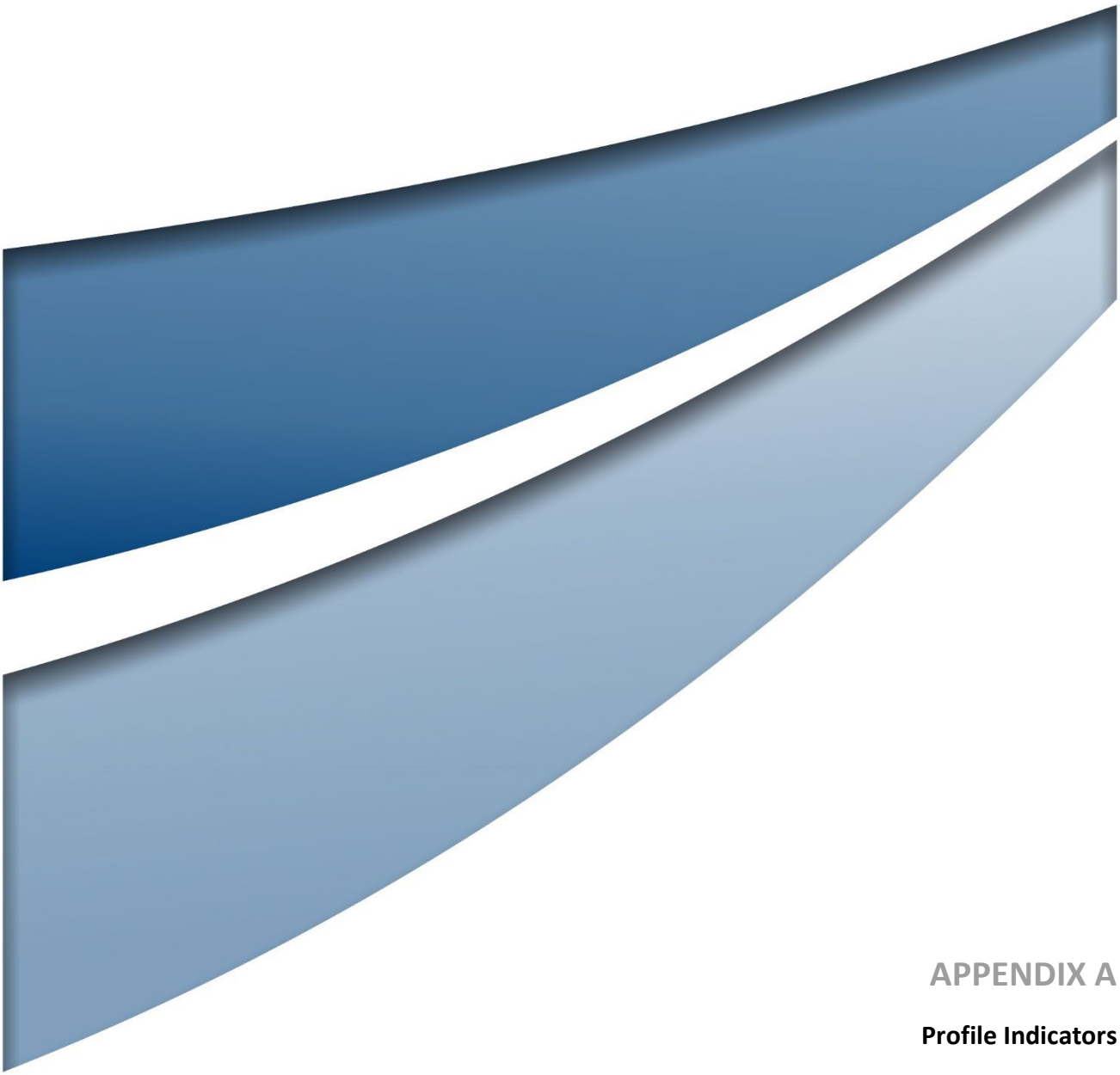


APPENDIX A

Profile Indicators

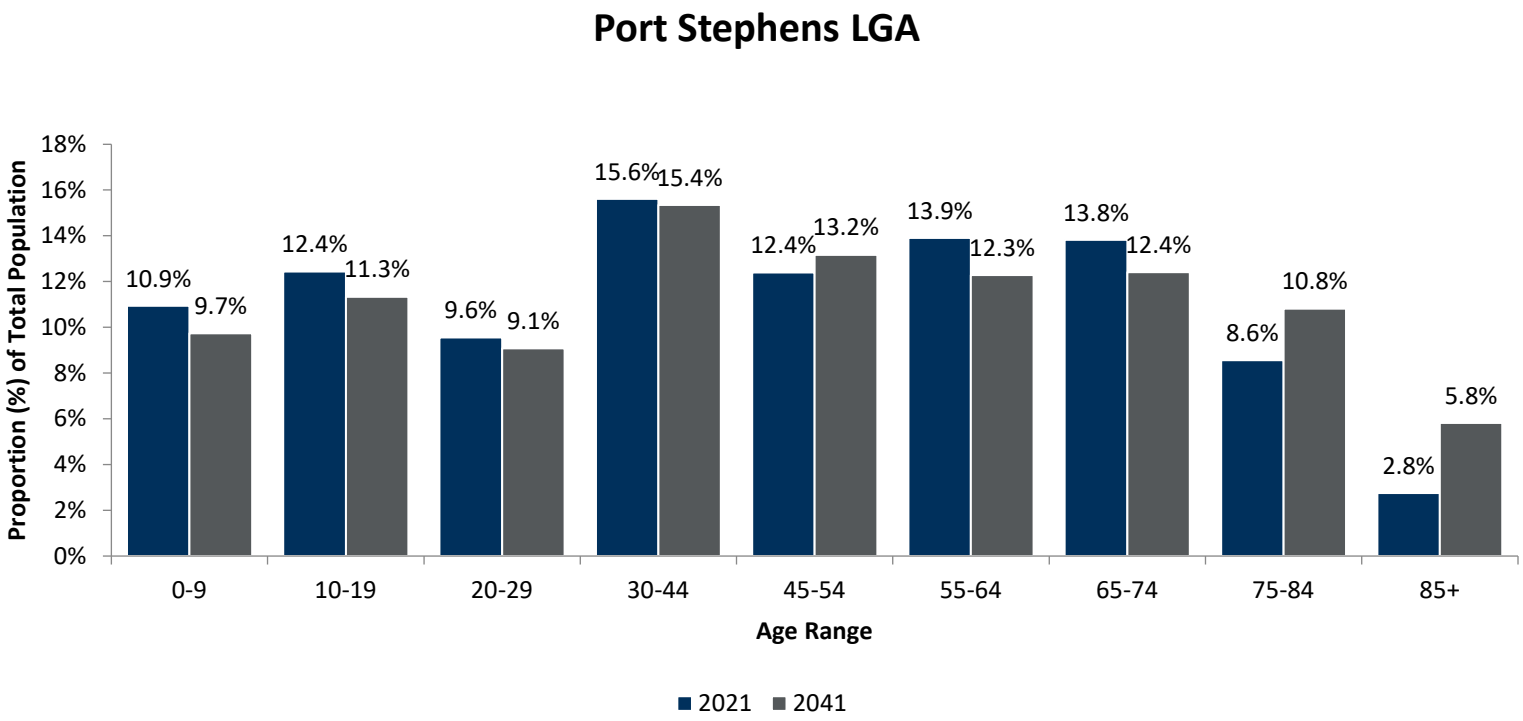
Table A.1 Community Profile Indicators (ABS, 2016, 2021)

	Balickera		East Seaham		Eagleton		Ferodale		Port Stephens		NSW	
	2016	2021	2016	2021	2016	2021	2016	2021	2016	2021	2016	2021
Population Size	27	18	324	353	211	205	83	98	69,556	75,276	7,480,231	8,072,163
Proportion Indigenous Population (%)	-	-	3	8	4	3	-	-	5	7	3	3
Median Age	37	37	40	42	49	50	48	43	45	47	38	39
Year 10 highest year of schooling (%)	-	-	38	34	40	37	-	-	37	36	23	21
Year 12 highest year of schooling (%)	-	-	43	44	39	45	-	-	39	43	59	63
Bachelor degree (%)	-	-	13	16	21	26	-	-	14	19	26	33
Certificate (%)	-	-	50	55	42	50	-	-	46	54	30	33
Proportion of population with a different address 1 year ago (%)	-	-	10	6	9	5	-	-	14	15	14	16
Proportion of population with a different address 5 year ago (%)	-	-	23	31	25	21	-	-	39	43	39	43
Proportion of population aged 15+ who volunteer (%)	-	-	21	20	28	22	-	-	18	14	18	13
Proportion of population born overseas (%)	-	-	5	-	11	3	-	-	12	12	30	30
Proportion of single parent families (%)	-	-	11	13	11	5	-	-	16	16	16	16
Proportion of family households (%)	-	-	-	85	-	78	-	-	-	72	-	71
Proportion of group households (%)	-	-	3	0	0	0	-	-	3	2	4	4
Proportion of lone person households (%)	-	-	16	15	9	22	-	-	25	26	24	25
Proportion of the labour force employed full-time (%)	-	-	57.4	54.0	65.0	57.1	-	-	53.5	51.5	59.2	55.2

	Balickera		East Seaham		Eagleton		Ferodale		Port Stephens		NSW	
	2016	2021	2016	2021	2016	2021	2016	2021	2016	2021	2016	2021
Proportion of the labour force employed part-time (%)	-	-	32.2	30.0	26.2	34.1	-	-	33.6	34.9	29.7	29.7
Proportion of the labour force who are unemployed (%)	-	-	4.4	4.0	6.8	3.3	-	-	7.2	5.0	6.3	4.9
Median household income ($/week)	-	-	1,708	2,250	1,625	1,421	-	-	1,180	1,372	1,486	1,829
Median mortgage repayment ($/month)	-	-	1,993	2,167	1,600	1,573	-	-	1,733	1,733	1,986	2,167
Median rent for a 3-bed house ($/week)	-	-	300	400	260	310	-	-	305	365	380	340
Median rent as a proportion of median household income (weekly)	-	-	18	18	16	22	-	-	26	26	26	19
Number of Private Dwellings	9	8	141	134	84	83	40	33	33,082	35,649	3,059,599	3,357,785
Proportion of occupied private dwellings that are fully owned (%)	-	-	38.1	39.8	51.4	58.4	-	-	38.6	41.2	32.2	31.5
Proportion of occupied private dwellings that are being purchased/ owned by a mortgage (%)	-	-	37.3	44.2	35.1	32.5	-	-	31.3	30.6	32.3	32.5
Proportion of occupied private dwellings that are being rented (%)	-	-	18.6	11.5	9.5	13.0	-	-	26.2	24.8	31.8	32.6
Proportion of households in mortgage stress (%)	-	-	-	10.0	-	20.0	-	-	-	14.1	-	17.3
Proportion of households in rental stress (%)	-	-	-	0.0	-	80.0	-	-	-	40.8	-	35.5
Method of Travel to Work (Car, as driver) (%)	-	-	-	60.8	-	48.3	-	-	-	56.0	-	43.1
Average number of motor vehicles per dwelling	-	-	-	3.0	-	2.5	-	-	-	2.0	-	1.8

Table A.2 Population Change Projections (Port Stephens LGA)

	2021	2026	2031	2036	2041
Port Stephens LGA Population (No.)	75,253	79,870	84,694	89,284	93,658
% Change	-	6.1%	6.0%	5.4%	4.9%



Source: (NSW Department of Planning & Environment, 2022)

Table A.3 Selected incidence of Long-term Health Conditions by Location

Selected Long-term Health Conditions	Balickera	East Seaham	Eagleton	Ferodale	Total	Port Stephens LGA	NSW
Arthritis	0.0	5.7	11.7	12.2	8.8	13.6	8.4
Asthma	0.0	6.8	9.8	3.1	7.4	9.7	7.8
Cancer (including remission)	0.0	3.7	5.9	0.0	3.8	4.3	2.8
Dementia (including Alzheimer's)	0.0	0.0	0.0	0.0	0.0	0.9	0.8
Diabetes (excluding gestational diabetes)	0.0	5.4	6.3	6.1	4.6	6.2	4.8
Heart disease (including heart attack or angina)	0.0	5.1	3.4	10.2	5.1	5.9	3.9
Kidney disease	0.0	1.1	2.9	0.0	0.9	1.4	1.0
Lung condition (including COPD or emphysema)	0.0	0.0	2.0	5.1	0.9	2.8	1.7
Mental health condition (including depression or anxiety)	0.0	9.1	13.7	13.3	10.9	11.6	8.0
Stroke	0.0	0.0	1.5	0.0	1.0	1.3	0.9
Any other long-term health condition(s)	0.0	9.6	11.7	7.1	9.4	9.2	7.8
No long-term health condition(s)	105.6	54.7	51.7	58.2	54.7	51.1	61.0
Not stated	0.0	8.8	9.3	7.1	8.7	8.2	8.1

Table A.4 Industry of Employment (ABS, 2021)

Industry of Employment	Balickera	East Seaham	Eagleton	Ferodale	Total	Port Stephens	New South Wales
Agriculture, Forestry and Fishing	0.0	4.9	4.7	8.3	4.0	1.4	2.1
Mining	0.0	2.2	3.5	0.0	2.2	2.0	1.0
Manufacturing	0.0	14.6	3.5	12.5	9.9	6.4	5.7
Electricity, Gas, Water and Waste Services	0.0	0.0	5.8	6.3	1.2	1.1	1.0
Construction	0.0	14.6	3.5	12.5	13.6	11.3	9.0
Wholesale Trade	0.0	0.0	7.0	0.0	2.8	2.3	2.9
Retail Trade	0.0	9.2	5.8	18.8	10.2	10.2	9.4
Accommodation and Food Services	0.0	3.8	3.5	0.0	5.9	9.5	6.5
Transport, Postal and Warehousing	0.0	7.0	5.8	6.3	5.6	5.1	4.8
Information Media and Telecommunications	0.0	0.0	0.0	0.0	0.0	0.6	1.9
Financial and Insurance Services	0.0	3.2	0.0	0.0	0.0	2.1	5.5
Rental, Hiring and Real Estate Services	0.0	2.2	0.0	0.0	0.0	1.4	1.8
Professional, Scientific and Technical Services	33.3	6.5	4.7	8.3	7.7	5.4	9.3
Administrative and Support Services	0.0	2.7	8.1	0.0	4.3	3.9	3.4
Public Administration and Safety	0.0	2.2	10.5	0.0	4.6	8.8	6.3
Education and Training	0.0	3.2	4.7	0.0	6.5	7.7	9.2
Health Care and Social Assistance	0.0	15.1	9.3	16.7	13.9	15.1	15.1
Arts and Recreation Services	0.0	0.0	0.0	0.0	0.0	1.3	1.5
Other Services	0.0	7.6	11.6	8.3	8.7	4.5	3.6

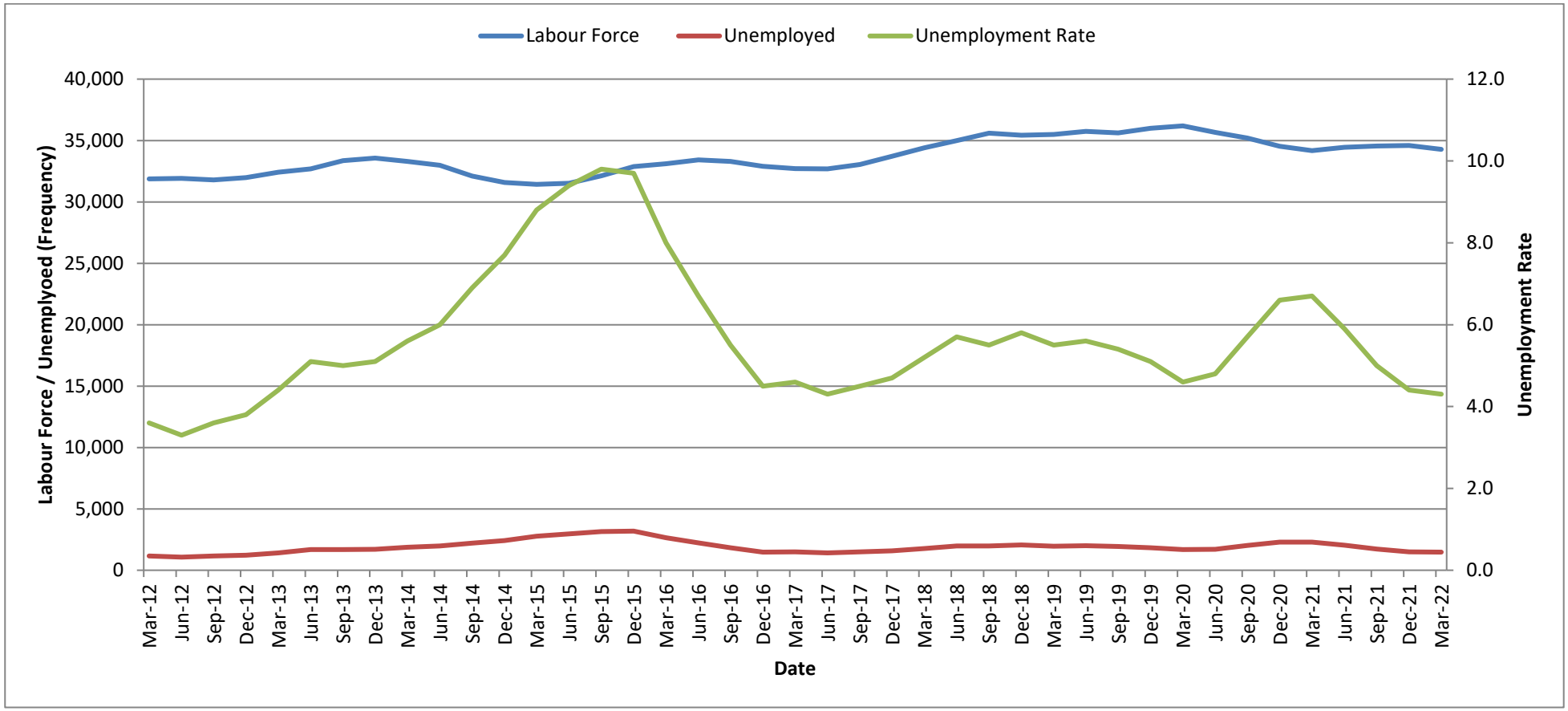


Figure A.1 Port Stephens LGA Labour Force and Unemployment No., and Rate of Unemployment

Source: (National Skills Comission, 2022)

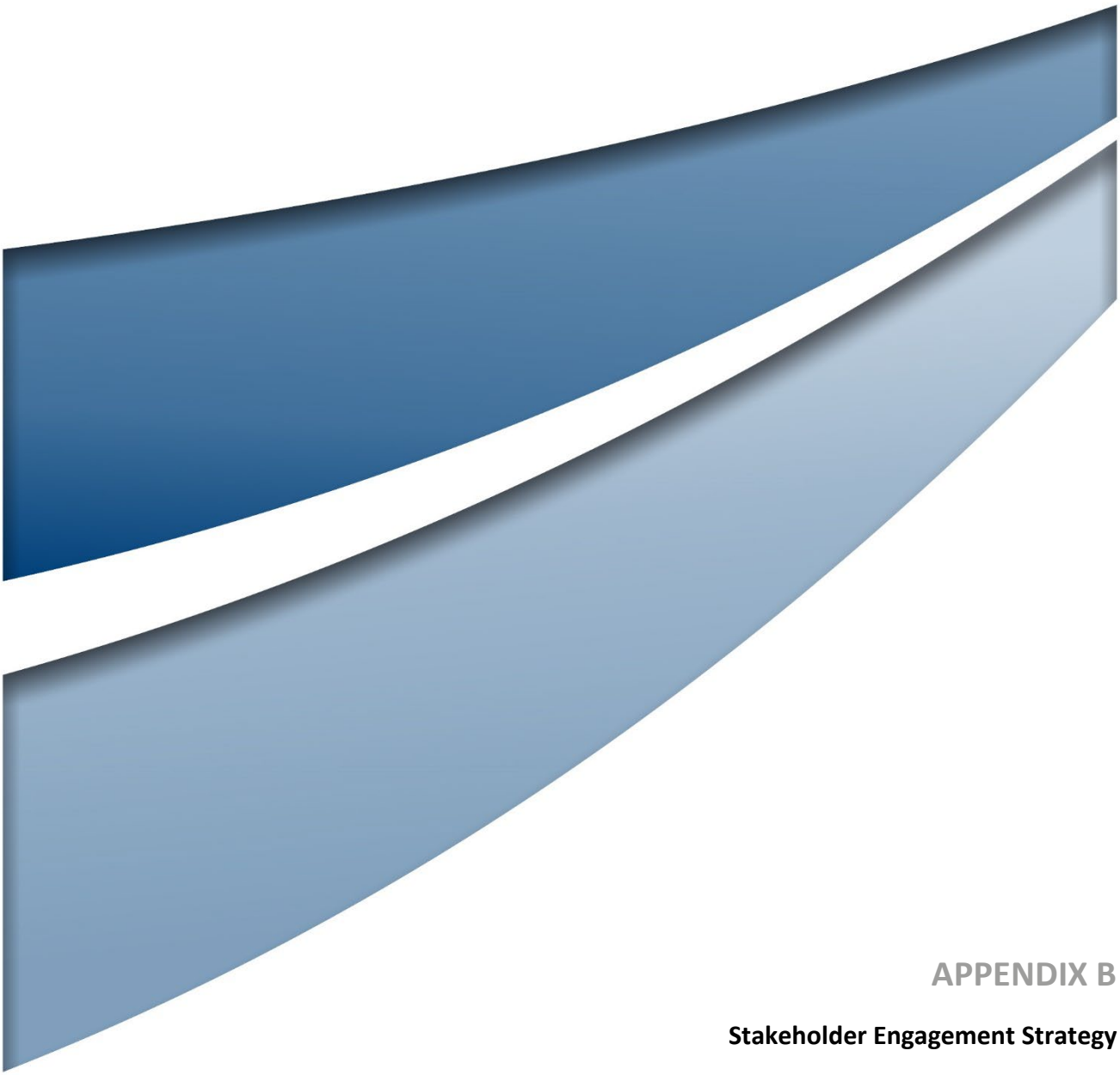
Table A.5 Summary of Education Infrastructure and Services

Service	Seaham	Medowie	Raymond Terrace
School	Seaham Public School	Medowie Christian School – Combined Medowie Public School Wirreanda Public School	Irrawang High School Grahamstown Public School Irrawang Public School Raymond Terrace Public School St Bridgid's Primary School
Childcare	Seaham Public School Seaham Preschool	Little Miracles Medowie Little Big Futures Medowie Community Pre-School The Medowie Gumnut Preschool United Early Learning Busy Owl Family Day Care	KiddyHawk Family Day Care and Preschool TLC Early Learning Centre Steps to Starting School Raymond Terrace Early Education St Nicholas Early Education
Fire Service	Seaham Rural Fire Brigade	Medowie Fire Station	Raymond Terrace rural Fire Brigade Fire and Rescue NSW Raymond Terrace
Police Station	-	-	Raymond Terrace Police Station

Table A.6 Health Facilities in the Port Stephens LGA

Facility	Suburb/location	Services
Tomaree Hospital	Nelson Bay	Emergency Services (Adult and paediatric) Adult acute medical care Palliative care
Nelson Bay Medical Centre	Nelson Bay	GP services Skin Cancer Clinic Minor Surgical Procedures Pathology on-site
Seaside Medical Centre	Fern Bay	GP services Skin Cancer Clinic After Hours Care
Fern Bay Medical Centre	Fern Bay	GP services
Central Health Alliance	Williamtown	GP services
Raymond Terrace Family Practice	Raymond Terrace	GP services
Sturgeon St Clinic	Raymond Terrace	GP services
William St Family Practice	Raymond Terrace	GP services
Awabakal Medical Service	Raymond Terrace	GP services
Seaham Surgery	Seaham	GP services

Facility	Suburb/location	Services
Dentist for Chickens	Raymond Terrace	Dental services
No Gap Smiles Raymond Terrace	Raymond Terrace	Dental services
Medowie Family Clinic	Medowie	GP services
Medowie Medical Centre	Medowie	GP services
Raymond Terrace Twin Rivers Dental Practice	Raymond Terrace	Dental services
Medowie Dental Surgery	Medowie	Dental services
No Gap Smiles	Raymond Terrace	Dental services
Raymond Terrace Dental Care	Raymond Terrace	Dental services



APPENDIX B

Stakeholder Engagement Strategy

umwelt
Environmental & Social Consultants

STAKEHOLDER ENGAGEMENT STRATEGY

Stone Ridge Quarry Project

FINAL

January 2020

STAKEHOLDER ENGAGEMENT STRATEGY

Stone Ridge Quarry Project

FINAL

Prepared by
Umwelt (Australia) Pty Limited
on behalf of
Australian Resource Development Group (ARDG)

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This report was prepared using Umwelt's ISO 9001 certified Quality Management System.

Document Status

Rev No.	Reviewer		Approved for Issue	
	Name	Date	Name	Date
V1	Gabrielle Allan	28/01/2020	Gabrielle Allan	28/01/2020

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1.0 Introduction

This Stakeholder Engagement Strategy (SES) has been developed to guide community and stakeholder consultation activities associated with the Scoping Report, Environmental Impact Statement (EIS) and Social Impact Assessment (SIA) for the proposed Stone Ridge Quarry Project, Balickera, NSW to be developed by Australian Resource Development group (ARDG).

SIA is an approach to predicting and assessing the likely consequences of a proposed action in social terms and developing options and opportunities to improve social outcomes. Best practice SIA is participatory and involves understanding impacts from the perspectives of those involved in a personal, community, social or cultural sense, to provide a complete picture of potential impacts, their context and meaning.

1.1 Project Overview

The proposed Stone Ridge Quarry Project (the Project) is located approximately 20 kilometres (km) north of Newcastle, 8km east of Seaham and immediately north-east of Boral's Seaham / Balickera Quarry. The site is located within the Wallaroo State Forest, adjacent to Italia Road and in close proximity to the Pacific Highway.

The Project triggers the extractive industry threshold for State Significant Development (SSD) listed under Schedule 1 of the *State Environmental Planning Policy (State and Regional Development) 2011* as it will extract more than 500,000 tonnes per annum and targets a total resource greater than 5 Mt.

When developed, Stone Ridge Quarry will be strategically positioned to supply the Lower Hunter, Central Coast and northern Sydney construction material markets.

Given the scarcity of high-quality hard rock resources in the lower Hunter Region, and the reserves / planning constraints that apply to other quarries in the region, the Stone Ridge Quarry is expected to ultimately become the largest and most attractively located quarry in the market.

In mid-2017, ARDG received approval from the Minister for Lands and Forestry and the Board of Forestry Corporation of NSW (FCNSW) to commence resource investigation activities to support a quarry development within the Wallaroo State Forest.

Detailed site investigations by ARDG since 2017 have confirmed that Stone Ridge resources are potentially in excess of 150 Mt and are suitable for producing the full range of high quality quarry products (i.e. concrete, asphalt and sealing aggregates, manufactured sand, road base and crushed rock products, armour rock, gabion and ballast).

In October 2018, Ministerial approval from the Minister for Lands and Forestry was granted for FCNSW to enter into a Deed of Agreement with ARDG for the issue of a Forest Materials Licence (FML). The FML will commence on receipt of all development approvals and licences to operate. A royalty will be payable to FCNSW for all materials sold from the quarry.

1.2 Strategy Objectives and Engagement Principles

The main purpose of this SES is to identify key stakeholders and outline the process to inform residents, landholders and other stakeholders about the proposed Project in order to collect any feedback and identified concerns to inform the Scoping Report and SIA.

The consultation program has a number of key objectives, namely:

- Identify and understand near neighbour issues/concerns in relation to the proposed quarry
- Facilitate near neighbour and local community involvement in the assessment process
- Develop appropriate strategies to enhance positive and minimise negative impacts should the Project proceed.

Outcomes of the consultation will be used by ARGD to inform their Project planning and assessment program and assist in the design and development of appropriate mitigation and management strategies for the Project.

Consultation program objectives include:

- Identify, assess and effectively manage environmental and social impacts and risks associated with the Project
- Meet government requirements for SIA relating to the Project
- Develop appropriate strategies to enhance positive, and minimise negative, impacts.

Process objectives include:

- Facilitate meaningful information exchange and involvement of stakeholders in the assessment process
- Ensure that environmental and social impacts are effectively integrated in Project planning and design.

Table 1.1 below outlines the assessment of risk associated with the Project to further guide the development of appropriate engagement and communication mechanisms.

Table 1.1 Potential Project Risks

Risk	Causes	Mitigation
A lack of pre-existing knowledge and familiarity regarding the ARDG company	• Lack of previous activities	• Early engagement with the community • Comprehensive explanation of the Project and assessment process
Failure to obtain Project approval	• Misinformation • Media attention	• Website • Develop and maintain stakeholder relationships • Ongoing community engagement in relation to the Project and approval process
	• Community outrage	• Early engagement with potentially impacted stakeholders, including development of appropriate agreements and provision of appropriate compensation (if required)

Risk	Causes	Mitigation
		• Education and communication campaigns/programs • Appointment of internal resources and qualified community engagement specialists • Development of strategies to address stakeholder issues and concerns

2.0 Methodology

2.1 Stakeholder Identification

SIA involves the cooperation and coordination of several 'social partners' or 'stakeholders'.

A comprehensive stakeholder identification process was undertaken prior to commencement of the Project. As Burdge (2004) outlines, stakeholders may be affected groups or individuals that:

- live nearby the resource/Project
- have an interest in the proposed action or change
- use or value a resource
- are interested in its use
- may be forced to relocate as a result of the Project.

These stakeholders have been grouped and are presented in **Table 2.1**.

Table 2.1 Stakeholder groups

Near neighbours	Residents and landholders within a 2km radius of Project site (approximately 20 households)
Wider community	Residents and landholders in surrounding suburbs Balickera State Suburb Code (SSC); Eagleton SSC, East Seaham SSC and Ferodale SSC (approximately 210 households), and along the transport route (refer to **Figure 2.1**). Wider community engagement during the EIS Phase.
Local businesses	Businesses surrounding the Project site, including: Boral Seaham Quarry Port Stephens Gardenland MG Car Club (Circuit Italia) Hunter Valley Paintball MX Central – Motor Cross
Local and State Government Agencies	Transport for NSW (formerly RMS) Hunter Water Corporation Port Stephens Council Forestry Corporation DPIE
Employees	ARDG employees and contractors
Service providers	Seaham Rural Fire Service, Essential Energy
Aboriginal stakeholders	Registered Aboriginal Parties, Local Aboriginal Land Council, Native title claimants, Traditional Owners

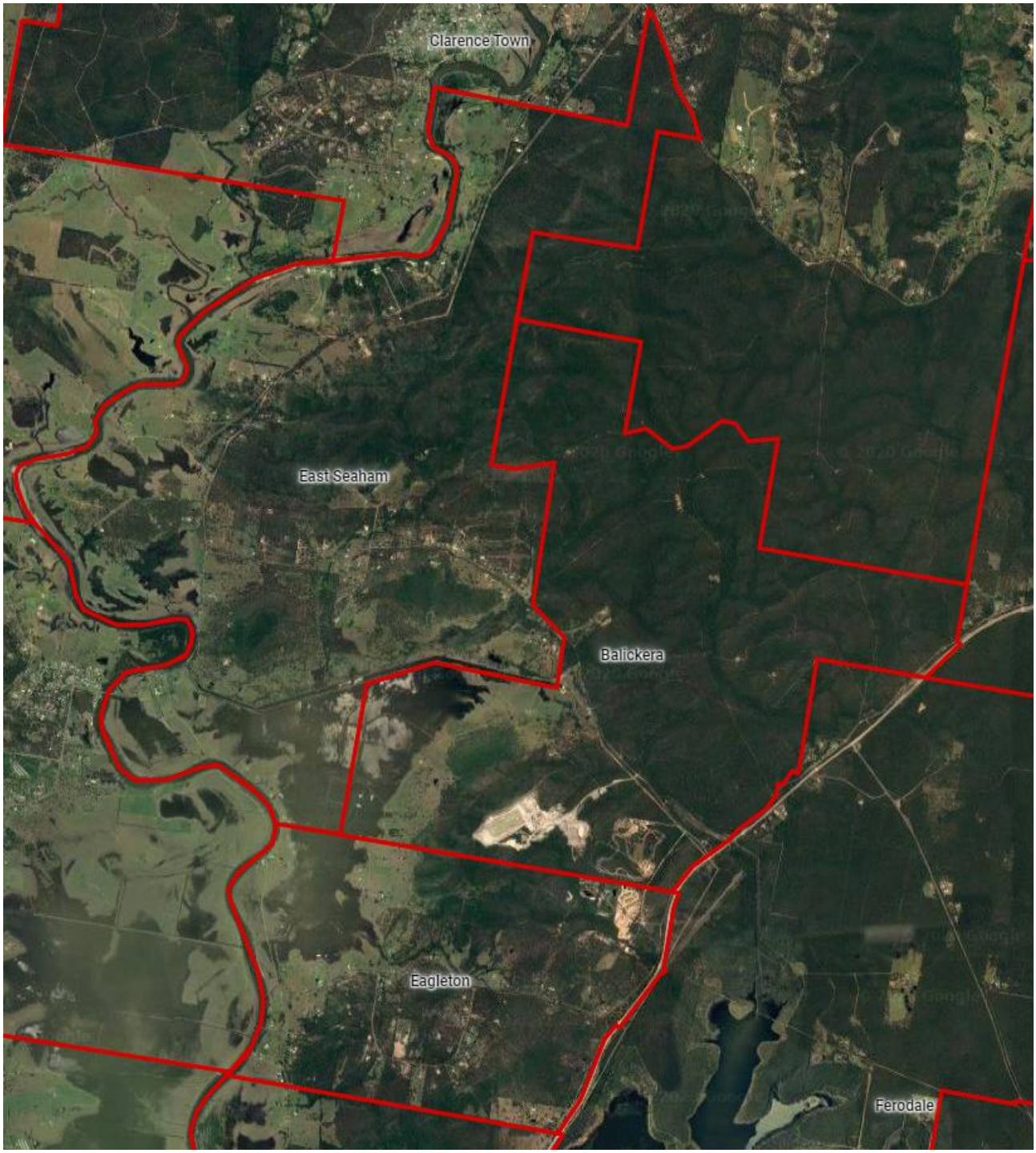

Figure 2.1 Wider Community – East Seaham, Balickera and Eagleton

2.2 Engagement Mechanisms

It is intended that a range of engagement mechanisms will be used to consult with stakeholders to address the SES objectives. These mechanisms are summarised in **Table 2.2**. Engagement and communication mechanisms to be utilised as part of the program will be tailored to specific stakeholders. **Section 2.4** outlines the engagement mechanisms during the various stages of the Project.

Table 2.2 Project engagement mechanisms – Scoping phase

Mechanism	Description	Stakeholder Group/s	Materials
Doorknocks	Inform near neighbours of the Project and invite them to participate in the SIA / personal interview.	Near neighbours	• CIS No. 1 • 'Sorry we missed you' post card • Interview guide • Q&A sheet
Telephone calls to invite participants for personal interviews (where residents not home during doorknock)	• Proactive contact with those landholders/residents whose contact details are available. • Scheduling of personal interviews (face-to-face or telephone) according to preference.	Near neighbours where contact details are available.	• CIS No.1 • Interview guide • Q&A sheet
Letterbox drop	Distribution of Community Information Sheet (CIS) via post	Near neighbours Local businesses(Except for Boral Quarry and Circuit Italia which will involve phone call, follow up email and face to face visit if required. This is to be undertaken by ARDG).	• CIS No. 1
Personal interviews	• Personal interviews used to identify Project issues and to inform Project mitigation and enhancement. • Snowballing to capture unlisted neighbours *Snowballing is getting landholders contact details from neighbouring properties during the interviews or phone calls.*	Near neighbours – within 2km radius	• Interview Guide • CIS No.1 • Q&A sheet
Project briefings	Informal and formal briefings to key government agencies as well as any key community groups, local business groups or political stakeholders that express an interest during the scoping phase, to outline the Project and the objectives of engagement.	Port Stephens Council DPIE (complete) Hunter Water Corporation RMS ARDG Employees	• Interview guide • CIS No. 1 • Briefing materials e.g. Project and engagement program Presentation

Table 2.3 Project engagement mechanisms – EIS Phase

Mechanism	Description	Stakeholder Group/s	Materials
Letterbox drop	Distribution of Community Information Sheet (CIS) via post	Near neighbours Local businesses Wider community	• CIS No. 2
Telephone calls to those who registered interest in the Project during the scoping phase	• Proactive contact to those stakeholders who were interviewed or registered interest in the Project during the scoping phase. • Scheduling of personal interviews (face-to-face or telephone) according to preference.	Community members who were interviewed in the first round of engagement or have showed interest in the Project	• CIS No.2 • Interview guide • Q&A sheet
Personal interviews	• Personal interviews used to identify Project issues and to inform Project mitigation and enhancement.	Community members who were interviewed in first round of engagement or have showed interest in the Project Landholders in Project environmental management zones	• Interview Guide • CIS No.2 • Q&A sheet
Project briefings	Informal and formal briefings to key government agencies as well as any key community groups, local business groups or political stakeholders that express an interest during the scope phase, to outline the Project and the objectives of engagement.	Port Stephens Council DPIE (complete) Hunter Water Corporation RMS ARDG Employees	• Interview guide • CIS No. 2 • Briefing materials e.g. Project and engagement program Presentation
Project briefing letters	Distribution of Project briefing letters to relevant government agencies providing an update on the Project.	Port Stephens Council Hunter Water Corporation Forestry Corporation RMS EPA	• Letter and supporting plans

2.3 Engagement Materials

Further details on the materials to be developed to support and complement the engagement program are also outlined in **Table 2.4.**

Table 2.4 Engagement Materials

Materials	Description
Community Information Sheet (CIS) No. 1	To provide stakeholders with an overview of the engagement program and its objectives, including information about ARDG and the Project and an invitation for stakeholders to be involved in SIA consultation. To provide details of relationship with Forestry Corporation.
Interview Guide	Development of an interview guide to facilitate discussions with landholders/residents in relation to the Project. Interview questions may relate to: • Knowledge of the company – top of mind associations • Trust in the company • Issues relating to future quarry activity • Project engagement preferences • Company investment and contribution • Values mapping – identification of values of importance in the area (economic, natural, social, physical, human)
'Sorry we missed you' Postcard	In the event door knock is unsuccessful as resident is not home, a postcard will be left to notify the resident of ARDG's contact details and reason for door knock.
Media Holding Statement	To provide an official statement to media regarding ARDG Project information. To inform on relationship with Forestry Corporation.
Project and Engagement Program Briefing Presentation	Development of a slide pack to provide information to key stakeholders on the Project, the engagement program and its objectives.
Community Information Sheet (CIS) No. 2	To provide stakeholders with an update on the Project at the conclusion of the engagement program, highlighting issues identified through the engagement process and provide a summary of the EIS and SIA findings.
Engagement Database	Database to collate all stakeholder contact information and data obtained through the consultation process.
Key Messages and Q&A	List of possible questions and answers relating to the Project.

2.4 Engagement by Phase

Table 2.5 outlines the engagement activities to be undertake across the various SIA Project phases. The SIA for Stone Ridge commences with the development of an engagement strategy (this document) and assessment and prioritisation of impacted stakeholders via a client workshop (Phase 1). Phase 2 will involve preparation of relevant consultation materials (interview guide, CIS No. 1 and Q&A document) and implementation of Round 1 of engagement with near neighbours, wider community members and other key stakeholders, through information provision and personal meetings. Phase 3 will involve collation and analysis of engagement/consultation data and assessment of social impacts to inform business planning regarding the Stone Ridge Project. In addition, Phase 3 will also involve engaging stakeholders to inform them of the outcomes of the technical studies and SIA. Engagement requirements for Phases 4 to 5 will be determined by the outcomes of the preceding SIA Phases.

Table 2.5 Engagement Mechanisms by Scoping Report/SIA Phase

Phase	Assessment and Engagement Mechanism
Phase 1: Engagement Plan and Profiling (Scoping Report)	Engagement Strategy development Stakeholder prioritisation
Phase 2: **Issue Scoping** (Scoping Report)	CIS No. 1 distribution to near neighbours (via doorknock), 'Sorry we missed you' postcard left if house unattended. Proactive calls to near neighbours and key local businesses to inform them of the Project and invite them to be involved in the SIA consultation Personal meetings with landholders and local businesses where requested Engagement.
Phase 3: Impact Assessment (SIA/EIS)	CIS No. 2 distribution to near neighbours and wider community. Proactive phone calls to those who were interviewed in the first round of engagement and in Project environmental management zones.
Phase 4 & 5: Strategy Development and Reporting (SIA/EIS)	Project briefings.

2.5 Engagement Roles and Responsibilities

Key roles and responsibilities are outlined in **Table 2.6**. Engagement activities will be undertaken by ARDG and Umwelt in accordance with the Strategy. Responsibilities of both parties are outlined in **Table 2.6** below.

Table 2.6 Responsibilities

Task	Umwelt	ARDG
Community Engagement Strategy	Prepare	Review and approve
Materials development:		
CIS No. 1	Prepare and design (include map of proposed Eagleton and Boral Projects in the area)	Review, approve and distribute (during doorknock)
Sorry we missed you' postcard	Prepare and design	Review, approve and distribute (during doorknock)
Media Holding Statement	Prepare	Review, approve and publish if required
CIS No. 2	Prepare, design and distribute	Review and approve
Interview guide	Prepare	Review and approve
Telephone calls to set up interviews	Conduct and record outcomes in Stakeholder database	Calls to local businesses where existing relationship exists
Letter box drop of CIS	Prepare and implement	Approve distribution

Task	Umwelt	ARDG
Landholder meetings	Setup, attend, facilitate Meetings to be summarised in Stakeholder database	Attend and facilitate
Agency letters	Prepare and distribute	Review and approve
Project briefings: **Port Stephens Council** **DPIE** **Forestry** **Transport for NSW** **Hunter Water** **EPA** **BCD (formerly OEH)** **Political Members**	Provide input and attend (if required)	Set up, attend and facilitate
Stakeholder database	Prepare	Review and approve Manage and update
Incoming enquires	Provide input (if required)	Manage and record detail
Website updates	Provide input (if required)	Develop and publish, including CIS No. 1 & 2, Scoping Report).
Q&A responses	Provide input (if required)	Develop and publish on website, including contact details/community feedback mechanisms.

3.0 Engagement Schedule (Scoping Phase)

An engagement schedule has been developed to guide the engagement program during the scoping phase of the Project. Scheduling of engagement tasks has been undertaken to ensure that each milestone is achieved.

Timing (week commencing)	Key Engagement Activities
20 January 2020	• Finalise Stakeholder Engagement Strategy

28 January 2020	• Engagement material development:
	  ○ Finalise development of CIS No. 1
	  ○ Finalise 'sorry we missed you' postcard
	  ○ Finalise Interview Guide
	  ○ Finalise Media Holding Statement
	  ○ Project briefing meeting Port Stephens Council

3 February 2020	• Finalise Stakeholder Database development • Project briefing meeting Hunter Water Corporation • Commence Aboriginal heritage stakeholder consultation (TBC – pending Forestry Corporation requirements) • Conduct doorknocks (Thursday 6th and Friday 7th February (TBC – after commencement of Aboriginal stakeholder consultation) • Post CIS No.1 to relevant local businesses • Ring, email and visit (if required) Boral Seaham Quarry and Circuit Italia (ARDG)
10 February 2020	• Telephone calls to participants for personal interviews (where residents not home during doorknock) – Set up face to face meetings for following week or conduct over the phone. • Finalise Agency letters
17 February 2020	• Conduct personal face to face interviews if requested • Finalise phone interviews if required
24 February 2020	• Scoping phase engagement analysis and reporting
2 March 2020	• Scoping Report finalisation • Scoping Report submission • Community feedback mechanisms, CIS No. 1 and Scoping Report on ARDG website

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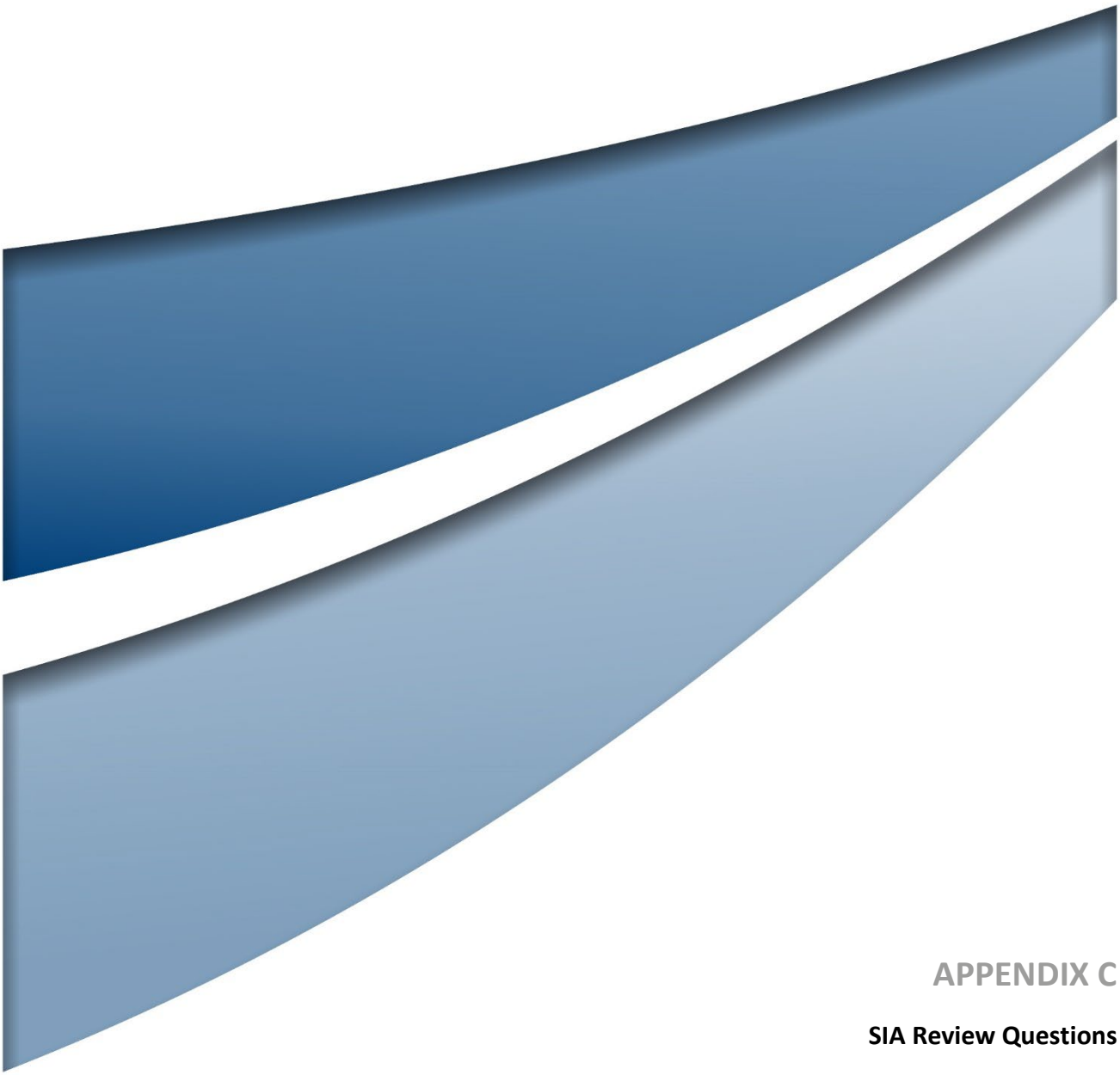


APPENDIX C

SIA Review Questions

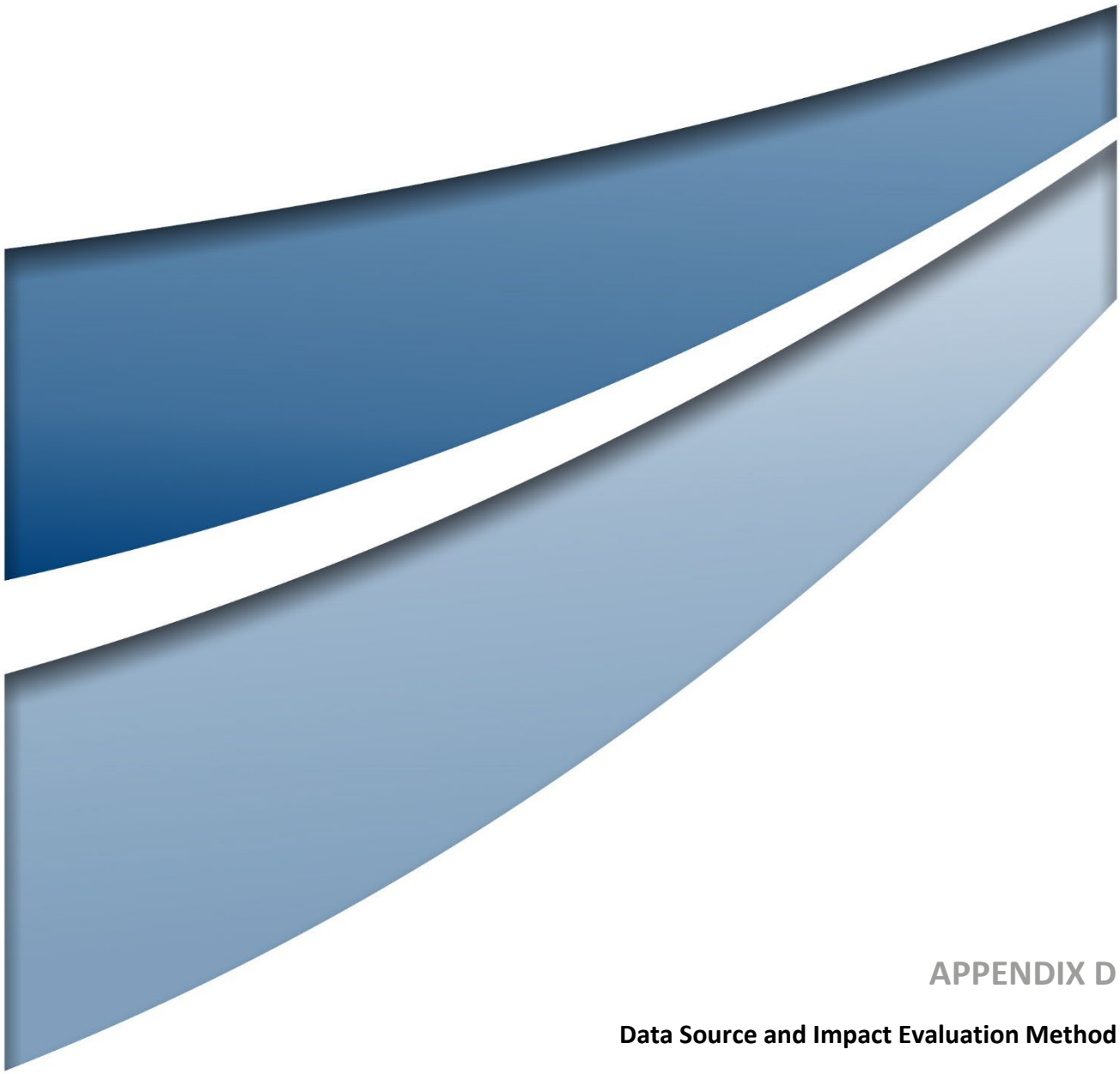
Table C.1 SIA Review Questions

Question	Response
General	
Does the lead author meet the qualification and experience requirements?	Yes. Refer Section *'Authors Declaration'*.
Has the lead author provided a signed declaration?	Yes. Refer Section '*Authors Declaration*'.
Would a reasonable person judge the SIA report to be impartial, transparent and suitably rigorous given the nature of the project?	The SIA Report has been prepared with the following declarations, being that: • It was prepared by a team that has suitable qualifications, proven experience, and competence in SIA practice, and who hold relevant professional memberships. • the authors understand their legal and ethical obligations in the preparation of the SIA. • to the best of our knowledge, none of the information included in the SIA is false or misleading; and • the SIA contains all relevant information.
Project's Social Locality and Social Baseline	
Does the SIA report identify and describe all the different social groups that may be affected by the project?	The SIA makes every attempt to identify and describe all the different social groups that may be affected by the project through a comprehensive review of primary and secondary data collection and analysis. Project related impacts on all different social groups are so described within the relevant sections of the Stakeholder identification process (refer **Section 2.2**), the social baseline (refer **Section 3.0**), and the social impact assessment and prediction process (refer **Section 4.0** and **Section 5.0**).
Does the SIA report identify and describe all the built or natural features that have value or importance for people, and explain why people value those features?	The SIA makes every attempt to identify and describe all the built or natural features that have value or importance for people and explain why people value those features through a comprehensive review of primary and secondary data collection and analysis. Elements of built or natural features of importance are so described within the relevant sections of the social baseline (refer **Section 3.0**), and the social impact assessment and prediction process (refer **Section 4.0** and **Section 5.0**).
Does the SIA report identify and describe historical, current, and expected social trends or social changes for people in the locality, including their experiences with this project and other major development projects?	The social baseline (refer **Section 3.0**) contained within the SIA report identifies and describes historical, current, and expected social trends or social changes for people in the locality, including their experiences with this project and other major development projects.

Question	Response
Does the social baseline study include appropriate justification for each element, and provide evidence that the elements reflect both relevant literature and the diversity of views and likely experiences?	The social baseline study has been prepared utilising a wide range of data sources to understand the socio-economic, cultural, and demographic characteristics of the communities within the Project's locality. Data for the social baseline profile has been gathered and summarised from publicly available secondary datasets, including the most recent Australian Census (2021), as well as through a review of local media, government plans and strategies and other literature as it relates to the social locality. Data collection methods are validated through a technique of triangulation, whereby the application and combination of several research methods in the study identify the same phenomenon.
Does the social baseline study demonstrate social-science research methods and explain any significant methodological or data limitations?	The social baseline study has utilised the social baseline has utilised the Sustainable Livelihoods Approach (U.K. Department for International Development (DFID, 2001), and a community capitals assessment approach, as outlined in the IAIA SIA Guidance (IAIA, 2015). Data limitations are identified and described within **Section 2.6**.
Identification and Description of social Impacts	
Does the SIA report adequately describe likely social impacts from the perspectives of how people may experience them, and explain the research used to identify them? When undertaken as a part of SIA scoping and initial assessment, has the plan for the SIA report been detailed?	The SIA identifies likely social impacts, from the perspectives of how people may experience them, as informed by a process of community and stakeholder consultation in relation to the Project. Social Impact are identified and are described in **Section 4.0**, with a comprehensive technical risk ranking provided at **Section 5.0.**
Does the SIA report apply the precautionary principle to identifying social impacts, and consider how they may be experienced differently by different people and groups?	The SIA report makes all necessary attempts to identify social impacts associated with the Project, however unlikely it may appear that the impacts may be experienced. Limitations associated with the preparation of the report, and the assessment process are further noted in **Section 2.6.** Limitations, where relevant, are considered in the context of the evaluations and conclusions provided.
Does the SIA report describe how the preliminary analysis influenced project design and EIS engagement strategy?	Preliminary analysis in relation to the Project, and its influence on project design and the EIS engagement strategy are identified and described on an impact specific basis within **Section 5.0**.
Community Engagement	
Were the extent and nature of engagement activities appropriate and sufficient to canvass all relevant views, including those of vulnerable or marginalised groups?	The extent and nature of engagement activities are considered appropriate and sufficient to canvass all relevant views in relation to the Project.
How have the views, concerns and insights of affected and interested people influenced both the project design and each element of the SIA report?	The views, concerns and insights of affected and interested people have been adequately reported and described in the social impact assessment and prediction process (refer **Section 4.0**), and have been considered and incorporates within the impact specific refinement and mitigation measures (refer **Section 5.0**).

Question	Response
Predicting and analysing Social Impacts	
Does the SIA report impartially focus on the most important social impacts to people at all stages of the project, without any omissions or misrepresentations?	The SIA identifies likely social impacts, from the perspectives of how people may experience them, as informed by a process of community and stakeholder consultation in relation to the Project, without omissions or misrepresentations. For reporting purposes, the SIA report identifies social impacts, both positive and negative, at all stages of the project, by order of magnitude within **Section 5.0.**
Does the SIA report analyse the distribution of both positive and negative social impacts, and identify who will benefit and who will lose from the project?	The SIA identifies both positive and negative likely social impacts, from the perspectives of how people may experience them, as informed by a process of community and stakeholder consultation in relation to the Project. The distribution of both positive and negative social impacts, so described, are outlined in greater detail within **Section 4.0** and **Section 5.0.**
Does the SIA report identify its assumptions, and include sensitivity analysis and alternative scenarios? (including 'worst-case' and 'no project' scenarios where relevant)	The SIA report identifies likely social impacts in relation to the Project, assuming it proceeds as proposed. Social impacts are identified from the perspectives of how people may experience them, as informed by a process of community and stakeholder consultation.
Evaluating Significance	
Do the evaluations of significance of social impacts impartially represent how people in each identified social group can expect to experience the project, including any cumulative effects?	The impact significance and evaluation process considers how identified social groups can expect to experience the Project, including any cumulative effects. Reference to specific social groups are provided within the SIA report where relevant.
Are the evaluations of significance disaggregated to consider the likely different experiences for different people or groups, especially vulnerable groups?	The evaluation of significance is disaggregated (where appropriate and relevant), to consider the likely different experiences for different people or groups, especially vulnerable groups.

Question	Response
Responses, monitoring and management	
Does the SIA report propose responses that are tangible, deliverable, likely to be durably effective, directly related to the respective impact(s) and adequately delegated and resourced?	Responses, monitoring, and management mechanisms proposed in the SIA report are provided with respect to SIA guidance (NSW DPE, 2021), and are detailed with respect to the following principles: • ***Performance-based*** – identify performance criteria that must be complied with to achieve an appropriate outcome, but do not specify how the outcome is to be achieved, demonstrating why the performance criteria are appropriate. • ***Prescriptive*** – that outline actions that need to be taken or things that must be done, with justification as to why this approach is appropriate by providing scientific evidence or referencing relevant guidelines or case studies. • ***Management-based*** - where potential impacts can be satisfactorily avoided or mitigated by implementing known management approaches
Does the SIA report demonstrate how people can be confident that social impacts will be monitored and reported in ways that are reliable, effective and trustworthy?	**Section 5.2** describes appropriate social impacts and monitoring mechanisms, including the provision of a Project specific community engagement and communication strategy.
Does the SIA report demonstrate how the proponent will adaptively manage social impacts and respond to unanticipated events, breaches, grievances and non-compliance?	**Section 5.2** describes appropriate social impacts and monitoring mechanisms, including the provision of a Project specific community engagement and communication strategy. Should the Project be approved, the SIA recommends that the strategy develop appropriate mechanisms to adaptively manage social impacts, and respond to unanticipated events.



APPENDIX D

Data Source and Impact Evaluation Method

Table D.1 Social Baseline Profile Indicators and Data Sources

Capital	Indicator	Data Source
Political	• Existing political and governance structures at local, state, and federal levels • Representation and governance of Traditional Owners • Existing public participation systems • Existence of Project-specific community consultation strategy and feedback and response mechanisms	• State representative and electoral information (Parliament of New South Wales, n.d.; Electoral Commission NSW, 2020) • Divisions in New South Wales (NSW) (Australian Electoral Commission, 2019)
Natural	• Land use profile • Vulnerability to natural disaster or severe climate events • Rate of tourism and recreation based on natural resources • Community values associated with natural or built environment • Measures of access to and level of dependency on natural assets (e.g., agricultural production, water supply, mineral resources)	• NSW Land Use 2017 (DPIE, 2020) • Regional Statistics by LGA (ABS, 2018) • Local Government Areas Council Strategic Planning Documents
Human	• Population size by gender, and by age • Population trends and projections • Median age • Aboriginal population size and proportion • Population diversity (proportion of population born overseas / languages spoken at home) • Highest level of formal education attainment • SEIFA Index of Education and Occupation • Public health status including self-assessed fair or poor health, level of psychological stress, rate of hospital admissions, life expectancy	• ABS Community Profiles (2006, 2011, 2016, 2021) • DPE population projections (2019) • Social Health Atlas of Australia (PHIDU, 2021)
Social	• Household size and composition	• SEIFA Indexes for Australia (ABS, 2018)

Capital	Indicator	Data Source
	• Volunteering rates • Incidents and rates of selected crimes and top crimes committed • Population mobility/stability (proportion of population with a different address 1 and 5 years ago) Index of Relative Advantage and Disadvantage (SEIFA)	• NSW Bureau of Crime (2021)
Cultural	• Native Title claims and/or determinations • Aboriginal ethnography and histories • Aboriginal heritage places • European heritage places • Cultural values Language, dialect, and belief-systems	• ABS Community Profiles (2006, 2011, 2016, 2021) • Register of Native Title Claims (National Native Title Tribunal, 2021) • Local Government Areas Council Strategic Planning Documents • Heritage Management Systems (Heritage NSW, 2021)
Economic	• Proportion (%) of the labour force that are: employed full-time, part-time, unemployed, and trends • Key industries of employment • Median household income • Median mortgage repayment • Median weekly rent • Level of housing stress (median housing costs as a proportion of median household income) Indices of economic resources (SEIFA)	• ABS Community Profiles (2021) • Rental vacancy rates (REINSW, 2021) • SEIFA Indexes for Australia (ABS, 2018) • Tourism Research Australia Local Government Area Profiles (2016)
Physical	• Housing typology – proportion of occupied private dwellings that are: owned with/without a mortgage, rented, public housing • Number of dwellings by type (housing stock) • Private-car dependency (car ownership by household)	• ABS Community Profiles (2006, 2011, 2016, 2021) • SEIFA Indexes for Australia (ABS, 2018) • Hunter Regional Plan 2036 (DPIE, 2016)

Capital	Indicator	Data Source
	• Availability of health and education facilities • Availability of short-term accommodation • Health services and infrastructure (proximity of health services, resident to GP ratio, availability of specialist services) • Access to Internet from dwelling	• Local Government Areas Council Strategic Planning Documents • NSW State Tourism Statistics (Destination NSW, 2016, 2020)

Impact Evaluation Criteria

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.

Figure D.1 Dimensions of Social Impact Magnitude

Source: SIA Guideline Technical Supplement (DPIE, 2023)

The integration of the outcomes of technical ranking (severity /scale) with stakeholder perceived ranking of impacts (intensity or importance), thus affords an improved integration of expert and local knowledge in SIA and enables both types of risk to be addressed in the development of impact mitigation, amelioration, and enhancement strategies. Such an approach is acknowledged in the SIA guidelines in relation to estimating material effects.

Prioritising impacts in this integrated manner ensures that appropriate assessment and mitigation strategies can be developed that not only address impacts that may require more technical management, but also those impacts that are perceived by stakeholders as of high risk / importance / concern. These perceived concerns are just as important to manage as they have the potential to result in elevated levels of community concerns, complaints and grievances if not addressed appropriately. As outlined in **Section 4.0** a range of social impacts have been identified in relation to the Project that require evaluation. The impacts identified within each of the social impact categories are assessed in detail as part of the overarching risk-based framework outlined below. It should also be noted that social impacts are often not

mutually exclusive, with higher order impacts such as population change resulting in second order impacts such as impacts on sense of community and service provision.

The social risk matrix (refer to Figure 6-3) considers both the magnitude of the potential social impact (minimal, minor, moderate, major and transformational) and the likelihood of the impact occurring (very unlikely, unlikely, possible, likely and almost certain) to determine an overall risk assessment of the social impact as 'low', 'medium', 'high' or 'very high'. **Figure D.3** and **Figure D.4** outline the parameters for defining the magnitude and likelihood level for use in the significance rating process.

		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

Figure D.2 Social Impact Significance Matrix

Source: SIA Guideline Technical Supplement (DPIE, 2023) Both positive and negative impacts are considered in this regard, with slight adjustments made to the approach to reflect positive impacts e.g., level of concern becomes level of interest, severity becomes scale of improvement or benefit, sensitivity becomes importance of the improvement or benefit and the equity of its distribution, etc.

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

Figure D.3 Defining Magnitude Levels for Social Impacts

Source: SIA Guideline Technical Supplement (DPIE, 2023)

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

Figure D.4 Defining Likelihood Levels of Social Impacts

Source: SIA Guideline Technical Supplement (DPIE, 2023)

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