



Cleary Bros (Bombo) Pty Ltd

ABN: 28 000 157 808

Scoping Report

for the

Albion Park Quarry Extraction Area Stage 7 Extension

Prepared by:



R.W. CORKERY & CO. PTY. LIMITED

August 2019

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Albion Park Quarry Extraction Area Stage 7 Extension

Prepared for:

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EXECUTIVE SUMMARY

This Scoping Report has been prepared to introduce the proposed extension of the current extraction area within the Albion Park Quarry (the Quarry). The report accompanies a request from Cleary Bros (Bombo) Pty Ltd (Cleary Bros, or 'the Applicant') to the Department of Planning, Industry and Environment (DPIE) for Secretary's Environmental Assessment Requirements (SEARs) for the extraction of hard rock resources within Stage 7 of the extraction area (the Project).

The Applicant is part of the Cleary Bros Group which is based in the Illawarra and South Coast regions of NSW and has operated for over a century. The Cleary Bros Group employs approximately 320 people, approximately 30 of which are directly involved with the Quarry. The Project covers Stages 1 to 6 of the current extraction area and the proposed extraction area extension into Stage 7. The Project is required in order to continue to meet market demands for the supply of high-quality hard rock products and to underpin the long term viability of the Cleary Bros Group.

Development consent is required to extend the extraction operations into Stage 7, which contains approximately 21 million tonnes of high quality hard rock. It is proposed that Stage 7 would be extracted in the same manner as Stages 1 to 6. The maximum annual production would be retained at the current approved level of 900 000tpa and no changes are proposed to the processing operations, product loading or product despatch.

The Project is located within an area identified as Significant Extractive Resources – State and Regional Mineral Resources and as a Mineral Resource Area under the Shellharbour Local Environmental Plan 2013. This area has been recognised as strategically important for the supply of high quality construction materials for the Sydney and Illawarra Regions, with current extractive operations targeting hard rock resources at Albion Park (Cleary Bros and Holcim), Dunmore (Boral), Bass Point (Hanson) and Bombo (Sydney Trains).

Stage 7 occupies a north-south trending ridge within the Wentworth Hills, the elevation and exposure of which dictates that careful design is required to minimise visual impacts to the surrounding areas. In addition, a preliminary review of the risks associated with a range of environmental attributes has established that:

- a low to moderate risk applies to ecology, groundwater, noise and vibration, air quality and historic heritage; and
- a very low risk applies to Aboriginal heritage and soils.

These risks would be quantified by a range of environmental assessments that would be undertaken as part of the Environmental Impact Statement for the Project after SEARs are issued.

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1. INTRODUCTION

This section introduces the Project and the location of the Cleary Bros Albion Park Quarry, the existing approvals and background relevant to the Project. The current extraction area and other quarry components are described and the Application Area is defined.

1.1 SCOPE

This Scoping Report has been prepared to introduce the proposed extension of the current extraction area within the Albion Park Quarry (the Quarry) located approximately 20km south-southwest of Wollongong (**Figure 1.1**). The report accompanies a request from Cleary Bros (Bombo) Pty Ltd (Cleary Bros, or 'the Applicant') to the Department of Planning, Industry and Environment (DPIE) for Secretary's Environmental Assessment Requirements (SEARs) for the extraction of hard rock resources within Stage 7 of the extraction area (the Project).

This document has been prepared to enable relevant NSW State and local Government agencies to provide their specific requirements for inclusion in the SEARs for the proposed extension of the current extraction area to be addressed in the EIS for the Project. **Appendix 1** provides the Scoping Worksheet for the Project to assist in guiding the level of assessment in the EIS.

This document has been compiled by R.W. Corkery & Co. Pty Limited in conjunction with Cleary Bros and a team of specialist consultants who will assist in the preparation of the EIS.

1.2 THE APPLICANT

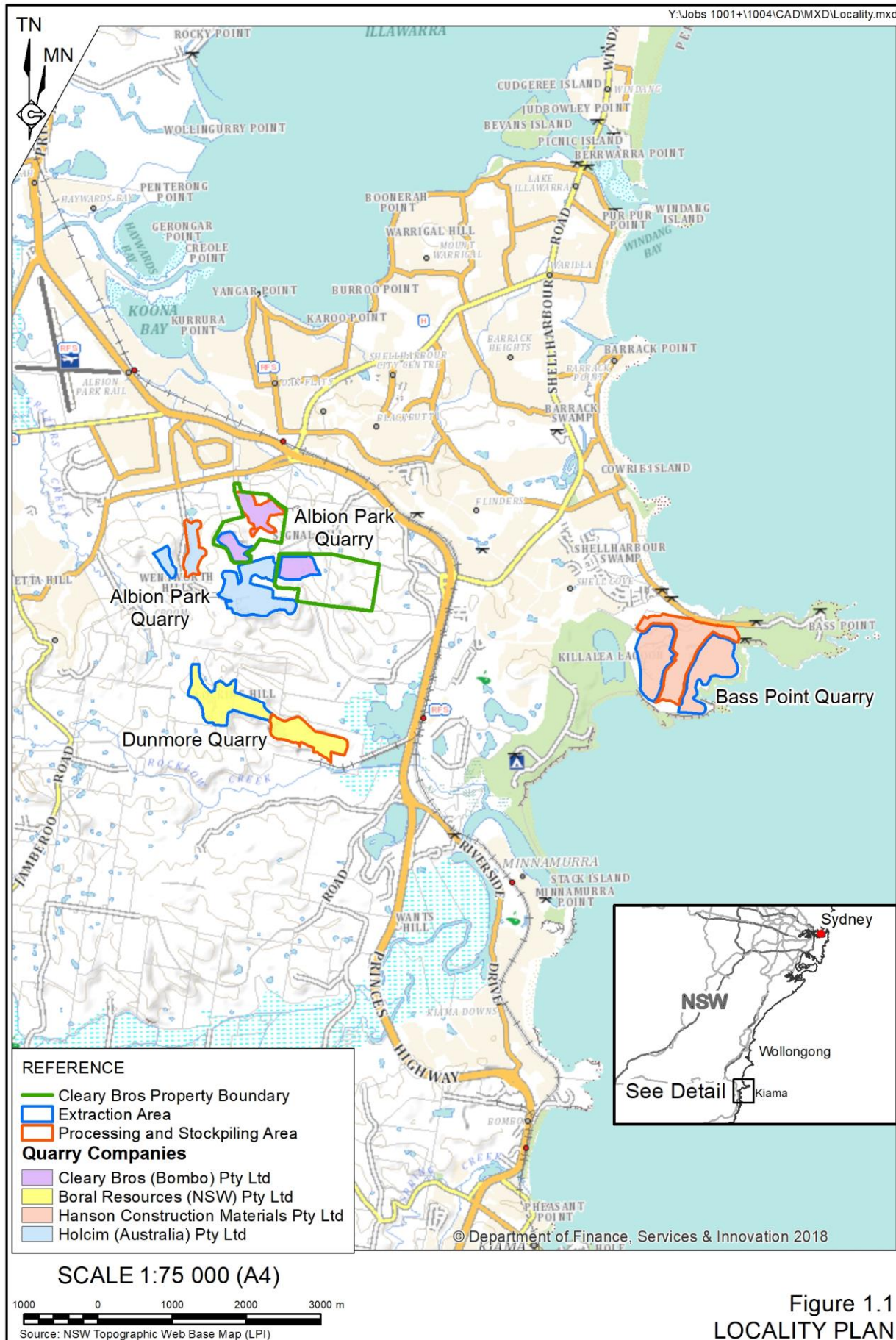
Cleary Bros is a company within the privately owned Cleary Bros Group based in the Illawarra and South Coast regions of NSW. Since its establishment in 1916, and initial involvement in the transport and timber industries, Cleary Bros has expanded and diversified over a period of more than a century to represent a significant operator in the construction and materials supply industries.

The Cleary Bros Group operates a number of divisions, including:

- extraction and processing of hard rock and sand from two extraction sites:
 - the Albion Park hard rock quarry; and
 - a sand extraction operation at Gerroa;
- earthmoving equipment and transport services;
- pre-mixed concrete manufacture at four plants located within the Illawarra and South Coast regions; and
- small to medium civil engineering works.

Of approximately 320 people employed by the Cleary Bros Group, approximately 30 are directly involved in extraction, processing and product transport operations at the Albion Park Quarry. A larger number of employees within the broader Cleary Bros Group are reliant upon ongoing production of a range of quarry products at the Albion Park Quarry.





The Cleary Bros Group has an established reputation for quality and reliability within the construction industry, with operations conducted in accordance with an Environmental Management System compliant with ISO14001. Furthermore, the Group has demonstrated a strong commitment to the community through both financial contributions to local historic associations, sporting teams, and charities and through the active participation of employees in community organisations.

1.3 THE EXISTING QUARRY

The property on which the Albion Park Quarry is located covers an area of approximately 140ha of which approximately 54ha is currently disturbed by quarry-related activities. **Figure 1.2** displays the following components and activities within the Quarry.

- An administration office, workshop and associated buildings.
- A processing area (largely within the footprint of the initial extraction area).
- A product stockpiling and loading area.
- A hardstand / laydown and parking area for light and heavy vehicles.
- A concrete batching plant
- The former Beacon Hill extraction area (currently approved for processing quarry products and processing imported VENM).
- The current extraction area (Stages 1 to 6) with an associated amenity bund.
- Native vegetation management.
- Grazing cattle and general farm management.

Access to the current extraction area is through the Quarry which in turn is accessed via the East-West Link (see **Figure 1.1**).

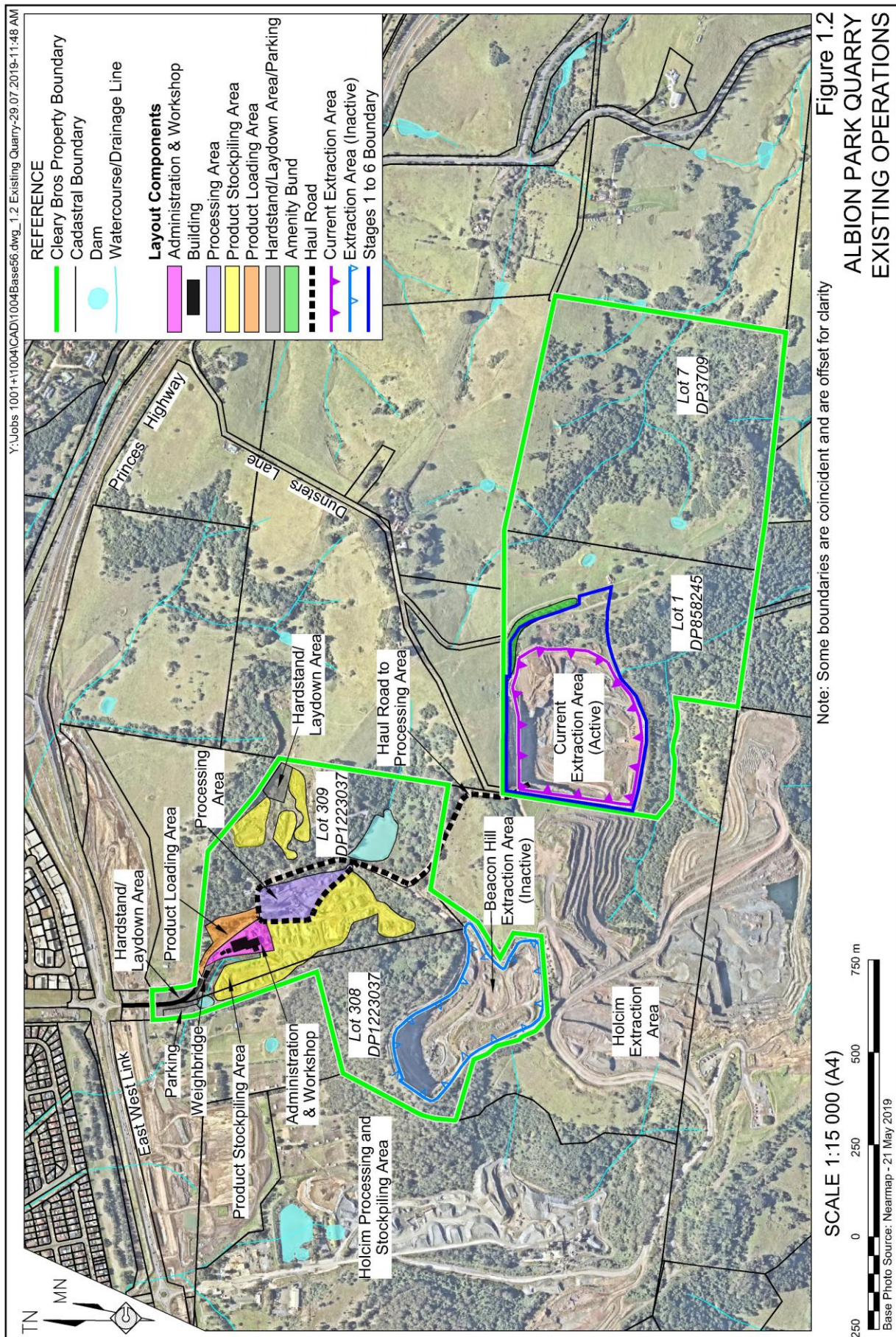
1.4 THE APPLICATION AREA

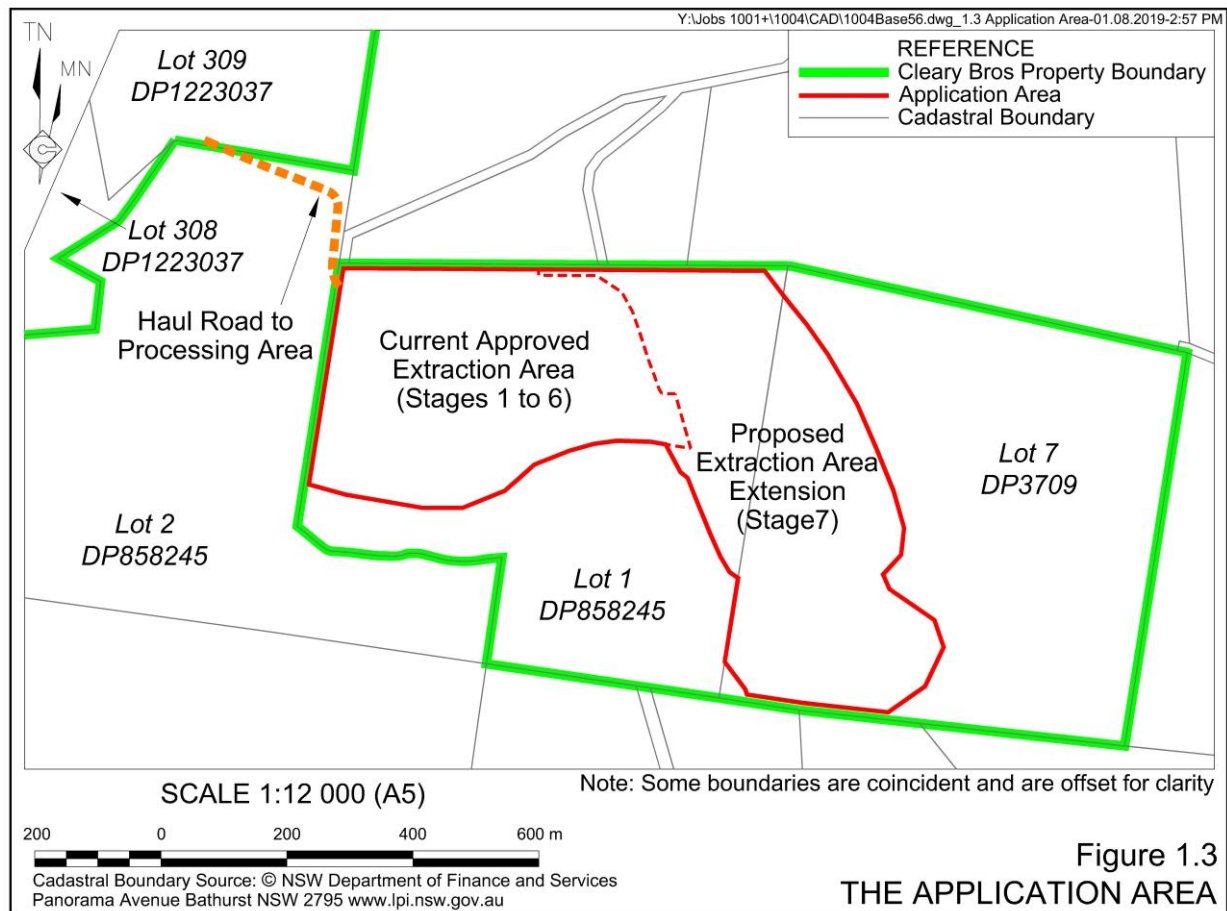
The Application Area for the Project covers Stages 1 to 6 of the current extraction area and the proposed extraction area extension, i.e. Stage 7 – see **Figure 1.3**. Stages 1 to 6 are included in the Application Area as a quantity of rock remains to be extracted in these stages and greater efficiencies would be achieved by extracting the remaining rock concurrently in Stages 5, 6 and 7. Furthermore, some of the overburden and soil from Stage 7 could be used for the rehabilitation of Stages 1 to 4.

Stages 1 to 6 are located wholly within Lot 1 DP858245. Stage 7 is located immediately east of Stages 1 to 6 and extends onto the adjoining Lot 7 DP3709. The internal haul road between the current extraction area and the processing area is located in the northern part of Lot 2 DP858245 but is not within the Application Area.

Both lots within the Application Area are owned by Bridon Pty Ltd, an associated entity of Cleary Bros (Bombo) Pty Ltd.







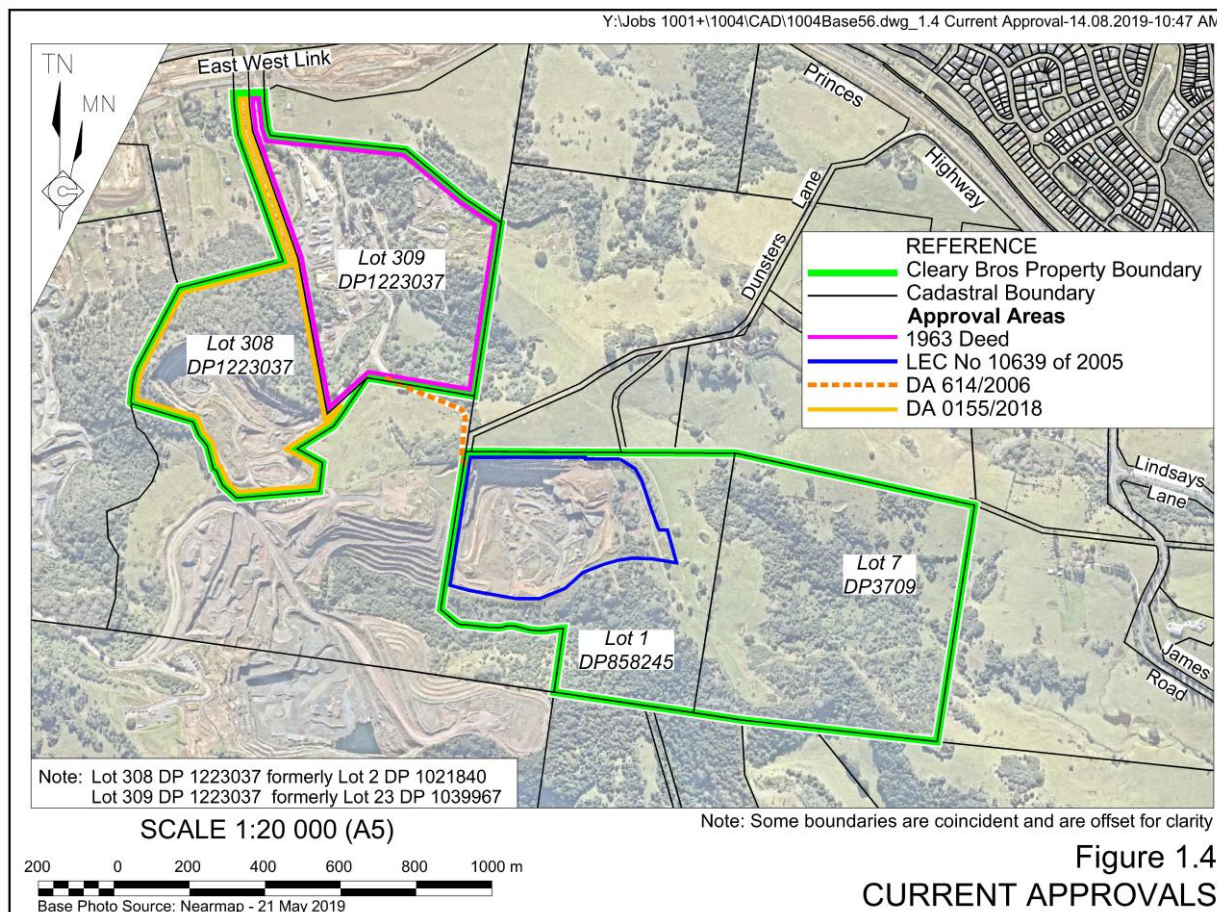
1.5 BACKGROUND

Initial Quarry operations on the Albion Park property were approved under a Deed dated 12 November 1963 and modified on 19 March 1964 between Cleary Bros and Shellharbour Council ('the Council Approval'). The Council Approval was for the operation of a "blue metal quarry and associated crushing plant" on land currently identified as Lot 309 DP1223037. The existing processing plant, office, workshop, product stockpiles and ancillary infrastructure remain on this Lot largely within the footprint of the initial extraction area (Pit 1). **Figure 1.4** displays the boundary of the property owned by the Cleary Bros Group and the boundaries of the various approvals obtained for the various components within the Quarry.

In February 1977, approval was granted for the expansion of extraction operations into the adjacent Lot 308 DP1223037. This extraction area was formerly referred to as the Beacon Hill Quarry (Pit 2) and was the focus of extractive operations by Cleary Bros between 1977 and 2007 under Development Consents DA77/6, DA88/67 and DA95/164 ('the Beacon Hill Approvals').

In 2003, an *Environmental Impact Statement* (EIS) was prepared to support an application to develop a third extraction operation on nearby Lot 1 DP858245 (Pit 3), encompassing six stages of extraction (**Figure 1.2**). The then Minister for Infrastructure and Planning granted consent for the extension under DA 466-11-2003, however it was subject to an objector appeal to the NSW Land and Environment Court (LEC) (Proceedings No. 10639 of 2005), following which the LEC dismissed the appeal and granted consent subject to a revised set of conditions (LEC Consent No. 10639 of 2005). In addition to providing for a maximum production limit of 400 000tpa,

Condition 6 of Schedule 3 of the consent required that “prior to extraction in Stages 5 and 6, a report must be submitted to the Minister essentially assessing the environmental, social, agricultural and economic impacts of Stage 5 and 6 based on the environmental performance of the previous four stages”. This report was submitted in the form of a request to modify LEC Consent No. 10639 of 2005.



In May 2007, Development Consent DA614/2006 was granted by Shellharbour Council for the construction of a haul road to link extraction area for Stages 1 to 4 to the existing haul road within Lot 309 DP1223037 to allow rock extracted from Stages 1 to 4 to be transported to the processing area.

LEC Consent No. 10639 of 2005 has been modified on three occasions. The first two modifications related to an increase in the production limit from 400 000tpa to 600 000tpa (MOD 1 – approved 30 June 2009) and from 600 000tpa to 900 000tpa (MOD 2 – approved 25 June 2015).

For the third modification (MOD 3), an *Environmental Assessment* (EA) was submitted to the Department of Planning and Environment in August 2016 to satisfy Condition 6 of Schedule 3 of LEC Consent No. 10639 of 2005 in support of a modification application to seek approval for the continued extraction within Stages 5 and 6 within the current extraction area with the approved annual production limit retained at 900 000tpa. Approval for MOD 3 was granted on 7 June 2017 until 21 February 2036.

The processing plant and sales area has been in operation for considerably longer than the current extraction area. It was initially used for processing hard rock extracted from the property upon which the processing plant is situated. Development Consent DA0155/2018 for the Importation and reprocessing of Virgin Excavated Natural Material (VENM) in Pit 2 requires that “Those controls relating to the use of the present crushing plant and equipment, as enumerated in the Deed Agreement dated 12 November 1963 shall continue to apply”.

In 2018, Shellharbour Council granted consent DA0155/2018 for the importation and reprocessing of Virgin Excavated Natural Material (VENM) within the processing area and former Beacon Hill extraction area. In addition, this development consent consolidated the three Beacon Hill Approvals into a single consent, namely DA0155/2018. **Table 1.1** presents a summary of the approvals which have been granted for the Quarry.

Table 1.1
Current Quarry Approvals

Date Granted	Approval Type	Key Approval(s)
12 Nov 1963 and 19 Mar 1964	Deed	Operation of blue metal quarry and crushing plant.
21 Feb 2006	LEC Consent No. 10639 of 2005	Extraction from Stages 1 to 4, production limit of 400 000tpa; requirement that Stages 5 and 6 are the subject of a future development consent.
10 May 2007	Consent DA614/2006	Construction of a haul road to link extraction Stages 1 to 4 to existing haul road to the processing area.
30 Jun 2009	LEC Consent No. 10639 of 2005 – MOD 1	Increased production limit to 600 000tpa.
25 Jun 2015	LEC Consent No. 10639 of 2005 – MOD 2	Increased production limit to 900 000tpa.
07 Jun 2017	LEC Consent No. 10639 of 2005 – MOD 3	Extraction from Stage 5 and 6 areas.
26 Sep 2018	Consent DA0155/2018	Consolidation of former consents DA77/6, DA88/67 and DA95/164 plus importation and reprocessing of VENM.
Source: Cleary Bros		

2. OVERVIEW OF THE PROJECT

This section presents information on the need for the Project, Cleary Bros approach to potential alternatives to the Project and the proposed operations within the Stage 7 extension area. The approvals required for the Project to proceed are also outlined.

2.1 NEED FOR THE PROJECT

The proposed extension to the current extraction area is required in order to continue to meet market demands for the supply of high-quality hard rock products and to underpin the long term viability of the Applicant and the Cleary Bros Group.

During the 2003 application for approval to develop an extraction operation within Lot 1 DP858245 to extract the hard rock resources from Stages 1 to 6, it was envisaged that each of the six stages would be completed in 5 year periods based on an extraction rate of 400 000tpa. The increase in the annual production limit of the Quarry to 900 000tpa under MOD 2 was granted in part based on evidence of increasing demand for Quarry products to support the construction industry in the Illawarra and Greater Sydney regions. This increase in the annual production rate has resulted in an increase in the annual extraction rate, which has in turn impacted the long term accessibility of hard rock resources within the current extraction area.

The hard rock resources remaining in Stages 1 to 6 will be depleted within approximately 5 to 10 years. Therefore, Cleary Bros is seeking approval to extract additional hard rock resources from an area referred to as “Stage 7” to secure the long term supply of important raw materials for which there is a regular, and often, high demand.

The continued competitiveness of the Applicant and the Cleary Bros Group is dependent upon maintaining a reliable supply of hard rock from a quarry controlled by the Applicant. Sourcing raw materials from a competitor would jeopardise the long term viability of the Group’s operations reliant upon quarry resources. The Project, if approved, would prevent disruptions to the supply chain and therefore impacts on the Cleary Bros Group.

2.2 POTENTIAL ALTERNATIVES

The options available to Cleary Bros to develop a further extraction area on its Albion Park property to provide a long-term source of high quality rock are limited principally by zoning restrictions and the occurrence of threatened vegetation communities and species on the property. The proposed Stage 7 extension area has been drilled and evaluated and determined to contain the quality and quantity of rock sought by Cleary Bros to underpin the future of the Cleary Bros Group. It also has the advantage of being adjacent to the current approved extraction area that would assist in the development of Stage 7.

2.3 PROPOSED STAGE 7 EXTRACTION OPERATIONS

Figure 2.1 displays an indicative layout of the extraction area within Stage 7. The boundary of the Stage 7 extension area, as displayed in **Figure 2.1**, is confined to an area zoned RU1 (Primary Production) – see **Table 5.2** with provision for an amenity bund near part of the northern boundary.



The layout is “indicative” as the constraints relating to visibility, terrestrial ecology, surface water and groundwater need to be further investigated. Potentially some of these constraints may result in a reduction in the area of disturbance. The EIS will examine each constraint in detail and identify how they will impact the final design of the Stage 7 extension area.

As discussed in Section 3.2, Stage 7 contains approximately 21 million tonnes of high quality hard rock within the Upper and Lower Latite units. Approximately 7.5 million tonnes of lower quality agglomerate interburden that occurs between the Upper Latite and Lower Latite would also be extracted, a significant proportion of which would be suitable for the production of road pavement products. An estimated 3.5 million tonnes of overburden would need to be removed from Stage 7 throughout its operational life.

The EIS will incorporate further information on the quantity and types of resources to be recovered within Stage 7.

It is proposed that Stage 7 would be extracted in the same manner as that already adopted in Stages 1 to 6 with the same indicative extraction design parameters.

- Bench heights = 14m, set at approximately 100m AHD and below
- Operational bench widths = 25m
- Terminal bench widths = 5m
- Typical extraction face = 75° to 90° from the horizontal

It is proposed that the Stage 7 extension area would be developed in conjunction with the ongoing extraction in Stages 4, 5 and 6. Some limited extraction also remains to be completed in Stages 1, 2 and 3.

The extraction process in the remainder of Stages 5 and 6 and also Stage 7 would initially involve the removal of topsoil and subsoil and weathered rock / overburden. During the initial stages of extraction in Stage 7, the soil and overburden would be pushed up to form an amenity barrier and/or transported to Stages 1 to 4 and incorporated in the rehabilitated landform in sections of those stages.

Following the removal of the soil and overburden, the drilling and blasting process would commence with typical blasts yielding approximately 20 000 tonnes to 100 000 tonnes. Resource recovery would commence in the Upper Latite and then the agglomerate unit with any agglomerate interburden unsuitable for incorporation in road pavement products also placed in Stages 1 to 4. Following the removal of the agglomerate, the Lower Latite would then be extracted. It is proposed that Cleary Bros would maintain operational benches in each rock type and progressively advance through the extraction area by advancing benches in each rock type.

It is proposed that extraction would commence on the western side of the ridge that traverses Stage 7 through the establishment of an access slot and haul road. This approach would minimise the visibility of earthmoving equipment on the land surface when viewed from the east and north. **Figure 2.1** displays a typical direction of extraction throughout the Stage 7 extension area.

The EIS will incorporate a series of extraction plans to illustrate how the Stage 7 extension area would be developed to minimise potential impacts throughout the life of the Project.

It is proposed to focus on extracting the hard rock to the base of the Lower Latite at the southern end of Stage 7 extension area and progressively advancing northwards thereby maintaining a substantial barrier for the bulk of the extraction activities to limit noise and visibility of operational areas.

Cleary Bros proposes to operate the Stage 7 extension retaining the current approved maximum annual production level of 900 000tpa. Annual production levels would vary and reflect market demands for the quarry products. No changes are proposed to the processing operations, product loading or product despatch. The current practice of processing either within a defined area of the active extraction area or the fixed processing plant to the north of the current extraction area would continue.

Throughout the Project life, Cleary Bros will continue the importation of VENM to create a useful final landform. The imported VENM would be drawn from projects where the Cleary Bros Group is excavating the materials with the VENM generally transported as back loads on trucks used to despatch quarry products.

The EIS will include details of the final landform and potential final land uses. Essentially, the final landform within Stages 1 to 7 would comprise:

- a series of retained benches or terraces around the perimeter of the extraction area with a range of native vegetation;
- the backfilled and profiled extraction floor; and
- side slopes from the extraction floor to the benches or terraces.

It is currently planned to retain terminal benches of 5m in those areas of the Stage 7 extension area that would be visible from the east and north to enable tree and shrub growth to substantially shield the terminal extraction faces.

The Project would be operated with a set of procedures to ensure sustainable waste management practices are adopted to avoid adverse impacts.

2.4 APPROVALS REQUIRED

Development consent is required to extend the extraction operations within the current extraction area into Stage 7. Upon receipt of the development consent for the extended extraction operation, Cleary Bros intends to surrender Development Consent LEC 10639 of 2005 (MOD 3) for the extraction operations covering Stages 1 to 6.

Cleary Bros intends to seek a variation of EPL 299 to cover the extended footprint of the extraction area.

Upon receipt of Development Consent for the extended extraction operation, Cleary Bros also intends to lodge an application to extend the term of DA 614/2006 for the ongoing use of the haul road between the extraction area for the ongoing delivery of extracted rock from Stages 1 to 7 to the processing area.

3. ENVIRONMENTAL SETTING

This section presents a brief overview of the components of the environmental setting in which Cleary Bros Albion Park Quarry is located, all of which will be considered during the design of the Stage 7 extension area and the mitigation measures required to avoid or mitigate impacts of the Project.

3.1 TOPOGRAPHY AND DRAINAGE

Existing Setting

The Quarry is located within the Wentworth Hills ridge system which extends east from Stockyard Mountain and forms the watershed divide between the Lake Illawarra catchment to the north and the Minnamurra River catchment to the south. The Stage 7 extension area occupies a north-south trending ridge within the Wentworth Hills, with elevations ranging from a maximum of approximately 119m AHD at the crest of the ridge to a minimum of approximately 65m AHD towards the base of the eastern slope (**Figure 3.1**). The Stage 7 extension area (and Stages 1 to 6) are located within the Minnamurra River catchment (see **Figure 3.1**).

A first order ephemeral watercourse (Watercourse 6) transects the northeastern corner of Stage 7 and a first order ephemeral watercourse (Watercourse 5) originates within the southern section of Stage 7 and drains to the east towards Watercourse 6. As the Stage 7 extension area occupies the crest of a ridge, rainfall runoff drains downslope to local second order watercourses to the west (Watercourse 3), south (Watercourse 4) and east (Watercourse 6) (**Figures 2.1 and 3.1**). These watercourses drain to the southeast where they join Rocklow Creek approximately 2.2km from the Stage 7 extension area. Rocklow Creek flows in an easterly direction for approximately 1km before joining the Minnamurra River which drains into the Tasman Sea at Minnamurra.

Constraints

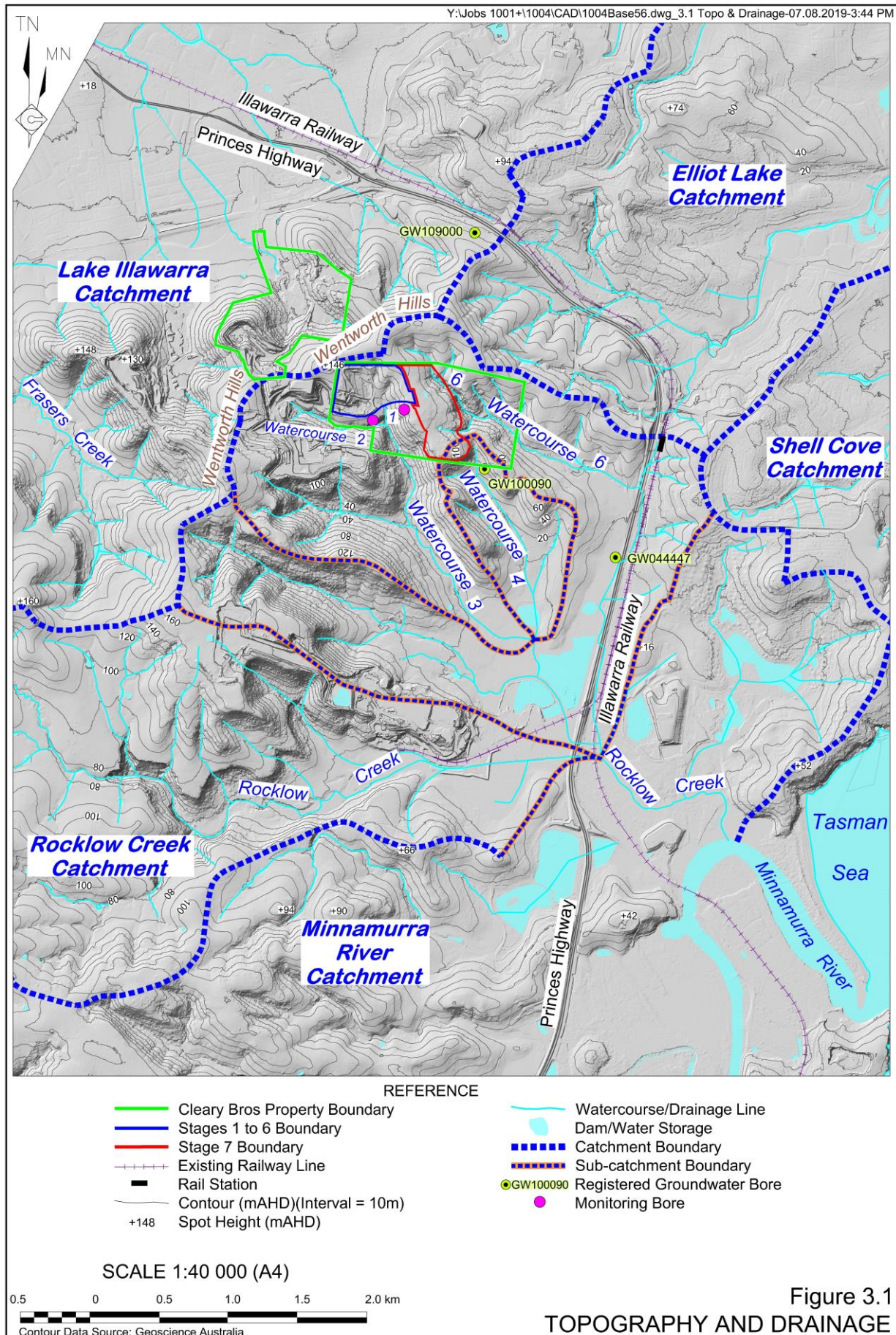
The topography within the Stage 7 extension provides considerable opportunities vertically to extract a substantial thickness of latite. However, the elevation and exposure of the ridge within the Stage 7 extension area dictates that careful design is required to minimise visual impacts from surrounding areas.

The presence of only one small first order watercourse near the northeastern boundary of the Stage 7 extension area provides the opportunity to develop the Stage 7 extension without the need to manage substantial quantities of through runoff in watercourses. The constraint provided by Watercourse 6 within the Stage 7 extension area and the opportunity to divert this watercourse will be examined during the design of the proposed extraction area.

Proposed Investigations

Sufficient topographic data is available for the Cleary Bros property and the surrounding areas for the purpose of planning surface water management and the sequence of extraction to limit visual impacts.

Surface water on site will be managed through the construction of diversion banks to re-direct runoff away from the active extraction area and a series of sediment basins and a sump within the extraction area to control sediment-laden runoff. Mitigation measures would be used to ensure no pollution occurs of surface water resources.



3.2 GEOLOGY AND RESOURCES

Existing Setting

The current extraction area and Stage 7 extension are located within the Bumbo Latite which is a member of the regionally extensive Gerringong volcanic facies that contain multiple latite lava flows separated by sandstone units. The three other quarries in the area (see **Figure 1.1**) also currently extract hard rock from the Bumbo Latite, i.e. Boral at Dunmore, Holcim at Albion Park and Hanson at Bass Point.

Within the current extraction area and Stage 7 extension area, the Bumbo Latite comprises lower and upper flows referred to as the Lower Latite and the Upper Latite respectively. These units are separated by an interburden layer of agglomerate or breccia which is unsuitable for use in high quality aggregates due to the presence of clays, calcite and zeolites. However, the interburden can produce a range of low quality products.

Figure 2.1 displays the extent of drilling undertaken in the Stage 7 extension area and **Figure 3.2** displays three typical cross-sections through and across the ridge. Whilst the drilling has identified a considerable quantity of high quality rock, it has also defined variable thicknesses of overburden and unsuitable rock which will need to be placed as backfill in a completed areas of Stages 1 to 7.

The drilling has defined the following stratigraphic unit thicknesses.

- Upper Latite: 0m to 58m.
- Agglomerate: 3m to 54m.
- Lower Latite: 13m to 29m.

The latite flows are sub-horizontal with a south-easterly dip of between 3.3 and 5.6 degrees. The base of the Lower Latite occurs at approximately 52m AHD and 17m AHD respectively within northern and southern ends of the Stage 7 extension area.

Constraints

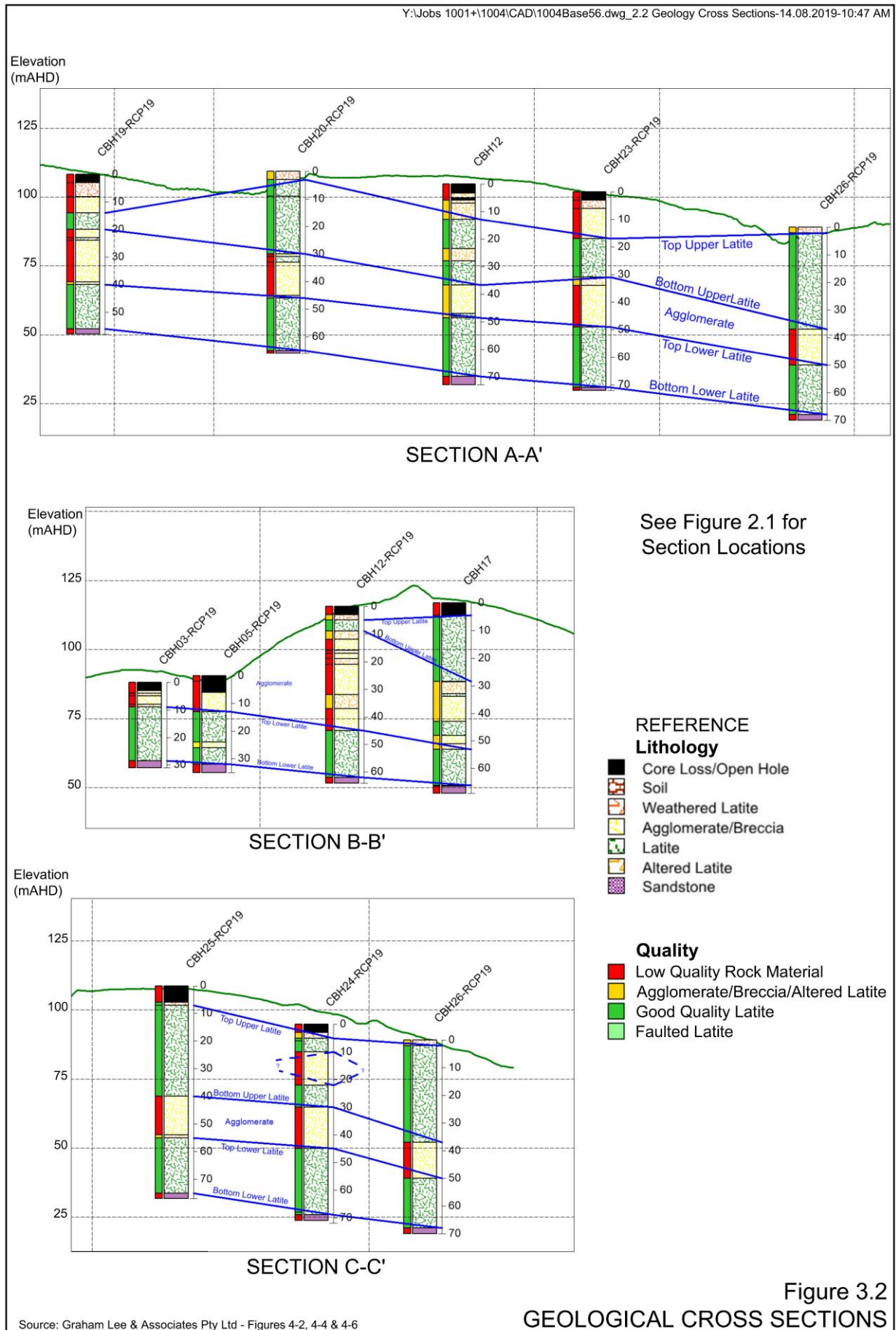
The presence of poorer quality agglomerate and breccia would require careful separation from the high quality latite.

A preliminary resource estimate identifies the opportunity for the following quantities of material to be recovered within the Stage 7 extension area.

- Upper Latite – 12 million tonnes
- Lower Latite – 9 million tonnes
- Overburden – 3.5 million tonnes
- Agglomerate – 7.5 million tonnes

Proposed Investigations

Additional geological investigations may be carried out by Cleary Bros, if required, for additional planning works, however no additional geological investigations are currently planned for the near future.



3.3 ECOLOGY

Existing Setting

Table 3.1 presents a summary of the vegetation types that Niche Environment and Heritage have documented within the Stage 7 extension area and surrounds.

Table 3.1
Vegetation Types within the Stage 7 Extension Area

Plant Community Type ¹ (see Figure 3.3)	Threatened Ecological Community	Approximate Area (ha)
PCT 1300: Whalebone tree – Native Quince dry subtropical rainforest on dry fertile slopes, southern Sydney Basin Bioregion.	Illawarra Subtropical Rainforest in the Sydney Basin Bioregion ²	4.7
PCT 906: Lilly Pilly – Sassafras – Stinging Tree subtropical warm/temperate rainforest on moist fertile lowlands, southern Sydney Basin Bioregion.	Illawarra Subtropical Rainforest in the Sydney Basin Bioregion ² Illawarra – Shoalhaven subtropical rainforest of the Sydney Basin Bioregion ³	
PCT 720: Bracelet Honey-myrtle – Australian Indigo dry shrubland on volcanics, southern Sydney Basin Bioregion.	<i>Melaleuca armillaris</i> Tall Shrubland in the Sydney Basin Bioregion ² (contains <i>Zieria granulata</i>)	2.1
Cleared land, exotic vegetation or Acacia shrubland (regrowth).	None	13.7
Note 1: Subject to further confirmation via floristic plots and analysis of species composition.		
Note 2: Threatened ecological community under the <i>Biodiversity Conservation Act</i> 2016.		
Note 3: Threatened ecological community under the <i>Environment Protection and Biodiversity Conservation Act</i> 1999.		

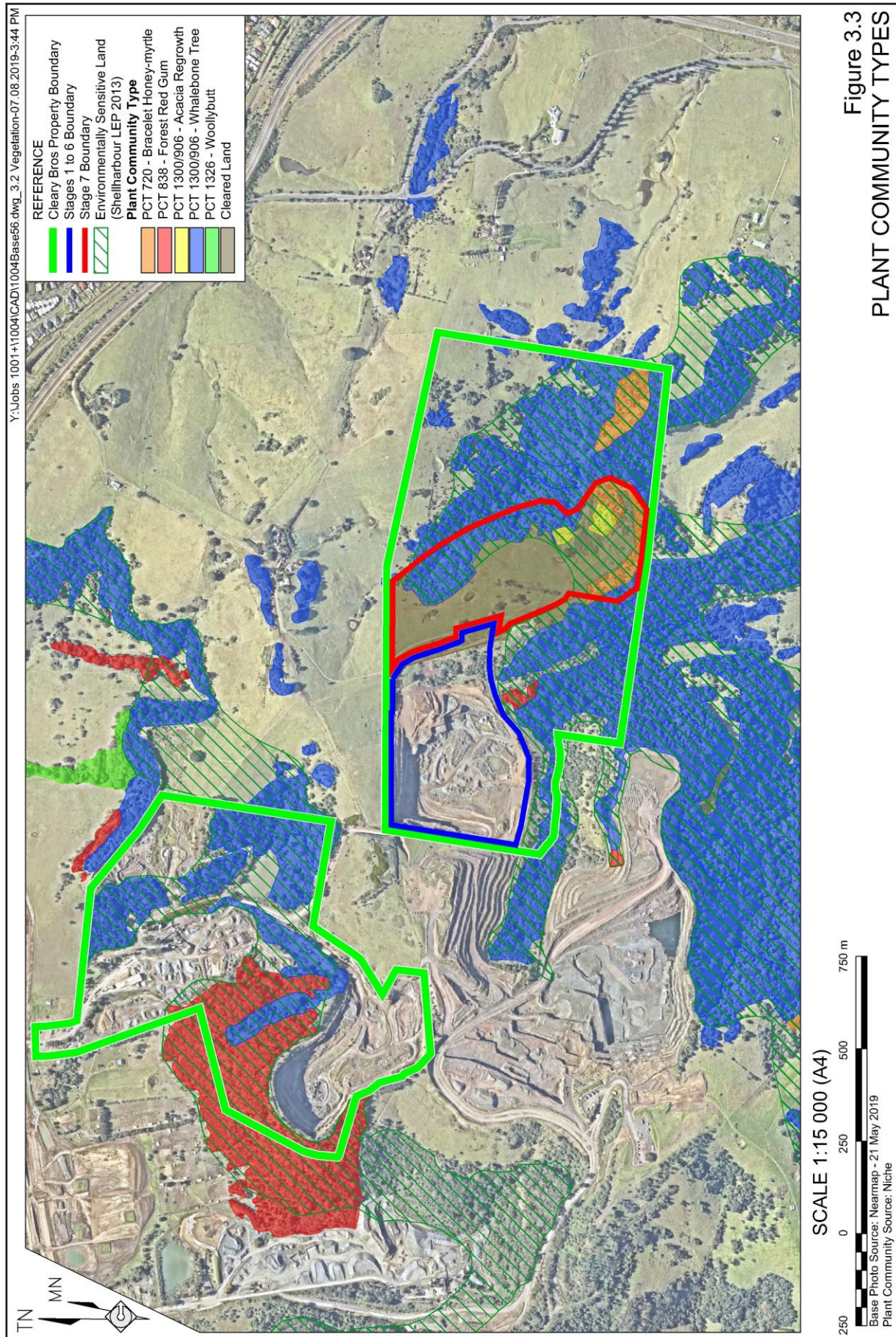
A total of the 26 threatened flora species have previously been recorded or are identified as having potential habitat within the Stage 7 extension area. The following four threatened flora species have a moderate to high likelihood of occurrence.

- *Cynachum elegans* – White-flowered Wax Plant.
- *Daphnandra johnsonii* – Illawarra Socketwood.
- *Irenepharsus trypherus* – Illawarra Irene.
- *Zieria granulata* – Illawarra Zieria.

A total of 98 threatened fauna species have previously been recorded within a 10km radius of the Stage 7 extension area or have been identified as having potential habitat area within the extension area. **Table 3.2** lists the threatened fauna species that Niche Environment and Heritage nominates will require survey in order to establish offsetting requirements for the Stage 7 extension area.

Table 3.2
Threatened Fauna Likely to Require Targeted Surveys

Glossy Black Cockatoo	Swift Parrot	Southern Myotis	Little Eagle
Eastern Pygmy Possum	Green and Golden Bell Frog	Pink Robin	Greater Glider
Large-eared Pied Bat	Square-tailed Kite	Gang-gang Cockatoo	White-bellied Sea Eagle



Constraints

A known population of *Zieria granulata*, listed as endangered under both the *Biodiversity Conservation Act 2016* (BC Act) and the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) is present within the southern section of the Stage 7 extension area. The distribution of this species within the Stage 7 extension area is broadly consistent with the distribution of the *Melaleuca armillaris* Tall Shrubland in the Sydney Basin Bioregion threatened ecological community (i.e. covering approximately 2.1ha).

Clearing of vegetation containing *Zieria granulata* will require an assessment of significance under the EPBC Act, with determination of a significant impact requiring a Commonwealth referral for the Project and offsetting under the EPBC Act.

Proposed clearing of native vegetation would also require offsetting under the BC Act, with options to satisfy requirements including the establishment of an offset site, purchasing credits from the public market (if available) or payment directly into the Biodiversity Conservation Fund.

Assessments of biodiversity within the Stage 7 extension area will consider other potentially occurring endangered flora and/or fauna species.

Proposed Investigations

A Biodiversity Development Assessment Report (BDAR) will be prepared to fully assess the biodiversity impacts of the Stage 7 extension area. Targeted surveys would also be undertaken to determine the presence or absence of threatened fauna species within the Stage 7 extension area and any offsetting requirements associated with those species. Any proposed vegetation clearing that could impact *Zieria granulata* would be referred under the EPBC Act.

The EIS will include discussions regarding the extent of vegetation clearing that could be justified to gain access to the substantial quantities of hard rock resources beneath the vegetation and the measures to mitigate the impacts on biodiversity values within Stage 7 extension area.

3.4 VISIBILITY

Existing Setting

The elevated location of the Stage 7 extension area on a local ridge provides the potential for extraction activities and faces to be visible from areas to the east and southeast mainly beyond the Princes Highway and the adjoining property immediately to the north. **Plates 3.1** and **3.2** display views of the Stage 7 extension area viewed from near Piper Drive, Dunmore and near the Fig Tree Hill residence. It is noted in **Plate 3.1** that some disturbed areas associated with the Holcim Albion Park Quarry are visible in the middle distance behind the Stage 7 extension area.

Constraints

The location of the Stage 7 extension area requires careful design of the proposed extraction area in order to minimise the opportunities for views of exposed extraction faces from the north, east and southeast of the active extraction area. It is also recognised that potential exists, as the ridgeline is lowered, for any unrehabilitated extraction faces and overburden stockpiles to the west of the Stage 7 extension area to become visible.



Plate 3.1 View to the west from near Piper Drive towards the Stage 7 extension area
(Ref: E1004D_014)

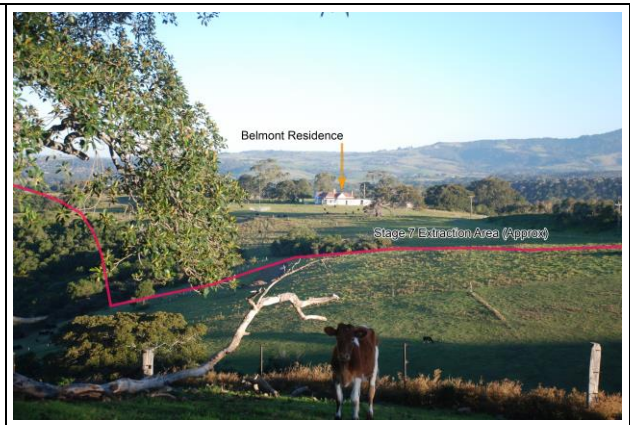


Plate 3.2 View to the south from near the Fig Tree Hill residence towards the Stage 7 extension area
(Ref: E1004C_035)

Proposed Investigations

The investigations would commence with the preparation of a seen area analysis to identify the areas within the visual catchment with views of the Stage 7 extension area. Studies would then be undertaken to identify the design features and mitigation measures required to limit visual impacts through the Project life.

3.5 GROUNDWATER

Existing Setting

Groundwater occurs beneath the current extraction area as either shallow perched aquifers or a deeper regional groundwater table in the latite, agglomerate or underlying sandstones. Inflows to the current extraction area are limited. The farmland to the north of the Stage 7 extraction area on the Fig Tree Hill property contains some spring-fed dams.

Two paired groundwater monitoring bores to the south and southeast of the current extraction area (see **Figure 3.1**) display the following quality.

- EC ranges from 110µS/cm to 2 010µS/cm – representative of fresh to brackish conditions.
- pH is generally close to neutral, ranging from 5.9 to 7.7.
- Nutrient levels are variable but generally elevated.
- Groundwater type is calcium bicarbonate.
- Dissolved metal concentrations are variable, with some analytes displaying elevated concentrations (e.g. lead, zinc, copper). These concentrations are considered to represent background conditions.

The three registered groundwater bores detailed in **Table 3.3** are located within 1.25km of the current extraction area.

Table 3.3
Groundwater Bores within 1.25km of the Current Extraction Area

Bore Ref. No.*	Distance from Stage 7 (m)	Purpose	Bore Depth (m)	Yield (L/s)	Standing Water Level (mbgl)
GW100090	150	Water Supply	66	0.1	0.3
GW109000	900	Water Supply	78	0.8	27
GW044447	1 250	Stock and Domestic	ND	ND	ND
ND = No Data				* See Figure 3.1	

Constraints

The extent to which extraction within the Stage 7 extraction area would be constrained by groundwater-related issues will be determined throughout the preparation of the EIS. The following potential key groundwater constraints are considered relevant for the Project.

1. Existing water supply bore GW100090 is considered likely to experience drawdown if extraction extends below the groundwater table. If the NSW Aquifer Interference Policy 2m drawdown criteria is exceeded, this would trigger the requirement for “make good” provisions.
2. The spring-fed dams in the “spring paddock” north of the Stage 7 extension area.
3. Whilst groundwater dependent ecosystems are not mapped as high priority in the Application Area, impacts associated with potential reductions to baseflows and hydrogeological conditions would require assessment if such impacts are assessed as likely to occur.

It is unlikely cumulative impacts will occur with other quarries.

Proposed Investigations

A groundwater assessment would be undertaken by Jacobs Australia Pty Ltd and include the following tasks.

- Investigate groundwater standing water levels and quality in the available 2019 resource drill holes (see **Figure 2.1**).
- Determine the potential for the Project to intersect the perched or regional groundwater tables and quantify groundwater extraction (inflow and dewatering) rates (if any).
- If groundwater extraction is assessed to be required, determine methods for management and treatment of produced water prior to discharge from the extraction area.
- Quantify the extent of drawdown and impacts on surrounding springs, groundwater dependent ecosystems (if any) and existing surrounding groundwater bores.
- Investigate the potential for creek baseflow reduction.
- Include an assessment against the Aquifer Interference Policy (AIP) and relevant licencing requirements.
- Identification of mitigation measures to avoid pollution of groundwater resources.

3.6 NOISE AND VIBRATION

Existing Setting

Operations within the current extraction area are undertaken in accordance with an existing Noise and Blast Management Plan which documents the required mitigation and management measures, and monitoring and reporting requirements for the Quarry. The most recent Annual Review for the Quarry, prepared for the period 1 July 2018 to 30 June 2019, records that compliance with all applicable noise and vibration criteria was achieved at the Quarry during the reporting period.

Background noise levels in the area surrounding the Quarry have increased in recent years principally due to traffic arising from the upgraded Princes Highway and construction of numerous local new roads and residential developments. It is also recognised in the NSW Noise Policy for Industry that noise generated by all quarries in the Albion Park, Dunmore and Bass Point area are recognised as features of the background noise in the area.

Constraints

The proposed Stage 7 extension area would result in extraction activities moving closer to some rural residences east and north of the Quarry.

Proposed Investigations

A Noise and Vibration Impact Assessment will be undertaken by SLR Consulting Australia Pty Ltd to fully assess the noise and vibration impacts of the Project. Background noise monitoring to establish the rating background levels would be undertaken at key receiver locations to determine the relevant project noise trigger levels for the Project. All predicted noise levels would be determined through the use of realistic operational scenarios and the use of computer modelling.

A cumulative noise and vibration impact assessment would be undertaken of the Project with the other activities undertaken by Cleary Bros within the Albion Park Quarry and surrounding quarries.

3.7 AIR QUALITY

Existing Setting

The air quality around the Stage 7 extension area is well understood through the assembly of a range of data compiled from the air quality monitoring network managed by Cleary Bros comprising a meteorological station, one High Volume Air Sampler for PM₁₀ concentrations, and four deposition dust gauges to measure dust deposition rates.

Cleary Bros is currently commissioning real-time PM₁₀ monitoring equipment to further characterise the local air quality. It is anticipated that measurements made by the updated monitoring network will be available prior to the lodgement of the EIS for the Stage 7 extension.

Four air quality-related complaints were received between 1 July 2017 and 30 June 2019. Review of these complaints indicated that the extraction operations within the Quarry were being operated appropriately.

Constraints

The existing air quality in the vicinity of the Quarry is assessed as good. It will be an important constraint for Cleary Bros to operate the Stage 7 extension without diminishing the existing air quality, particularly at the residences east of the Stage 7 extension area.

Proposed Investigations

A detailed Air Quality Impact Assessment will be prepared by Northstar Pty Ltd for the proposed Stage 7 extension to address matters including an increase in total site particulate matter associated with the lengthening of haulage routes between the active extraction area and the processing area and the potential for greater air quality impacts at receptors east of the current extraction area.

Consideration of the emissions from the mobile earth-moving fleet and from the use of explosives on site is also proposed. Odour generation from blasting will also be addressed.

The existing management and mitigation measures would be reviewed through a Best Management Practice Assessment to ensure that primary emission sources are targeted.

A cumulative air quality impact assessment would be undertaken of the Project with the other activities undertaken by Cleary Bros within the Albion Park Quarry and the surrounding quarries.

3.8 SOILS

Existing Setting

The soil landscape within and surrounding the current extraction area and the Stage 7 extension area consists of rolling low hills with a relief of approximately 54m (65m AHD to 119m AHD). eSpade¹ documents that the Stage 7 extension area is situated within the Bombo landscape terrain, which has the soil characteristics described below.

The dominant soil type comprises a friable, reddish brown sandy clay loam topsoil over a subsoil comprising a reddish brown sandy clay or reddish brown light medium clay. The soils:

- are well structured and free draining (where rock outcrop is absent);
- have moderate to low fertility;
- are strongly acidic;
- have low to moderate cation exchange capacity; and
- exhibit a moderate to high erodibility.

Constraints

The soils present within the Stage 7 extension area are sufficiently well developed in some areas to be an important resource for rehabilitation for the final landforms throughout the Application Area. Their moderate to high erodibility would require careful management when exposed and/or stockpiled to minimise sediment-laden runoff.

¹ <https://www.environment.nsw.gov.au/eSpade2Webapp#>

Proposed Investigations

A brief soil sampling program will be undertaken by SEEC Pty Ltd to document topsoil and subsoil thicknesses across the Stage 7 extension area and their qualities / suitability for rehabilitation. The soil characteristics will be studied to establish parameters influencing the design of erosion and sediment controls. The investigations would enable an understanding of land capability to be developed.

3.9 ABORIGINAL CULTURAL HERITAGE

Existing Setting

A search of the Aboriginal Heritage Information Management System (AHIMS) database undertaken by Biosis Pty Ltd identified a total of 111 registered Aboriginal sites within a 5km radius of the Quarry. No Aboriginal sites are recorded within the Stage 7 extension area. The most common site types recorded in the vicinity of the Quarry are artefact scatters (64.4%), followed by potential archaeological deposits (26%), shells (4.8%), and then modified trees, grinding grooves, stone arrangements and burials (0.7% each).

Constraints

Predictive modelling undertaken by Biosis suggests that the soil landscape and geological formations present within the Stage 7 extension area are not conducive to large numbers of Aboriginal sites or objects. Additionally, predictive modelling suggests that the Project has low potential for the occurrence of Aboriginal sites as the highest number of Aboriginal sites in the area are typically situated around third or fourth order watercourses and only first or second order watercourses are located within or adjacent to the Stage 7 extension area. The Project would increase the disturbance footprint of the current extraction area into an area that has not previously been assessed for Aboriginal cultural heritage.

Proposed Investigations

An Aboriginal Cultural Heritage Assessment (ACHA) is planned to fully assess the Aboriginal cultural heritage impacts of the Project.

3.10 HISTORIC HERITAGE

Existing Setting

The Stage 7 extension area lies within the Wentworth Hills cultural landscape, comprising three farms, namely, "Belmont", "The Hill" and "Kyawana".

The "Belmont" farm occupies Lot 1 DP858245 and Lot 7 DP3709 and is listed as being of local significance under Schedule 5 of the Shellharbour Local Environmental Plan (LEP) 2013. Three other items within the Stage 7 extension area, i.e. the former bails and dairy as well as an extant dry stone wall, are considered to have moderate archaeological potential.

Constraints

The presence of the "Belmont" residence and the associated former bails, dairy and an incomplete dry stone wall provides a constraint for the Project.

Proposed Investigations

Following a structural integrity report for the “Belmont” residence undertaken by KF Williams and Associates Pty Ltd, it was concluded that rectification works to upgrade the existing “Belmont” would be impractical and unfeasible. Based on this assessment, Cleary Bros intends to apply for approval to remove the “Belmont” residence and a number of related structures as part of development application for the Stage 7 extension area.

Cleary Bros intends to commission archival recording of the “Belmont” residence and associated structures in accordance with the NSW Heritage Office guideline *How to Prepare Archival Records of Heritage Items* together with a research design project to account for potential subsurface archaeological material within the Stage 7 extension area.

The most appropriate locations to reconstruct the salvaged dry stone wall within or close to the Stage 7 extension area would also be selected.

4. STRATEGIC CONTEXT

This section documents the various issues relevant to the proposed environmental assessments and evaluation of the Project's merits with respect to the defined mineral resource area within Shellharbour LEP 2013, adjoining land ownership, extent of rural and residential development surrounding the Stage 7 extension area and surrounding land uses.

4.1 SIGNIFICANT MINERAL RESOURCE AREA

The current extraction area and Stage 7 extension area are located wholly within an area identified as Significant Extractive Resources – State and Regional Mineral Resources and as a Mineral Resource Area under the Shellharbour LEP 2013, as described in Section 5. This area has been recognised as strategically important for the supply of high quality construction materials for the Sydney and Illawarra Regions.

The Significant Mineral Resource Area encompasses most of the land west of the Princes Highway and south of the East-West Link, as shown in the Shellharbour LEP mapping (**Figure 4.1**). As a result, companies engaged in the extractive industries, namely Cleary Bros, Boral, Holcim, Hanson and RailCorp own most of this land.

Construction of residences is currently underway immediately east of Shellharbour Junction and is likely to continue adjacent to Dunmore Road.

4.2 LAND OWNERSHIP

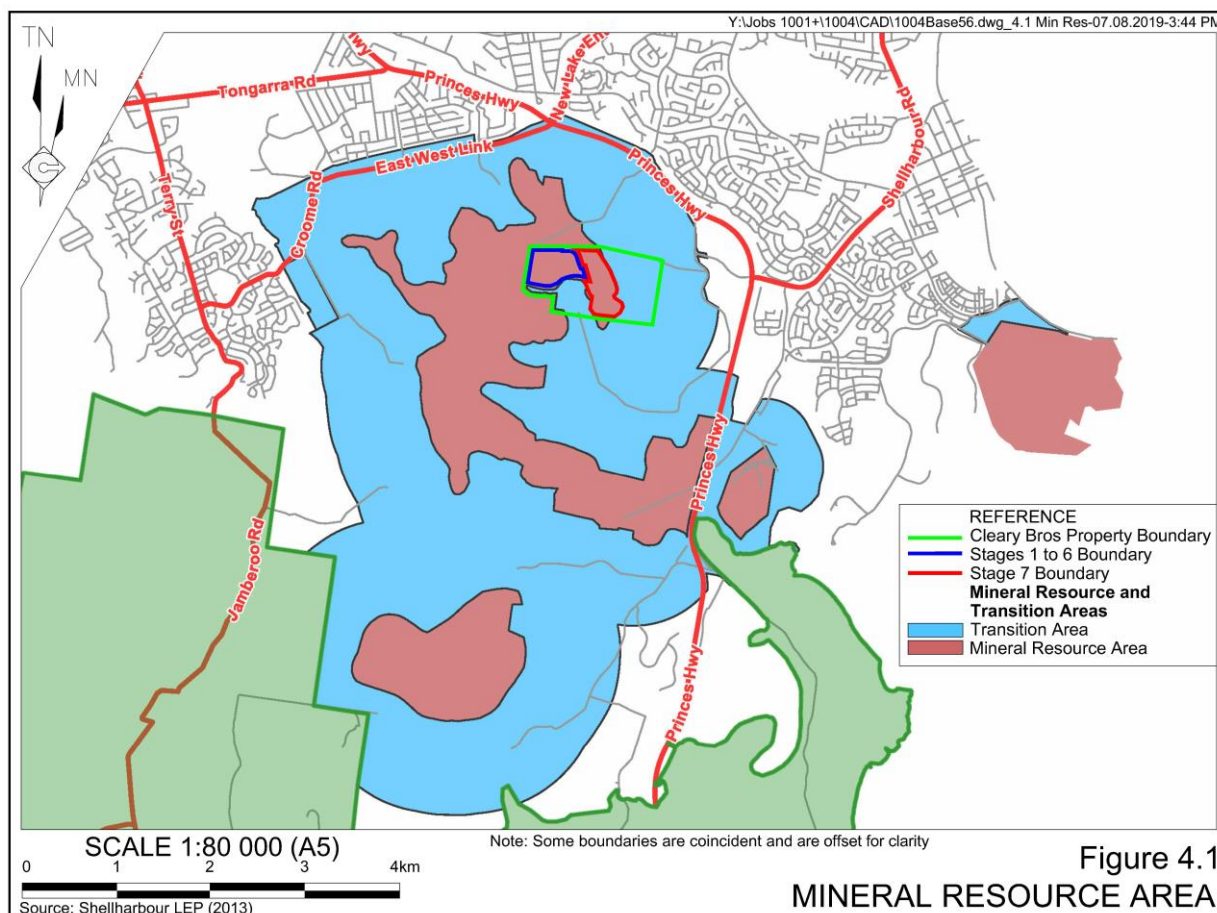
Stages 1 to 6 and the Stage 7 extension area are located on land owned by Bridon Pty Ltd, an associated entity of Cleary Bros (Bombo) Pty Ltd. A number of private land holdings are present to the north, east and southeast of the Application Area and west and south of the Princes Highway, as shown in **Figure 4.2**. These properties typically vary in area from 1.7ha to 89ha.

Roads and Maritime Services has acquired property adjacent to the East-West Link for the Princes Highway bypass of Albion Park, which is currently under construction (**Figure 4.2**).

4.3 RURAL AND LOW-MEDIUM DENSITY RESIDENTIAL DEVELOPMENT

The Stage 7 extension area is located within a rural area where single residences are located on rural and semi-rural lifestyle properties. **Figure 4.2** displays the closest residences to the north of the Stage 7 extension area namely, 'The Cottage' and 'The Hill'. Six rural residences are located on properties to the northeast, east and southeast fronting onto James Road. There are no nearby occupied residences to the southwest and west of the Stage 7 extension area.

Figure 4.2 also displays sections of the low-medium density residential development within the nearby suburbs of Albion Park Rail, Blackbutt and Flinders. The increase in residential development in this area in recent years has been accompanied by the construction of a new railway station on South Coast line (Shellharbour Junction) and other community facilities such as schools (Shellharbour Anglican College).



4.4 LAND USES

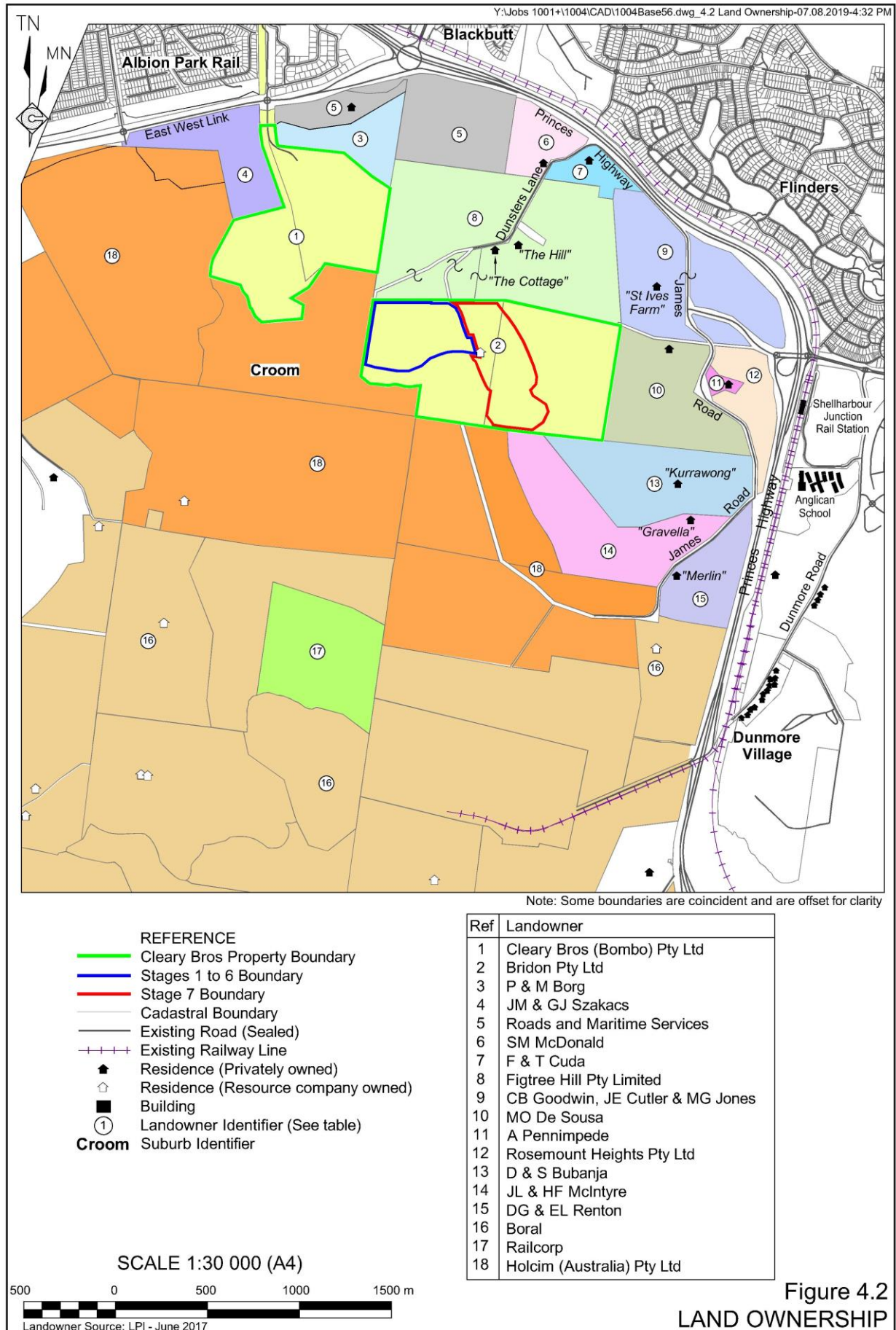
4.4.1 On-Site Land Uses

The land uses within the Cleary Bros property comprise hard rock extraction and processing, product stockpiling and despatch, concrete manufacture, VENM recycling and cattle grazing. The bulk of the cattle grazing is undertaken within the cleared areas of Lot 7 DP3709 and periodic grazing is also undertaken in the remnant bushland areas within the property.

4.4.2 Surrounding Land Uses

Historically, the area within the defined Mineral Resource Area was a dairy farming district extending from the Wentworth Hills east to the coast. This area has largely been cleared of native vegetation and comprises a combination of grassland used for grazing, with remnant vegetation remaining on steeper slopes and within gullies.

Since the 1960s, the area bound by the East-West Link in the north and west of the Princes Highway has been the focus of extractive industries with current operations at Albion Park (Cleary Bros and Holcim) and Dunmore (Boral) targeting hard rock resources from the Bumbo Latite (**Figure 1.1**). Within this area, grazing and dairying is still conducted to varying degrees on properties, north, east and southeast of the Cleary Bros property. Some of these properties are essentially lifestyle properties.



5. STATUTORY CONTEXT

This section tabulates the Commonwealth, State and local Government statutory and planning requirements relevant to the Project.

Table 5.1
Commonwealth and State Government Statutory Requirements

Legislation	Key Requirements	Relevance to Project
Commonwealth Statutory Requirements		
Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act)	<p>Covers 'matters of national environmental significance'. Relevant matters of national environmental significance include:</p> <ul style="list-style-type: none"> • listed threatened species and ecological communities; and • listed migratory species protected under international agreement. 	<p>Proposed clearing of <i>Zieria granulata</i> will require an assessment of significance under the EPBC Act.</p> <p>Determination of a significant impact would require referral of the Project to the Department of Environment and Energy and offsetting under the EPBC Act.</p>
State Statutory Requirements		
Environmental Planning and Assessment Act 1979 (EP&A Act)	<p>Provides the framework for the assessment and approval of development in NSW.</p> <p>Development consent is required under the EP&A Act for development which is permissible with development consent under the relevant Local Environmental Plan.</p> <p>An EIS is required for SSD development applications and must address all Secretary's Environmental Assessment Requirements (SEARs).</p>	<p>The Project is State Significant Development (SSD).</p> <p>The consent authority for the Project will be the Minister for Planning and Environment or the Independent Planning Commission under delegation from the Minister.</p>
Protection of the Environment Operations Act 1997 (POEO Act)	<p>Provides the framework for regulation and reduction of pollution and waste in NSW.</p> <p>Requires immediate reporting of pollution incidents which cause or threaten to cause material harm to the environment.</p> <p>Holders of EPL's are required to prepare, implement and regularly test Pollution Incident Response Management Plans (PIRMP).</p>	<p>Cleary Bros holds EPL299 which was issued by the EPA on 18 November 1999 for extractive activities and mining for minerals.</p> <p>Cleary Bros implements a Pollution Incident Response Management Plans for the existing Quarry.</p>
Water Management Act 2000 (WM Act)	<p>Provides arrangements for controlling land-based activities that affect the quality and quantity of the State's water resources.</p> <p>For controlled activities and aquifer interference activities, the WM Act requires that the activities avoid or minimise their impact on the water resource and land degradation, and where possible the land must be rehabilitated.</p>	<p>The Applicant holds Water Supply Works Approval IOWA 122753 and Water Access Licence (WAL) 36711. WAL36711 currently has a 15ML unit share allocation for the Sydney Basin South Groundwater Source.</p>
National Parks and Wildlife Act 1974 (NP&W Act)	<p>Aims to manage and conserve nature, objects, places and features that have ecological and/or cultural value. Aboriginal places and objects are protected under the NP&W Act.</p> <p>The management of SSD sites needs to be undertaken in accordance with an Aboriginal Cultural Heritage Management Plan prepared in consultation with the OEH and Aboriginal community representatives.</p>	<p>Cleary Bros implements a Heritage Management Plan for the current extraction area.</p>

Table 5.2
State and Local Government Planning Context

Page 1 of 2

Planning Instrument	Key Requirements	Relevance to Project
State Planning Instruments		
SEPP State and Regional Development 2011	For a development for the purpose of extractive industry to be classified as State Significant, the Project must either: <ul style="list-style-type: none"> extract more than 500 000t of material per year; have a total resource (the subject of the development application) of more than 5 million tonnes; and/or extract from an environmentally sensitive area of State significance. 	As the Project would have a total resource of 21 million tonnes and would involve the extraction of up to 900 000t of material per year, the Project qualifies as State Significant Development (SSD).
SEPP Mining, Petroleum Production and Extractive Industries 2007	Specifies matters requiring consideration in the assessment of any mining, petroleum production and extractive industry development.	These matters will be considered in the EIS.
SEPP Primary Production and Rural Development 2019	Aims relevant to the Project include the following. <ul style="list-style-type: none"> Facilitating orderly economic use and development of lands for primary production. Reducing land use conflict and sterilisation of rural land by balancing primary production, residential development and the protection of native vegetation, biodiversity and water resources. Identifying State significant agricultural land to ensure the ongoing viability of agriculture on that land, having regard to social, economic and environmental considerations. 	The Project will be considered with respect to these aims in the EIS.
SEPP Infrastructure 2007	Identifies matters to be considered in the assessment of development adjacent to types of infrastructure including the following. <ul style="list-style-type: none"> Electricity transmission. Railways. Roads. 	The EIS will consider the Project with regards to adjacent / nearby infrastructure with respect to blast-related impacts.
SEPP 33 – Hazardous and Offensive Developments	Hazardous materials to be held or used within the extraction area are required to be identified and classified in accordance with the risk screening method contained within Appendix 4 of Applying SEPP 33 (DoP, 2011).	The EIS will consider the use of explosives within the extraction area.
Shellharbour Local Environmental Plan 2013		
Zoning	Extractive industries are permissible with consent on land zoned RU1 – Primary Production.	Stages 1 to 7 of the extraction area are located entirely on land zoned RU1 – Primary Production (Figure 5.1).

Table 5.2 (Cont'd)
State and Local Government Planning Context

Page 2 of 2

Planning Instrument	Key Requirements	Relevance to Project
Shellharbour Local Environmental Plan 2013 (Cont'd)		
Heritage	The Stage 7 extension area is partially located within Lot 1 DP858245 which is identified under the Shellharbour LEP 2013 as containing an item of local heritage significance: "Belmont", stone walls, figs and coral tree avenue. "The Hill" Farm Complex located immediately north of the Project in Lot 5 DP3709 is also identified as an item of local heritage significance.	The Project would involve the removal of the "Belmont" residence and associated structures. Potential impacts on heritage items will be considered in the EIS.
Significant Extractive Resources	The Project is identified under the Shellharbour LEP as occurring entirely within an area of Significant Extractive Resources - State and Regional Mineral Resources. The Project is also identified as a Mineral Resource Area under the Shellharbour LEP (Figure 4.1).	These classifications require consideration by the consent authority under Clause 13 of the Mining SEPP.
Terrestrial Biodiversity	The Project includes areas identified as Environmentally Sensitive Land under the Shellharbour LEP 2013.	Potential impacts on biodiversity values and Environmentally Sensitive Land will be considered in the EIS.

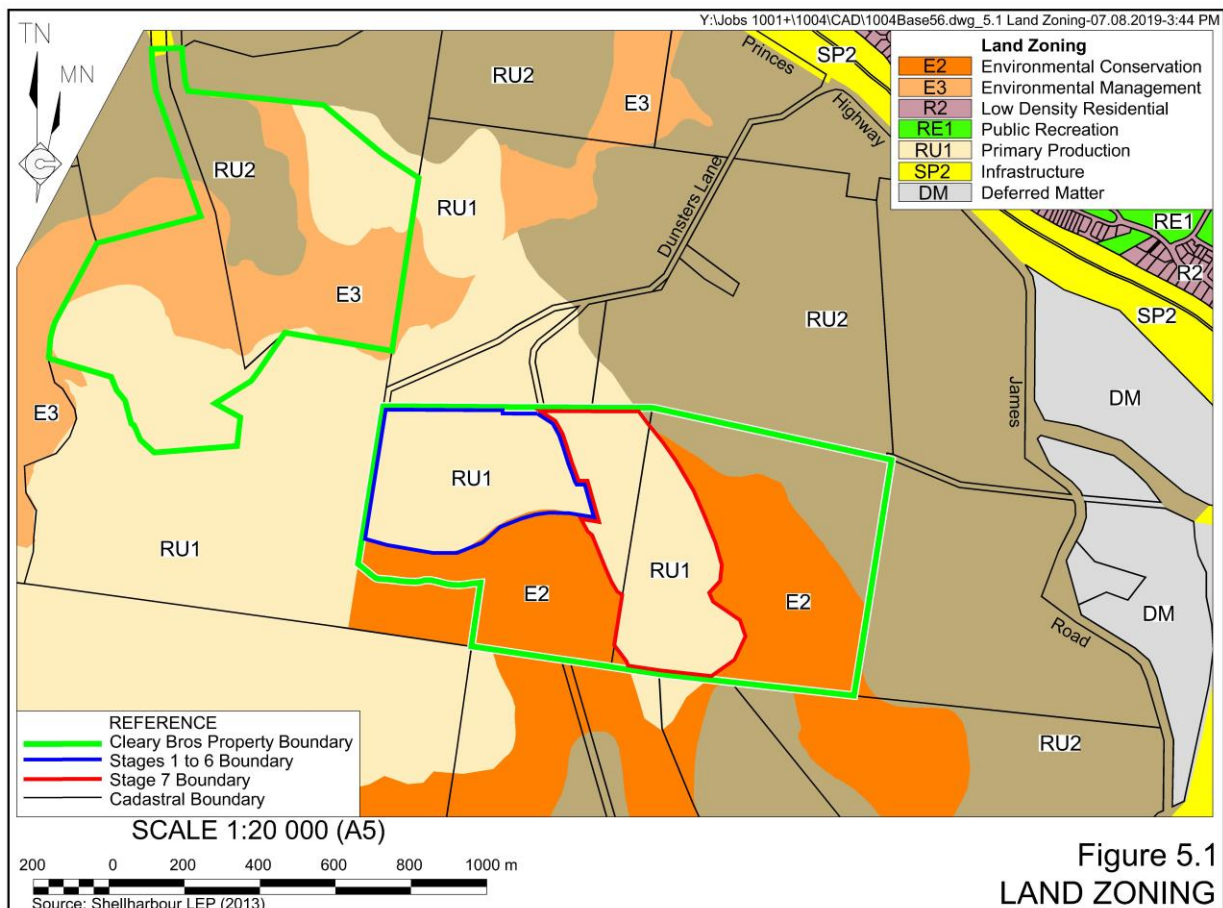


Figure 5.1
LAND ZONING

6. STAKEHOLDER ENGAGEMENT

This section outlines the stakeholder engagement undertaken to date with the adjoining landowners, local community, other stakeholders and Government agencies. The consultation planned during the preparation of the EIS is also outlined.

6.1 ADJOINING LANDOWNERS

Cleary Bros has consulted the five adjoining landowners who own properties adjoining the Application Area during the preparation of this Scoping Report and the issues that were raised or discussed are outlined below. Surrounding land ownership is presented on **Figure 4.2**.

1. Visual impacts from mobile equipment and quarry faces and long-term landscape changes.
2. Structural damage to residence, fly rock and noise from blasting.
3. Reductions in spring flows and availability of water for stock watering.
4. Concerns that the Project may restrict the ability to further develop the property.
5. Concerns re dust, particularly during strong westerly winds.
6. The Project may reduce the value of the landowner's property and limit potential for subdivision.
7. The proximity of quarrying to their property boundary.

6.2 LOCAL COMMUNITY

The Project was discussed with members of the Cleary Bros Albion Park Quarry Community Consultative Committee (CCC) at a meeting on 25 July 2019. The Project-related issues discussed included timing, opportunities for the public to provide input during the early stages of the planning process and the noise and visual impacts of the Project.

6.3 GOVERNMENT AGENCIES

Whilst the SEARs have not yet formally been sought for the Project, Cleary Bros and R.W. Corkery & Co. Pty Ltd have initiated discussions and correspondence with State Government Agencies and Shellharbour City Council. An overview of the outcomes from the consultation to date is outlined below.

Department of Planning, Industry and Environment

DPIE advised that it was not necessary for Cleary Bros to participate in a Scoping meeting for the Project and requested a Scoping Report be prepared and submitted to the Department.

Shellharbour City Council

Provision of information by Cleary Bros and a consultation meeting regarding the Project was held on 2 July 2019. Matters raised by Council included vegetation mapping, biodiversity offsets, bushfire prone land, groundwater impacts, EPBC Act referral and the heritage-listed Belmont building and associated structures.

Environment Protection Authority

Cleary Bros advised the EPA of its general plans for the proposed extension to the current extraction area and that a Scoping Report would be submitted shortly.

6.4 ONGOING CONSULTATION

As part of its ongoing consultation, Cleary Bros proposes to:

- maintain a dialogue with the adjoining landholders throughout the planning, construction and operational stages of the Project.
- consult with all landowners on Properties 3 to 15 and 18 on **Figure 4.2**, west and south of the Princes Highway about the Company's plans for the planned extraction area extension.
- consult with the Federal Department of Environment and Energy and relevant State government agencies regarding specific matters relating to the Project.
- continue to liaise with Shellharbour City Council throughout all stages of the Project.

7. CONCLUSION

The resource definition undertaken to date has identified a suitable quantity and quality of hard rock resources within the documented and planned significant mineral resource area adjacent to the current extraction area.

The collection of preliminary environmental data and information to date indicates that the current extraction area can be extended without causing an unacceptable level of environmental impacts.

Surrounding landowners already have a high degree of understanding of potential/actual impacts of extraction activities given the extraction process of latite has been underway for many years. The Project is essentially extending the area of extraction.

Cleary Bros therefore requests the Secretary's Environmental Assessment Requirements are provided to enable the preparation of an Environmental Impact Statement to proceed.

Appendix 1

Scoping Worksheet

(Total No. of pages including blank pages = 4)

This worksheet has been compiled to assist in guiding the level of assessment that is proposed to be undertaken for the respective environmental matters within the Environmental Impact Statement.

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Project : Albion Park Quarry Extraction Area Stage 7 Extension

MATTERS		IMPACTS		ASSESSMENT LEVEL	CUMULATIVE IMPACTS	COMMUNITY ISSUES	ASSESSMENT APPROACH	SCOPING REPORT
Potential matters that could be affected by the project		Is the project (without mitigation) likely to cause an impact?	Are the impacts (without mitigation) likely to be significant based on the magnitude of the impacts and/or sensitivity of receivers?	What level of assessment is required to assess impacts and determine mitigation measures?	Will cumulative assessment be required?	Did the community raise any concerns about the impacts?	Indicative approach to assessment in EIS	Where was this addressed in the Scoping Report?
Group	Specific	Impact?	Significant Impact?	Assessment Level	Cumulative Impact?	Concerns?	Category	Section
ACCESS	access to property	N/A						
	parking	N/A						
	port / airport facilities	N/A						
	road / rail network	N/A						
	other - please specify	N/A						
AIR	atmospheric emissions	No	Unlikely	Standard	Yes	No	None	3.7
	gases	No	Unlikely	Standard	Yes	No	None	3.7
	particulate matter	Yes	Likely	Detailed	Yes	Yes	Detailed Assessment	3.7
	other - please specify	N/A						N/A
AMENITY	noise	Yes	Likely	Detailed	Yes	Yes	Detailed Assessment	3.6
	odour	Yes	Unlikely	Standard	No	No	None	3.7
	vibration	Yes	Likely	Detailed	Yes	Yes	Detailed Assessment	3.6
	visual	Yes	Likely	Detailed	Yes	Yes	Detailed Assessment	3.4
	other - please specify	N/A						
BIODIVERSITY	conservation areas	N/A				No		
	native vegetation	Yes	Likely	Detailed	No	No	Detailed Assessment	3.3
	native fauna	Yes	Unknown	Detailed	No	No	Detailed Assessment	3.3
	other - please specify	N/A						
BUILT ENVIRONMENT	private property	Yes	Likely	Standard	Yes	Yes	Detailed Assessment	3.6 & 3.7
	public domain	N/A						
	public infrastructure	N/A						
	other - please specify	N/A						
ECONOMIC	livelihood	No	Unlikely	Standard	No	Yes	Standard Assessment	6.1
	natural resource use	Yes	Unlikely	Standard	No	Yes	Standard Assessment	6.1
	opportunity cost	Yes	Unlikely	Standard	No	Yes	Standard Assessment	6.1
	other	N/A						
HAZARDS & RISKS	biosecurity	Yes	Unlikely	Standard	No	No	Standard Assessment	3.3
	bush fire	N/A						
	coastal hazards	N/A						
	dams	N/A						
	dangerous goods	Yes	Likely	Standard	No	Yes	Standard Assessment (explosives)	3.11
	environmental hazards	N/A						
	floods	N/A						
	groundwater contamination	No	Unlikely	Standard	No	No		3.5
	hazardous / offensive development	Yes	Likely	Standard	No	Yes	Standard Assessment (explosives)	3.3
	land contamination	No	Unlikely	Standard	No	No	Standard Assessment	3.11
	land movement	N/A						
	waste	Yes	Likely	Standard	No	No	Standard Assessment	2.3
	other - please specify	N/A						
HERITAGE	Aboriginal cultural	Unknown	Unknown	Detailed	No	No	Detailed Assessment	3.9
	historic	Yes	Likely	Detailed	No	Yes	Detailed Assessment	3.10
	natural	N/A						
	other - please specify	N/A						
LAND	land capability	Yes	Likely	Standard	No	No	Standard Assessment	3.8
	soil chemistry	Yes	Unlikely	Standard	No	No	Standard Assessment	3.8
	stability / structure	Yes	Unlikely	Standard	No	No	Standard Assessment	3.8
	topography	Yes	Likely	Standard	No	No	Standard Assessment	3.1
	other - please specify	N/A						
SOCIAL	community services / facilities	N/A				No		
	health	Yes	Unlikely	Standard	Yes	No	Standard Assessment	
	housing availability	N/A				No		
	safety	Yes	Unlikely	Standard	No	No	Standard Assessment	3.11
	social cohesion	No	Unlikely	Standard		No	None (include short explanation in Scoping Report)	N/A
	other - please specify	N/A						
WATER	groundwater quality	No	Unlikely	Standard	No	No	Standard Assessment	3.5
	hydrological flows (including flooding)	Yes	Unlikely	Detailed	No	No	Detailed Assessment	3.1
	surface water quality	Yes	Unlikely	Detailed	No	No	Detailed Assessment	3.1
	water availability	Yes	Likely	Detailed		No	Detailed Assessment	3.1
	other - please specify							
	Not applicable		Yes / Likely Impact		Yes / Unlikely Impact		No / Unlikely Impact	Unknown Impacts

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