



Cleary Bros Marulan Quarry Carrick, NSW

Scoping Report



November 2024

Cleary Bros Marulan Quarry Carrick, NSW

State Significant Development Scoping Report

Prepared by

International Environmental Consultants Pty Limited
on behalf of
Cleary Bros (Bombo) Pty Ltd

Project Manager: Robert Byrnes

Date: 19 November 2024

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1. Introduction

1.1 Overview

Cleary Bros (Bombo) Pty Ltd (Cleary Bros) proposes to develop a hard rock quarry in the locality of Carrick, located 2.5 kilometres (km) south of Brayton and 5.5 km north west of Marulan, New South Wales as shown in Figure 1 ("Project"). The land covers Lots 21, 22, 31, 37 and 64 of DP 750003 and Lot 2 of DP 545834, Parish of Billyrambija, County of Argyle.

The Project will produce up to one million tonnes per annum (tpa) of hard rock products for the construction industry. The Project Area is located adjacent to two existing hard rock quarries and contains a resource in excess of 30 million tonnes.

The Project will incorporate environmental controls and mitigation strategies designed to minimise environmental impacts. These will include but not necessarily limited to the following:

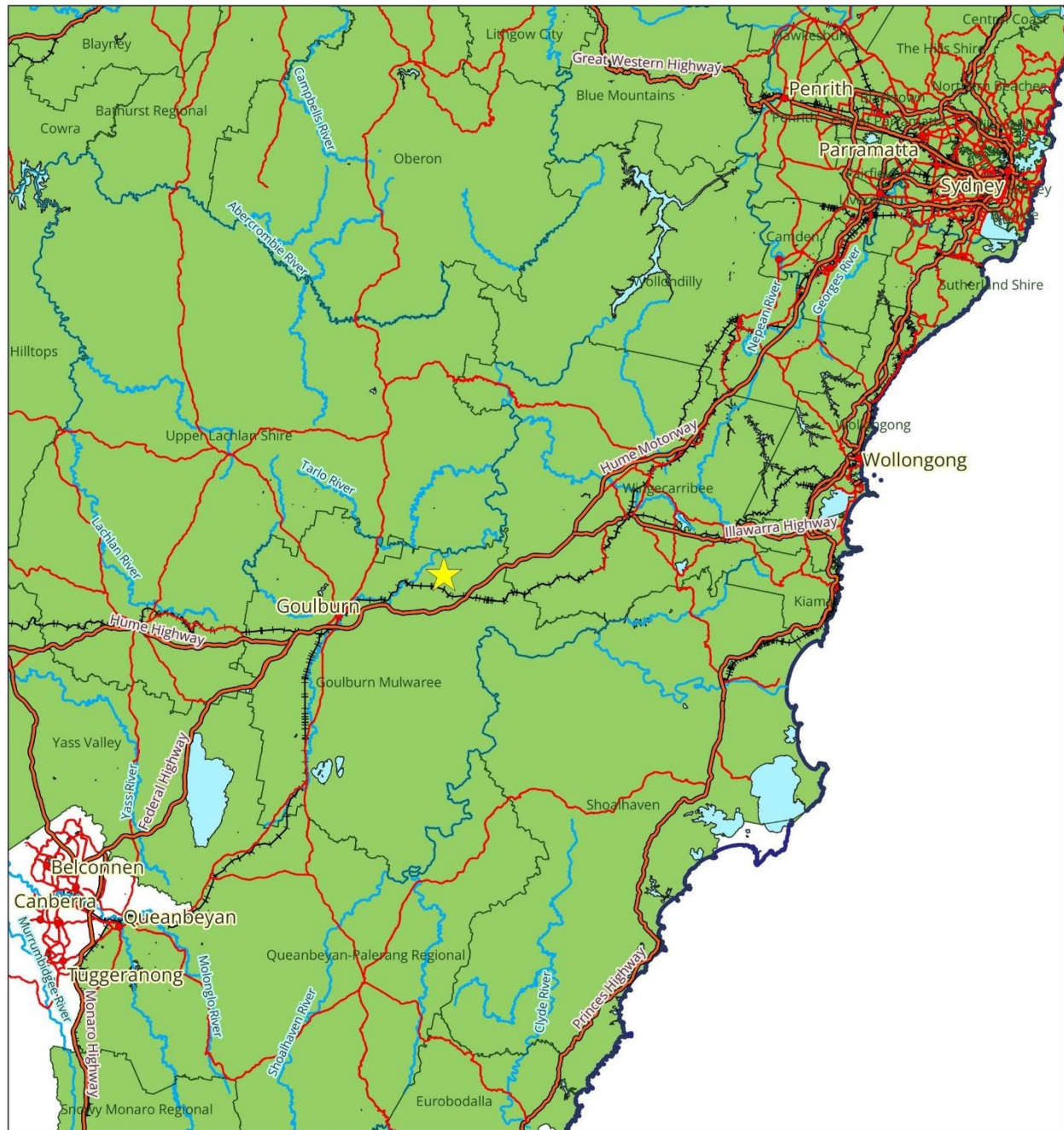
- ❑ Construction of a noise barrier and utilising existing topographic shielding to reduce noise impacts.
- ❑ Incorporation of dust controls during construction and operation of the Project to minimise dust generation.
- ❑ Quarry design will incorporate early rehabilitation strategies.
- ❑ Strategies to avoid, minimise, and lastly offset impacts to biodiversity values.
- ❑ Locating the Project to minimise visual access and to avoid watercourses and high quality agricultural land.

The Project represents State Significant Development (SSD) and will therefore require an Environmental Impact Statement (EIS) to be prepared to assess the impacts of the project on the environment and the community. This report identifies the issues that will be further explored and assessed in the EIS. The outcome of the EIS process is the identification of specific environmental controls that will be implemented throughout the Project life to reduce the adverse environmental and social impacts of the Project.

This scoping report has been prepared by International Environmental Consultants Pty Limited (IEC) on behalf of Cleary Bros for submission to the NSW Department of Planning, Housing and Infrastructure (DPHI) to obtain the Planning Secretary's environmental assessment requirements (SEARs) for the Project.

1.2 Background

Cleary Bros is a privately owned and operated company with ongoing operations based in the Illawarra and Shoalhaven regions south of Sydney which undertakes work for a range of government and private clients across NSW. The company holds a unique position in the regional building and construction industry by integrating



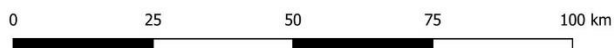
Cleary Bros Marulan Quarry
Figure 1 - Regional Location



39 FIVE ISLANDS RD
PORT KEMBLA NSW 2505
PH: (02) 4275 1000

Prepared by: Cleary Bros

Date: 14/11/2024



Legend

- Proposed Quarry
- City
- Major Highway
- Other Main Road
- Railway
- Major River
- Lakes and Dams
- NSW Local Government Area



Base data sourced from Spatial Services NSW
(spatial.nsw.gov.au)

material supply and equipment hire with civil construction project management and logistics. This has enabled Cleary Bros to supply quarry materials for construction as well as play an integral role in building and development projects in the Illawarra region and throughout NSW.

The company has internal divisions covering quarried materials (hard rock and sand), ready-mix concrete products, transport and logistics, equipment hire and civil construction management services. The key to the company's success over the past 100 years has been its ability to develop a fully integrated business structure to compete on medium sized public and private sector construction projects. Public infrastructure projects delivered by Cleary Bros include road construction and maintenance, bridges and coastal revetment works, while private sector projects have included large scale residential subdivisions, and civil works associated with new buildings and industrial complexes.

The genesis of the Project lies in the need to conserve the resource at the Cleary Bros Albion Park Quarry for high specification engineered products, while also supporting the growth of the Greater Sydney market. The Illawarra region possesses a limited latite resource with properties that make the rock ideal for use as a road sealing aggregate, asphalt and other diverse uses. The rock can also be used for concrete aggregates but the value of the resource lies in its physical properties that consistently meet the Transport for NSW specifications for road sealing aggregates.

The proposed resource is an ignimbrite which has recognised value as a concrete aggregate. It has high strength, low water absorption, and is chemically benign when mixed with cement. It is also suitable for manufacturing high quality road base materials to meet Transport for NSW specifications.

Cleary Bros has been seeking for some time an alternative supply of concrete aggregate which can supplement its existing clients, allowing its existing latite quarry to focus on the supply of markets where latite offers a superior advantage over other hard rock materials. The Project in the Marulan district would be an ideal fit for the existing business and enable Cleary Bros to continue to service existing clients and maintain current market share in the construction sector.

Several alternative sites were investigated however it was found that the particular geology of the Marulan district provided the best resource closest to the company's predominantly east coast market base. The distinctive geology of the region has also been recognised by other extractive industry participants who are well established in the Marulan district.

1.3 The Applicant

Cleary Bros has been at the frontline of shaping the development of the Illawarra and South Coast for more than a century. The company employs approximately 250 people directly over its integrated portfolio of services. The company was formed in 1916 as a transport business but has progressively developed as a supplier of ready-mix concrete, aggregate and other hard rock construction products, earthmoving equipment, and a civil construction management division.

Over the past 30 years, Cleary Bros has developed a reputation as a quality construction contractor and supplier, having been involved in large public and private infrastructure and development projects along the east coast including the Goulburn Mulwaree Local Government Area.

Cleary Bros currently operate two quarries. The company's existing hard rock quarry at Albion Park has operated for approximately 60 years, while its sand quarry at Gerroa has been in operation for approximately 50 years. The proposed Marulan Hard Rock Quarry will be a strategic fit in supplying concrete aggregates to east coast markets.

Primary contact details are provided in Table 1.

Table 1 – Applicant details

Item	Details
Project Contact	Mark Hammond Head of Sustainability Cleary Bros (Bombo) Pty Ltd
Postal Address	PO Box 200, Port Kembla NSW 2505 39 Five Islands Rd Port Kembla NSW 2505
Email	environment@clearybros.com.au
ABN	28 000 157 808

1.4 Project Objectives

The key objectives of the Project are:

- ☐ to provide a source of hard rock which is suitable to be used specifically in ready-mixed concrete products and high quality road base;
- ☐ to conserve the supply of latite within Cleary Bros' existing Albion Park Quarry for markets where latite offers superior properties;
- ☐ to diversify hard rock types to meet client needs and expectations;
- ☐ to maintain Cleary Bros' existing market share in the construction industry;
- ☐ provide local employment and economic activity;
- ☐ support infrastructure development throughout the local region and beyond; and
- ☐ develop an environmentally responsible operation and maintain local community support.

Cleary Bros has developed a unique position in the construction industry by providing turnkey services for major infrastructure developments. As a vertically integrated entity with existing clients, an additional independent quarry operator in the Marulan district will provide an ongoing competitive environment within the Greater Sydney construction industry.

Maintaining Cleary Bros' existing market share in the NSW construction industry through establishing a new quarry in the Marulan district will provide ongoing economic benefits to the state, and additional accretive economic benefits to the Marulan community.

1.5 Purpose of the Scoping Report

This report provides a high-level description of the Project and identifies the environmental aspects which will need to be addressed in the environmental impact statement (EIS) accompanying the development application (DA). This document will be used by the DPHI to enable the Planning Secretary to issue its SEARs. The SEARs are issued by DPHI to detail what government stakeholders require to be included in the EIS. This Scoping Report will be provided to at least the following government agencies and statutory authorities prior to DPHI issuing the SEARs:

- ❑ Goulburn Mulwaree Council;
- ❑ Transport for NSW;
- ❑ NSW Environment Protection Authority;
- ❑ NSW Department of Climate Change, Energy, the Environment and Water;
- ❑ WaterNSW; and
- ❑ Department of Primary Industries and Regional Development.

This document has been prepared in accordance with Appendix A to the State Significant Development Guidelines October 2022 and State Significant Development Guidelines March 2024 and includes:

- ❑ a description of the Project and its feasible alternatives considering the project objectives;
- ❑ the results of the initial community engagement work and the proposed ongoing program; and
- ❑ the identification of the nature, scale and extent of environmental aspects requiring further investigation, and the approach to be taken in assessing each of these as part of the EIS.

Although some aspects of the Project are still being finalised, there is sufficient detail provided to enable the accurate identification of potential impacts and Cleary Bros' plans to manage or mitigate those impacts. A significant benefit to seeking the SEARs at this early stage is the enabling of early identification of any specific impact mitigation strategies which the government may require to be integrated into the Project from the outset.

2. Strategic Context

This section provides information on the key strategic issues likely to be relevant to the assessment and evaluation of the Project for investigation in more detail through the EIS. Further descriptions of the issues and proposed scope of the environmental studies is provided in Sections 5 and 6.

2.1 Strategic Context and Issues

A broadscale investigation into alternative hard rock sources to alleviate strong demand on the existing Cleary Bros Albion Park Quarry became focussed upon the Goulburn – Marulan district due to its appropriate geology and distance to the Illawarra and Greater Sydney markets via existing transport routes. Further geological investigations identified the availability of a suitable property adjacent to the existing Gunlake-operated Marulan Quarry, and just north of the existing Holcim Lynwood Quarry.

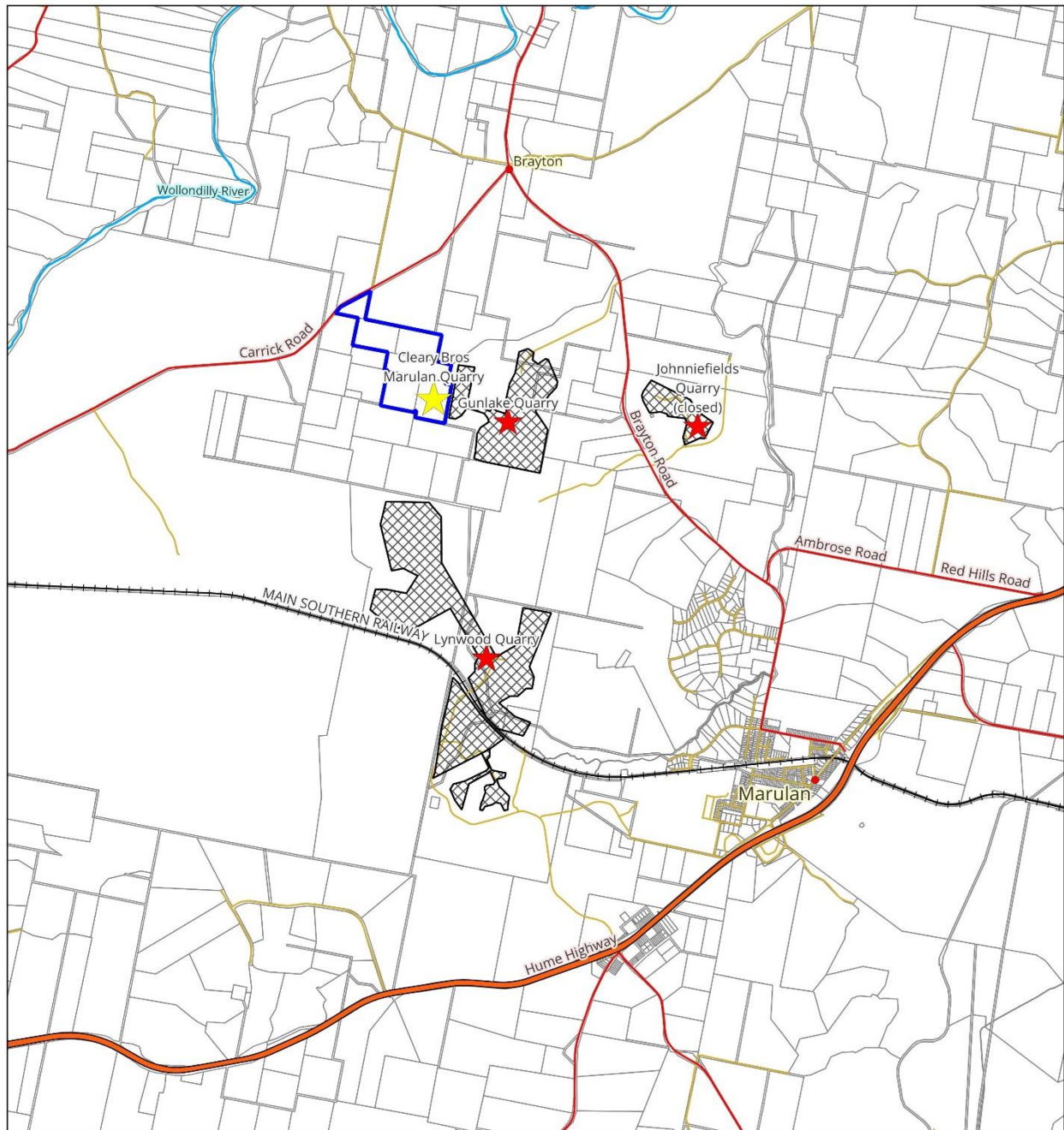
2.1.1 Regional Location

The proposed site is shown in more detail on Figure 2. The 66 hectare (ha) Project Area forms part of the 'Lockyersleigh' property, the owners of which have entered into a long term lease agreement with Cleary Bros for the purposes of developing the hard rock resource defined within the Project Area.

The site is located in the Southern Tablelands region of NSW approximately 5.5 kilometres (km) northwest of the Marulan township and approximately 20 km northeast of Goulburn. The Hume Highway is located just east of Marulan and is approximately 12 km by road from the Project Area using the existing truck bypass of the Marulan township. The Project Area is located 2.5 km north of the main southern railway line, providing the potential for rail transport of quarried materials to markets.

The target resource is located on the western end of a volcanic derived resource known as the Barralier Ignimbrite which is a hard rock type suitable for all concrete construction purposes. The resource forms part of a complex geological formation which has given rise to the nearby hard rock quarries in the local area including the adjacent Gunlake Quarry which also extracts from the Barralier Ignimbrite, the Lynwood Quarry to the south which extracts the Lockyersleigh Granite and the now closed Johnniefields Quarry to the northeast which extracted from the Joaramin Ignimbrite.

Although once quite extensive, the resource is now surrounded by broad valleys created from subsequent weathering of more recent sedimentary rocks and granite and dolerite intrusions. These broad valleys now support low intensity grazing and drain to the Wollondilly River and ultimately into Sydney's main water supply dam at Warragamba.



Cleary Bros Marulan Quarry
Figure 2 - Locality Plan



39 FIVE ISLANDS RD
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Prepared by: Cleary Bros

Date: 14/11/2024



Legend

- ★ Proposed Quarry
- ★ Existing Quarry
- Project Area
- Major Highway
- Other Primary Road
- Local Road
- Railway
- Major River
- Cadastral Boundaries



Base data sourced from Spatial Services NSW
(spatial.nsw.gov.au)

2.1.2 Site Characteristics of Project Area

The Project Area is accessed off Carrick Road, which is unsealed from the intersection with Brayton Road, and which is the main access road from Marulan. The Project Area can be accessed from the Hume Highway directly via Carrick Road to the southwest, or via Carrick Road, Brayton Road and Ambrose Road to the northwest. There are presently three residences located along Carrick Road in the vicinity of the Project Area, a further residence owned by Gunlake Quarries approximately 500 metres (m) to the north of the Project Area, and the locality of Brayton which is located 2.5 km to the north. The historic 'Lockyersleigh' Homestead is located approximately 3 km southwest of the Project Area, with the village of Towrang along the Wollondilly River valley some 6 km to the west. The closest residential area is a new rural-residential subdivision on the north-western side of Marulan which lies 3.7 km southeast of the Project Area.

The Project Area has been used for low intensity sheep grazing for more than 150 years however given the steep slopes, shallow soils and near surface hard rock occurrences, the Project Area was deemed not suitable for cropping. The soils have responded well to annual fertiliser treatments and currently support a healthy improved pasture.

The Main Southern Railway crosses Carrick Road approximately 7 km to the southwest of the Project Area. The railway line passes through Marulan and links with the Sydney metropolitan rail network. There is also a rail link between Moss Vale and Port Kembla to the northeast of Marulan.

Transport options are still under investigation and consideration. These include road and rail options and combinations utilising conveyors.

2.1.3 Characteristics of the Project Area Surrounds

The Project lies within the Southern Tablelands region which extends from the Southern Highlands to the South West Slopes and Capital Country. Surrounding the Project Area are the gorges of Bungonia, agricultural land around Marulan and forested slopes around Towrang.

The Marulan township has expanded over recent years as a result of population growth and economic development. The role of extractive industries in this growth was recognised in the *Goulburn Mulwaree Community Strategic Plan Towards 2042* and the *Goulburn and Marulan Urban and Fringe Housing Strategy 2020*. However, it was also recognised in the *Goulburn Mulwaree Tablelands Regional Community Strategic Plan 2016–2036* that maintaining this economic activity without compromising the rural, natural and built environmental characteristics of the region is important to the community. A key risk to maintaining this aspect is the cumulative impacts resulting from the concentration of multiple extractive industries.

2.1.4 Strategic Issues

Based on the above, the primary strategic issues to be addressed in the EIS are as follows:

-
- ❑ Transport – this issue is currently the subject of detailed study and investigation. It is an issue of concern within the local community and Goulburn Mulwaree Council, particularly with respect to the cumulative impacts.
 - ❑ Social and economic issues – the preliminary engagement work undertaken for the cumulative impacts of the Project has indicated the community is concerned in relation to the cumulative impacts from the existing extractive industry operations located in the Marulan district and associated transport issues, whilst others have identified the employment and other benefits that the Project will bring to the area.
 - ❑ Noise and air quality impacts at nearby residences – while located in a rural area with few nearby sensitive receivers, the cumulative impacts of noise and dust will need to be extensively considered.
 - ❑ Biodiversity – there are sections of the Project Area, and in particular the location of the resource, which support remnant and regrowth native vegetation. Preliminary surveys have indicated this includes the Yellow Box - Blakely's Red Gum grassy woodland which is classified as an Ecological Endangered Community (EEC) under the Biodiversity Conservation Act 2016.

There are a number of other environmental aspects which will need to be addressed in the EIS. These include:

- ❑ Aboriginal cultural heritage – based on previous extensive surveys and investigations of surrounding areas, it is anticipated the Project Area will have a relatively low potential archaeological sensitivity. An Aboriginal Cultural Heritage Assessment will be undertaken in consultation with relevant stakeholders.
- ❑ Historic heritage – with a long documentable history of agricultural uses, it is known the Project Area does not possess any remnant European heritage items. However, the potential impacts on the 'Lockyersleigh' Homestead will be canvassed in detail through the EIS. This will include potential visual, noise and blasting-related impacts. It is anticipated that given the intervening topographic shielding, the Project will not be visible from the homestead and that noise, blasting and air quality mitigation strategies will minimise any potential adverse impacts.
- ❑ Groundwater resources – a groundwater monitoring program has commenced which has identified the ignimbrite deposit does not act as an aquifer. Its tight crystalline matrix does not hold nor convey groundwater. The program has also identified that water-bearing fractured rock exists outside the target hard rock resource which will be modelled to determine the effect (if any) of the Project. An Aquifer Interference Assessment will be required as part of the groundwater assessment to inform the groundwater take associated with the Project.
- ❑ Surface water and water supply – the area is known for its long dry periods coupled with short and very intense rainfall events. The Project will require adequate pollution control water storage to cater for intense storm events but which may also serve as a water supply for the operation. Given the potential

lack of groundwater that will enter the extraction area, a separate bore water supply will be secured. This will require a Water Access Licence with adequate unit shares to meet the water take for Project use as well as aquifer interference requirements. The Project is within the water catchment of Warragamba Dam, part of the Sydney water supply network.

- ❑ Visual and landscape issues – despite the Project being located on the northern slope of a hill, it is not the dominant ridge within the Project Area. The operation, including the processing area, therefore has the potential to be well screened from publicly accessible vantage points and a range of residential locations.
- ❑ Soils and rehabilitation – it is anticipated that only a small quantity of overburden will need to be removed to access the resource. This material may be used for bunding around the Project Area to increase visual screening and noise mitigation. The soils are generally poor but respond well to fertiliser treatments, potentially enabling effective rehabilitation to occur throughout the early stages of the Project.
- ❑ Public infrastructure – the western part of the Project Area is crossed by a 132 kilovolt (kV) and two 330 kV transmission lines. These are located in a single corridor which may need to be crossed by the Project Area access road. The road design will accommodate any specific conductor clearance required by the infrastructure owners. There are also underground gas and water pipelines located to the south of the Project Area however these are unlikely to be impacted by the Project.

There are other environmental matters which are either low risk or not considered relevant to the Project but will be addressed in the EIS for completeness. These include land contamination, wastes, land capability, odour, flooding, bushfire risk, dangerous goods and biosecurity.

The scope of the environmental assessment required for each issue will be subject to a separate Environmental Risk Assessment process to ensure the identification of all issues that would potentially require assessment and/or mitigation strategies. This process will include any known projects or development activities which would need to be considered from a cumulative impact perspective.

2.1.5 Strategic Planning

There are a number of local and regional planning strategies which are relevant to the project. These are summarised in Table 2 and will be comprehensively examined in the EIS.

Table 2 – Strategic Plans

Planning Strategy	Relevance to the Project
Goulburn Mulwaree Community Strategic Plan Towards 2042	Included extensive engagement to establish community views on the local economy, employment and environment. The results highlighted concern about future employment, retaining and supporting young

Planning Strategy	Relevance to the Project
	people, and encouraging growth in the economy
Goulburn and Marulan Urban and Fringe Housing Strategy 2020	Seeks additional housing development while also minimising disturbance or conflict with State Significant Quarry Areas and haulage routes. Housing development in the area west of Marulan was identified as having the potential to sterilize a potential resource area/quarry expansion.
Goulburn Mulwaree Council Social Sustainability Strategy and Action Plan 2019-2029	Emphasises the importance of employment and to seek to identify and encourage emerging employment industries.
Goulburn Mulwaree Employment Land Strategy 2016	Land use and infrastructure planning is also required in order to ensure that any adverse impacts from the expansion of the quarrying industry are mitigated and managed in order to reduce the impact on the Marulan township and the LGA as a whole and to not undermine its attractiveness to future residents and associated businesses.
Tablelands Regional Community Strategic Plan 2016–2036	Recognises the Marulan community views to maintain an economic base without compromising the rural character, natural environment, and historic heritage of the community.
South East and Tablelands Regional Plan 2036 and Draft 2041 version	Recognises the Marulan area as an important source of hard rock but also an area of natural beauty with an easy going lifestyle and village atmosphere.
Greater Sydney Regional Plan – A Metropolis of Three Cities 2018	Describes objectives of providing cost-competitive inputs into the region's growing infrastructure and construction needs and protection of these resources being important in supporting the construction industry of Greater Sydney.
State Infrastructure Strategy 2022-2024	Recognises that construction industry capacity, supply chains and skills are currently stretched and will require a longer term staged approach to avoid shortages.

2.2 Alternative Project Sites

Cleary Bros has investigated several different project site alternatives. Its initial review of the hard rock industry identified several alternative sources based upon:

- ☐ rock type and suitability;
- ☐ distance to markets and construction project sites;
- ☐ available transport options;

-
- ❑ accessibility to services and site remoteness;
 - ❑ potential environmental impacts; and
 - ❑ development costs.

2.2.1 Rock Type

Specifications for concrete aggregates are listed in Australian Standard AS2758.1. There are several permitted grades however premium concrete aggregates used for structures with very long design life such as buildings and bridges have strict specifications. Durability is a key criterion which determines the material's long-term integrity. Other tests include density, water absorption, strength, abrasion, shrinkage, and a range of chemical attributes to demonstrate the rock will contribute to the design life of the structure. The use of higher quality rock in concrete also enables a reduction in the use of cement, subsequently reducing the carbon emissions of the ready-mixed concrete.

Hard rock deposits are generally volcanic in origin and several types can be used in concrete products. Granite, granodiorite, latite, basalt, dolerite, rhyolite, rhyodacite and ignimbrite are the most commonly used however consistent resource quality can render a particular deposit unsuitable for the construction industry. There are limited areas where suitable resources have been identified that can sustain long-term production of the consistent high quality aggregates demanded by the construction industry. These deposits are known to occur within the Marulan – Goulburn district, with similar formations in Young, Bathurst, Gulgong and the New England regions. There are also several isolated deposits in the Canberra-Queanbeyan region.

The Marulan district was chosen as it represents a source of suitable quality rock which is close to and would meet the requirements of existing markets.

2.2.2 Project Location Alternatives

The investigation of suitable sites around the Marulan district centred on two main aspects - appropriate rock type, and potential environmental implications. It was found the ridge which runs northwest from the Marulan township possessed a suitable mix of volcanics such as ignimbrite, granite and rhyolite. Along the ridge there are two operating quarries and one closed quarry. The Holcim Lynwood Quarry has extracted ignimbrite and now granite, Gunlake Quarry is extracting ignimbrite, and the closed Johnniefields Quarry also extracted ignimbrite.

There are two ignimbrite deposits within the ridge - the Barrilier Ignimbrite is bluish in colour and extracted at the Gunlake Quarry. It is younger than the lower pink-coloured Joaramin Ignimbrite found at the Johnniefields Quarry and which was previously extracted at the Lynwood Quarry.

Geological data confirmed the Barrilier Ignimbrite would be the target deposit sought. Several properties along the deposit were identified however the Project Area was selected due to:

- ❑ ease of available access;

-
- ❑ its long agricultural history but low agricultural value;
 - ❑ a variety of options for transport to markets via both road and rail;
 - ❑ low number of nearby residences and increased distance from the Marulan township; and
 - ❑ reduced level of impacts to biodiversity compared with other sites containing the target resource.

The Project Area's location in close proximity to two other active quarries provides some benefits but also poses the risk of adverse cumulative impacts. Cumulative impacts, including community attitudes towards an additional quarry in an area already exposed to extractive industries, will be assessed in the EIS.

2.2.3 Project Area

The chosen Project Area has several attributes which were attractive in the selection process. Plate 1 was taken in the central part of the Project Area showing the dolerite hill on the left. This hill is not targeted for extraction, but will remain, providing screening of the activities within the Project Area from the west and south.



Plate 1 – View of central portion of Project Area showing dolerite hill looking north

Plate 2 is also taken from the centre of the Project Area looking east towards the proposed extraction area. The elevation of the target ignimbrite extraction area is lower than the dolerite hill and is well shielded from most vantage points, even on the Project Area itself.



Plate 2 – Centre of Project Area looking east towards to proposed extraction area

Plate 3 is taken from the southern boundary of the Project Area looking south towards Holcim's Lynwood Quarry. The earthen mound seen in the background represents the visual earthen bund at the western extent of the Lynwood Quarry.

The 'Lockyersleigh' property is currently used to graze around 1500 ewes. On the gentle slopes the pasture has been improved however native grasses still exist on elevated rocky outcrops.



Plate 3 – View from the southern end of the Project Area looking south towards Lynwood Quarry

The Gunlake Quarry can be seen in Plate 4, bordering the eastern Project Area boundary. The operation is clearly visible from the northern section of the Project Area. This photo was taken looking east.



Plate 4 – Northern part of Project Area looking east towards Gunlake Quarry

The Project Area is currently accessed via Carrick Road which is unsealed between Brayton Road and the site entrance. Brayton Road passes Gunlake Quarry and provides access to the Hume Highway via Ambrose and Red Hills roads.

2.3 Justification for Project

The justification for developing a new quarry at the chosen site west of Marulan lies primarily in the meeting of existing and future demand for crushed rock products within the Greater Sydney Region and Illawarra Region. As noted in the report by R.W. Corkery and Co Pty Limited in 2018 entitled *Supply and Demand Profile of Geological Construction Materials for the Greater Sydney Region*, there are no hard rock quarries producing crushed rock products within the Greater Sydney Region with 92% (in 2018) of all extractive materials being met from quarries located outside the Greater Sydney Region. Construction material shortages can also lead to infrastructure delays and cost blowouts. A summary of the Project justification is as followings:

- ❑ meet future demand for construction materials within the construction industry;
- ❑ improve the range of products available to the construction industry to cater for different project needs;
- ❑ improve reliability of supply demanded by large infrastructure projects;
- ❑ securing a second source of suitable hard rock will provide Cleary Bros with the flexibility to separate its existing concrete products market from its road sealing aggregate markets; and

-
-
- ❑ extend the life of the latite resource at the Albion Park Quarry which produces an ideal and desirable road sealing aggregate product.

From a corporate perspective, Cleary Bros wishes to maintain its market share within the construction industry over the long-term. The company views the Marulan deposit as a 50 plus year investment into the future.

2.4 Key Benefits

The Project will also provide benefits on both a local and regional level as discussed in the following sections.

2.4.1 Benefits to the Local Area

The Project will provide the Marulan district with a stable additional workforce of approximately 30 full time employees plus additional contractors and flow-on indirect employment. Being a greenfield site, the Project construction program will involve a temporary workforce of up to 50 people engaged in earthmoving and infrastructure development.

Given Cleary Bros already competes with existing quarry operators of the region, these new employees will not be at the expense of the existing workforce engaged in the local area. The benefits to Marulan and the surrounding district will be sustained growth and associated improved amenities due to critical mass economic benefits.

The Project is a strategic move by Cleary Bros to ensure it can maintain its long-term position in the construction materials supply industry. It will also provide opportunities to better serve its existing client base by providing a long-term secure supply of concrete and construction aggregates.

Cleary Bros has a reputation for being an active part of the communities in which it operates. It has been at the frontline of shaping the Illawarra and south coast regions of NSW for more than a century. Through its range of building and construction products and solutions, Cleary Bros has assisted these regions to grow.

2.4.2 Regional Benefits

The Project will provide access to an available hard rock resource for the production of aggregates, a core component of pre-mixed concrete and construction materials. These materials are essential for the development of public and private infrastructure underpinning the State's ongoing function and growth.

The long term availability of construction materials has been highlighted in various regional and Greater Sydney planning strategies including State Infrastructure Strategy 2022-2042 which recognises that construction industry capacity, supply chains and skills are currently stretched and will require a longer term staged approach to avoid shortages and cost blowouts.

The existing pressure on the materials supply industry which supports the residential building market is also likely to continue in the foreseeable future. The Project will

provide improved material availability, diversification of supplier base, maintain cost competition for customers and dampen rising costs currently evident across the construction industry. The Project will therefore provide ongoing benefits to the people of NSW.

3. The Project

This section describes the Project in sufficient detail to allow government stakeholders to determine their requirements for the EIS. As the Project is in its early development stage, engineering and environmental studies are still progressing. Undertaking design and environmental studies concurrently provides the opportunity to incorporate impact mitigation strategies from the outset.

3.1 Project Outline

Cleary Bros proposes to develop a hard rock quarry on land located off Carrick Road, Carrick, approximately 5.5 km north west of the town of Marulan NSW as shown in Figure 2. The Project is within the Goulburn Mulwaree Local Government Area and covers an area of 66 ha. It is located adjacent to the existing Gunlake-operated Marulan Quarry and north of the existing Holcim Lynwood Quarry.

Exploration drilling of the resource has confirmed a resource in excess of 30 million tonnes. The Project will involve extracting up to one million tonnes per annum over the Project life, which is likely to extend beyond the maximum 30 year period generally considered for State Significant Developments. In the event a development consent is only granted for 30 years for the Project, Cleary Bros may apply for a further extension towards the end of the 30-year development consent to enable the recovery of the remaining resources within the Project Area.

The Project is expected to have a smaller footprint than the nearby quarries largely as a result of the limited surface or areal extent of the resource identified at this stage. Similarly, the operation is expected to have a significantly smaller out-of-pit overburden emplacement due to the shallow depth of weathered material overlying the resource indicated by exploration drilling.

The Project Area is largely cleared and has a long agricultural history, however initial ecological surveys suggest the presence of matters of biodiversity significance, which will be further assessed in detail as part of a Biodiversity Development Assessment Report.

The Project is well shielded by existing topography which limits views from public roads and the locality of Brayton. With limited nearby residential receptors, it is considered the Project is well suited for development as an extractive operation.

Some aspects of the Project are still subject to detailed study. An options analysis including engineering design and cost estimations is currently being prepared for material transportation. This transport study is currently examining a range of potential alternatives including road and rail options, noting some options consider a combination of public and private land holdings which are currently subject to confidential commercial negotiations.

The volume of overburden to be generated over the life of the Project is anticipated to be small but has yet to be quantified. Once the proposed extraction area has been refined, overburden quantities will be finalised which in turn will guide the design of

surface emplacements, as well as inform the noise and air quality models supporting the EIS preparation.

The conceptual plan for the Project is shown on Figure 3. The figure outlines the anticipated footprint of the extraction area, processing and stockpile area, infrastructure site overburden emplacement areas. The current proposed internal access road to Carrick Road is also shown.

3.2 Extraction Plan

There are two separate hills located on the Project area. The eastern hill represents the target ignimbrite resource while the adjacent western hill comprises dolerite. Although dolerite is often an acceptable hard rock with properties suitable for a range of construction purposes, the ignimbrite resource is a superior material in terms of strength and suitability for concrete aggregates. The extraction plan will concentrate on utilisation of the ignimbrite resource which is sufficient to cater for a 30 year development life, however in order to extract the ignimbrite, some dolerite around the boundaries of the ignimbrite resource will also be extracted with this material used to manufacture road base products.

To access the resource will require removal of topsoil and subsoil followed by removal of any weathered material overlying the target resource. This weathered material overlying the resource is referred to as overburden. Topsoil and subsoils which are suitable for rehabilitation purposes will be separated and retained for later use. Overburden will be used to construct bunding and noise barriers and if suitable, used in the construction of hardstand areas and for road construction.

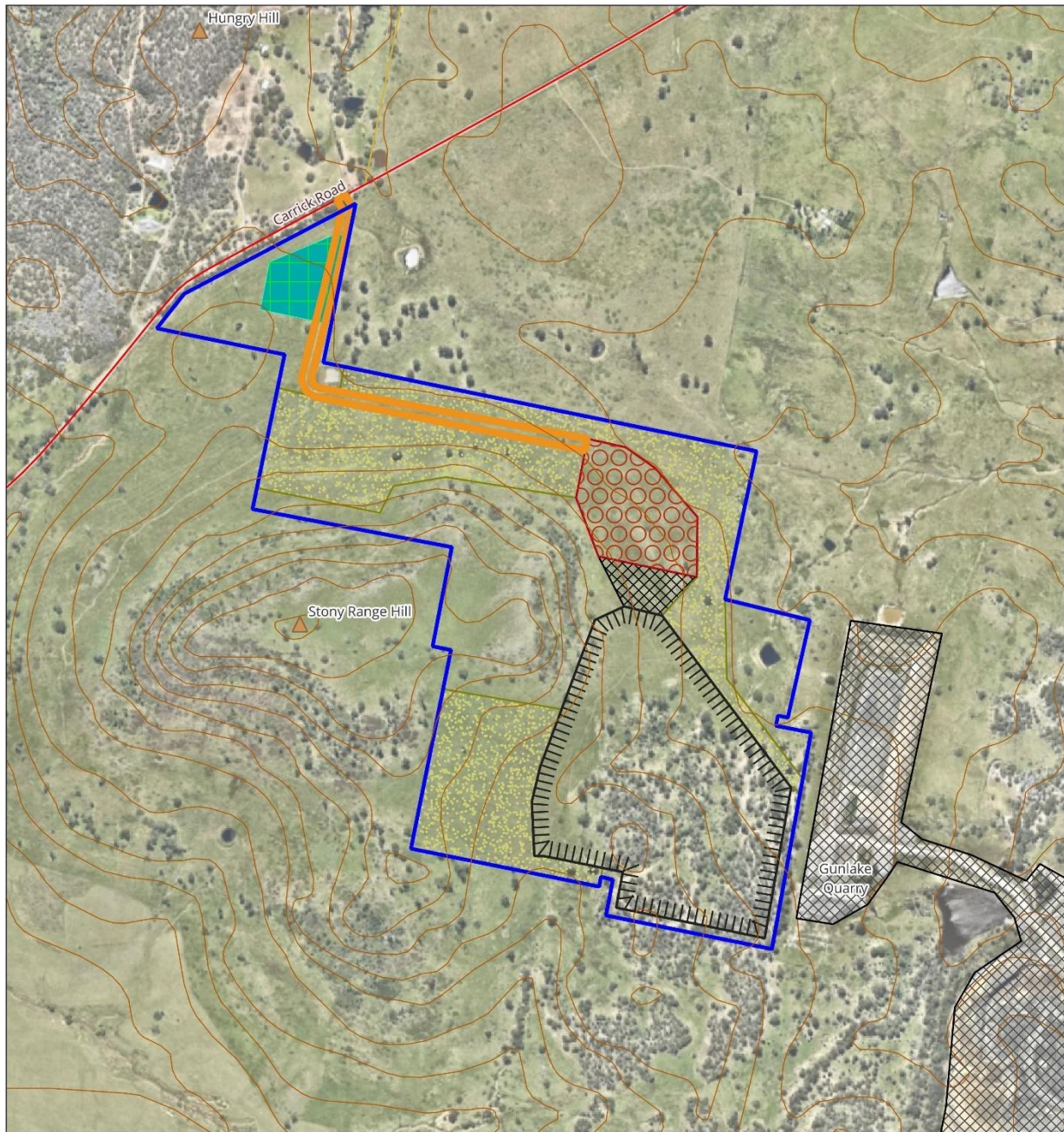
Topsoil in the extraction area mainly consists of shallow, rapidly drained lithosols and shallow earths, with rock outcrops occurring across the area. Although the main resource will generate little overburden, the edges of the resource are covered by several metres of colluvial material. The location of the first box cut will be selected on the basis of depth of overburden as sufficient material needs to be generated to allow for bunding and levelling of the processing area.

The EIS will present a series of detailed staged quarry extraction plans covering the progressive development of the quarry. The first stage plan will show the development of the infrastructure, bunding and road development as well as the area of extraction needed to produce the necessary overburden for the construction. Progressive stages will show the expanding extraction area and any subsequent overburden emplacement areas. These staged plans will also be used to model noise and air quality impacts.

3.3 Extraction Method

The extraction method will commence with topsoil and overburden stripping. Given the unweathered rock strength of the ignimbrite, the extraction method will rely on drilling and blasting.

The stripping of topsoil, subsoil and underlying weathered rock will be undertaken by dozers with excavators and trucks transporting the material to designated areas. This



Cleary Bros Marulan Quarry
Figure 3 - Conceptual Project Layout



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Prepared by: Cleary Bros

Date: 14/11/2024



Legend

- Project Area
- Extraction Area
- Access Road
- Processing Area
- Infrastructure Area
- Waste Emplacement Area
- Stockpile Area
- Existing Quarries
- Contour Intervals

Base data sourced from Spatial Services NSW
(spatial.nsw.gov.au)



will be followed by drilling and blasting to develop the upper quarry benches. Standard drill and blast methods will be used. Managing these operations to minimise noise and blasting impacts requires careful blast design and appropriate equipment selection. Ultimately, the extraction area will have a depth in excess of 50m below the current ground level.

3.4 Material Processing

The blast design will maximise the fragmentation of the in-situ rock material. This material will be loaded into an in-pit mobile primary crusher for initial processing. The material will then be transported to the fixed processing plant for further crushing and screening to produce the finished products. Numerous product stockpiles will be required for the range of products envisaged.

The EIS will provide a detailed description of the processing operations including general specifications and size in order to accurately model noise and dust emissions.

3.5 Associated Infrastructure

The Project will also require:

- ☐ an office, training room and carparking area;
- ☐ amenities and sewage treatment facilities;
- ☐ workshop and heavy vehicle park up area;
- ☐ storage area and hardstand;
- ☐ vehicle washdown area; and
- ☐ a weighbridge.

Figure 3 provides a general location for the infrastructure on the site with further detail to be included in the EIS. It is anticipated that some flexibility will be provided in the EIS to allow for minor changes to the configuration of associated infrastructure post-approval.

3.6 Rehabilitation Initiatives

Unlike a typical open cut mine, quarries by their very nature are more compact with very little overburden compared to the volume of target resource. As a result, quarries tend to consist of large voids and provide reduced opportunities for progressive rehabilitation.

Quarry planning will consider the potential to maximise the ability to complete final surfaces as soon as practicable to allow some progressively rehabilitation to occur throughout the life of the quarry. The first stage will involve removal of sufficient overburden to construct the facilities and noise bunding. This stage will also expose

sufficient rock to construct the access road and hardstand areas as well as the first few years of production.

Topsoil generated from the first stage quarry development will be used to rehabilitate the outer face of the noise control bund, completed batters of the overburden emplacement around the northern side of the stockpiling, access road and processing area. Other areas disturbed during the construction phase such as temporary facilities and laydown areas will also be rehabilitated during the first stage.

Subsequent quarry stages will involve a progressive increase in the extraction area followed by deepening of the quarry void. Quarry planning will identify opportunities to progressively form final batters throughout the life of the quarry.

Details of surface treatments, revegetation methods, batter and berm drainage provisions, final land use and target vegetation community will be detailed in the EIS. The EIS will also document appropriate rehabilitation monitoring commitments to demonstrate completion of rehabilitation phases.

3.7 Project Development Alternatives

Section 2.3 outlined the process that determined the current site location. This section covers potential alternative development scenarios that will be further explored in the EIS. Although equivalent hard rock resources of this quality are rare, the selected site does offer potential alternative development scenarios. These alternatives lie in the following categories:

- ❑ Quarry Planning – the resource may be extracted from the northern end first as currently outlined or could be extracted from the western end. This would alter the location of the processing facilities.
- ❑ Alternative transport routes – at present it is proposed to use Carrick Road to the Brayton Road intersection and then Brayton Road to Ambrose Road which is currently the designated truck route for Gunlake Quarry. Alternative routes may be possible, and these are currently being examined with the results to be presented in the EIS.
- ❑ The use of rail facilities to the south for a component of the production may be possible and is currently being explored.
- ❑ Alternative earthmoving and processing equipment is currently being examined to determine the most appropriate, cost effective and efficient methods. The results of this assessment will be used in the noise and dust studies prepared as part of the EIS.

The environmental and engineering studies which form part of the EIS process are interrelated. Alternative quarry designs, site layouts, equipment and transport options will be assessed for their respective environmental impacts. The selected options put forward for development approval will represent a balance between project costs and efficiency and resultant environmental and social impacts.

3.8 Services

The main services required to support the Project are discussed in the following sections.

3.8.1 Water

The main water usage will be for dust suppression of the haul roads and processing plant(s). A water truck will be available at all times to water unsealed roads and internal exposed areas of the Project, as required. Fixed dust suppression sprays will be used to control dust within the processing area.

Water tanks will be used to store raw water for dust suppression and will be available for firefighting purposes as required, while potable water will be trucked to the Project. It is not envisaged the Project will be linked to the town water supply.

Cleary Bros is currently examining options for raw water supplies to the Project, which may include on site groundwater bores elsewhere on the 'Lockyersleigh' property and the reuse of sediment-laden water retained to prevent contamination of surrounding waterways. Cleary Bros has been successful in securing share components of the Goulburn Fractured Rock Groundwater Source in the Greater Metropolitan Region Groundwater Sources Water Sharing Plan.

A detailed water management plan and water balance will be provided in the EIS.

3.8.2 Power

A separate power supply will be established from the local distribution network. This will likely require a separate feed line from the existing distribution network. This will link to an on-site substation and private feed lines to the on-site facilities.

During the construction phase and early operations, power will be provided by diesel generator. Details of the proposed power supply will be provided in the EIS.

3.9 Production Rate

It is anticipated that the production rate will commence at a lower rate of around 300,000 tpa of product to meet current demand, with this rate increasing over time in response to a growing market in Greater Sydney. It is envisaged the Project will produce on average 500,000 tpa over its lifetime, however approval will be sought to produce up to one million tonnes per annum. This will allow the quarry to cater for periods of peak demand, which may be associated with supply to large infrastructure projects.

3.10 Hours of Operation

Anticipated operating hours for the Project are between 6am to 6pm weekdays, and 7am to 3pm on Saturdays. Maintenance activities, emergency activities and other activities inaudible at the nearest sensitive receivers may occur outside these periods.

3.11 Employment

Base employment within Project Area will be 30 people. This will include management and office support staff, trade qualified personnel and equipment operators. Additional contractors will be employed as required in the transport of materials from the Project. Cleary Bros intends to source this workforce from the local community and surrounding areas.

4. Statutory Context

4.1 Summary of Statutory Requirements

A summary of the key statutory requirements for the Project is provided in Table 3 which follows the categories listed in the SSD Scoping Report Guidelines.

Table 3 – Summary of Statutory Requirements

Matter	Response
Power to grant consent	The Project is of a scale and size to define it as State Significant Development. There are no known impediments to the granting of consent by the consent authority.
Permissibility	The Project is permissible under Goulburn Mulwaree Local Environmental Plan 2009 and Clause 2.9(3) of the State Environmental Planning Policy (Resources and Energy) 2021.
Other approvals	As outlined in Section 4.4, other approvals will be necessary under the Protection of the Environment Operations Act 1997, Biodiversity Conservation Act 2016 and Roads Act 1993. There are other potential approvals needed which are further discussed in Section 4.4
Pre-conditions to exercising the power to grant approval	Neutral or Beneficial Effect on Water Quality under the Biodiversity and Conservation SEPP; Matters listed under the Resources and Energy SEPP; Matters listed under the Resilience and Hazards SEPP; Section 7.14 of the Biodiversity and Conservation Act 2016.
Mandatory matters for consideration	Matters listed in Clause 4.15 of the Environmental Planning and Assessment Act 1979

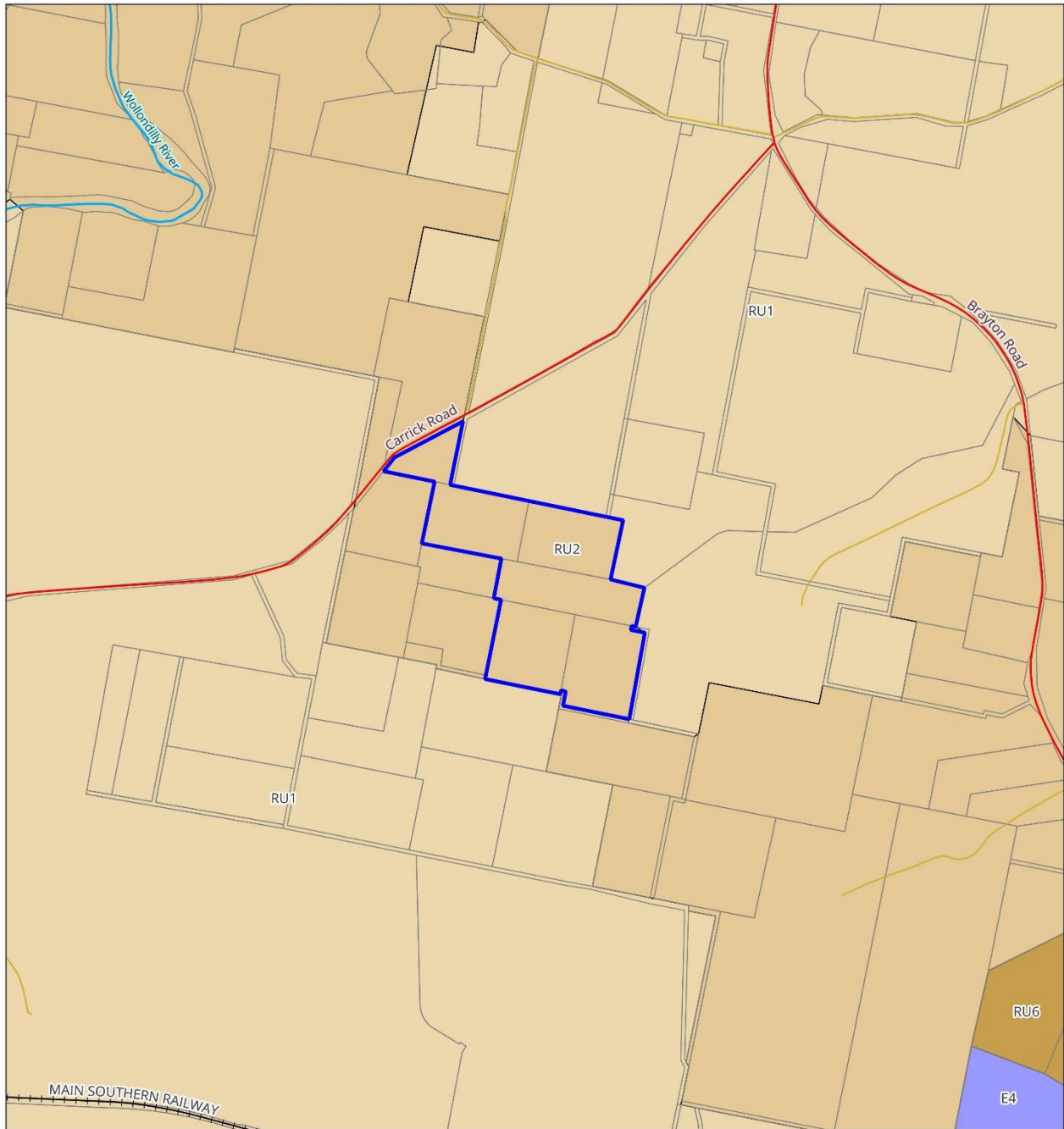
These matters are further discussed in the following sections.

4.2 Power to Grant Consent

The legal pathway under which consent is sought is under the State Significant Development provisions of the Environmental Planning and Assessment Act 1979 (EP&A Act).

4.2.1 NSW Environmental Planning and Assessment Act 1979

The EP&A Act provides the statutory framework for planning approval and environmental assessment in NSW. This Act is the primary legislation which governs the approval path for the Project. As discussed below, the Project is considered State Significant Development which places the approval path under Division 4.7 of the EP&A Act.



Cleary Bros Marulan Quarry
Figure 4 - Land Use Zones



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Prepared by: Cleary Bros

Date: 14/11/2024

0 625 1,250 1,875 2,500 m

A horizontal scale bar with markings at 0, 625, 1,250, 1,875, and 2,500 meters.

Legend

- Project Area
- Cadastral Boundaries
- Land Zoning
 - E4
 - RU1
 - RU2
 - RU6

Base data sourced from Spatial Services NSW
(spatial.nsw.gov.au)



The EIS will, however, address matters listed for consideration in the LEP, Council's views and any concerns in relation to the Project. Cleary Bros has met with Council officers and has made an undertaking to keep them informed, and to work closely with them throughout the Project.

4.3.2 Land Owner Consent

Cleary Bros has entered into a lease agreement with the land owner which includes consent to seek approval for, and operation of, a hard rock quarry. Land subject to the lease agreement is shown on Figure 2.

4.4 Relevant NSW Legislation and Other State Approvals

In addition to the EP&A Act, there are other legislative requirements that will need to be considered either as part of the development approval process or prior to the Project proceeding. These are discussed in the following sections.

4.4.1 Protection of the Environment Operations Act 1997

The Protection of the Environment Operations Act 1997 (POEO Act) is administered by the NSW Environment Protection Authority (EPA) with the aim to protect, restore and enhance the quality of the environment in the context of ecologically sustainable development, and to reduce risks to human health and prevent degradation of the environment.

Section 48 of the POEO Act requires the operator of an activity listed under Schedule 1 of the Act to hold an Environment Protection Licence (EPL) for that activity. An extractive industry of the scale proposed is listed as a scheduled activity and therefore the Project will require an EPL.

The EPA is a key government stakeholder in the approval process but is also a post development consent approval authority as an EPL is required to be obtained to enable operations to commence.

4.4.2 Biodiversity Conservation Act 2016

The Biodiversity Conservation Act 2016 (BC Act) provides the framework for the protection of threatened species and ecological communities throughout NSW. The purpose of this Act is to maintain a healthy, productive and resilient environment for the greatest well-being of the community, now and into the future, consistent with the principles of ecologically sustainable development. As described in Section 6.1.3, a Preliminary Environmental Constraints Assessment has been undertaken for the Project which has identified Plant Community Type (PCT) *Yellow Box - Blakely's Red Gum grassy woodland on the tablelands, South Eastern Highlands Bioregion*. The community exists in three observed condition states being described as moderate, low and derived grassland.

The BC Act is supported by the Biodiversity Conservation Regulation 2017, the 2020 Biodiversity Assessment Method (BAM), offsetting rules, sensitive biodiversity mapping, credit pricing spreadsheet and other guidance documents.

Under the BC Act, impacts to native vegetation and/or threatened flora and fauna habitat may be required to be offset under Section 6 of the Act, known as the Biodiversity Offsets Scheme.

The assessment of biodiversity values listed in the Act will be addressed through the preparation of a Biodiversity Development Assessment Report (BDAR). The BDAR will be prepared as an integral part of the EIS and outline avoidance and mitigation measures, as well as offset requirements, for all biodiversity impacts regardless of whether significant impacts to threatened biodiversity are likely to occur.

4.4.3 Water Management Act 2000

The Water Management Act 2000 ensures water resources within NSW are conserved and managed for sustainable use benefitting both present and future generations. The Act provides for Water Sharing Plans for significant water sources including rules for protecting the environment and administering water licencing and trading.

Cleary Bros has secured a water allocation to meet the estimated requirements of the Project under the *Goulburn Fractured Rock Water Source* of the *Water Sharing Plan for the Greater Metropolitan Region Groundwater Sources 2023*. The share components required to meet the requirements of the Water Sharing Plan will be confirmed as part of the EIS.

4.4.4 National Parks and Wildlife Act 1974

The National Parks and Wildlife Act 1974 (NPW Act) contains provisions for the protection and management of national parks, historic sites, nature reserves and Aboriginal heritage. The Division of Environment and Heritage within the Department of Climate Change, Energy, the Environment and Water administers the NPW Act. The NPW Act provides statutory protection for Aboriginal objects by making it illegal to move, damage, deface or destroy a relic without Ministerial permission. However, Section 4.41 of the EP&A Act provides an exemption for SSD from requiring an Aboriginal Heritage Impact Permit under Section 90 of the NPW Act.

As discussed in Section 6.1.6, an Aboriginal Cultural and Heritage Assessment will be undertaken for the Project and the results detailed in the EIS.

4.4.5 Heritage Act 1977

The Heritage Act 1977 protects buildings and structures of heritage significance within NSW. The Project Area is located on land within the 'Lockyersleigh' property, however is outside of the curtilage of the item of heritage significance. The 'Lockyersleigh' Homestead, approximately 2.5 km to the southwest of the proposed extraction area, is listed on the Register of the National Estate as well as Heritage Item 33 on the LEP. The listing includes the homestead's gardens.

The potential impact on the 'Lockyersleigh' Homestead will be examined in detail in the EIS.

4.4.6 Roads Act 1993

Section 138 of the Roads Act 1993 requires consent to be obtained prior to disturbing or undertaking work in, on or over a public road. Goulburn Mulwaree Council manages the local road network and will be consulted in relation to any works within the public road corridor associated with the Project. The EIS will include the results of this consultation as well as details of the proposed works.

4.4.7 Crown Land Management Act 2016

Depending on the transport method selected, there is the potential for some paper roads to be crossed or otherwise form part of the Project Area. Crown land may not be occupied, used, sold, leased, licensed, dedicated, reserved, or otherwise dealt with unless authorised by the Crown Land Management Act. This issue will be further explored during the assessment of alternatives within the EIS and Crown Lands NSW will be consulted as part of this process.

4.5 Commonwealth Legislation

4.5.1 Environment Protection and Biodiversity Conservation Act 1999

The EPBC Act is the primary environmental legislation at the Commonwealth level. The EPBC Act is administered by the Commonwealth Department of Climate Change, Energy, the Environment and Water and provides a legal framework to protect and manage national and nationally important flora, fauna, ecological communities and heritage places, defined under the EPBC Act as matters of national environmental significance (MNES).

Nine categories of MNES are considered in the EPBC Act, including world heritage properties, national heritage places, wetlands of international importance, listed threatened species and ecological communities, migratory species protected under international agreements, Commonwealth marine areas, the Great Barrier Reef Marine Park, Nuclear Actions and a water resource in relation to coal seam gas.

An action that has, will have, or is likely to have a significant impact on a MNES or Commonwealth land may not be undertaken without prior approval from the Commonwealth Minister, as provided under Part 9 of the EPBC Act. A Protected Matters Search has been undertaken for the Project and the results are provided in Table 4.

Table 4 – Matters of National Significance

Matters of National Environmental Significance	Results of Search
World heritage properties	None in impact zone of the Project Area
National heritage places	None in impact zone of the Project Area
Wetlands of international importance (listed under the Ramsar Convention)	None in impact zone of the Project Area
Listed threatened species and ecological communities	Yes, will be subject to detailed site surveys and investigation

Matters of National Environmental Significance	Results of Search
Migratory species protected under international agreements	Yes, will be subject to detailed site surveys and investigation
Commonwealth marine area	None in impact zone of the Project Area
The Great Barrier Reef Marine Park	None in impact zone of the Project Area
Nuclear actions (including uranium)	Not relevant
A water resource, in relation to coal seam gas development and large coal mining development	Not relevant

The BDAR will target species which fall under the EPBC Act along with matters raised within the BC Act. These studies will determine if a referral is required under the EPBC Act. Should a referral be made, and the project is deemed to be a Controlled Action under the EPBC Act, the Project would be assessed under the existing bilateral agreement between the NSW and Commonwealth governments.

4.5.2 Native Title Act 1993

The Native Title Act 1993 recognises that Aboriginal people have rights and interests to land and waters which derive from their traditional laws and customs. Native title may be recognised in places where Indigenous people continue to follow their traditional laws and customs and have maintained a link with their traditional country. It can be negotiated through a Native Title Claim, an Indigenous Land Use Agreement or future act agreements.

The Project Area falls under the Gundungurra Area Agreement which provides a consultation protocol. This land use agreement covers several adjoining Local Government Areas including Lithgow, Blue Mountains, Penrith, Oberon, Wingecarribee, Wollondilly, Upper Lachlan and Goulburn Mulwaree. Although this agreement does not directly affect the approval pathway, it is a matter which will be considered during the preparation of the Archaeology and Heritage study for the EIS.

4.6 Environmental Planning Instruments

A summary of the relevant Environmental Planning Instruments is provided in Table 5.

Table 5 – Relevant Environmental Planning Instruments

Instrument	Relevance
Goulburn Mulwaree Local Environmental Plan 2009	As discussed in Section 4.1.2, although not enforceable under the SSD process, matters listed in the LEP will be addressed in detail in the EIS as these matters are important to both the Council and the local community
State Environmental Planning Policy (Planning Systems) 2021	As discussed in Section 4.1.1, the Project triggers the threshold for SSD. This governs the approval path under the EP&A Act.

Instrument	Relevance
State Environmental Planning Policy (Transport and Infrastructure) 2021	Clause 104 directs the consent authority to give written notice of certain traffic generating developments to Transport of NSW (TfNSW). As the Project will be a traffic-generating development, it will be referred to TfNSW.
State Environmental Planning Policy (Resources and Energy) 2021	This SEPP regulates the permissibility of mining, extractive industries and related development and specifies matters that must be considered in assessing extractive industry developments requiring consent under Part 4 of the EP&A Act. The Project is not considered exempt or complying development and therefore requires consent in accordance with clause 7.
State and Environmental Planning Policy (Biodiversity and Conservation) 2021	This Policy includes the 2011 Sydney Drinking Water Catchment SEPP which specifically requires all proposed development in the Sydney drinking water catchment to demonstrate a neutral or beneficial effect on water quality. The Project is located in the Wollondilly River catchment which is listed within this SEPP.
	Included in this amalgamated SEPP are provisions covering the original Koala Habitat Protection SEPP. This Policy aims to encourage the conservation and management of areas of natural vegetation that provide habitat for Koalas to support a permanent free-living population over their present range and reverse the current trend of Koala population decline. The Policy does not apply to land zoned RU1 Primary Production, RU2 Rural Landscape or RU3 Forestry however the intent to protect Koala habitat and feed trees will be addressed in the EIS.
State Environmental Planning Policy (Resilience and Hazards) 2021	This SEPP requires the consent authority to consider whether or not the proposed activity satisfies the definition of either potentially hazardous or potentially offensive industry. The EIS will include a screening test specified in the guideline Applying SEPP 33 – Hazardous and Offensive Development Application Guidelines (NSW Department of Planning, 2011). It is considered unlikely the Project will trigger SEPP33.

4.7 Pre-conditions to Exercising the Power to Grant Consent

Of the legislative requirements discussed above, the main pre-condition that is necessary to be satisfied prior to the grant of consent relates to the Neutral or Beneficial Effect on Water Quality requirement which is required under the State Environmental Planning Policy (Biodiversity and Conservation) 2021. Other matters that need to be considered are:

- ☐ Matters that may arise from any referral under the EPBC Act;
- ☐ Matters that may arise from the assessment under the BC Act outlined in Section 4.4.2.
- ☐ Matters that may arise from the assessment under the Resources and Energy SEPP, particularly Clauses 2.17 to 2.20.

The required information and assessment needed for the consent authority to satisfy these pre-conditions prior to determining the project, will be provided in the EIS.

4.8 Mandatory Matters for Consideration

Clause 4.15 of the EP&A Act lists the matters for consideration in assessing State Significant Developments. In summary, these are:

- ❑ The provisions of any environmental planning instruments and instruments that have been subject to public consultation, development control plans and planning agreements.
- ❑ The likely impacts of the development, including environmental impacts on both the natural and built environments, and social and economic impacts in the locality.
- ❑ the suitability of the site for the development, any submissions made in accordance with this Act or the regulations and the public interest.
- ❑ Compliance with non-discretionary development standards.

Relevant legislative provisions have been discussed in this section, while the proposed scope of the environmental studies proposed to assess the likely impacts of the development and social and economic impacts on the local area are described in Chapter 6 of this Scoping Report. The EIS will address all relevant matters listed in Clause 4.15 of the EP&A Act.

5. Community Engagement

5.1 Approach

Cleary Bros has adopted an open communications approach to stakeholder and community engagement. Commencing in September 2021, Cleary Bros began contacting community members surrounding the area being considered for the proposed Project Area to seek their views on the local quarry industry. The feedback received has proved valuable in informing the approach to community engagement for the Project.

It was clear the community valued the open and honest approach which will be continued during the preparation of the EIS. It will also form the basis of ongoing consultation should the Project receive development consent. Full details of the community engagement approach are provided in Appendix B.

5.2 Engagement Carried Out

A Project Stakeholder is someone who has an interest in or responsibility for the project. This includes individual people, groups and Government agencies.

5.2.1 Community Stakeholders

At this stage of the Project, community stakeholders are still being identified however engagement has begun with:

- ☐ local residents within the area of social impact of the Project;
- ☐ local residents from the wider region who have an interest in community amenity issues;
- ☐ local community groups such as the Marulan & District Historical Society and Towrang Valley Progress Group;
- ☐ business groups such as the Marulan Region Chamber of Commerce; and
- ☐ other non-government organisations which may have an interest in the area.

Community stakeholders also include other businesses with an interest in the quarry industry or general development with the region such as other quarry operators, transport contractors and industry groups. It also includes indigenous groups and organisations which will be involved with specific archaeological investigations.

5.2.2 Government Stakeholders

Government stakeholders relevant to this Project will include:

- ☐ Goulburn Mulwaree Council.
- ☐ Department of Planning, Housing and Infrastructure

-
- ❑ Department of Climate Change, Energy, the Environment and Water (Water and Environment and Heritage divisions).
 - ❑ Environment Protection Authority.
 - ❑ Transport for NSW.
 - ❑ Water NSW.
 - ❑ Natural Resources Access Regulator.
 - ❑ NSW Crown Lands.
 - ❑ Commonwealth Department of Climate Change, Energy, the Environment and Water.

Government stakeholders will play a role in the approval process for the Project. They usually rely on specific legislation that governs their areas of interest and statutory responsibilities. These agencies will be consulted as required during the approval and post-approval phases of the Project.

There are also a range of utility and emergency authorities that will be consulted with as part of the Project development according to need. These will include power utilities, particularly in relation to conductor clearance and arrangements necessary for the three existing high voltage power lines which cross the Project Area, and emergency services in relation to access arrangements.

5.2.3 Engagement to date

The community engagement process to date has identified the following community issues which are discussed in detail in the Social Impact Scoping Report within Appendix B.

- ❑ Whether there is the need for a new quarry in the Marulan area.
- ❑ Excessive truck movements on existing public roads.
- ❑ Cumulative impacts of noise and dust from other quarry operators.
- ❑ Both positive and negative economic impacts.
- ❑ Both positive and negative employment impacts.
- ❑ General amenity issues.

5.3 Community Views

It is clear from Cleary Bros' early engagement efforts and research that the community welcomes a proactive approach to seeking views on the local quarry industry. The community is concerned about the local district changing from a quiet rural area to one that is characterised by the extractive industry. The change in amenity and community perceptions about extractive industries, heavy vehicle movements on local roads, cumulative noise and dust impacts, and the influx of new workers will be fully explored in the Social Impact Assessment (SIA).

There are some residents who have seen these changes as positive and acknowledge the district has benefited from an associated increase in employment opportunities. It will be important to separately identify the views of long-standing residents who will be directly impacted by the Project and ensure their views are taken into account.

5.4 Ongoing Engagement

A Community Engagement Plan has been prepared for the Project, the results of which will be incorporated into the SIA. The plan covers the following forms of communication:

- ❑ one on one active engagement with local residents;
- ❑ Project web page which is hosted within the Cleary Bros website to provide details of the Project and progress updates;
- ❑ regular community newsletters providing updates on the progress of the various environmental and engineering studies;
- ❑ media releases and briefings;
- ❑ an active social media presence to facilitate ongoing feedback from the community; and
- ❑ regular briefings with community groups to assist with dissemination of information.

It is Cleary Bros' objective to ensure those members of the community who wish to have input into the Project are afforded the opportunity to do so.

The Project will continue to provide ongoing information to the wider community and government agencies as required. Detailed records will be retained of the issues raised by the community which will be reported as part of the SIA, while specific environmental matters that are raised will be included in the relevant specialist studies. Current EIS guidelines require the EIS to consider social impacts as well as physical environmental impacts - how the Project will impact on communities. In this way, the SIA becomes an important and integral component of the EIS. To achieve this, the ongoing community engagement strategy will:

- ❑ define the social amenity of the locality;
- ❑ establish the community's values and aspirations;
- ❑ define the environmental aspects which are of concern to the community; and
- ❑ provide feedback on how each environmental aspect will be assessed in the EIS and the specific controls provided to ameliorate the impacts of concern to the community.

The community engagement strategy will also determine the best and most effective forms of communication with the community. The strategy will therefore be flexible to cater for the specific community needs within the area of social impact of the Project.

6. Proposed Assessment of Impacts

This section identifies the matters requiring assessment in the EIS and the proposed approach to assessing each of these matters, having regard to the required level of assessment. The scoping worksheet used to determine the environmental matters requiring detailed or standard level assessments in the EIS is provided as Appendix A.

6.1 Detailed Assessment Matters

Cleary Bros has undertaken a Project Environmental Risk Assessment which identified the key environmental matters requiring detailed environmental assessment in the EIS. It also identified matters that would need to be covered in the EIS but which represented a low risk of significant impact. These are categorised as requiring standard assessment. The results of the risk assessment have been summarised using the DPIE Scoping Worksheet, attached as Appendix A.

6.1.1 Social

Dr Jamie Seaton from The Social Aspect has been commissioned to assist Cleary Bros with a thorough communications and community engagement program for the Project, and to prepare the SIA as an integral component of the EIS process. A separate SIA Scoping Report is provided as Appendix B. The community engagement program was commenced in September 2021 through initial contact with Goulburn Mulwaree Council, closely followed by an introductory letter distributed to the local community.

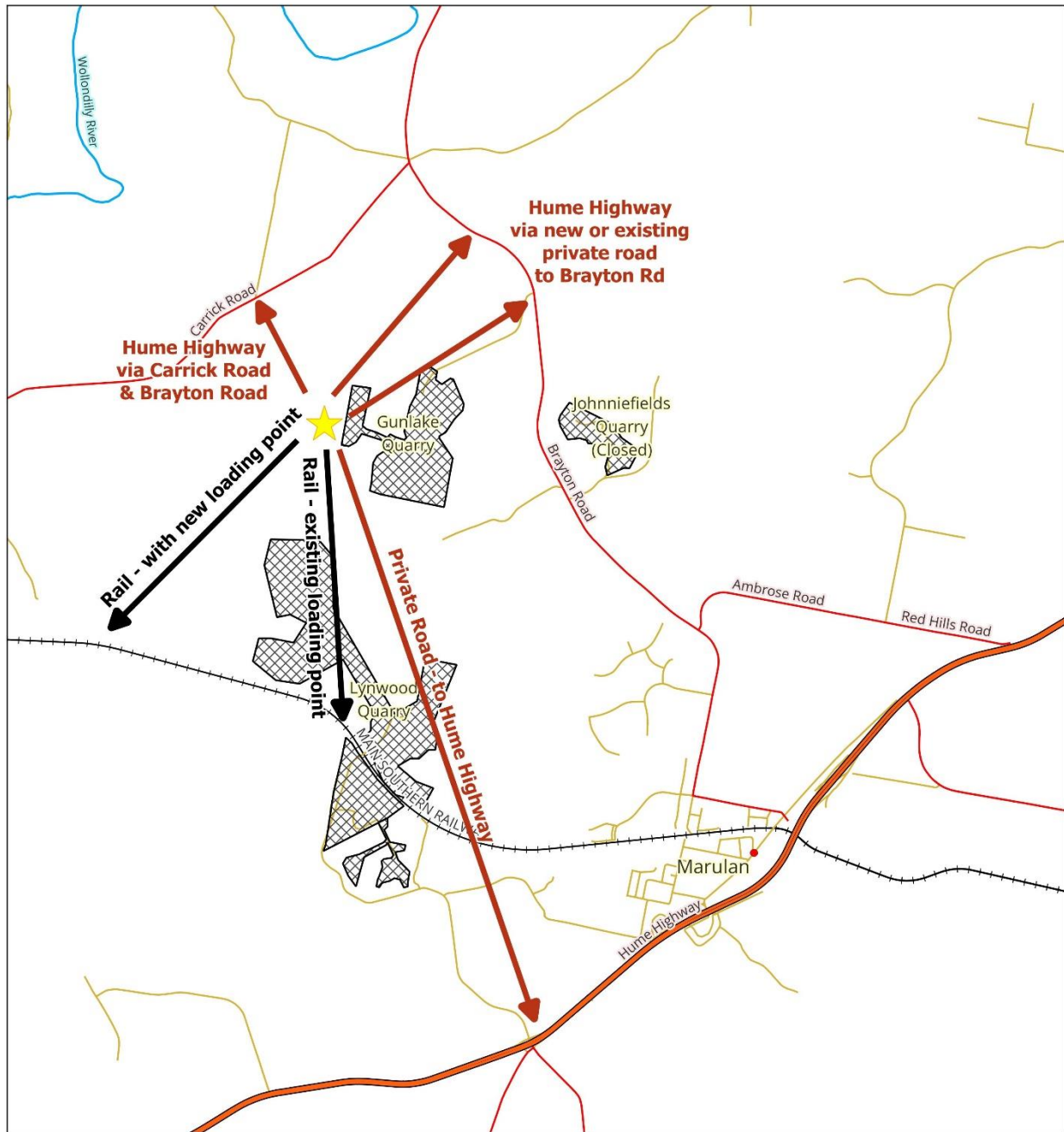
The engagement program will continue throughout the EIS preparation and assessment process and will form the basis of ongoing communications with the local community during the operational phase.

The SIA will assess the predicted (positive and negative) social impacts, including the potential for cumulative impacts from nearby extractive industry or other projects; and

- ☐ develop enhancement measures for predicted positive impacts, and mitigation measures for predicted negative impacts;
- ☐ finalise the social baseline resulting from engagement; and
- ☐ develop a social impact management plan which responds to any material negative social impacts.

6.1.2 Transportation

Transportation has been identified as a key issue for the community and Council and will be subject to detailed assessment in the EIS. The mode of product transport has yet to be determined and may include road and/or rail, or a combination involving conveyors. Figure 5 shows the existing transport infrastructure which may be used to transport the material to markets.



Cleary Bros Marulan Quarry
Figure 5 - Transport Options



39 FIVE ISLANDS RD
PORT KEMBLA NSW 2505
PH: (02) 4275 1000

Prepared by: Cleary Bros

Date: 14/11/2024



Legend

- Proposed Quarry
- Project Area
- Major Highway
- Other Primary Road
- Local Road
- Railway
- Major River



Base data sourced from Spatial Services NSW
(spatial.nsw.gov.au)

Further investigations into transport options and the selection of a preferred option will be undertaken as follows.

- ❑ Seek community and government stakeholder input into potential transport options - this work is currently underway.
- ❑ Transport Options Study – this work has commenced on both rail and road options and involves preliminary design and cost estimation of a range of potential transport scenarios which assess both public and private landholdings, for which the private land holdings are currently subject to confidential commercial discussions.
- ❑ Transport Feasibility Study – this component has yet to commence and will include detailed cost estimation of the preferred options.
- ❑ Finalisation of the proposed transport method and engagement of stakeholders.
- ❑ Incorporation of the final transport options into the EIS.

GHD has been commissioned to provide engineering support for the Project, however the transport options will require a multidisciplinary environmental study and, depending on the final selected method, may involve a combination of the following.

- ❑ Biodiversity studies covering any new land disturbance.
- ❑ Noise assessment of each component of the transport method.
- ❑ Air Quality assessment of preferred loading and unloading facilities.
- ❑ Traffic and transport assessment for any component that uses public infrastructure.
- ❑ Visual and landscape assessment of any new components that may be required.
- ❑ Cumulative impacts of each of the above which considers the combined impacts with all existing quarry operations.

6.1.3 Biodiversity

Niche Environment and Heritage Pty Ltd has been commissioned to prepare the Biodiversity Development Assessment Report (BDAR) for the Project. The Preliminary Constraints Assessment has been completed and targeted surveys are underway. Work undertaken to date has included:

- ❑ Field inspection and preliminary surveys by qualified ecologists.
- ❑ Review of Southeast NSW Native Vegetation Classification and Mapping (Tozer *et al.* 2010).
- ❑ Review of the Bionet Vegetation Atlas and component Plant Community Type classifications.
- ❑ SPRAT Database and Protected Matters Search Tool (DAWE 2021).

The preliminary fieldwork concluded that vegetation on the Project Area best fits the description of *Yellow Box - Blakely's Red Gum grassy woodland on the tablelands, South Eastern Highlands Bioregion* which was observed in three condition states being described as moderate, low and derived grassland.

In the south eastern corner of the Project Area, the moderate condition was represented as relatively intact woodland with canopy consisting of *Eucalyptus melliodora*, *E. blakelyi*, *E. macroryncha*, *E. boisistiana*, native shrubs including *Lissanthe strigosa* and *Stypandra glauca*, and a native-dominated ground layer, including *Austrodanthonia spp.*, *Aristida ramosa*, *A. vagans* and *Bothriochloa macra*.

Elsewhere it was represented as a derived grassland of poor condition.

Based on the results of the proposed survey work, the EIS will be accompanied by a BDAR prepared in accordance with the Biodiversity Assessment Method 2020 and contain:

- ☐ An updated search of threatened species records and listings of State and Commonwealth databases.
- ☐ Definition of the study area inclusive of Project footprint and adjacent areas which may be indirectly impacted by the Project.
- ☐ Identification of any external fauna corridors or community isolation.
- ☐ Detailed mapping of vegetation communities within the defined study area.
- ☐ The results of targeted flora and fauna surveys for listed threatened species and habitat assessments.
- ☐ Identification of mitigation and management actions to avoid significant impacts.
- ☐ Identification of opportunities for habitat enhancement to protect biodiversity values within undisturbed parts of the Project Area.
- ☐ Identification of a Biodiversity Offset Strategy, if required.

The BDAR will be prepared in accordance with the BC Act and will include an Assessment of Significance. If required, the offset strategy will be prepared in accordance with the BC Act. The BDAR will also assess any impacts to Matters of National Environmental Significance (MNES) under the EPBC Act.

6.1.4 Noise Impact Assessment

Atkins Acoustics has been commissioned to prepare the Noise Impact Assessment (NIA) for the Project. As the Project is located near two existing operating quarries, cumulative impacts will feature in these studies.

Seasonal background noise surveys are currently underway. The results of these surveys indicate the receiving environment is already influenced by these existing operations. The scope of the NIA includes:

-
- ❑ ambient background noise monitoring;
 - ❑ review of existing quarry noise impact studies for the two nearby quarries;
 - ❑ noise risk review and input for the conceptual Project layout, staging, infrastructure, haulage road and off-site road transport;
 - ❑ a broad brush Environmental Noise Risk Assessment;
 - ❑ develop a noise model for the Project;
 - ❑ review and assessment of cumulative operational and traffic noise impacts;
 - ❑ predict and assess operational and construction noise accordance with the EPA assessment procedures;
 - ❑ review noise mitigation options;
 - ❑ review and evaluate potential noise mitigation/attenuation strategies;
 - ❑ identify measures to avoid, minimise, or mitigate adverse noise impacts, and to manage residual noise impacts to acceptable levels and in accordance with EPA guidelines;
 - ❑ model and assess transport noise impacts; and
 - ❑ preparation of a report to present the results, findings and recommendation of the noise modelling and impact assessment.

The Project design will include a number of staged plans showing the anticipated progressive development of the extraction area. Typically, these include plans showing extraction years 1, 5, 10, 20 and 30 with a final end-of-Project rehabilitation plan. The NIA will determine the worst case scenario for noise modelling along with typical extraction years for comparison. The Year 1 scenario will include construction related impacts.

Should predicted noise levels exceed guideline values, then the design will be modified or mitigation strategies such as bunding incorporated into the design to minimise noise impacts.

Relevant guidelines for the noise assessment include:

- ❑ Noise Policy for Industry 2017.
- ❑ NSW Road Noise Policy 2011.
- ❑ Rail Infrastructure Noise Guideline 2013
- ❑ Interim Construction Noise Guideline 2009.
- ❑ Protection of the Environment (Noise Control) Regulation 2017.

The EIS will include a noise monitoring program designed to confirm the predicted impacts from the NIA. The program may include attended and/or unattended noise monitoring as well as specific noise readings from the main noise generating equipment and processes.

6.1.5 Blasting Impact Assessment

A separate assessment of blasting related impacts is proposed to be undertaken for inclusion in the EIS. The Blasting Impact Assessment (BIA) will assess the potential impact of blasting, including airblast overpressure, ground vibration, and associated blasting related impacts on residential receptors in the vicinity of the Project Area.

There are also a number of industry standards covering ground vibration and airblast overpressure aimed at minimising the risk of damage to structures as well as limiting amenity impacts. The BIA will assess impacts using the guideline Technical Basis for guidelines to minimise annoyance due to blasting overpressure and ground vibration (ANZEC, 1990), current EPA blasting criteria and Australian Standard AS 2187.2-2006 Explosives – Storage and Use.

The extraction plan will consider potential blast impacts in the design of quarry benches including orientation, geometry and the required blast pattern to achieve sufficient rock breakage. The BIA will include an appropriate maximum instantaneous charge (MIC) weight. The MIC will be determined from the results of a predictive blast model, to ensure that each blast can be designed to meet the required blasting criteria.

The EIS will include details of monitoring airblast overpressure and ground vibration for each blast.

6.1.6 Air Quality

Northstar Air Quality Pty Ltd has been commissioned to prepare an Air Quality Impact Assessment (AQIA) for the Project. As with noise impacts, the potential for cumulative air quality impacts caused by the combined effects of the existing quarry operations will be examined in detail. An air quality model will be developed which includes emissions from other quarrying operations at their maximum approved production levels.

The air quality dispersion model will be developed in accordance with the EPA's Approved Methods for the Modelling and Assessment of Air Pollutants in NSW (2022). The air quality assessment will include:

- ☐ An assessment of ambient dust levels based on five years' of available data in order to select a representative year as the ambient condition. This will include regional weather and dust data, and published monitoring data.
- ☐ Identification and quantification of all dust sources relevant to the Project construction and operation.
- ☐ Estimation of other regional dust sources based on published information and anticipated further developments or expansions.
- ☐ Identification of all receiver locations for the purposes of impact assessment.
- ☐ Prediction of ground level concentrations of dust as a result of the Project.
- ☐ Prediction of cumulative impacts.
- ☐ Detailed description of all dust control equipment and strategies.

The EIS will include details of an air quality monitoring program designed to confirm the predicted impacts from the AQIA.

6.1.7 Aboriginal Cultural Heritage

OzArk Environment and Heritage Pty Ltd has been commissioned to prepare an Aboriginal Cultural and Heritage Assessment (ACHA) for the Project. The assessment will be a transparent and equitable approach to assessing for Aboriginal heritage, including identification of and consultation with the local Aboriginal community.

A predictive model has been prepared which includes a search of the Aboriginal Heritage Information Management System (AHIMS) for the area surrounding the Project area. The AHIMS search shows that no sites have been recorded within the Project Area.

The topography of the Project Area is dominated by the eastern flank of Stony Range Hill but does not include the crest of this hill. Elevations range from 750m above sea level near the crest of Stony Range Hill to 670m above sea level in the east of the study area near Chapmans Creek (over a distance of around 700m). As a result, most of the study area has a moderate slope which is a landform unlikely to retain archaeological sites. Only limited parts of the study area are associated with waterways such as Chapmans Creek, a landform that is associated with the presence of archaeological sites in the nearby Gunlake Quarry.

A patch of woodland remains in the south east of the Project area and this may contain culturally modified trees. However, historical aerial imagery shows trees in this area were less dense in 1975 and therefore many are likely to be regrowth, diminishing the likelihood that modified trees will be present.

OzArk has previously completed surveys in the local area and advised that low density artefact sites and isolated finds are likely to be the most commonly site recorded in the Project area. The ACHA will be prepared with reference to:

- ❑ Aboriginal Cultural Heritage Consultation Requirements for Proponents (ACHCRs, DECCW 2010).
- ❑ Code of Practice for Archaeological Investigations of Objects in NSW (the Code, DECCW 2010).
- ❑ Guide to investigating, assessing and reporting on Aboriginal cultural heritage in NSW (The guide, OEH 2011).
- ❑ NSW Heritage Manual (DUAP and Heritage NSW).

The EIS will include any mitigation strategies, additional investigations or separate approvals that may be necessary to protect or manage Aboriginal cultural heritage.

6.1.8 Groundwater

The Project Area lies within the *Goulburn Fractured Rock Groundwater Source*, part of the *Greater Metropolitan Region Groundwater Sources 2023 Water Sharing Plan*.

Dr Katarina David has been commissioned to undertake a Groundwater Impact Assessment for the Project, which will include the development of a groundwater model to assess the potential impacts of the Project on local and regional groundwater resources. A network of piezometers was installed in 2021 to assist with the characterisation of the groundwater resource, with bores installed and screened within the ignimbrite resource as well as in the surrounding units.

The groundwater model will use the MODFLOW-SURFACT program package calibrated to the specific geological strata and boundary conditions relevant to the Project. The program will incorporate:

- ❑ hydraulic parameters generated by the groundwater monitoring program;
- ❑ geological model generated by the exploration program;
- ❑ available regional groundwater monitoring data;
- ❑ topographic controls and hydraulic gradients;
- ❑ estimation of strata permeability,
- ❑ rainfall recharge and anticipated lateral flows.

The output of the model will be an estimation of any depressurisation of the surrounding groundwater system and an assessment of the resulting impacts to the environment and any licenced bores. The results will also be used in the biodiversity study to predict if any localised impacts may occur on vegetation communities, as well as informing the aquifer interference assessment undertaken with respect to the NSW Aquifer Interference Policy.

The EIS will include a groundwater monitoring program designed to verify the EIS predicted impacts on local groundwater resources. The program and associated trigger action response plan (TARP) will be based on the National Water Quality Management Strategy – Guidelines for Groundwater Quality Protection in Australia 2013.

6.1.9 Surface Water Pollution Control and Water Balance

The Marulan district is known for long dry periods coupled with short and very intense rainfall events (Bureau of Meteorology 2024). Even during the Millennium Drought between 1997 and 2009, and the more recent 2017 to 2019 drought when Goulburn's water supply was under extreme stress, there were several intense rainfall events. Rainfall patterns since 2020 have generally been at or sometimes above long term averages causing localised flooding.

These factors will be incorporated into the Water Management Plan for the Project. To manage stormwater flows and avoid uncontrolled discharges, the Project will require adequate pollution control storage. These storages may also serve as a raw

water source for the operation, subject to water licencing requirements associated with the Water Management Act.

The EIS will include an assessment of Neutral or Beneficial Effect on the water supply catchment as required by State and Environmental Planning Policy (Biodiversity and Conservation) 2021. A water balance will be prepared covering different climatic conditions such as drought conditions, average rain years, and above average rain years. This data will inform the design of the Water Management Plan.

The EIS will also include an appropriate surface water quality monitoring program designed to assist the quarry operator in understanding surface water quality and quantity. It is likely that the quarry will seek a discharge point on its Environment Protection Licence. Appropriate discharge quality criteria will also be included in the assessment based on the revised method for deriving Australian and New Zealand water quality guideline values for toxicants (ANZG 2018) and typical EPA discharge criteria.

6.1.10 Visual and Landscape

The EIS will assess the likely impact of the Project on the landscape, views and visual amenity of the local area. The Project Area is located on the northern slopes of the ridgeline which runs northwest from Marulan. The Project Area has open views in a northerly direction but is well screened from the south, east and west. There is one property which would have direct views to the proposed extraction and processing area. This property is owned by Gunlake Quarries and may be exposed to elevated noise and air quality impacts.

The quarry design will incorporate bunding along the northern boundary which will provide some screening of views from the north. This bund will form part of the noise controls for the quarry operation but will also be planted with native vegetation. The views to the north will be further screened as the vegetation develops.

6.1.11 Rehabilitation

The EIS will include rehabilitation activities relevant to each Project development stage. As with most extractive industries, the majority of overburden and non-commercial weathered rock will be produced in the early years. This will include surplus material beneath the processing area, internal haul roads, dams and hardstand areas. The material will need to be emplaced outside the excavation area and progressively rehabilitated. These areas form part of the disturbance footprint for the Project.

The primary objectives of the rehabilitation plan for the Project will be to:

- ☐ to produce a final “walk away” landform which is stable and aesthetically consistent with surrounding landforms, yet as far as possible does not preclude possible future land uses;
- ☐ to minimise the environmental impact of the Project. This will best be achieved by shaping and revegetating surfaces as soon as possible, consistent with

constraints imposed by the operation of the quarry and associated infrastructure. In addition, careful use of overburden and topsoil stockpiles will minimise noise and visual impacts;

- ❑ to ensure available topsoil resources are optimised but, if necessary, establishing the suitability of alternative topdressing material in the later stages of extraction; and
- ❑ to ensure the drainage systems within the Project Area will remain stable and functional under extreme rainfall events.

These objectives will be further examined in the EIS.

6.2 Standard Assessment Matters

There are a range of environmental aspects covered in the EIS which will not require detailed assessment. These have been determined as being unlikely to be, or to cause, significant environmental impacts.

Historic Built Heritage – The National Estate-listed ‘Lockyersleigh’ Homestead is located approximately 3 km southwest of the Project Area and will feature within several specialist studies such as air quality and noise. It is anticipated that given the intervening topographic shielding, the Project will not be visible from the homestead and noise, blasting and air quality mitigation strategies will adequately mitigate any potential for adverse impacts.

Greenhouse Gases and Climate Change – The EIS will detail Scope 1 and Scope 2 emissions which include combustion-related emissions from plant and equipment engaged in the Project, and through the use of electricity on the Project. The assessment of climate change implications, mitigation strategies and responses will be conducted in accordance with AS 5334-2013 Climate change adaptation for settlements and infrastructure – a risk-based approach and Climate Change Impacts and Risk Management A Guide for Business and Government (Australian Government Department of the Environment and Heritage Australian Greenhouse Office, 2006).

Land – the Project is located on a moderate slope adjacent to and below Stony Range Hill. The Project is positioned adjacent to the upper section of the Chapmans Creek catchment which flows in a northeast direction into Jaorimin Creek, approximately 3km downstream of the Project area. Jaorimin Creek connects to the Wollondilly River, which in turn is a tributary of Warragamba Dam. Soils located within the proposed extraction area are rapidly drained lithosols with little evidence of erosion.

Soils on shallower slopes around Stony Range Hill are more structured Yellow Podzolic soils formed from the Bindook porphyry. Red Duplex Soils and shallow Red Earths occur on the Stony Range Hill itself. These areas are generally stable and show little signs of sheet erosion. They do not pose a threat to rehabilitation work and, having little existing structure, are suitable for stripping and stockpiling for later

use in rehabilitation. These issues will be further detailed in the EIS at a standard level of assessment.

Land Capability – Land capability and assessment systems in NSW use biophysical factors such as soil fertility and erosion potential, climate, geology, topography and vegetation. Under the Rural Land Capability system, the Project Area would be defined as Class VI land which is only suitable for grazing with no cultivation. Under the Agricultural Suitability system, the Project Area would be defined as Class 4 which are marginal lands not suitable for cultivation and with a low to very low productivity for grazing. The Project Area has not been used for cultivation in the past and although some pasture improvement has occurred there has been minimal tillage. The steeper slopes have been left with native pastures.

Strategic Agricultural Land combines land with unique natural resource characteristics, referred to as Biophysical Strategic Agricultural Land (BSAL), and clusters of significant agricultural industries referred to as Critical Industry Clusters. Strategic Agricultural Land is defined under the policy as “highly productive land that has both unique natural resource characteristics such as soil and water resources, as well as socio-economic value such as high productivity, infrastructure and access to markets. BSAL assessment and mapping has yet to be undertaken within the Marulan region however it is highly unlikely the Project area will fit the definition of BSAL.

Bushfire –There is an ongoing risk of bush fires and grass fires in the district and the Project will need to adopt some protection measures. These will be addressed in the EIS which will cover management initiatives to protect people, property and quarry assets. Although the Project Area is not considered bushfire prone, the assessment will be based on the Rural Fire Service publication “Planning for Bush Fire Protection” (2019), which provides development standards for designing and building on bushfire prone land in NSW.

Agriculture and Biosecurity - The NSW Biosecurity Strategy 2022 - 2030 aims to expand on the previous 2013 NSW Department of Primary Industries Biosecurity Strategy to include additional initiatives resulting from stakeholder engagement. The strategy covers threats to biodiversity and the natural environment, infrastructure and service industries as well as lifestyle, recreation, sport and social amenity. Biosecurity is defined as the protection of the economy, environment and community from pests, diseases and weeds. It includes measures to prevent new pests, diseases and weeds from entering the country and becoming established.

The Project Area has had a long grazing history. Care will be needed to ensure the continued removal of common and noxious weeds and pest animals. It is possible a component of the Cleary Bros leased property will remain available for agricultural purposes.

Contamination and environmental hazards – As the Project Area has not been previously used for extractive or other industrial uses, there is a very low potential for contamination. The current land use and property does not fall under the category of contaminated land as defined by the Contaminated Land Management Act 1997. The historical land use will be investigated and reported in the EIS for completeness

although it is considered highly unlikely that any specific contamination investigations will be warranted.

Waste – The Project will not generate significant quantities of general solid, hazardous or liquid waste. Any waste generated will be managed in accordance with the waste hierarchy in the Waste Avoidance and Resource Recovery Act 2007.

Economics - An Economic Impact Assessment will be prepared for the EIS. This assessment will include matters listed in the Guidelines for Economic Assessment of Mining and Coal Seam Gas Proposals (NSW Government 2015). The Economic Impact Assessment will include a Cost Benefit Analysis and Local Effects Analysis of the Project.

6.3 Matters Requiring No Assessment in the EIS

Table 6 lists matters which do not require further assessment due to project type, location or relevance.

Table 6 – Matters Requiring No Further Assessment

Environmental Aspect or Matter	Reason for No Further Assessment
Port and airport facilities	No facilities impacted by Project
Aquatic flora and fauna	Not relevant to Project Area
Conservation Areas	None affected
Dam Safety	No prescribed dams impacted or proposed
Coastal Hazards	Not relevant to Project Area
Land movement (subsidence)	Not relevant to surface extraction
Flooding	Project Area not subject to flooding
Hazardous and Offensive Development	Not relevant to Project

7. References

As most references have been produced by government departments and agencies of the NSW State Government, the list below has been formatted using title first which also allows for ease of internet search rather than the Harvard style or similar. The reference list excludes legislation, Australian Standards and NSW State Environmental Planning Policies cited in this Scoping Report.

Aboriginal Cultural Heritage Consultation Requirements for Proponents (2010), NSW Department of Climate Change and Water.

Approved Methods for the Modelling and Assessment of Air Pollutants in NSW (2022), NSW Environment Protection Authority.

Assessing Heritage Significance (2023), NSW Department of Planning and Environment.

Australian Groundwater Modelling Guidelines (National Water Commission, 2012), Commonwealth Department of Agriculture and Water Resources.

Biodiversity Assessment Method 2020, NSW Department of Planning, Industry and Environment.

Biodiversity Development Assessment Report Waiver Determinations for SSD and SSI Applications (2018), NSW Department of Planning and Environment.

Climate Change Impacts and Risk Management A Guide for Business and Government (2006), Commonwealth Department of the Environment and Heritage Australian Greenhouse Office.

Code of Practice for Archaeological Investigations of Objects in NSW (2010), NSW Department of Environment, Climate Change and Water.

Cumulative Impact Assessment Guidelines for State Significant Projects (2022), NSW Department of Planning, Infrastructure and Environment.

Goulburn Mulwaree Local Environmental Plan 2009, Goulburn Mulwaree Shire Council.

Greenhouse Gas Inventory Guide for Construction Projects 2012, Transport for NSW.

Guide to investigating, assessing and reporting on Aboriginal cultural heritage in NSW (2011), NSW Department of Primary Industries - Office of Environment and Heritage.

Guidelines for Managing Risk in Recreational Waters (2008), National Health and Medical Research Council.

Guidelines for the Economic Assessment of Mining and Coal Seam Gas Proposals (2015) NSW Department of Planning and Environment.

Guide to Traffic Management – Part 3 Traffic Studies and Analysis (2013), Austroads

Guide to Traffic Generating Developments Version 2.2 (2002), NSW Roads and Traffic Authority.

Guidelines for Groundwater Quality Protection in Australia - National water Quality Management Strategy (2013), Commonwealth Department of Agriculture and Water.

Land and Soil Mapping for NSW (2021), NSW Department of Planning and Environment.

Managing Urban Stormwater: Soils and Construction Volume 1 (2004), Landcom.

Managing Urban Stormwater: Soils and Construction Volume 2 (2008), NSW Department of Environment and Climate Change.

NSW Aquifer Interference Policy (2012), NSW Department of Primary Industries – Office of Water.

Planning for Bushfire Protection (2019), NSW Rural Fire Service.

Revised Method for Deriving Australian and New Zealand Water Quality Guideline Values for Toxicants (ANZG 2018), Commonwealth Department of Agriculture and Water Resources.

Risk assessment Guidelines for Groundwater Dependent Ecosystems (2012), NSW Department of Primary Industries – Office of Water.

Social Impact Assessment Guidelines for State Significant Projects (2021), NSW Department of Planning Industry and Environment

State Significant Development Guidelines (2024), NSW Department of Planning, Housing and Infrastructure.

State Significant Development Guidelines – Preparing a Scoping Report (2022), NSW Department of Planning, Industry and Environment.

Supply and Demand Profile of Geological Construction Materials for the Greater Sydney Region (2018), R.W. Corkery and Co Pty Limited.

Technical basis for guidelines to minimise annoyance due to blasting overpressure and ground vibration (1990). Australia and New Zealand Environment Council.

Water Sharing Plan for the Greater Metropolitan Region Groundwater Source - Goulburn Fractured Rock Water Source (2023), NSW Department of Planning and Environment.

Appendix A – EIS Scoping Summary Table

Matter	Level of Assessment	Cumulative Assessment	Engagement	Relevant Plans, Policies and Guidelines	Scoping Report Reference
Social	Detailed	Yes	Yes	Social Impact Assessment Guidelines for State Significant Projects (Department of Planning Industry and Environment, 2021)	Chapter 5; Section 6.1.1
Transport	Detailed	Yes	Yes	❑ Guide to Traffic Management – Part 3 Traffic Studies and Analysis (Austroads, 2013) ❑ Austroads Construction Guidelines ❑ Guide to Traffic Generating Developments Version 2.2 (RTA, 2002).	Section 6.1.2
Biodiversity	Detailed	Yes	Yes	❑ Biodiversity Assessment Methodology (BAM) as current ❑ NSW Biodiversity Offsets Policy for Major Projects (as current) ❑ Relevant NSW and Commonwealth Species Survey Guidelines ❑ Bionet Vegetation Atlas and component Plant Community Type classifications. ❑ Southeast NSW Native Vegetation Classification and Mapping ❑ SPRAT Database and Protected Matters Search Tool (DAWE 2021) ❑ Fact Sheet: Biodiversity development assessment report waiver determinations for SSD and SSI applications (Department	Section 6.1.3

Matter	Level of Assessment	Cumulative Assessment	Engagement	Relevant Plans, Policies and Guidelines	Scoping Report Reference
				of Planning and Environment, November 2018)	
Noise – Construction and Operation	Detailed	Yes	Yes	☐ Noise Policy for Industry 2017. ☐ NSW Road Noise Policy 2011. ☐ Rail Infrastructure Noise Guideline 2013 ☐ Interim Construction Noise Guideline 2009. ☐ Protection of the Environment (Noise Control) Regulation 2017	Section 6.1.4
Blasting	Detailed	Yes	Yes	☐ Technical Basis for guidelines to minimise annoyance due to blasting overpressure and ground vibration (ANZEC, 1990) ☐ Australian Standard AS 2187.2-2006 Explosives – Storage and Use	Section 6.1.5
Air Quality	Detailed	Yes	Yes	☐ Approved Methods for the Modelling and Assessment of Air Pollutants in NSW (2022) ☐ NSW's Sustainable Design Guidelines (Version 3.0) (Transport for NSW, 2013) ☐ Greenhouse Gas Inventory Guide for Construction Projects (Transport for NSW, 2012).	Section 6.1.6

Matter	Level of Assessment	Cumulative Assessment	Engagement	Relevant Plans, Policies and Guidelines	Scoping Report Reference
Aboriginal Cultural Heritage	Detailed	No	Yes	❑ Aboriginal Heritage Information Management System ❑ Aboriginal Cultural Heritage Consultation Requirements for Proponents (ACHCRs, DECCW 2010). ❑ Code of Practice for Archaeological Investigations of Objects in NSW (the Code, DECCW 2010). ❑ Guide to investigating, assessing and reporting on Aboriginal cultural heritage in NSW (The guide, OEH 2011). ❑ NSW Heritage Manual (DUAP and Heritage NSW).	Section 6.1.7
Groundwater	Detailed	Yes	Yes	❑ National water Quality Management Strategy – Guidelines for Groundwater Quality Protection in Australia 2013NSW Aquifer Interference Policy (DPI, 2012) ❑ Risk assessment Guidelines for Groundwater Dependent Ecosystems (Office of Water, 2012) ❑ Australian Groundwater Modelling Guidelines (National Water Commission, 2012) ❑ Groundwater and surface water sharing plans (as current)	Section 6.1.8

Matter	Level of Assessment	Cumulative Assessment	Engagement	Relevant Plans, Policies and Guidelines	Scoping Report Reference
				☐ Aquifer Interference Policy (as current)	
Surface Water	Detailed	No	Yes	☐ State and Environmental Planning Policy (Biodiversity and Conservation) 2021 ☐ Australian and New Zealand water quality guideline values for toxicants (ANZG 2018) ☐ NSW Water Quality and River Flow Objectives. (NSW Department of Environment, Climate Change and Water, 2006) ☐ Guidelines for Managing Risk in Recreational Waters. (National Health and Medical Research Council, 2008)	Section 6.1.9
Visual and Landscape	Detailed	Yes	No	Scope as described in Section 6.1.10	Section 6.1.10
Rehabilitation	Detailed	Yes	No	Scope as described in Section 6.1.11	Section 6.1.11
Historic Built Heritage	Standard	No	No	Specific scope and methodology as described in this Scoping Report	Section 6.2
Greenhouse Gas and Climate Change Adaptation	Standard	Yes	No	☐ Climate Risk Assessment Guideline (Transport for NSW, 2018) ☐ AS5334 – Climate Change Adaptation for Assets and Infrastructure ☐ Climate Change Impacts and Risk Management A Guide for Business and Government (Australian Government Department of the Environment and	Section 6.2

Matter	Level of Assessment	Cumulative Assessment	Engagement	Relevant Plans, Policies and Guidelines	Scoping Report Reference
				Heritage Australian Greenhouse Office, 2006). ☐ AS 5334-2013 Climate change adaptation for settlements and infrastructure – a risk-based approach	
Land Use and Soil Management	Standard	No	No	Managing Urban Stormwater: Soils and Construction Volume 1 (Landcom, 2004) and Volume 2 (A. Installation of Services; B. Waste Landfills; C. Unsealed Roads; D. Main Roads; E. Mines and Quarries) (Department of Energy and Climate Change, 2008)	Section 6.2
Bushfire	Standard	No	No	Rural Fire Service publication “Planning for Bush Fire Protection” (2019)	Section 6.2
Agriculture and Biosecurity	Standard	No	No	The NSW Biosecurity Strategy 2022 - 2030	Section 6.2
Contamination and Environmental Hazards	Standard	No	No	☐ Contaminated Land Management Act 1997 ☐ National Environment Protection (Assessment of Site Contamination) Measure 1999 (as revised) ☐ Managing Land Contamination: Planning Guidelines SEPP 55 – Remediation of Land (Department of Urban Affairs and Planning & Environment Protection Authority, 1998)	Section 6.2

Matter	Level of Assessment	Cumulative Assessment	Engagement	Relevant Plans, Policies and Guidelines	Scoping Report Reference
				☐ Guidelines for Consultants Reporting on Contaminated Sites (NSW Office of Environment and Heritage, 2011)	
Waste	Standard	No	No	☐ Waste Classification Guidelines (NSW Environment Protection Authority, 2014) ☐ NSW Sustainable Design Guidelines, Version 4.0 (Transport for NSW, 2019)	Section 6.2
Economics	Standard	Yes	No	Guidelines for Economic Assessment of Mining and Coal Seam Gas Proposals (NSW Government 2015)	Section 6.2

Appendix B – SIA Scoping Report



THE SOCIAL ASPECT

PEOPLE AND PROJECTS. BALANCED.



Cleary Bros Marulan Hardrock Quarry

Social Impact Assessment Scoping Report

Social Aspect Consulting Pty Ltd ABN 57 676 178 340

Document control

Author	Social Aspect Consulting Pty Ltd
Client	Cleary Bros Pty Ltd
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Prepared by

Name	Dr Jamie Seaton
Company	The Social Aspect
Position	Director
Project Role	SIA Lead
Signature	
Date	18 November 2024

Acknowledgement of Country

The Social Aspect acknowledges the traditional custodians of the land on which we work and live.

We pay our respects to Elders past and present and celebrate the diversity of Aboriginal people and their ongoing cultures and connections to land and water.

The Social Aspect is committed to honouring Aboriginal peoples' cultural and spiritual connections to land and water and their rich contribution to society.

Certification page

Lead author declaration

I, Dr Jamie Seaton, certify that the social impact assessment (SIA) scoping component of the of the Cleary Bros Pty Ltd Marulan Hard Rock Quarry environmental impact statement (EIS) scoping report contains information relevant to the SIA of the project, and that the information is not false or misleading. My qualifications and experience are listed below.

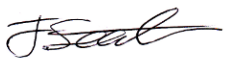
Qualifications:

1. Bachelor of Science Hons. (Human Geography)
2. Community Development Diploma
3. Doctorate of Philosophy (Human Geography).

Experience:

I am trained in social science methods and I have demonstrated social research skills in government, private and education settings.

Date: 18 November 2024



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Director

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THE SOCIAL ASPECT
PEOPLE AND PROJECTS. BALANCED.



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1. Introduction and project overview

1.1. Project background and description

Cleary Bros proposes to develop a hard rock quarry on land located off Carrick Road, Brayton, approximately 5.5 km northwest of the town of Marulan NSW (the Project) as shown in **Figure 1**. The Project is within the Goulburn Mulwaree Local Government Area (LGA) and covers an area of 66 ha. It is located adjacent to the existing Gunlake-operated Marulan Quarry and north of the existing Holcim Lynwood Quarry. The Project Area forms part of the 'Lockyersleigh' property, the owners of which have entered into a long-term lease agreement with Cleary Bros for the purposes of developing the hard rock resource.

Exploration drilling of the resource has confirmed a resource in excess of 30 million tonnes within the Barralier ignimbrite, which has successfully been extracted from the adjacent Gunlake Quarry over the past 10 years. The Project would involve extracting up to one million tonnes per annum over the Project life, from an open cut excavation of at least 50m depth. The Project would rely on initial drilling and blasting, following by on-site crushing and screening to produce a range of concrete aggregates and roadbases, which would be supplied mostly to the Greater Sydney and Illawarra regions. The mode of product transport has yet to be determined and may include road or rail, or a combination involving conveyors.

Anticipated operating hours for the Project would be 6am to 6pm weekdays, and 7am to 3pm on Saturdays, with other activities (inaudible to adjacent sensitive receivers) occurring outside of these times. The Project is well shielded by existing topography which limits views from public roads and the locality of Brayton. Some large lot residential properties exist on Carrick Road.

The Project would provide improved material availability, diversification of supplier base, maintain cost competition for customers and dampen rising costs currently evident across the construction industry. The Project would provide the Marulan district with a stable additional workforce of approximately 30 full time employees plus additional contractors and flow-on indirect employment. Being a greenfield site, the Project construction program would involve a temporary workforce of up to 50 people engaged in earthmoving and infrastructure development.

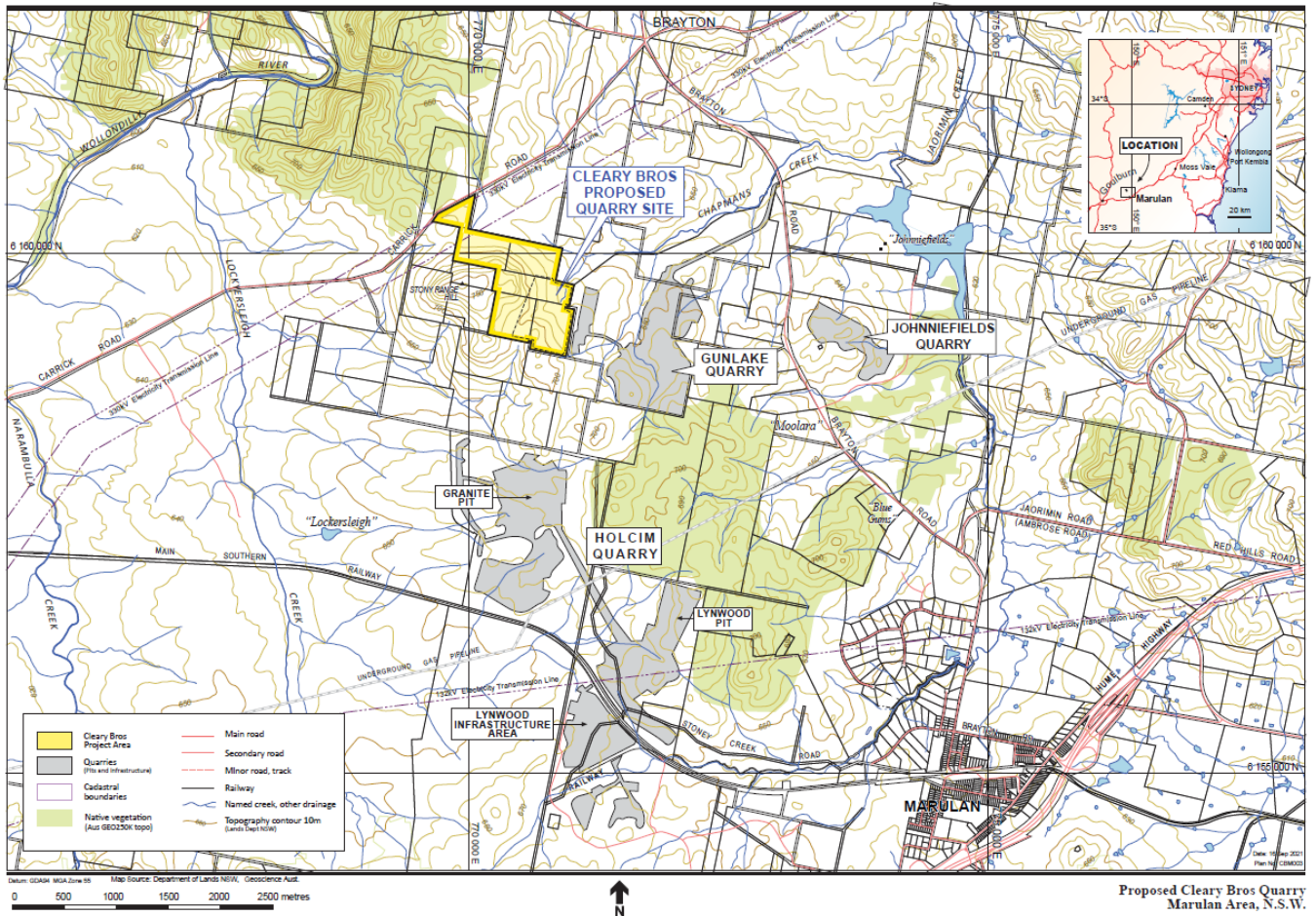


Figure 1 Project site location

1.2. Purpose of report

In accordance with the Social Impact Assessment Guideline (the Guideline) (NSW DPHI, 2023), the purpose of this report is to:

- Establish a preliminary social baseline and social locality for the Cleary Bros Marulan Hard Rock Quarry (the Project)
- Identify Project activities that could have social impacts and group them against the categories presented in the Guideline
- Provide a summary of potential social impacts that require additional assessment (scoping worksheet)
- Establish appropriate methodologies to investigate and assess Project related social impacts
- Provide a brief overview of potential management measures and ongoing monitoring.



1.3. Scoping phase engagement and research methodology

Stakeholder and community engagement commenced in August 2021 when Cleary Bros began preliminary Project planning. Since this time, the engagement and research methods in **Table 1** have been implemented to scope the SIA for the Project.

Table 1 Scoping methods

Method	Date of activity	Method detail
Phone Call	August 2021	Courtesy contact with Project site property owner to highlight Community Perception Survey (CPS) and letterbox distribution/publicity program.
CPS	September 2021	A CPS was developed to: • Gain an understanding of the attitudes toward and perceptions of the existing extractive industry operations in the Marulan region (e.g. Gunlake, Holcim, Boral, and others) • Introduce the Cleary Bros brand and image into the Marulan region • Gather data which was used to scope the SIA. The survey was distributed via a QR code embedded in a community 'project introduction letter', through a link on the related Cleary Bros Project webpage, and via email to key stakeholders. The introduction letter and webpage are described below.
Cleary Bros Project webpage	September 2021	A page (refer http://www.clearybros.com.au/marulan/) on the Cleary Bros website was created at the start of SIA scoping phase to be the main source of Project related information. Initial content included an announcement about Project options and environmental investigations. The page contained a link to the CPS.
Community Introduction Letter distribution	September 2021	A total of 67 letters were distributed to letterboxes at properties in the nominated social locality (Figure 2) proposed for the Project, including those properties along haulage route options. The letter introduced Cleary Bros, described environmental



Method	Date of activity	Method detail
		and operational investigations, and invited participation in the CPS.
Key stakeholder email	September 2021	Emails sent to key stakeholders raising awareness of the CPS and initial Project investigations.
Facebook post	September 2021	A link to the CPS was shared via the Marulan and District Community Noticeboard Facebook page following an earlier enquiry to Cleary Bros from a resident.
Online meeting	October 2021	Preliminary meeting with Goulburn Mulwaree Council (Council) to introduce the Project and discuss risks. Council raised some issues about the Project which have been considered in Section 3.3.4 of this report.
In-person meeting	November 2021	Meeting with Marulan Region Chamber of Commerce Executive Committee members to update on progress with Project investigations, and to review primary outcomes of the CPS.
In-person meeting	November 2021	Meeting with resident of Red Hills Road North and member of Gunlake Community Consultative Committee (CCC). Feedback was obtained about Project related traffic.
Meeting attendance / presentation	November 2021	Cleary Bros accepted an invitation to 'Men Off Track' session at Towrang Village Hall. The group is a subsidiary of the Towrang Valley Progress Association and involves local men meeting to work on projects and discuss topics of local interest, like a 'men's shed' group. A Cleary Bros representative provided an overview of the company via a presentation, and answered the questions raised by attendees.
In-person meeting	November 2021	Meeting with a resident of Bulls Pit Road, a neighbouring landholding to the Project site. The meeting was arranged after contact details of the resident were shared with Cleary Bros.



Method	Date of activity	Method detail
In-person meeting	December 2021	Follow up meeting with the resident of Bulls Pit Road to afford an update on Project progress prior to the Christmas-New Year break.
Meeting attendance / presentation	December 2021	Meeting organised with the Marulan and District Historical Society to introduce Cleary Bros, provide a Project overview, obtain feedback, and respond to queries.
Meeting attendance	February 2022	First attendance as a member of the Marulan Region Chamber of Commerce.
Meeting attendance / presentation	April 2022	Invitation to address monthly meeting of the Towrang Valley Progress Association. Introduced Cleary Bros, provided a Project overview and progress to date, and responded to queries.
Cleary Bros Project webpage	September 2024	The Cleary Bros Project webpage was updated to describe key project features, progress with the EIS (including the SIA), and invite feedback via an online stakeholder survey designed to assist the SIA scoping assessment. The page contained a link to the stakeholder survey.
Project update letter distribution	October 2024	A total of 95 letters were distributed to letterboxes in the same area as that adopted for the community introduction letter (refer Figure 2), including those properties along potential haulage route options. The letter provided an update on the planning process, a link to the online survey, and new project contact details. The letter invited participation in the online stakeholder survey. A copy of the letter is in Appendix B – Project update letter .
Online stakeholder survey	September 2024	An online stakeholder survey (see Appendix C – Online survey) was developed to explore community sentiment towards the Project in Carrick and surrounds. It sought to validate previous survey results and determine the social challenges and opportunities in the region. The survey results were used to inform the SIA scoping assessment.



Method	Date of activity	Method detail
Stakeholder meetings	October 2024	Follow-up meetings with key stakeholders were held to update stakeholders about the Project and validate feedback they initially provided. The stakeholders involved were: • Towrang Valley Progress Group • Marulan Region Chamber of Commerce • Marulan & District Historical Society • Council's Director of Planning and Development and Director of Operations. The Pejar Local Aboriginal Land Council was again invited to a meeting and it was accepted by the LALC CEO.
Direct contact with owners of property near the Project site	September and October 2024	Property owners near the Project site on Carrick Road and Brayton Road were contacted via phone and email to confirm they were aware of the Project and planning application. Feedback was invited about the Project and a copy of the Project update letter was provided when requested.
Key stakeholder email	October 2024	An email was sent to key stakeholders providing details about the project and inviting feedback. A copy of the Project update letter was attached to the email.

2. Preliminary social baseline

This section describes both the regional and local context of the Project. It then provides the Project's preliminary social baseline, comprised of the current profile of the communities potentially affected by it. Lastly, this section identifies the Project's nominated social locality.

2.1. Regional context

The Project is in the NSW South East and Tablelands Region. NSW Department of Planning, Housing and Industry (2022) describes the region as a diverse area encompassing coastal, alpine, and rural landscapes. It stretches from the coastline to the Australian Alps and includes undulating hinterlands in between. The region is known for its rich environmental assets, rural character, and coastal and heritage towns. It comprises nine local government areas: Bega Valley, Eurobodalla, Goulburn Mulwaree, Hilltops, Queanbeyan–Palerang, Snowy Monaro, Upper Lachlan, Wingecarribee, and Yass Valley.



Goulburn City exists as the strategic capital of the Southern Tablelands. It is Australia's earliest established inland city which today offers contemporary services, modern assets, strong arts, an emerging entertainment scene, and economic opportunities. Yass Valley and Upper Lachlan Shire LGAs are synonymous with the productive rural lands and rural residential areas of the region. The region has strong links to Canberra and Sydney (including road and rail access), mineral resources, lifestyle advantages, and historic heritage and villages.

The region faces various challenges, including the need to balance growth and environmental preservation, adapt to climate change, and recover from recent natural disasters such as droughts, bushfires, and floods. The *Draft South East and Tablelands Regional Plan 2041* (NSW Department of Planning, Housing and Industry, 2022) aims to address these challenges by providing a strategic framework for sustainable development, resilience building, and economic diversification.

The economy of the South East and Tablelands region is diverse, with key industries including agriculture, tourism, and services. The plan emphasises the importance of innovation in sustainable agriculture and energy use, as well as promoting a year-round visitor economy. It also focuses on strengthening cross-border connectivity with the Australian Capital Territory, which plays a significant role in the region's economy and employment.

The South East and Tablelands region has a rich history of mining activities. Though they are not as prominent in the current economic landscape as they once were, the NSW Government states that the "location of many of these resources, near rail lines and freeways, and their proximity to Australia's biggest construction materials market in Sydney, makes them particularly important to NSW. Whilst noting this, these industries can at times create adverse impacts on locally managed infrastructure and the amenity of local communities. It is critical to find a balance to ensure that the cumulative impact of these uses is mitigated/managed" (NSW Department of Planning, Housing and Industry, 2022, p.63).

2.2. Local context

The project's local context is the area comprised of the Brayton, Marulan and Carrick State Suburbs (SSC) as defined by the census. These suburbs are the subjects of the preliminary social baseline in **Section 2.2.1** (note a comparison to NSW data is provided where possible) and comprise the Project's nominated social locality (see **Section 2.2.2**).

Although Carrick is part of the social locality, its demographic data is omitted from the social baseline because:

- Its population is smaller, less dense and predominantly more physically separated from the Project site than the Brayton and Marulan populations, and is therefore less representative
- It has a lower concentration of smaller acreages. Larger acreages exist immediately to the west and south of the Project site which account for the majority of the Carrick suburb and are owned by a single family who lease the Project site to Cleary Bros.
- Its population will likely have less frequent interface (in terms of haulage routes) with the Project than the neighbouring suburbs.



Census geographies other than those nominated above (e.g. Census Statistical Area 1 [SA1] 10105154023) were assessed for their suitability to the baseline and social locality. They were deemed less suitable in the terms of their scale and relationship to the Project site.

2.2.1. Preliminary social baseline

The Project's preliminary social baseline is in **Table 2**. This baseline is a preliminary set of social indicators for communities potentially affected by the Project. The baseline provides a point of comparison – it can be used as reference data against which to measure the impacts of the Project as it develops (Vanclay, 2015). During the SIA phase 2, the indicators adopted for the baseline will be expanded and refined according to the outcomes of ongoing community engagement activities.

All data used in the baseline is derived from the 2021 Australian Census of Population and Housing (Australian Bureau of Statistics, 2024) unless an alternate source is cited.

Table 2 Social baseline indicators

Characteristic	Measurement		
	Brayton SSC	Marulan SSC	NSW
People	208	1,428	8,072,163
Aboriginal and/or Torres Strait Islander	9	73	278,043
Male	50.2%	50.1%	49.4%
Female	49.8%	49.9%	50.6%
Median age	49	38	39
Families	50	363	2,135,964
Average children per family (families with children)	1.8	1.9	1.8
All private dwellings	120	627	3,357,785
Average people per household	2.5	2.6	2.6
Median weekly household income	\$1,812	\$1,484	\$1,829



Characteristic	Measurement		
Median monthly mortgage repayments	\$2,167	\$1,950	\$2,167
Median weekly rent	\$300	\$380	\$420
Average motor vehicles per dwelling	2.6	2.3	1.8
People reported needing disability assistance	8	56	6.3%

2.2.2. Social locality and surrounding land use

The Project site is in Carrick, approximately 5.5km from the nearest township of Marulan and approximately 2.5km from Brayton. As described in **Section 2.2**, Carrick is characterised by larger acreages compared to the surrounding suburbs. Some properties are large lot residential properties used for grazing livestock.

It is noteworthy that other quarries are operating near the Project site including the long-standing Gunlake Quarry (accessed via Brayton Road), Lynwood Quarry (operated by Holcim) and Johnniefields Quarry.

Other natural or man-made features of the surrounding the Project site are:

- Brayton Cemetery on Bulls Pit Road, a short distance (approximately 3km by road) from the Project site via Carrick Road
- The Wollondilly River to the north of Carrick Road
- The Main Southern Railway Line and the Hume Highway, both in a southern direction from the Project site passing on the outskirts of Marulan. These provide significant transport links to Sydney, Canberra and beyond, and service the existing extractive industry operations.

The Project's nominated social locality is shown in **Figure 2**.

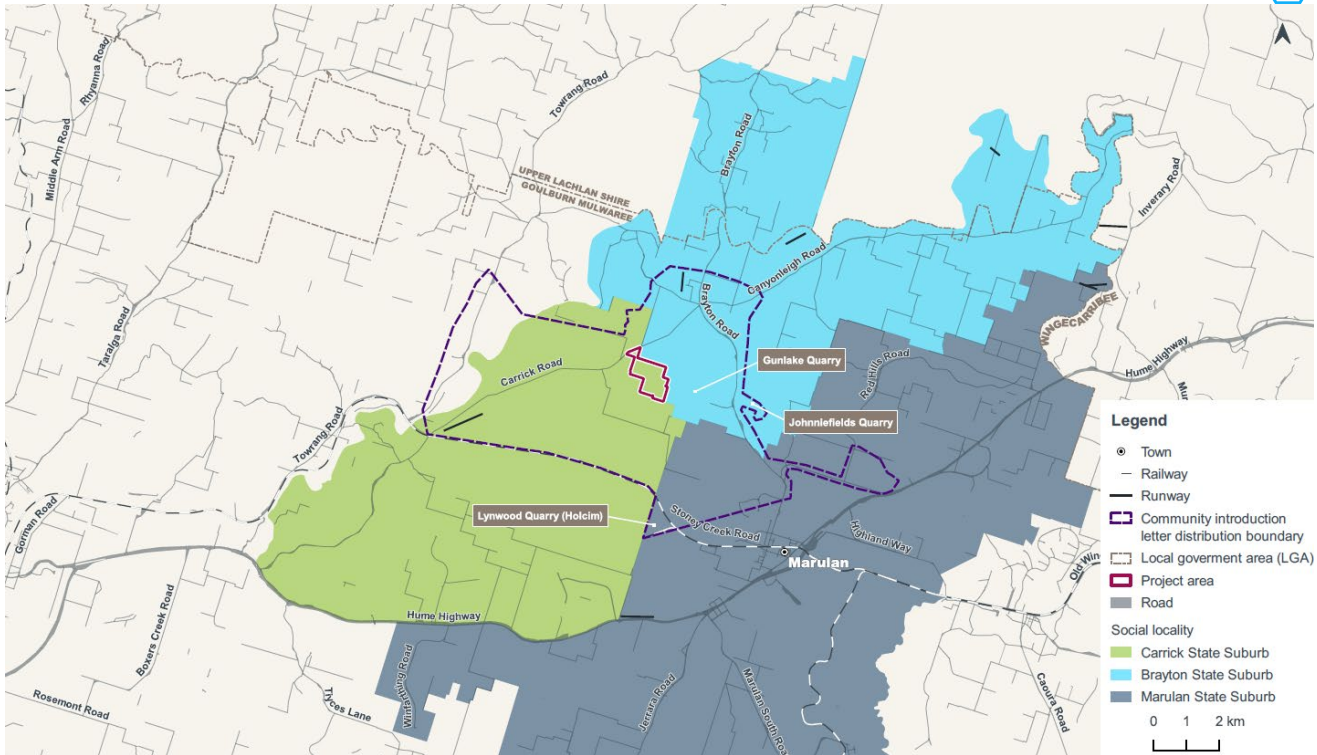


Figure 2 The nominated social locality

3. Preliminary social impact assessment

The aim of this section is to provide a preliminary assessment of potential social issues that require additional assessment, including a consideration of the duration, extent, sensitivity and severity of potential social impacts.

The scoping methods implemented in the Phase 1 SIA (refer **Table 1**) enabled the collection of primary data used in this assessment. Secondary data was also collected and assessed. In summary, most of the data assessed was derived from:

- The community introduction letter and CPS which targeted local residents and stakeholders in the social locality
- Meetings with Council representatives
- Correspondence via email and telephone with Project stakeholders, seeking early feedback about the Project
- Separate key stakeholder meetings with representatives of the Marulan Chamber of Commerce, Marulan and District Historical Society (MDHS), and Towrang Progress Association, and meetings with the CEO Pejar LALC and residents living adjacent to the Project site
- A review of relevant literature and SIA reports related to other extractive industry projects in the area.

For this assessment, the social impact categories outlined in the Guideline (DPIE, 2023) have been adopted to identify the potential social impacts. These categories are outlined in **Table 3**.



Table 3 Social impact categories

Impact category	Impact definition
Way of life	How people live, how they get around, how they work, how they play, and how they interact each day
Community	Community composition, cohesion, character, how the community functions, and people's sense of place
Accessibility	How people access and use infrastructure, services and facilities, whether provided by a public, private or not-for-profit organisation
Culture	Aboriginal and non-Aboriginal, including shared beliefs, customs, values and stories, and connections to Country, land, waterways, places and buildings
Health and wellbeing	Physical and mental health especially for people vulnerable to social exclusion or substantial change, psychological stress resulting from financial or other pressures, and changes to public health overall
Surroundings	Ecosystem services such as shade, pollution control, and erosion control, public safety and security, access to and use of the natural and built environment, and aesthetic value and amenity
Livelihoods	People's capacity to sustain themselves through employment or business, whether they experience personal breach or disadvantage, and the distributive equity of impacts and benefits
Decision-making systems	Whether people experience procedural fairness, can make informed decisions, can meaningfully influence decisions, and can access complaint, remedy and grievance mechanisms

As part of determining the social impacts that need to be considered in Phase 2 of the SIA, the NSW DPHI scoping tool (**see Appendix A – Scoping worksheet**) was populated to inform the SIA methodology. As listed in the scoping tool, the potential impacts considered relevant to the Project and worthy of further investigation in the SIA are:

- Community (positive)
- Livelihood (positive)
- Access (positive)
- Health and wellbeing (negative)
- Surroundings (negative)



- Decision-making systems (negative).

In the remainder of this section, a preliminary assessment of each of the above social impacts will be made.

3.1. Positive social impacts

3.1.1. Community character (community's shared identity)

The Project team met with the MDHS in 2021 and conveyed preliminary details of the Project to the society's members. A follow up meeting with representatives of the society and Marulan Progress Association was held in 2024 to confirm earlier opinions about the Project were still valid.

The MDHS and progress association representatives communicated that they recognise the value of the extractive industry to the town and that they are interested in establishing an ongoing relationship with Cleary Bros. The representatives showed an interest in working with Cleary Bros on community activities of mutual benefit.

It was implied in the MDHS comments about the industry, and the value it has for Marulan, that there is a potential positive social impact to be realised if the Project proceeds. This is on the premise that, as part of the wider industry, the Project would positively contribute to the community's shared identity which is shaped in part by the multiple quarries and mines currently operating in the region, and the region's historical ties to extractive industries.

3.1.2. Community cohesion (proponent led community initiatives)

From the MDHS and progress association feedback described above and their references to community activities, it is feasible that the Project could yield positive impacts for community cohesion in the Marulan and surrounding population. This would come in the form of Cleary Bros community initiatives.

The likelihood of this positive impact being realised is supported by the corporate record of Cleary Bros in relation to community initiatives it has led in the Illawarra and NSW South Coast regions, where it owns and operates other projects. Examples of these include:

- Operation of a private museum at Port Kembla with over 30 pieces of restored equipment, including classic trucks and various earthmoving equipment, which is opened to interest groups on request.
- Contributions to other historical associations in the region, including the Historical Aircraft Restoration Museum, the Illawarra Motoring Museum, the Illawarra Light Rail Museum and the Illawarra Live Steamers
- Sponsorship of local sporting groups, including the annual local rugby league union (Kiama Sevens tournament), and Premier League franchise netball (South Coast Blaze) owned by the Kiama, Illawarra and Shoalhaven Netball Associations which promotes pathways for elite netballers



- Significant annual contributions to local charities including the i98FM Illawarra Convoy of which Cleary Bros has been a major sponsor since it was founded in 2005
- Ongoing sponsorship of the Group 7 Rugby League Referees Association that has extended over 35 years
- Contributions towards the Kiama Show for over 50 years, specifically the Woodchopping Competitions
- Incidental sponsorships towards MS Gong Ride, Kids Express and Movember.

In a recent meeting (October 2024), President of the Towrang Progress Association conveyed a consistent opinion, describing donations programs led by other extractive industry companies in the region and the positive effect those programs have on community spirit and events.

There is an opportunity for the Project to foster a similar positive impact if it proceeds and this will be explored further in the Phase 2 SIA.

3.1.3. Livelihood (employment opportunity, people's capacity to sustain themselves)

There is a high likelihood that the Project will create positive social impacts through the ability of the population of Marulan and surrounds to sustain themselves.

At a macro scale, there is potential for the Project to contribute positively to the existing extractive industry sector and to the businesses that service it. This was evident in feedback provided by CPS participants. The following response provided by one CPS respondent is an example:

"[I am] exposed to the industry through operations, industry is good for jobs"

There are also likely positive impacts at a more micro scale, in terms of employment for individuals. CPS respondents also provided commentary on this, for example, one male visitor to an industry site stated that the Project could "employ local people and give local businesses a good chance to cart materials and maintenance work". Another female respondent stated that direct employment for locals would be a positive impact.

In the recent October 2024 meetings with representatives of the MDHS and Marulan Progress Association the meeting attendees made similar remarks when considering the Project's potential positive impact on employment:

"All this new development in [Marulan] town, we need people to be employed, Marulan is going ahead leaps and bounds"

Finally, comments made by the Pejar LALC CEO also emphasised the positive influence that extractive industry projects can have on employment opportunities for Aboriginal people. Employment of LALC representatives for cultural heritage surveys has occurred regularly in the past, and an Aboriginal employment program has recently been established with a quarry operator in the region.



Employment opportunities derived from the Project would be more closely examined in the Phase 2 SIA.

3.1.4. Access to community services and businesses (new business and organisational growth)

There is the potential for the Project to impact positively on people's access to community services and businesses in Marulan and surrounds. It is feasible that the Project would support investor and community awareness of Marulan as an economic hub in the region, thereby fostering in-migration and attracting additional community or business services.

A CPS participant provided commentary on this scenario and the potential positive influence of the Project, should it proceed. The participant stated that:

“The community is expanding and this [the Project] can only be better for the community in the way of more job opportunities and better prospects for local businesses, as it brings more people to the community”.

3.2. Vulnerable communities

As part of the Phase 1 SIA engagement efforts made by the Project team (refer **Table 1**), the presence of vulnerable residents was not obvious.

However, the Project team is aware of two elderly people that reside on separate properties neighbouring the Project site. These residents were consulted during the Phase 1 SIA and they will be included in ongoing engagement.

In addition, the ‘Five Ways’ intersection which incorporates the intersection of Carrick Road and Brayton Road, was identified as a school student bus stop and community meeting point at certain times of the day. Both a Carrick Road property owner and representative of the Towrang Progress Association identified school children waiting for the bus by the roadside as being vulnerable in relation to road safety.

3.3. Negative social impacts

3.3.1. Health and well-being (noise and vibration impacts from haulage, excavation or blasting)

Results from the Phase 1 SIA consultation and engagement activities indicated that noise and vibration impacts have been experienced by the community in the past. Noise and vibrations can disturb the quiet enjoyment of private property and public areas, and cause physical discomfort for sensitive receivers. Extractive industry activities such as haulage, excavation, and blasting were identified as being the source of social (health and well-being) impacts.

For example, two CPS participants cited noise and vibration impacts derived from existing extractive industry operations as a concern. A neighbour (or near neighbour) to the Project site stated he is affected by quarry related noise and traffic. The resident referred to the mode of



transport used to haul materials as being influential in respect to his well-being, and he showed a preference for rail transport and the implementation of effective sound mitigation to offset these potential social impacts. Feedback from the second CPS participant was consistent with these remarks.

In several separate meetings, Project stakeholders also identified the possibility that noise and vibration (from haulage, excavation, and blasting) would be a social impact potentially created by the Project. In separate meetings held with two neighbours/near neighbours of the Project site, noise impacts from braking and accelerating at the 'Five Ways' road intersection were discussed. Although not raised specifically in relation to the Project, general extractive industry traffic impacts were discussed in meetings with the Towrang Progress Association and the MDHS.

A review of SIA reports developed for other extractive industry projects in the region also highlighted noise and vibration impacts as being likely social impacts. In its assessment of the Gunlake Quarry, EMM (2021) ranked amenity related to traffic noise derived from the operation as a negative social impact of medium significance. In addition, GHD (2019) assessed noise as being a likely impact generated by the proposed hard rock quarry, situated at a site approximately 4km northwest of Marulan.

Recognising the above recent studies and stakeholder feedback about noise and vibration, this social impact will be further explored in the Phase 2 SIA.

3.3.2. Health and well-being (dust impacts from extraction and haulage)

In the Phase 1 SIA, dust impacts derived from existing mining and quarry operations in the areas surrounding the Project were identified as a potential social impact worthy of further assessment. Airborne dust particles and the deposition of dust on private property has an obvious connection to the 'Health and well-being' social impact category, given it can cause respiratory irritation and contaminate water supplies (among other issues) if dust levels are excessive.

Three CPS participants provided feedback to the Project team about their experiences with dust impacts from extractive industry operations. Each of the participants was a neighbour/near neighbour to the Project site. The concerns they raised included:

- Dust impacts caused by trucks hauling the resource
- Airborne dust particles being deposited on rooftops that are potable water catchments
- Two of the participants suggested that rail haulage would alleviate the social impacts they have experienced.

Health and well-being impacts associated with dust will be the subject of further assessment in the Phase 2 SIA.



3.3.3. Surroundings (traffic impacts to flora and fauna)

Flora and fauna were identified in the SIA scoping activities as being a second aspect of the 'Surroundings' social impact category relevant to the Project. Specifically, the negative influence of heavy vehicles on the natural environment (flora and fauna) was a focus of stakeholder feedback.

One CPS participant voiced her concern about the impact of existing extractive industry projects on their natural surroundings. The participant stated that fatal injuries are often sustained by wildlife that encounter trucks. She also stated her preference to see trees planted along haulage routes leading to the Hume Highway, to create green corridors.

Although the EIS will assess the potential for the Project to impact the natural environment, there is an inherent social aspect to the feedback described above. In providing her feedback, the CPS participant made a connection between her natural surroundings and social well-being. For this reason, traffic impacts to flora and fauna will be further assessed in Phase 2 of the SIA under the 'Surroundings' social impact category.

3.3.4. Surroundings (traffic impacts to road user safety)

An additional aspect of the 'Surroundings' social impact category relevant to the Project is traffic. This is on the basis that Project-generated traffic has the potential to influence road user safety. This topic was communicated to the Project team in both the CPS results (2021), stakeholder meetings (2021 and 2024), and direct contact with owners of property near the Project site (2024).

For example, CPS participants communicated the following potential negative impacts that Project traffic related to existing quarries could have for road user safety:

- Heavy vehicle movements along Brayton Road, Ambrose Road and Red Hills Roads where the effects were described as 'intolerable at times'
- Concern was raised about the speed of some heavy vehicles, and disturbance from acceleration and braking
- The volume of heavy vehicles and their influence on road pavement quality (note that road maintenance was also raised as an issue and discussed with Council representatives during their meeting with the Project team).

In a meeting with one of the Project's near neighbours during 2021, similar feedback was provided to the Project team. The resident expressed most concern about sight lines at some intersections, particularly the intersection of Brayton Road and Ambrose Road, where there are variations (or 'dips') in the level of the road surface. These variations in the road surface were reported to make cars and trucks 'disappear' momentarily, depending on the intersection approach angle of the driver and their vehicle type.

During 2024 correspondence with a Carrick Road property owner, the potential for the Project to negatively affect the safety of graziers and their livestock was identified. The property owner explained that her family members frequently move stock on both sides of Carrick Road and



predicted that this would be an issue if the Project proceeds and additional truck movements occur. It was emphasised that safe stock passageways would be required in order to mitigate the safety risks.

For this potential social impact there is an obvious cumulative aspect to consider. The Project would introduce additional heavy vehicles to the road network which already supports the volume of heavy vehicles associated with other operations in the region. This cumulative aspect will be further considered and assessed in Phase 2 of the SIA.

3.3.5. Surroundings (visual impacts to residences)

The potential for the Project to yield negative visual impacts for residents living near the Project site on Carrick Road was identified during direct contact with residents in 2024. One resident predicted that if the Project proceeds, one existing residence on Carrick Road would be visually exposed to the quarry operations. A second resident referred to a property which recently changed ownership and the new owner's intention to build a residence there in future. On the assumption that the new residence would be built and the Project proceeds, the resident anticipates a visual impact would be created.

The visual exposure of residential properties surrounding the Project would be further assessed in the Phase 2 SIA following receipt of a visual impact assessment report commissioned for the EIS.

3.3.6. Decision-making systems (information equity and transparency)

Information equity and transparency was a topic that emerged in the Phase 1 SIA engagement outcomes. CPS participants focussed on this topic in their response, in respect to existing extractive industry operators in the region.

Two near neighbours to the Project site participated in the CPS and made remarks about the decision-making process of extractive industry operators. The first participant conveyed his desire for all operators to explain their rationale for operating on a 24/7 basis. The second participant asserted that operators should be transparent about their intentions for the scale of their operations and in particular, the heavy vehicle traffic volumes they produce. These results were deemed to be an expression of discontent with information equity and transparency within the industry.

Two industry workers (one current, one former) also provided feedback about information equity and transparency via the CPS. One of the participants stated his desire for operators to host project information sessions in plain-English, implying not enough information is discernible for existing projects in the region. The second participant stated that more community sessions should be held, implying the availability of information is inadequate.

These matters would be the subject of further assessment in the Phase 2 SIA if the Project proceeds.



4. Social impact assessment methodology, monitoring, and management

4.1. Social impact methodology

Based on the results of the scoping exercise (see **Appendix A – Scoping worksheet**), the methodology proposed to assess the impact of the identified social impacts is in **Table 4**.

Table 4 Social impact assessment methodology

Social impact category (and aspect)	Potential social impact	Assessment methodology
Potential positive impacts for further assessment		
Community character (shared identity)	Contribution to the community's shared identity which is shaped by the multiple quarries and mines currently operating in the region, and the region's historical ties to extractive industries	Semi-structured interviews
Community cohesion (proponent led community initiatives)	Donations and other programs contributing positively to community spirit and events	Workshop with proponent Community benefits desktop research
Livelihood (employment opportunity)	Opportunity for individuals seeking employment in the extractive industry sector	Semi-structured interviews
Access (new business and organisational growth)	Major projects can foster in-migration and attract additional community or business services	Review of technical study commissioned for the Project (i.e. economic study) Desktop research
Potential negative impacts for further assessment		
Health and well-being (noise and vibration)	Noise and vibrations can disturb the quiet enjoyment of private property and public areas, and cause physical discomfort	Review of technical study commissioned for the Project (i.e. noise and vibration study)



Social impact category (and aspect)	Potential social impact	Assessment methodology
		Doorknock/survey along haulage routes
Health and well-being (dust impacts)	Airborne dust particles and the deposition of dust on private property can cause respiratory irritation and contaminate water supplies (among other issues)	Review of technical study commissioned for the Project (i.e. air quality study) Semi-structured interviews and stakeholder meetings
Surroundings (traffic impacts to flora and fauna)	Heavy vehicles causing damage to the natural environment (e.g. fauna fatalities) can create anxiety for residents	Interview with representatives of local environmental organisations Consultation regarding green corridors with Council or other responsible government agencies
Surroundings (traffic impacts to road user safety)	Project generated traffic being excessive in volume, causing poor quality road surfaces and unsafe line-of-sight issues.	Review of technical study commissioned for the Project (i.e. transport and traffic study)
	Road safety risk to children (vulnerable people) using the bus stop at 'Five Ways'	Ongoing consultation regarding road surfaces and safety Council or other responsible government agencies
		Participant observation
Surroundings (visual impact)	Potential for the Project to yield negative visual impacts for residents living on Carrick Road	Review of technical study commissioned for the Project (i.e. visual impact assessment) Direct consultation with property owners
Decision-making systems (information equity and transparency)	Desire for visibility of operational decision-making, transparency about the scale of	Consultation (via survey or doorknock) to determine



Social impact category (and aspect)	Potential social impact	Assessment methodology
	projects, and plain-English Project information	communication preferences

4.2. Potential project refinements and approaches

In response to stakeholder feedback obtained during the Phase 1 SIA, some Project refinements have been developed by Cleary Bros. In addition, Cleary Bros have made (or are considering making) other Project refinements that it considers to be sensible and responsive to potential social impacts.

Table 5 lists the potential Project refinements that:

1. Have been adopted according to stakeholder feedback
2. Are being considered by the Project team. In these cases, a range of options are feasible and a decision has not yet been made. The Project team will consult the community about these options during the Phase 2 SIA.

Table 5 Project refinements

Stakeholder feedback or Cleary Bros led Project design initiative	Project refinement	Status (adopted vs being considered)
Stakeholders prefer that the rationale for 24/7 operating is communicated	Operations will not be 24/7	Adopted
Stakeholders prefer rail haulage instead of heavy vehicle road haulage, based on the prediction that noise and dust impacts would be lessened	Rail haulage	Being considered
Cleary Bros designing the quarry pit to respond to amenity impacts	Quarry pit orientation, width, depth and aspect	Being considered
Cleary Bros selecting plant to respond to amenity impacts	Quarry plant and equipment with dust and noise suppression features	Being considered
Potential negative impacts to amenity (e.g. noise, dust) and road user safety (including graziers and livestock passage)	Cleary Bros pursuing near neighbour property agreements to reduce the number of residences potentially affected	Adopted



4.3. Impact management and mitigation

A range of management plans will be developed or updated as part of the Project operations and they will assist with the management of some of the negative Project impacts identified in **Table 5**. The management plans may include, but are not limited to, the:

- Environmental management strategy
- Air quality management plan
- Noise and vibration management plan
- Transport management plan
- Safety management plan.

Cleary Bros has developed a community engagement and communication approach for the Project and this will be reviewed on an annual basis. If the Project proceeds, this will be converted into a plan that will outline how the community and stakeholders will be engaged by Cleary Bros throughout the operational life of the Project. It will also aim to strengthen community relationships in the social locality.

Further consideration of management measures would be provided as part of the SIA report in consultation with Cleary Bros.



References

- Australian Bureau of Statistics. (2024). *2021 Census of Population and Housing*. Canberra: Australian Bureau of Statistics.
- EMM. (2021). *Gunlake Quarry Continuation Project Social Impact Assessment*. Sydney: EMM.
- GHD. (2019). *Marulan Quarry EIS - Social Impact Assessment Scoping*. Sydney: GHD.
- NSW Department of Planning, Housing and Industry. (2022). *Draft South East and Tablelands Regional Plan 2041*. Sydney: NSW Department of Planning, Housing and Industry.
- NSW DPHI. (2023). *Social Impact Assessment Guideline*. Sydney: NSW DPHI.
- NSW DPHI. (2024a). *Practice Note: Engaging with Aboriginal Communities*. Sydney: NSW DPHI.
- Tablelands Councils. (2016). *Goulburn Mulwaree Council - Tablelands Regional Community Strategic Plan*. Retrieved March 1, 2018, from https://www.goulburn.nsw.gov.au/Information/Community_Strategic_Plan.aspx
- Vanclay, F. (2015). *Social Impact Assessment: Guidance for Managing the Social Impacts of Projects*. Fargo: International Association for Impact Assessment.



Appendix A – Scoping worksheet

	Social Impact Assessment (SIA) Worksheet											
	Project name:						Cleary Bros Marulan Hardrock Quarry					
PROJECT ACTIVITIES	CATEGORIES OF SOCIAL IMPACTS	POTENTIAL IMPACTS ON PEOPLE		PREVIOUS INVESTIGATION OF IMPACT		CUMULATIVE IMPACTS		ELEMENTS OF IMPACTS - Based on preliminary investigation				
Which project activity / activities could produce social impacts ?	what social impact categories could be affected by the project activities	What impacts are likely, and what concerns/aspirations have people expressed about the impact? Summarise how each relevant stakeholder group might experience the impact. NB. Where there are multiple stakeholder groups affected differently by an impact, or more than one impact from the activity, please add an additional row.		Has this impact previously been investigated (on this or other project/s)?	If "yes - this project," briefly describe the previous investigation. If "yes - other project," identify the other project and investigation	Will this impact combine with others from this project (think about when and where), and/or with impacts from other projects (cumulative)?	If yes, identify which other impacts and/or projects	Will the project activity (without mitigation or enhancement) cause a material social impact in terms of its: You can also consider the various magnitudes of these characteristics				
		Is the impact expected to be positive or negative						extent i.e. number of people potentially affected?	duration of expected impacts? (i.e. construction vs operational phase)	intensity of expected impacts i.e. scale or degree of change?	sensitivity or vulnerability of people potentially affected?	level of concern/interest of people potentially affected?
Haulage, excavation and blasting	health and wellbeing	Noise and vibrations can disturb the quiet enjoyment of private property and public areas, and cause physical discomfort	Negative	Yes - other project	Holcim, Boral and Gunlake operations (EIS and SIAs)	Unknown		Yes	Yes	Unknown	Unknown	Yes
Resource extraction and haulage	health and wellbeing	Airborne dust particles and the deposition of dust on private property can cause respiratory irritation and contaminate water supplies (among other issues)	Negative	Yes - other project	Holcim, Boral and Gunlake operations (EIS and SIAs)	Unknown		Unknown	Unknown	Unknown	Unknown	Yes
Traffic impacts on flora and fauna	surroundings	Heavy vehicles causing damage to the natural environment (e.g. fauna fatalities) can create anxiety for residents	Negative	Yes - other project	Holcim, Boral and Gunlake operations (EIS and SIAs)	Unknown		Yes	Yes	Unknown	No	Unknown
Haulage	surroundings	Project generated traffic being excessive in volume, causing poor quality road surfaces and unsafe line-of-sight issues. Road safety risk to children (vulnerable	Negative	Yes - other project	Holcim, Boral and Gunlake operations (EIS and SIAs)	Yes	Gunlake Quarry - heavy vehicles on Brayton Road	No	Yes	Yes	No	Unknown
Quarry operations	surroundings	Potential for the Project to yield negative visual impacts for residents living on Carrick Road	Negative	Yes - other project	Holcim, Boral and Gunlake operations (EIS and SIAs)	No	Not required	Unknown	Unknown	Unknown	Unknown	Unknown
EIS planning application	decision-making systems	Concerns about perational decision-making, transparency about the scale of projects, and plain-English Project information	Negative	No		No	Not required	Yes	Yes	Yes	No	Yes
The entire mining operation	community	Contribution to the community's shared identity which is shaped by the multiple quarries and mines currently operating in the region, and the region's historical ties to extractive industries	Positive	Yes - other project	Boral Marulan Limestone Mine SIA	Yes	Holcim, Boral and Gunlake operations contributing to community identify	Yes	Yes	Yes	No	Yes
The entire mining operation	community	Donations and other programs contributing positively to community spirit and events	Positive	Yes - other project	Holcim, Boral and Gunlake operations (EIS and SIAs)	Unknown		Yes	Yes	Yes	Yes	Yes
Employment opportunities	livelihoods	Opportunity for individuals seeking employment in the extractive industry sector	Positive	Yes - other project	Holcim, Boral and Gunlake operations (EIS and SIAs)	No	Not required	Yes	Yes	Yes	Unknown	Yes
New business and organisational growth	access	Major projects can foster in-migration and attract additional community or business services	Positive	Yes - other project	Holcim, Boral and Gunlake operations (EIS and SIAs)	Yes	Holcim, Boral and Gunlake - economies of scale for mine suppliers and other local businesses	Yes	Yes	Yes	Unknown	Yes



Appendix B – Project update letter



Cleary Bros proposed Marulan Hard Rock Quarry

Project update, September 2024

Cleary Bros is progressing plans to develop a hard rock quarry near Marulan in NSW. The proposed development emerged from a state-wide investigation into alternative hard rock sources to meet strong demand for aggregates and similar materials across the NSW construction industry. The Goulburn – Marulan district is an exceptional area due to its appropriate geology and distance to existing markets via existing transport routes.

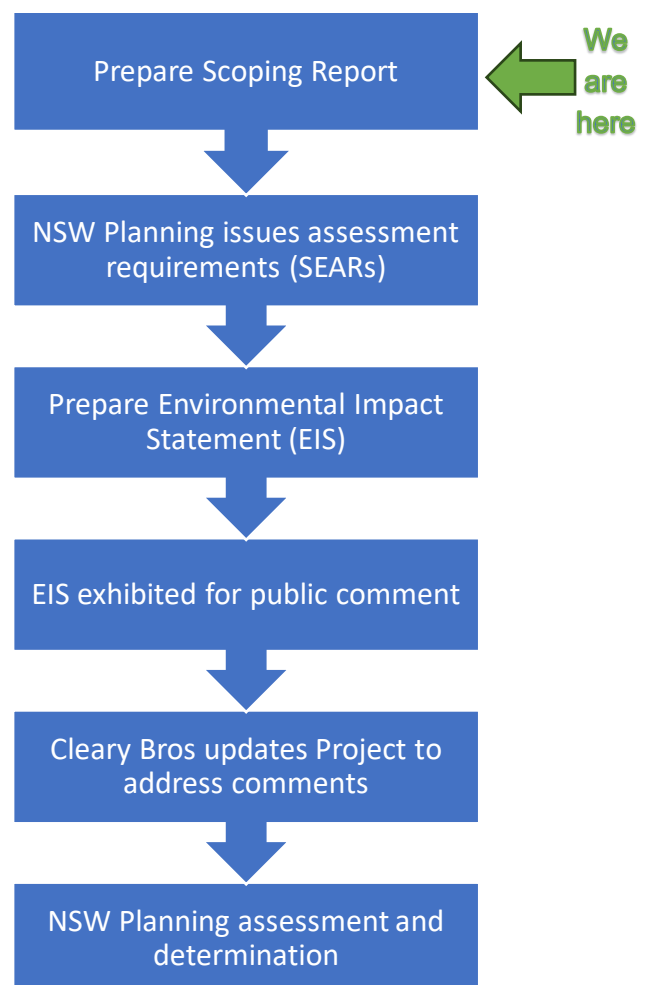
Proposed site

Geological investigations identified a site suitable for the Marulan Quarry, accessible from Carrick Road, adjacent to the existing Gunlake-operated Marulan Quarry (see the map overleaf) The property is to the north of the existing Holcim Lynwood Quarry.

Project details

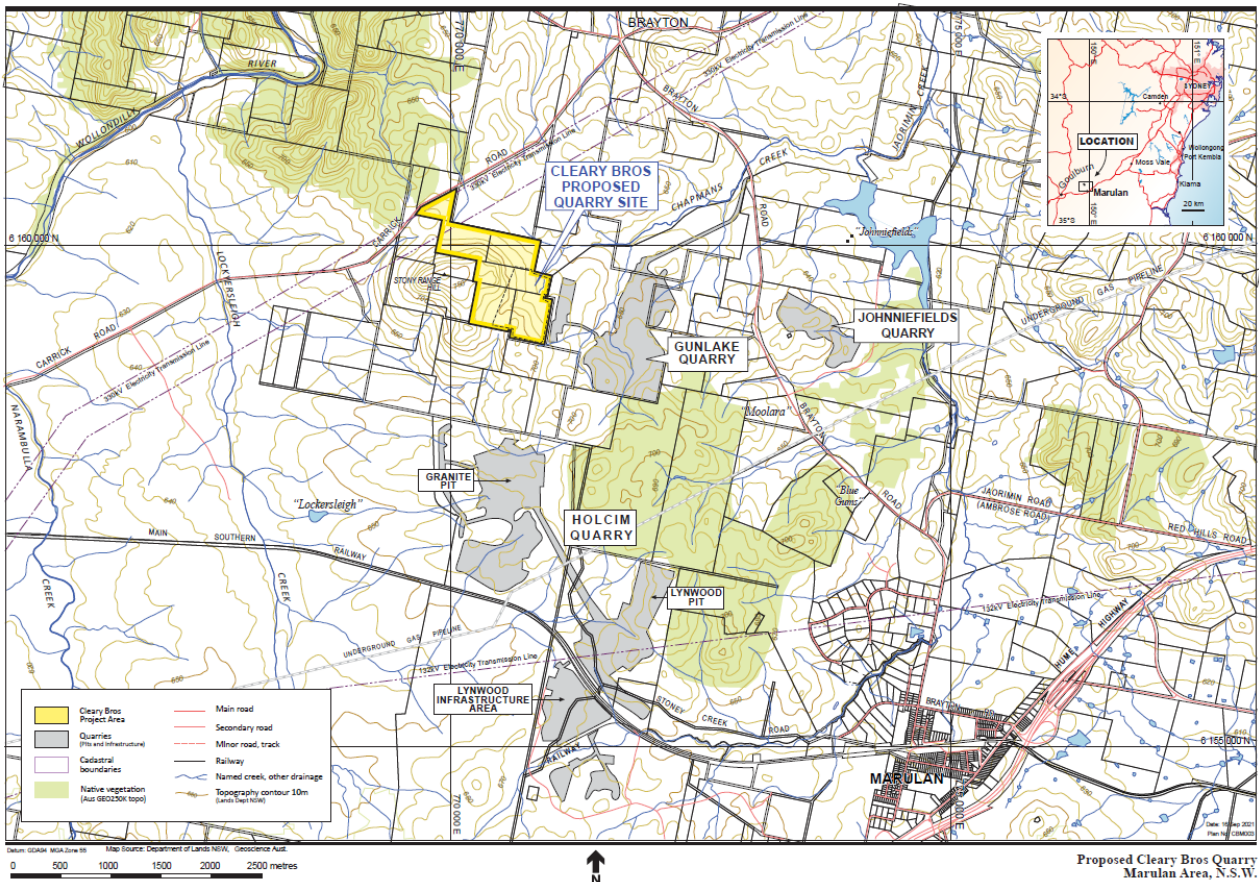
The key features of the proposed development are in the table below. These features will be refined in collaboration with project stakeholders as the project matures.

PROJECT CHARACTERISTIC	DETAIL
Project site area	75 hectare (ha)
Target resource	Hard rock
Resource volume	In excess of 30 million tonnes
Anticipated life	30-50 years
Extraction method	Drill and blast
Processing method	Mobile or fixed crushing and screening plant on site
Transport route and methods	Subject to confirmation



Planning application

The proposal requires the preparation of an Environmental Impact Statement (EIS) to support a State Significant Development application to the Department of Planning, Housing and Infrastructure (NSW DPHI). The EIS process will involve the completion of a range of comprehensive environmental and social studies which will occur over many months. Once finalised, the EIS including the results of the technical studies will be assessed by NSW DPHI and placed on public exhibition.



The range of studies being prepared for the EIS include ecology, transport, heritage (both Aboriginal and European), noise and vibration, social impacts, air quality, visual impact and others. We are seeking opinions to inform the EIS via an online survey available at:

<https://forms.office.com/r/Ws6H10FEa5>.

Cleary Bros will carefully consider the results of these studies and should the project receive planning approval, will implement their recommendations to minimise any foreseeable community or environmental impacts.

Project benefits and more information

The Cleary Bros Marulan Quarry would unlock a high demand hard rock resource which is an essential component of building and construction materials. The hard rock resource would supply a number of major transport projects in NSW and support ambitious housing construction targets set by the NSW Government. Cleary Bros is committed to maximising the opportunities for employment and local businesses that provide products and services to the resources sector. It is anticipated the project would provide ongoing employment for 30 full time employees on the site, with many more indirect jobs generated for transport and other services.

Cleary Bros supports a range of initiatives in local communities near its other business operations in the Illawarra and South Coast of NSW, including financial and in-kind contributions to historical associations, sporting groups, charities, and community events. Cleary Bros would seek to develop similar beneficial relationships with organisations in the Marulan area should the quarry proceed.

For more information about the proposal, please visit Cleary Bros website <http://www.clearybros.com.au/marulan/> or contact Jamie Seaton on 0466 413 645.

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Appendix C – Online survey

Cleary Bros Marulan Hardrock Quarry - Stakeholder Survey

Introduction

Cleary Bros is progressing plans to develop a hard rock quarry in Carrick, near Marulan in NSW. The Social Aspect Pty Ltd has been engaged by Cleary Bros to engage with the community about the proposed development and prepare a Social Impact Assessment (SIA) to support a development application, which will be submitted to the NSW Department of Planning, Housing and Infrastructure (DPHI) for assessment and determination.

Geological investigations identified a site suitable for the Marulan Quarry, accessible from Carrick Road, adjacent to the existing Gunlake-operated Marulan Quarry.

The proposed project

Key features of the proposed project are:- Project site area: 75 hectare (ha) - Target resource: Hard rock - Resource volume: In excess of 30 million tonnes- Anticipated quarry life: 30-50 years- Extraction method: Drill and blast- Processing method: Mobile or fixed crushing and screening plant on site - Transport route and methods: Subject to confirmation

About the survey

The purpose of this survey is to seek your opinions on the proposal so they can be considered in the SIA, and understand how we can best engage with you going forward. The survey would take around 5 minutes to complete. Your participation is voluntary and any personal information you provide will only be used by Cleary Bros and The Social Aspect and will not be disclosed to any third party in their entirety. All questions are voluntary, and we encourage you to

Your details

Please provide your contact details and a response to the questions below.

1. Please provide your name

2. Please provide your email address

3. Please provide your contact phone number

4. Please provide the suburb that you live in

5. Please provide your area postcode

6. Please select any of the following groups with which you identify

- ☐ Older people
- ☐ Younger people
- ☐ First Nations people
- ☐ People of foreign nationality
- ☐ People with financial, housing, or employment hardship
- ☐ People with mental or physical impairments
- ☐ LGBTQI+
- ☐ None of the above
- ☐ Other

Your opinions about Marulan District and the proposal

7. What do you value about living or working in the Marulan district?

8. What benefits (if any) would a new quarry in the Marulan district create for people living in the area and wider region? Please provide details.

9. What challenges (if any) would a development like this create in the area? Please provide details.

10. How can Cleary Bros ensure the proposed development creates a positive influence for the people living and working in the area?

11. Do you have any concerns about the proposed development based on the information provided in the survey introduction?

☐ Yes

☐ No

12. Can you please describe and suggest how Cleary Bros could address those concerns?

13. Would you like to receive information about the project?

☐ Yes

☐ No

14. How would you like to receive it?

- ☐ SMS
- ☐ Email
- ☐ Letter-drop
- ☐ Phonecall
- ☐ Website

15. Would you be interested in attending a community information session about the project in the coming months and/or participating in an interview with a member of the project team, to share your opinions (please make sure you entered your contact details at the start of the survey if so)?

- ☐ Yes
- ☐ No

