

Annexure C

DETERMINATION OF DEVELOPMENT APPLICATION BY GRANT OF CONSENT

Development Application No: SSD-10432

Development: A new hard rock quarry, proposing to extract, process and transport up to 1.5 million tonnes per annum of materials over a period of 30 years

Site: Stone Ridge Quarry, Italia Road, Balickera 2324

The above development application has been determined by the granting of consent subject to the conditions specified in this consent.

Date of determination: 22 August 2025

Date from which consent takes effect: Date of determination.

TERMINOLOGY

In this consent:

- (a) Any reference to a Construction, Compliance, Occupation or Subdivision Certificate is a reference to such a certificate as defined in the *Environmental Planning and Assessment Act 1979*.
- (b) Any reference to the “applicant” means a reference to the applicant for development consent or any person who may be carrying out development from time to time pursuant to this consent.
- (c) Any reference to the “site”, means the land known as Stone Ridge Quarry, Italia Road, Balickera 2324.

The conditions of consent are as follows:

Development Consent

Section 4.38 of the Environmental Planning and Assessment Act 1979

The Independent Planning Commission of NSW, as the declared consent authority under clause 8A of the *State Environmental Planning Policy (State and Regional Development) 2011* and section 4.5(a) of the *Environmental Planning and Assessment Act 1979*, approves the development application referred to in Schedule 1, subject to the conditions in Schedule 2.

These conditions are required to:

- prevent, minimise, or offset adverse environmental impacts;
- set standards and performance measures for acceptable environmental performance;
- require regular monitoring and reporting; and
- provide for the ongoing environmental management of the development.

Janett Milligan (Panel Chair)
Member of the Commission

Richard Pearson
Member of the Commission

Terry Bailey
Member of the Commission

Sydney

16 December 2024

SCHEDULE 1

Application Number: SSD-10432
Applicant: Australian Resource Development Group Pty Limited
Consent Authority: The Independent Planning Commission of NSW
Site: The land defined in Appendix 1
Development: Stone Ridge Quarry Project

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DEFINITIONS

Aboriginal object / Aboriginal place	Has the same meaning as the definition of the term in section 5 of the <i>National Parks and Wildlife Act 1974</i>
Access road	The quarry access road shown on the plan in Appendix 2
Annual Review	The review required by condition D10
Applicant	Australian Resource Development Group Pty Limited, or any person carrying out any development under this consent
Approved disturbance area	The area identified as such on the development layout
Approved extraction area	The area identified as such on the development layout
ARI	Average recurrence interval
BC Act	<i>Biodiversity Conservation Act 2016</i>
BCS	Biodiversity Conservation and Science Group of NSW Department of Climate Change, Energy, the Environment and Water
BCT	Biodiversity Conservation Trust
Blast misfire	The failure of one or more holes in a blast pattern to initiate
Calendar year	A period of 12 months from 1 January to 31 December
CCC	Community Consultative Committee required by condition A16
Conditions of this consent	Conditions contained in Schedule 2
Construction	All physical works to enable quarrying operations to be carried out, including demolition and removal of buildings or works, and erection of buildings and other infrastructure permitted by this consent
Council	Port Stephens Council
Date of commencement	The date notified to the Department by the Applicant under condition A13 for the commencement of construction or quarrying operations.
Day	The period from 7 am to 6 pm on Monday to Saturday or 8 am to 6 pm on Sundays and public holidays
Decommission	The deconstruction or demolition and removal of works installed as part of the development
Demolition	The deconstruction and removal of buildings, sheds and other structures on the site
Department	NSW Department of Planning, Housing and Infrastructure
Development	The development described in the document/s listed in condition A2(c), as modified by the conditions of this consent.
Development Layout	The plan in Appendix 2
EIS	The Environmental Impact Statement titled "Stone Ridge Quarry <i>Environmental Impact Statement</i> ", dated January May 2023 and prepared by Umwelt (Australia) Pty Limited; " <i>Stone Ridge Quarry Project Submissions Report</i> " dated March 2024 and prepared by Umwelt (Australia) Pty Limited; " <i>Stone Ridge Quarry Amendment Report</i> " dated March 2024 and prepared by Umwelt (Australia) Pty Limited; and the Applicant's additional information responses in support of the application and included in Appendix F of the Department's assessment report on Stone Ridge Quarry Project, dated October 2024; <u>and the Applicant's "Consolidated Management Measures" dated July 2025 and prepared by Umwelt (Australia) Pty Ltd.</u>
Environment	Includes all aspects of the surroundings of humans, whether affecting any human as an individual or in his or her social groupings
EPA	NSW Environment Protection Authority
EP&A Act	<i>Environmental Planning and Assessment Act 1979</i>
EP&A Regulation	<i>Environmental Planning and Assessment Regulation 2021</i>
EPBC Act	Commonwealth <i>Environment Protection and Biodiversity Conservation Act 1999</i>
EPL	Environment Protection Licence under the POEO Act

Evening	The period from 6 pm to 10 pm
Feasible	Means what is possible and practical in the circumstances
GPS	Global Positioning System
Heritage NSW	Heritage NSW group of NSW Department of Climate Change, Energy, the Environment and Water
Hunter Water	Hunter Water Corporation
Incident	An occurrence or set of circumstances that causes or threatens to cause material harm to the environment, and as a consequence of that environmental harm, may cause harm to the health and safety of human beings, and which may or may not be or cause a non-compliance
Land	Has the same meaning as the definition of the term in section 1.4 the EP&A Act, except for where the term is used in the noise and air quality conditions in PART B of this consent where it is defined to mean the whole of a lot, or contiguous lots owned by the same landowner, in a current plan registered at the Land Titles Office at the date of this consent
Local roads	All public roads for which the Council of a local government area is the roads authority as prescribed under Clause 7 of the <i>NSW Roads Act 1993</i>
Material harm	<p>Is harm that:</p> <ul style="list-style-type: none"> involves actual or potential harm to the health or safety of human beings or to the environment that is not trivial; or results in actual or potential loss or property damage of an amount, or amounts in aggregate, exceeding \$10,000, (such loss includes the reasonable costs and expenses that would be incurred in taking all reasonable and practicable measures to prevent, mitigate or make good harm to the environment). <p>This definition excludes “harm” that is authorised under either this consent or any other statutory approval.</p> <p>For the purposes of this definition, material harm excludes incidents captured by Work Health and Safety reporting requirements.</p>
Minimise	Implement all reasonable and feasible mitigation measures to reduce the impacts of the development
Minister	NSW Minister for Planning and Public Spaces, or delegate
Minor	Not very large, important or serious
MNES	Matters of National Environmental Significance under the Commonwealth EPBC Act
Morning Shoulder	The period from 6 am to 7 am Monday to Saturday
NCC	National Construction Code
Negligible	Small and unimportant, such as to be not worth considering
Night	The period from 10 pm to 7 am on Monday to Saturday, and 10 pm to 8 am on Sundays and public holidays
Non-compliance	An occurrence, set of circumstances or development that is a breach of this consent
NSW DCCEEW – Water Group	NSW Department of Climate Change, Energy, the Environment and Water – Water Group
Planning Secretary	Planning Secretary under the EP&A Act, or nominee
PCT	Plant Community Type
POEO Act	<i>Protection of the Environment Operations Act 1997</i>
Privately-owned land	Land that is not owned by public agency or a mining, petroleum or extractive industry company (or its subsidiary or related party)
Public infrastructure	Linear and related infrastructure that provides services to the general public, such as roads, railways, water supply, drainage, sewerage, gas supply, electricity, telephone, telecommunications, etc
Quarrying operations	The extraction, processing, stockpiling and transportation of extractive materials on the site and the associated removal of vegetation, topsoil and overburden

Quarry products	Includes all saleable quarry products, but excludes wastes and rehabilitation material
Reasonable	Means applying judgement in arriving at a decision, taking into account: mitigation benefits, costs of mitigation versus benefits provided, community views, and the nature and extent of potential improvements
Registered Aboriginal Parties	As described in the <i>National Parks and Wildlife Regulation 2019</i>
Rehabilitation	The restoration of land disturbed by the development to a good condition, to ensure it is safe, stable and non-polluting
Residence	Existing or approved dwelling at the date of grant of this consent
RFS	NSW Rural Fire Service
Site	The Project area shown in Appendix 2
TfNSW	Transport for NSW
Waste	Has the same meaning as the definition of the term in the Dictionary to the POEO Act

SCHEDULE 2

PART A ADMINISTRATIVE CONDITIONS

OBLIGATION TO MINIMISE HARM TO THE ENVIRONMENT

- A1. In addition to meeting the specific performance measures and criteria in this consent, all reasonable and feasible measures must be implemented to prevent, and if prevention is not reasonable and feasible, minimise, any material harm to the environment that may result from the construction and operation of the development, and any rehabilitation required under this consent.

TERMS OF CONSENT

- A2. The development may only be carried out:
- in compliance with the conditions of this consent;
 - in accordance with all written directions of the Planning Secretary; and
 - generally in accordance with the EIS and Development Layout.
- A3. Consistent with the requirements in this consent, the Planning Secretary may make written directions to the Applicant in relation to:
- the content of any strategy, study, system, plan, program, review, audit, notification, report or correspondence submitted under or otherwise made in relation to this consent, including those that are required to be, and have been, approved by the Planning Secretary; and
 - the implementation of any actions or measures contained in any such document referred to in condition A3(a).
- A4. The conditions of this consent and directions of the Planning Secretary prevail to the extent of any inconsistency, ambiguity or conflict between them and a document/s listed in condition A2(c). In the event of an inconsistency, ambiguity or conflict between any of the document/s listed in condition A2(c), the most recent document prevails to the extent of the inconsistency, ambiguity or conflict.

LIMITS OF CONSENT

Identification of Approved Extraction Area

- A5. At least one month before the commencement of extraction:
- a registered surveyor must be engaged to mark out the boundaries of the approved areas of extraction within the site (as set out in Appendix 2); and
 - the Planning Secretary must be provided with a survey plan of such boundaries and their GPS coordinates.
- A6. The boundaries of the approved areas of extraction within the site must be clearly marked in a manner that allows them to be easily identified at all times during the carrying out of quarrying operations.

Quarrying Operations

- A7. Quarrying operations may be carried out on the site for a period of 30 years from the date of the commencement of the development.

Note: Under this consent, the Applicant is required to decommission and rehabilitate the site and carry out other requirements in relation to quarrying operations. Consequently, this consent will continue to apply in all respects other than to permit the carrying out of quarrying operations until the rehabilitation of the site and other requirements have been carried out to the required standard.

- A8. The Applicant must not extract more than 1,500,000 tonnes of hard rock quarry products at the site in each calendar year.

Transport Operations

- A9. The Applicant must limit total truck movements at the site (i.e. arrivals and dispatches) to a maximum of:
- 334 truck movements per day; and
 - 75 truck movements per hour.

Note: Truck movements to and from the site are also controlled by the operating hours specified in condition A11.

- A10. The Applicant must ensure that all heavy vehicles and haulage trucks associated with the development:
- travelling southbound from the quarry first turn left (i.e. northbound) onto the Pacific Highway and utilise the Tarean Road Interchange to perform a U-turn; and
 - turn left only into Italia Road from the Pacific Highway.

Hours of Operation

- A11. The Applicant must comply with the operating hours set out in Table 1.

Table 1: Operating hours

Activity	Permissible Operating Hours
Site establishment and construction	<ul style="list-style-type: none"> • 7 am to 6 pm Monday to Friday • 8 am to 1 pm Saturday • At no time on Sundays or public holidays
Quarrying operations	<ul style="list-style-type: none"> • 7 am to 6 pm Monday to Friday • 7 am to 3 pm Saturday • At no time on Sundays or public holidays
Loading and dispatch of product trucks	<ul style="list-style-type: none"> • 7 am to 6 pm Monday to Friday • 6 pm to 10 pm Monday to Friday on up to 100 days per calendar year • 7 am to 3 pm Saturday • At no time on Sundays or public holidays
Blasting	<ul style="list-style-type: none"> • 9 am to 5 pm Monday to Friday • At no time on Saturdays, Sundays or public holidays
Maintenance and environmental management	<ul style="list-style-type: none"> • 24 hours per day, 7 days per week provided that these activities are not audible at any privately-owned residence if outside of the operational hours

A12. The following activities may be carried out outside the hours and restrictions specified in Table 1:

- (a) delivery or dispatch of materials as requested by Police or other public authorities; and
- (b) emergency work to avoid the loss of lives, property or to prevent environmental harm.

In such circumstances, the Applicant must notify the Department and affected residents prior to undertaking the activities, or as soon as is practical thereafter.

NOTIFICATION OF COMMENCEMENT

A13. The date of commencement of each of the following phases of the development must be notified to the Department and Council in writing, at least one month before that date:

- (a) commencement of construction under this consent;
- (b) commencement of quarrying operations;
- (c) cessation of quarrying operations; and
- (d) any period of suspension of quarrying operations.

CONTRIBUTIONS TO COUNCIL

A14. The Applicant must make annual financial contributions to Council towards the maintenance of roads used for haulage of quarry products, where Council is the roads authority under the *Roads Act 1993*. The contributions must be determined in accordance with the Port Stephens Local Infrastructure Contributions Plan 2020 (including any updated or revised version of this plan) for local roads within the local government area.

A15. If there is a dispute over the determination of the contributions in condition A14, the Applicant or Council may refer the matter to the Planning Secretary for resolution. The decision of the Planning Secretary will be final.

COMMUNITY CONSULTATIVE COMMITTEE

A16. Within 6 months from the date of commencement of development, a CCC must be established for the development in accordance with the Department's *Community Consultative Committee Guidelines: State Significant Projects (2023)*.

EVIDENCE OF CONSULTATION

A17. Where conditions of this consent require consultation with an identified party, the Applicant must:

- (a) consult with the relevant party prior to submitting the subject document; and
- (b) provide details of the consultation undertaken including:
 - (i) the outcome of that consultation, matters resolved and unresolved; and
 - (ii) details of any disagreement remaining between the party consulted and the Applicant and how the Applicant has addressed the matters not resolved.

STAGING, COMBINING AND UPDATING STRATEGIES, PLANS OR PROGRAMS

A18. With the approval of the Planning Secretary, the Applicant may:

- (a) prepare and submit any strategy, plan or program required by this consent on a staged basis (if a clear description is provided as to the specific stage and scope of the development to which the strategy, plan or program applies, the relationship of the stage to any future stages and the trigger for updating the strategy, plan or program);
- (b) combine any strategy, plan or program required by this consent (if a clear relationship is demonstrated between the strategies, plans or programs that are proposed to be combined); and
- (c) update any strategy, plan or program required by this consent (to ensure the strategies, plans and programs required under this consent are updated on a regular basis and incorporate additional measures or amendments to improve the environmental performance of the development).

A19. If the Planning Secretary agrees, a strategy, plan or program may be staged or updated without consultation being undertaken with all parties required to be consulted in the relevant condition in this consent.

PROTECTION OF PUBLIC INFRASTRUCTURE

A20. Unless the Applicant and the applicable authority agree otherwise, the Applicant must:

- (a) repair, or pay the full costs associated with repairing, any public infrastructure that is damaged by carrying out the development; and
- (b) relocate, or pay the full costs associated with relocating, any public infrastructure that needs to be relocated as a result of the development.

Note: *This condition does not apply to any damage to roads or public infrastructure caused as a result of general road usage or otherwise addressed by contributions required by condition A14 of this consent.*

DEMOLITION

A21. All demolition must be carried out in accordance with *Australian Standard AS 2601-2001 The Demolition of Structures* (Standards Australia, 2001), or its latest version as may be in force

STRUCTURAL ADEQUACY

A22. All new buildings and structures, and any alterations or additions to existing buildings and structures, that are part of the development, must be constructed in accordance with the relevant requirements of the BCA.

Notes:

- *Under Part 6 of the EP&A Act, the Applicant is required to obtain construction and occupation certificates for the proposed building works.*
- *Part 8 of the EP&A Regulation sets out the requirements for the certification of the development.*

OPERATION OF PLANT AND EQUIPMENT

A23. All plant and equipment used on site, or to monitor the performance of the development, must be:

- (a) maintained in a proper and efficient condition; and
- (b) operated in a proper and efficient manner.

COMPLIANCE

A24. The Applicant must ensure that all of its employees, contractors (and their sub-contractors) are made aware of, and are instructed to comply with, the conditions of this consent relevant to activities they carry out in respect of the development.

APPLICABILITY OF GUIDELINES

A25. References in the conditions of this consent to any guideline, protocol, Australian Standard or policy are to such guidelines, protocols, Standards or policies in the form they are in as at the date of this consent.

A26. However, consistent with the conditions of this consent and without altering any limits or criteria in this consent, the Planning Secretary may, when issuing directions under this consent in respect of ongoing monitoring and management obligations, require compliance with an updated or revised version of such a guideline, protocol, Standard or policy, or a replacement of them.

PRODUCTION DATA

A27. Each year, from the commencement of quarrying operations, the Applicant must report the calendar year total quantity of quarry product transported from the development in the Annual Review (required under condition D10).

PART B SPECIFIC ENVIRONMENTAL CONDITIONS

NOISE

Operational Noise Criteria

- B1. The Applicant must ensure that the noise generated by the development does not exceed the criteria in Table 2 at any residence on privately-owned land.

Table 2: Operational noise criteria dB(A)

Noise Assessment Location	Day <i>L_{Aeq} (15 min)</i>	Evening <i>L_{Aeq} (15 min)</i>	Night	
			<i>L_{Aeq} (15 min)</i>	<i>L_{AFmax}</i>
R5, R6, R7, R8, R9, R10, R22, R23	45	35	35	52
All other privately-owned residences	40	35	35	52

Note: To identify the locations referred to in Table 2, refer to the receiver locations on the figure in Appendix 3.

- B2. Noise generated by the development must be measured in accordance with the relevant requirements and exemptions (including certain meteorological conditions) of the *NSW Noise Policy for Industry* (EPA, 2017). Appendix 5 sets out the meteorological conditions under which these criteria apply and the requirements for evaluating compliance with these criteria.
- B3. The noise criteria in Table 2 do not apply if the Applicant has an agreement with the owner/s of the relevant residence or land to exceed the noise criteria, and the Applicant has advised the Department in writing of the terms of this agreement.

Noise Operating Conditions

- B4. The Applicant must:
- (a) take all reasonable steps to minimise all noise from construction, operational and road transport activities, including low frequency noise and other audible characteristics;
 - (b) operate a comprehensive noise management system commensurate with the risk of impact to ensure compliance with the relevant conditions of this consent;
 - (c) take all reasonable steps to minimise the noise impacts of the development during noise-enhancing meteorological conditions;
 - (d) engage a suitably qualified and experienced person(s) to carry out regular attended noise monitoring (at least quarterly, unless otherwise agreed with the Planning Secretary) to determine whether the development is complying with the relevant conditions of this consent;
 - (e) regularly assess the noise monitoring data and modify or stop operations on the site to ensure compliance with the relevant conditions of this consent; and
 - (f) develop and implement a protocol for identifying any noise-related exceedance, incident or non-compliance and for notifying the Department and relevant stakeholders of these events.

BLASTING

Blasting Criteria

- B5. The Applicant must ensure that blasting on the site does not cause exceedances of the criteria in Table 3.

Table 3: Blasting criteria

Location	Airblast overpressure (dB(Lin Peak))	Ground vibration (mm/s)	Allowable exceedance
Any residence on privately-owned land	120	10	0%
	115	5	5% of the total number of blasts over a calendar year

Note: Ground vibration criteria for impacts to roosting microbats within Balickera Tunnel must be established within the Biodiversity Management Plan required under condition B50.

B6. The blasting criteria in Table 3 do not apply if the Applicant has an agreement with the owner/s of the relevant residence to exceed the blasting criteria, and the Applicant has advised the Department in writing of the terms of this agreement.

Blasting Frequency

B7. The Applicant may carry out a maximum of 2 blasts per day (not more than 4 per week) during construction and a maximum of 1 blast per day and 2 blasts in every fourteen days during quarrying operations.

B8. Condition B7 does not apply to blasts that generate ground vibration of 0.5 mm/s or less at any residence on privately-owned land, or to blast misfires or to blasts required to ensure the safety of the mine, its workers or the general public.

Notes:

- *For the purposes of this condition, a blast refers to a single blast event, which may involve a number of individual blasts fired in quick succession in a discrete area of the quarry.*
- *For the avoidance of doubt, should an additional blast be required after a blast misfire, this additional blast and the blast misfire are counted as a single blast.*

Property Inspections

B9. Prior to the commencement of quarrying operations, the Applicant must advise in writing the owners of sensitive receiver R19 (Balickera House) as shown in Appendix 3 and the owners of all privately-owned land within 1 kilometre of any approved extraction area on the site that they may request a property inspection in accordance with this condition. If the Applicant receives a written request from the owners of sensitive receiver R19 (Balickera House) as shown in Appendix 3 and/or the owner of any privately-owned land within 1 kilometre of any approved extraction area on the site for a property inspection to establish the baseline condition of any buildings and structures on their land, or to have a previous property inspection updated, then within 2 months of receiving this request the Applicant must:

- (a) commission a suitably qualified, experienced and independent person, whose appointment is acceptable to both parties to:
 - (i) establish the baseline condition of any buildings and other structures on the land, or update the previous property inspection report; and
 - (ii) identify measures that should be implemented to minimise the potential blasting impacts of the development on these buildings and structures; and
- (b) give the landowner a copy of the new or updated property inspection report.

B10. If there is a dispute over the selection of the suitably qualified, experienced and independent person, or the Applicant or the landowner disagrees with the findings of the property inspection report, either party may refer the matter to the Planning Secretary for resolution.

Property Investigations

B11. Prior to the commencement of quarrying operations, the Applicant must advise in writing the owners of all privately-owned land within 2 kilometres of any approved extraction area on the site that they may request a property investigation in accordance with this condition. If the owner of any privately-owned land within 2 kilometres of any approved extraction area on the site or any other landowner where the Planning Secretary is satisfied an investigation is warranted, claims in writing that buildings or structures on their land have been damaged as a result of blasting on the site, then within 2 months of receiving this written claim the Applicant must:

- (a) commission a suitably qualified, experienced and independent person, whose appointment is acceptable to both parties to investigate the claim; and
- (b) give the landowner a copy of the property investigation report.

B12. If this independent property investigation confirms the landowner's claim, and both parties agree with these findings, then the Applicant must repair the damage to the satisfaction of the Planning Secretary.

B13. If there is a dispute over the selection of the suitably qualified, experienced and independent person, or the Applicant or the landowner disagrees with the findings of the independent property investigation, then either party may refer the matter to the Planning Secretary for resolution.

Blast Operating Conditions

B14. During blasting operations, the Applicant must:

- (a) take all reasonable steps to:
 - (i) consult and coordinate with nearby quarries within the locality to ensure blasting activities are conducted in a manner to minimise interference with the amenity of the locality;
 - (ii) ensure the safety of people, livestock and native fauna (including microbats within Balickera Tunnel) from blasting impacts of the development;

- (iii) protect public or private infrastructure and property in the vicinity of the site, including Balickera Tunnel, from blasting damage associated with the development; and
- (iv) minimise blast-related dust and fume emissions;
- (b) operate a suitable system to enable members of the public to get up-to-date information on the proposed blasting schedule on the site and implement a protocol for investigating and responding to blast-related complaints;
- (c) identify any blast-related exceedance, incident or non-compliance and notify the Department and relevant stakeholders of these events; and
- (d) carry out regular blast monitoring, including monitoring the structural integrity of Balickera Tunnel, to determine whether the development is complying with the relevant conditions of this consent.

AIR QUALITY

Odour

B15. The Applicant must ensure that no offensive odours are emitted from the site, as defined under the POEO Act.

Air Quality Criteria

B16. The Applicant must ensure that particulate matter emissions generated by the development do not cause exceedances of the criteria in Table 4 at any residence on privately-owned land.

Table 4: Air quality criteria

<i>Pollutant</i>	<i>Averaging period</i>	<i>Criterion</i>
Particulate matter < 10 µm (PM ₁₀)	Annual	^{a, c} 25 µg/m ³
	24 hour	^b 50 µg/m ³
Particulate matter < 2.5 µm (PM _{2.5})	Annual	^{a, c} 8 µg/m ³
	24 hour	^b 25 µg/m ³
Total suspended particulate (TSP) matter	Annual	^{a, c} 90 µg/m ³

Notes:

^a Total impact (i.e. incremental increase in concentrations due to the development plus background concentrations due to all other sources).

^b Incremental impact (i.e. incremental increase in concentrations due to the development on its own).

^c Excludes extraordinary events such as bushfires, prescribed burning, dust storms, fire incidents or any other activity agreed by the Planning Secretary.

B17. The air quality criteria in Table 4 do not apply if the Applicant has an agreement with the owner/s of the relevant residence or infrastructure to exceed the air quality criteria, and the Applicant has advised the Department in writing of the terms of this agreement.

Air Quality and Greenhouse Gas Operating Conditions

B18. The Applicant must:

- (a) take all reasonable steps to:
 - (i) minimise odour, fume, and dust (including PM₁₀ and PM_{2.5}) emissions of the development;
 - (ii) minimise any visible off-site air pollution generated by the development;
 - (iii) minimise the extent of potential dust generating surfaces exposed on the site at any given point in time; and
 - (iv) improve energy efficiency and minimise Scope 1 and Scope 2 greenhouse gas emissions generated by the development;
- (b) ensure that trucks entering and leaving the site carrying loads of dust generating materials have their loads covered at all times, except during loading and unloading;
- (c) operate a comprehensive air quality management system that uses a combination of meteorological forecasting and real-time air quality monitoring data to guide the day-to-day planning of quarrying operations and the implementation of both proactive and reactive air quality mitigation measures to ensure compliance with the relevant conditions of this consent;
- (d) minimise the air quality impacts of the development during adverse meteorological conditions and extraordinary events (see Note c to Table 4 above);

- (e) engage a suitably qualified and experienced person(s) to carry out routine air quality monitoring in accordance with the *Approved Methods for Sampling and Analysis of Air Pollutants in New South Wales* (EPA, 2022), to determine whether the development is complying with the relevant conditions in this consent; and
- (f) regularly assess meteorological and air quality monitoring data and relocate, modify or stop operations on the site to ensure compliance with the relevant conditions of this consent; and
- (g) develop and implement a protocol for identifying any air quality-related exceedance, incident or non-compliance and for notifying the Department and relevant stakeholders of these events.

Quarry Land

B19. The Applicant must ensure that all reasonable and feasible avoidance and mitigation measures are employed so that particulate matter emissions generated by the development do not cause exceedances of the criteria in Table 4 at any occupied residence on the Site unless:

- (a) the tenant has been notified of any health risks associated with such exceedances in accordance with the notification requirements under Part C of this consent; and
- (b) the tenant of any land owned by the Applicant can terminate their tenancy agreement without penalty at any time, subject to giving reasonable notice,

to the satisfaction of the Planning Secretary.

METEOROLOGICAL MONITORING

B20. Prior to the commencement of construction and for the life of the development, the Applicant must ensure that there is a suitable meteorological station operating in close proximity to the site that:

- (a) complies with the requirements in the *Approved Methods for Sampling and Analysis of Air Pollutants in New South Wales* (EPA, 2022); and
- (b) is capable of measuring meteorological conditions in accordance with the *NSW Noise Policy for Industry* (EPA, 2017),

unless a suitable alternative is approved by the Planning Secretary following consultation with the EPA.

SOIL AND WATER

Water Supply

B21. The Applicant must ensure that it has sufficient water for all stages of the development, and if necessary, adjust the scale of the development, within the limits of consent set out in Part A of Schedule 2, to match its available water supply.

B22. The Applicant must construct the proposed water supply bore described in the EIS with a minimum grout seal of 20 metres (m) from ground surface.

B23. The Applicant must report on water take from the site each year (direct and indirect) in the Annual Review, including harvestable rights and water taken under each water licence.

Note: *Under the Water Act 1912 and/or the Water Management Act 2000, the Applicant is required to obtain all necessary water licences for the development.*

Compensatory Water Supply

B24. Prior to the commencement of construction, the Applicant must undertake potable water supply testing on water tanks located at sensitive receivers R1 to R23 identified in Appendix 3 to establish a water quality baseline against which to monitor and assess potential water quality impacts arising from the proposed development. Testing must be undertaken by a qualified, experienced and independent professional with results and testing reports provided to the landowners and Planning Secretary. If landowner consent for potable water testing is not provided by the relevant sensitive receiver, evidence of this and/or the Applicant's engagement with the sensitive receiver seeking to undertake the testing must be provided to the Planning Secretary.

B25. If there is a dispute over the selection of the suitably qualified, experienced and independent professional as identified in condition B24, or the Applicant or the landowner disagrees with the findings of the water quality report, either party may refer the matter to the Planning Secretary for resolution.

B26. The Applicant must provide a compensatory water supply to any landowner of privately-owned land whose rightful water supply is adversely and directly impacted (other than an impact that is minor or negligible) as a result of the development, in consultation with NSW DCCEEW – Water Group, and to the satisfaction of the Planning Secretary.

B27. The compensatory water supply measures must provide an alternative long-term supply of water that is equivalent, in quality and volume, to the loss attributable to the development. Equivalent water supply should be provided (at least on an interim basis) as soon as practicable after the loss is identified, unless otherwise agreed with the landowner.

- B28. If the Applicant and the landowner cannot agree on whether the loss of water is to be attributed to the development or the measures to be implemented, or there is a dispute about the implementation of these measures, then either party may refer the matter to the Planning Secretary for resolution.
- B29. If the Applicant is unable to provide an alternative long-term supply of water, then the Applicant must provide compensation, to the satisfaction of the Planning Secretary.

Note: *The Water Management Plan (see condition B32) is required to include trigger levels for investigating potentially adverse impacts on water supplies.*

Water Discharges

- B30. The Applicant must ensure that all surface water discharges from the site comply with all relevant provisions of the POEO Act, including any discharge limits (both volume and quality) set for the development in any EPL.

Water Management System

- B31. The Applicant must ensure that the on-site water management system is designed, constructed and implemented:
- (a) to achieve a Neutral or Beneficial Effect on water quality discharged from the site;
 - (b) to prevent discharges during rainfall events up to the one in 500 year ARI 24 hour storm event during operation of the development; and
 - (c) in accordance with *Managing Urban Stormwater Volume 1* (Landcom 2004) and *Managing Urban Stormwater: Soils and Construction Volume 2E, Mines and Quarries* (DECC 2008).

Water Management Plan

- B32. The Applicant must prepare a Water Management Plan for the development. This plan must:
- (a) be prepared by suitably qualified and experienced person/s whose appointment has been endorsed by the Planning Secretary;
 - (b) be prepared in consultation with EPA, NSW DCCEEW – Water Group and Hunter Water; and
 - (c) include a:
 - (i) **Site Water Balance** that:
 - includes details of:
 - sources and security of water supply;
 - water use and management on the site;
 - off-site discharges and water transfers;
 - metering of water volumes in all water storages and volumes of water pumped between water storages and discharged off-site;
 - reporting procedures, including the annual preparation of a site water balance; and
 - minimises clean and potable water use on the site;
 - (ii) **Surface Water Management Plan**, that includes:
 - detailed baseline data on surface water flows, water quality, riparian condition and geomorphic stability in watercourses and/or water bodies that could potentially be affected by the development including Nine Mile Creek and Grahamstown Dam;
 - detailed information on predicted off-site discharges, including:
 - once constructed, baseline data on water quality in water storages on the site, including the in-pit sump(s) and treatment dam(s);
 - predicted controlled and uncontrolled off-site discharge volumes, frequencies and rates;
 - dirty water treatment options to ensure compliance with condition B30, including gross pollutant traps, floating wetlands, bio-retention swales and flocculation systems;
 - measures to avoid, minimise or mitigate adverse water quality and geomorphological impacts of receiving waters from controlled and uncontrolled off-site discharges;
 - surface water impact assessment criteria, including trigger levels for investigating any potentially adverse impacts, and surface water management performance measures;
 - a detailed description of the surface water management system on the site, including the:
 - clean water diversion system;
 - erosion and sediment controls;
 - water storages;
 - dirty water management system;
 - management of potentially hazardous or contaminating materials; and

- maintenance program to ensure adequacy capacity to capture and store runoff from the design rainfall criteria;
 - a program to monitor and report on:
 - any controlled and uncontrolled surface water discharges;
 - stream stability, riparian condition and geomorphic processes in receiving watercourses;
 - the effectiveness of the water management system, including regular independent reviews of the adequacy of the system;
 - surface water flows and quality in watercourses and/or waterbodies that could potentially be impacted by the development, including Nine Mile Creek and Grahamstown Dam;
 - a protocol for identifying and investigating any exceedances of the surface water impact assessment criteria and for notifying the Department, Hunter Water and other relevant stakeholders of these events.
- (iii) **Groundwater Management Plan** that includes:
- detailed baseline data of localised groundwater levels, yield and quality for groundwater resources potentially impacted by the development, including:
 - the existing groundwater bores;
 - groundwater supply for other water users; and
 - groundwater dependent ecosystems identified in the vicinity of the site;
 - a detailed description of the groundwater management system;
 - groundwater performance criteria, including trigger levels for investigating any potentially adverse groundwater impacts;
 - a groundwater bore replacement strategy for any bores removed during quarrying activities;
 - a program to periodically validate the groundwater model for the development in accordance with best practice methods, including an update of the model after the first 5 years of quarrying operations, and at least annual comparison of monitoring results with modelled predictions;
 - a program to monitor and report on:
 - groundwater levels, yield and quality of groundwater resources potentially impacted by the development;
 - groundwater inflows into the extraction area;
 - seepage/leachate into the surrounding groundwater system;
 - impacts of the development on groundwater dependent ecosystems; and
 - impacts of the development on groundwater supply for other water users;
 - a protocol for identifying and investigating any exceedances of the groundwater performance criteria and for notifying the Department and relevant stakeholders of these events; and
 - a protocol to obtain appropriate water licence(s) to cover the volume of any unforeseen groundwater inflows into the extraction areas.

B33. The Applicant must not commence construction until the Water Management Plan is approved by the Planning Secretary.

B34. The Applicant must implement the approved Water Management Plan.

TRANSPORT

Monitoring of Product Transport

B35. The Applicant must keep accurate records of all laden truck movements to and from the site (including hourly truck movements and the weight of each truck entering and existing the site) and publish a summary of these records on its website every 6 months.

Transport Route

B36. Prior to transporting any quarry products from the site on public roads, the Applicant must:

- (a) ensure the intersection at the junction of the Pacific Highway and Italia Road is upgraded to the satisfaction of TfNSW; and
- (b) ensure the intersection of Hamburger Trail and Italia Road is upgraded in accordance with the EIS and the latest Austroads standards. This includes ensuring:
 - (i) heavy vehicles and haulage trucks leaving the Site turn left only onto Italia Road; and
 - (ii) heavy vehicles and haulage trucks entering the Site turn right only from Italia Road.

Transport Operating Conditions

B37. The Applicant must:

- (a) ensure that all laden trucks entering or exiting the site have their loads covered; and
- (b) take all reasonable steps to minimise traffic safety issues and disruption to local road users.

Traffic Management Plan

B38. The Applicant must prepare a Traffic Management Plan for the development. This plan must:

- (a) be prepared by suitably qualified and experienced person/s;
- (b) be prepared in consultation with TfNSW and Council;
- (c) include details of:
 - (i) construction related traffic management measures;
 - (ii) all transport routes and traffic types to be used for development-related traffic and GPS tracking to monitor compliance with the required transport routes. This must include details of how GPS tracking will be installed in all heavy vehicles and haulage trucks;
 - (iii) processes in place for the control of truck movements entering and exiting the site;
 - (iv) measures to be implemented to:
 - ensure compliance with the traffic operating conditions and other traffic related conditions of this consent;
 - manage the traffic impacts from contractors and subcontractors;
 - minimise traffic safety issues and disruption to local road users, including minimising potential for conflict with school bus operations;
 - minimise the transmission of dust and tracking of material onto the surface of public roads from vehicles exiting the site;
 - monitor driver behaviour; and
 - participate in transport management investigations initiated by Council;
- (d) include a Drivers' Code of Conduct that includes procedures to ensure that drivers:
 - (i) adhere to posted speed limits or other required travelling speeds;
 - (ii) adhere to designated transport routes and travel times, including GPS tracking; and
 - (iii) implement safe and quiet driving practices, including restriction on the use of compression braking;
- (e) describe the measures to be put in place to ensure compliance with the Drivers' Code of Conduct.

B39. The Applicant must not commence construction or quarrying operations until the Traffic Management Plan is approved by the Planning Secretary.

B40. The Applicant must implement the approved Traffic Management Plan and ensure that GPS data tracking of the transport routes for heavy vehicles and haulage trucks is collected to ensure compliance with the approved transport routes. The GPS data is to be made available to Council, TfNSW and the Planning Secretary upon request.

HERITAGE

Protection of Aboriginal Heritage

B41. The Applicant must ensure that the development does not cause any direct or indirect impact on any identified Aboriginal object or Aboriginal place located outside the approved disturbance areas.

B42. A procedure for the management of unexpected Aboriginal objects and human remains must be developed in consultation with the Registered Aboriginal Parties and Heritage NSW. The procedure must be prepared in accordance with Heritage NSW guidelines and codes of practice and must be implemented for the duration of the project.

B43. If suspected human remains are discovered on the site, then all work surrounding the area must cease, and the area must be secured. The Applicant must immediately notify NSW Police Force and Heritage NSW, and work must not recommence in the area until authorised by NSW Police Force and Heritage NSW.

B44. The Applicant must:

- (a) ensure that all known Aboriginal objects or Aboriginal places on the site are properly recorded, those records are kept up to date and are reported to the Aboriginal Heritage Information Management System.
- (b) ensure all workers receive suitable Aboriginal cultural heritage training/inductions prior to carrying out any activities which may cause impacts to Aboriginal objects or Aboriginal places, and that suitable records are kept of these inductions; and
- (c) facilitate ongoing consultation and involvement of Registered Aboriginal Parties in the conservation and management of Aboriginal cultural heritage on the site.

Historic Heritage

B45. If unexpected archaeological deposits or relics not identified and considered in the supporting documents for this approval are discovered, work must cease in the affected area(s) and the Heritage Council of NSW must be notified in accordance with Section 146 of the *Heritage Act 1997*. Additional assessment and approval may be required prior to works continuing in the affected area(s) based on the nature of this discovery.

BIODIVERSITY AND REHABILITATION

Biodiversity Offset Strategy

B46. The Applicant must retire the biodiversity credits specified in Table 5 and shown on the figure in Appendix 4 for each impact area stage prior to commencing vegetation clearing within each impact area stage. The total biodiversity credits specified in Table 5 for *Vespadelus troughtoni* (Eastern Cave Bat) must be retired prior to commencing vegetation clearing in any impact area stage.

The retirement of credits must be carried out in consultation with BCS and in accordance with the Biodiversity Offset Scheme of the BC Act¹.

Table 5: Biodiversity credit requirements

Credit type	Credits required							
	Total		Stage 1		Stage 2		Stage 3	
	Area (ha)	Credits	Area (ha)	Credits	Area (ha)	Credits	Area (ha)	Credits
PCT 762 Cabbage Gum open forest or woodland on flats of the North Coast	0.33	13	0.33	13	-	-	-	-
PCT 1590 Spotted Gum - Broad-leaved Mahogany - Red Ironbark shrubby open forest	39.27	1092	11.07	308	13.48	375	14.72	409
PCT 1618 Smooth-barked Apple – White Stringybark – Red Mahogany – <i>Melaleuca sieberi</i> shrubby open forest on lowlands of the lower North Coast	0.88	34	0.88	34	-	-	-	-
PCT 1619 Smooth-barked Apple – Red Bloodwood – Brown Stringybark – Hairpin Banksia heathy open forest of coastal lowlands	27.54	763	19.36	537	7.27	201	0.91	25
Species credits	Total		Stage 1		Stage 2		Stage 3	
	Area (ha)	Credits	Area (ha)	Credits	Area (ha)	Credits	Area (ha)	Credits
<i>Petaurus norfolcensis</i> (Squirrel Glider)	68.02	2519	31.64	1172	20.75	768	15.63	579
<i>Phascogale tapoatafa</i> (Brush-tailed Phascogale)	68.02	2519	31.64	1172	20.75	768	15.63	579
<i>Phascolarctos cinereus</i> (Koala)	68.02	2519	31.64	1172	20.75	768	15.63	579

Credit type	Credits required							
<i>Vespadelus troughtoni</i> (Eastern Cave Bat) ²	68.02	3778	-	-	-	-	-	-

1 The available credit retirement options for the development include purchase and retirement of open market available biodiversity credits, payment into the Biodiversity Conservation Fund or establishment of a Biodiversity Stewardship Site(s). Credits retired for impacts on EPBC Act listed species and associated habitat must be like-for-like.

2 Based on assumed presence (see condition B48)

B46A The Applicant must obtain and retire the biodiversity credits specified in Table 5 from the following sources (in order of priority):

- (a) new Biodiversity Stewardship Site(s) established within the Wallaroo State Forest;
- (b) other Biodiversity Stewardship Site(s) (existing or new) - through either purchases on the market or the creation of new sites; and
- (c) if, following all reasonable endeavours, credit requirements are unable to be met through (a) and (b), payment into the Biodiversity Conservation Fund.

Within 6 months of the retirement of any biodiversity credits specified in Table 5, the Applicant must provide a report detailing the source(s) of these credits to the CCC and include this report in the Annual Review for the year in which the retirement occurred.

B47. The Planning Secretary must be provided with evidence that confirms the correct number and class of credits has been retired prior to the development impacting the biodiversity values associated with each impact area stage identified in Table 5 and shown on the figure in Appendix 4.

Species Survey Verification

B48. Prior to commencing vegetation clearing, the Applicant may undertake further targeted surveys in the area of assumed presence within the approved disturbance area, as described in the EIS, to confirm the extent of foraging habitat for *Vespadelus troughtoni* (Eastern Cave Bat). The species credit obligations for this species, as listed in Table 5, may then be revised or removed based on the extent of foraging habitat identified, in consultation with BCS, to the satisfaction of the Planning Secretary.

Riparian Corridors

B49. The Applicant must ensure that riparian corridors are maintained on either side of watercourses within the Project area, outside of the direct disturbance footprint in accordance with the *Guidelines for controlled Activities on Waterfront Land* (DPI Water 2012).

Biodiversity Management Plan

B50. The Applicant must prepare a Biodiversity Management Plan for the development. This plan must:

- (a) be prepared by suitably qualified and experienced person/s;
- (b) be prepared in consultation with FCNSW, BCS and Council;
- (c) describe the short, medium, and long-term measures to be undertaken to:
 - (i) implement the Biodiversity Offset Strategy; and
 - (ii) manage the remnant vegetation and fauna habitat on the site;
- (d) include a detailed description of the measures to be implemented on the site to:
 - (i) enhance the quality of existing vegetation, vegetation connectivity and fauna habitat, including through the assisted regeneration and/or targeted revegetation of appropriate canopy, sub-canopy, understorey and ground strata;
 - (ii) maximise the salvage of resources within the approved disturbance area, including tree hollows, vegetative and soil resources, for beneficial reuse on site, including fauna habitat enhancement;
 - (iii) minimise impacts on tree hollows where reasonable and feasible;
 - (iv) minimise impacts on fauna, including undertaking pre-clearance surveys;
 - (v) manage potential indirect impacts on threatened plant and animal species;
 - (vi) manage injured fauna;
 - (vii) relocate fauna displaced during vegetation clearing;
 - (viii) introduce naturally scarce fauna habitat features such as den structures, nest boxes and salvaged tree hollows, and promote the use of these introduced habitat features by threatened fauna species;
 - (ix) monitor vegetation and fauna habitat outside the approved disturbance area, including within riparian corridors and downstream aquatic environments;

- (x) establish and/or retain vegetation screening to minimise the visual impacts of the development on surrounding receivers;
- (xi) control weeds and feral pests, with consideration of actions identified in relevant threat abatement plans;
- (xii) manage the collection and propagation of seed;
- (xiii) control unrestricted access; and
- (xiv) manage bushfire hazards;
- (e) include a seasonally based program to monitor and report on the effectiveness of biodiversity measures, and any progressive improvements that could be implemented to improve biodiversity outcomes;
- (f) include an adaptive management plan for ongoing monitoring and management of impacts to roosting microbats within Balickera Tunnel that:
 - (i) includes ground vibration criteria for impacts to roosting microbats within the tunnel;
 - (ii) includes monitoring of bat movement within the tunnel and at egress points of the tunnel prior to, during and immediately following blasting to observe impacts on bat behaviour;
 - (iii) includes vibration monitoring at a location representative of likely vibration levels within the tunnel;
 - (iv) includes procedures for adaptive management of blasting to mitigate impacts on roosting microbats within the tunnel.
- (g) include an adaptive management plan for groundwater dependent ecosystems that:
 - (i) is based on a Before After Control Impact (BACI) design to determine baseline conditions and identify any quarrying-related impacts in the vicinity of the site;
 - (ii) provides details of the baseline plot data for groundwater dependent ecosystems, including vegetation composition, structure and health, and any candidate threatened species associated with the community;
 - (iii) provides for the collection of groundwater level monitoring data (monthly) to detect any shallow groundwater drawdown in areas identified as being potentially impacted during quarrying operations;
 - (iv) provides details of the offsetting regime that would be implemented in accordance with the Biodiversity Offsets Scheme of the BC Act if a change (partial or full direct impacts) in vegetation is detected and found to be caused by groundwater drawdown associated with the development; and
- (h) include details of the process and who would be responsible for monitoring, reviewing, and implementing the plan.

B51. The Applicant must not commence construction until the Biodiversity Management Plan is approved by the Planning Secretary.

B52. The Applicant must implement the approved Biodiversity Management Plan.

Rehabilitation Objectives

B53. The Applicant must rehabilitate the site to the satisfaction of the Planning Secretary. This rehabilitation must be consistent with the rehabilitation strategy set out in the EIS and the conceptual rehabilitation plan in Appendix 6 and must comply with the objectives in Table 6.

Table 6: Rehabilitation objectives

Feature	Objective
<i>All areas of the site affected by the development</i>	<ul style="list-style-type: none"> • Safe • Hydraulically and geotechnically stable • Non-polluting • Fit for the intended post-quarrying operations land use(s) • Final landform integrated with surrounding natural landforms as far as is reasonable and feasible, and minimising visual impacts when viewed from surrounding land
<i>Surface infrastructure areas</i>	<ul style="list-style-type: none"> • All infrastructure decommissioned and removed, unless otherwise agreed by the Planning Secretary • Landscaped and vegetated using native grassland and endemic woodland species • Tree species to include endemic Koala feed species
<i>Quarry benches</i>	<ul style="list-style-type: none"> • Landscaped and vegetated using native grassland and woodland species

Feature	Objective
<i>Riparian corridors along Nile Mile Creek</i>	<ul style="list-style-type: none"> • Stabilised and vegetated
<i>Final void</i>	<ul style="list-style-type: none"> • Minimise the size, depth and slope of the batters of the final void • Minimise the drainage catchment of the final void • Safe access for fire fighting

Note: *The rehabilitation objectives related to the establishment of native vegetation communities do not constitute an obligation for biodiversity offset purposes. Biodiversity offsets obligations in relation to development approved under this consent are regulated by conditions B46 to B52.*

Progressive Rehabilitation

B54. The Applicant must rehabilitate the site progressively, that is, as soon as reasonably practicable following disturbance. All reasonable steps must be taken to minimise the total area exposed at any time. Interim stabilisation and temporary vegetation strategies must be employed when areas prone to dust generation, soil erosion and weed incursion cannot be permanently rehabilitated.

Note: *It is accepted that some parts of the site that are progressively rehabilitated may be subject to further disturbance at some later stage of the development.*

Rehabilitation Management Plan

B55. Within 12 months of commencement of development under this consent, the Applicant must prepare a Rehabilitation Management Plan for the development to the satisfaction of the Planning Secretary. This plan must:

- (a) be prepared by suitably qualified and experienced person/s;
- (b) describe the short, medium, and long-term measures to be undertaken to ensure compliance with the rehabilitation objectives in this consent;
- (c) include a conceptual closure plan that considers the hydrological and hydraulic impacts of the final landform;
- (d) include detailed performance and completion criteria for evaluating the performance of rehabilitation of the site, including triggers for remedial action, where these performance or completion criteria are not met;
- (e) include a seasonally-based program to monitor and report on the effectiveness of rehabilitation measures, progress against the detailed performance and completion criteria, and any progressive improvements that could be implemented to improve rehabilitation outcomes;
- (f) monitor and report on the impacts of the development on riparian vegetation, and identify trigger levels for the remediation of any material impacts to this vegetation;
- (g) include an adaptive management framework for rehabilitation of the site;
- (h) identify the potential risks to the successful implementation of the final rehabilitation, and include a description of the contingency measures to be implemented to mitigate against these risks; and
- (i) include details of the process and who would be responsible for monitoring, reviewing, and implementing the plan.

B56. The Applicant must implement the approved Rehabilitation Management Plan.

Rehabilitation Bond

B57. Within 6 months of the approval of the Rehabilitation Management Plan, the Applicant must lodge a Rehabilitation Bond with the Department to ensure that the rehabilitation of the site is undertaken in accordance with the performance and completion criteria set out in the plan and the relevant conditions of this consent. The sum of the bond must be an amount agreed to by the Planning Secretary and determined by:

- (a) calculating the cost of rehabilitating all existing and immediately proposed disturbed areas of the site (taking into account likely surface disturbance over the next 3 years of quarrying operations); and
- (b) employing a suitably qualified, independent and experienced person to verify the calculated costs.

B58. The calculation of the Rehabilitation Bond must be submitted to the Department for approval at least 1 month prior to the proposed lodgement of the bond.

B59. The Rehabilitation Bond must be reviewed and if required, an updated bond must be lodged with the Department within 3 months following:

- (a) any update or revision to the Rehabilitation Management Plan;
- (b) completion of an Independent Environmental Audit in which recommendations relating to rehabilitation have been made; or
- (c) a request by the Planning Secretary,

- B60. If rehabilitation of this site is completed generally in accordance with the relevant performance and completion criteria, to the satisfaction of the Planning Secretary, the Planning Secretary will release the bond.
- B61. If rehabilitation of the site is not completed generally in accordance with the relevant performance and completion criteria, the Planning Secretary will call in all, or part of, the bond, and arrange for the completion of the relevant works.

Note: *In the event that the bond is called in, the Planning Secretary may provide all, or part of, the bond to FCNSW to complete the relevant works.*

VISUAL

- B62. The Applicant must:
- (a) take all reasonable steps to minimise the visual and off-site lighting impacts of the development;
 - (b) ensure that all external lighting associated with the development complies with relevant Australian Standards including *Australian/New Zealand Standard AS/NZS 4282:2023: Control of Obtrusive Effects of Outdoor Lighting*, or its latest version as may be in force.
 - (c) ensure that the visual appearance of all buildings, structures, facilities or works (including paint colours and specifications) is aimed at blending as far as possible with the surrounding landscape; and
 - (d) take all reasonable steps to shield views of quarrying operations and associated equipment from users of public roads and privately-owned residences.

WASTE

- B63. The Applicant must:
- (a) manage on-site sewage treatment and disposal in accordance with the requirements of an applicable EPL, and to the satisfaction of EPA;
 - (b) classify all waste in accordance with the *Waste Classification Guidelines* (EPA, 2014);
 - (c) minimise the waste generated by the development;
 - (d) ensure that the waste generated by the development is appropriately stored, handled, and disposed of; and
 - (e) monitor and report on waste minimisation and management in the Annual Review referred to in condition D10.
- B64. Except as expressly permitted in an applicable EPL, specific resource recovery order or exemption under the *Protection of the Environment Operations (Waste) Regulation 2014*, the Applicant must not receive waste at the site for storage, treatment, processing, reprocessing or disposal.

LIQUID STORAGE

- B65. The Applicant must ensure that all tanks and similar storage facilities (other than for water) are protected by appropriate bunding or other containment, in accordance with the relevant Australian Standards.

DANGEROUS GOODS

- B66. The Applicant must ensure that the storage, handling, and transport of dangerous goods is done in accordance with the latest version of the Australian Standards, particularly *AS 1940-2004 The storage and handling of flammable and combustible liquids* (Standards Australia, 2004) and *AS/NZS 1596:2014 The storage and handling of LP Gas* (Standards Australia, 2014), and the *Australian Dangerous Goods Code*.

BUSHFIRE MANAGEMENT

- B67. The Applicant must:
- (a) ensure that the development:
 - (i) provides for asset protection in accordance with the relevant requirements in *the Planning for Bushfire Protection* (RFS, 2019) guideline; and
 - (ii) ensure that there is suitable equipment to respond to any fires on the site; and
 - (b) assist the RFS and emergency services to the extent practicable if there is a fire in the vicinity of the site.

PART C ADDITIONAL PROCEDURES

NOTIFICATION OF EXCEEDANCES

- C1. As soon as practicable and no longer than 7 days after obtaining monitoring results showing an exceedance of any noise, blasting, water, or air quality criterion in PART B of this consent, the Applicant must:
- (a) provide to any affected landowners and tenants; and
 - (b) publish on its website
- the full details of the exceedance.
- C2. For any exceedance of any air quality criterion in PART B of this consent, the Applicant must also provide to any affected landowners and tenants a copy of the fact sheet entitled “*Mine Dust and You*” (NSW Minerals Council, 2011).

INDEPENDENT REVIEW

- C3. If a landowner considers the development to be exceeding any noise, blasting, water quality or air quality criterion in PART B of this consent, they may ask the Planning Secretary in writing for an independent review of the impacts of the development on their land.
- C4. If the Planning Secretary is not satisfied that an independent review is warranted, the Planning Secretary will notify the landowner in writing of that decision, and the reasons for that decision, within 21 days of the request for a review.
- C5. If the Planning Secretary is satisfied that an independent review is warranted, within 3 months of the Planning Secretary’s decision, or as otherwise agreed by the Planning Secretary and the landowner, the Applicant must:
- (a) commission a suitably qualified, experienced and independent person, whose appointment has been approved by the Planning Secretary, to:
 - (i) consult with the landowner to determine their concerns;
 - (ii) conduct monitoring to determine whether the development is complying with the relevant criteria in PART B of this consent; and
 - (iii) if the development is not complying with any relevant criterion, identify measures that could be implemented to ensure compliance with that criterion;
 - (b) give the Planning Secretary and landowner a copy of the independent review; and
 - (c) comply with any written requests made by the Planning Secretary to implement any findings of the review.

PART D ENVIRONMENTAL MANAGEMENT, REPORTING AND AUDITING

ENVIRONMENTAL MANAGEMENT

Environmental Management Strategy

- D1. An Environmental Management Strategy must be prepared for the development. This strategy must:
- (a) provide the strategic framework for environmental management of the development;
 - (b) identify the statutory approvals that apply to the development;
 - (c) set out the role, responsibility, authority and accountability of all key personnel involved in the environmental management of the development;
 - (d) set out the procedures to be implemented to:
 - (i) keep the local community and relevant agencies informed about the operation and environmental performance of the development;
 - (ii) receive record, handle and respond to complaints;
 - (iii) resolve any disputes that may arise during the course of the development;
 - (iv) respond to any non-compliance and any incident;
 - (v) respond to emergencies; and
 - (e) include:
 - (i) references to any strategies, plans and programs approved under the conditions of this consent; and
 - (ii) a clear plan depicting all the monitoring to be carried out under the conditions of this consent.
- D2. The Applicant must not commence construction or quarrying operations until the Environmental Management Strategy is approved by the Planning Secretary.
- D3. The Applicant must implement the approved Environmental Management Strategy.

Management Plan Requirements

- D4. Management plans required under this consent must be prepared in accordance with relevant guidelines, and include:
- (a) a summary of relevant background or baseline data;
 - (b) details of:
 - (i) the relevant statutory requirements (including any relevant approval, licence or lease conditions);
 - (ii) any relevant limits or performance measures and criteria; and
 - (iii) the specific performance indicators that are proposed to be used to judge the performance of, or guide the implementation of, the development or any management measures;
 - (c) a description of the measures to be implemented to comply with the relevant statutory requirements, limits, or performance measures and criteria;
 - (d) a program to monitor and report on the:
 - (i) impacts and environmental performance of the development; and
 - (ii) effectiveness of the management measures set out pursuant to condition D4(c);
 - (e) a contingency plan to manage any unpredicted impacts and their consequences and to ensure that ongoing impacts reduce to levels below relevant impact assessment criteria as quickly as possible;
 - (f) a program to investigate and implement ways to improve the environmental performance of the development over time;
 - (g) a protocol for managing and reporting any:
 - (i) incident, non-compliance or exceedance of the impact assessment criteria or performance criteria;
 - (ii) complaint; or
 - (iii) failure to comply with statutory requirements; and
 - (h) a protocol for periodic review of the plan.

Note: *The Planning Secretary may waive some of these requirements if they are unnecessary or unwarranted for particular management plans.*

REVISION OF STRATEGIES, PLANS AND PROGRAMS

- D5. Within three months of:
- (a) the submission of an incident report under condition D7;
 - (b) the submission of an Annual Review under condition D10;
 - (c) the submission of an Independent Environmental Audit under condition D12;

- (d) the approval of any modification of the conditions of this consent;
- (e) notification of a change in development stage under condition A19; or
- (f) the issue of a direction of the Planning Secretary under condition A2(b) which requires a review,

the suitability of existing strategies, plans and programs required under this consent must be reviewed by the Applicant.

- D6. If necessary, to either improve the environmental performance of the development, cater for a modification or comply with a direction, the strategies, plans and programs required under this consent must be revised, to the satisfaction of the Planning Secretary and submitted to the Planning Secretary for approval within six weeks of the review.

Note: *This is to ensure strategies, plans and programs are updated on a regular basis and to incorporate any recommended measures to improve the environmental performance of the development.*

REPORTING AND AUDITING

Incident Notification

- D7. The Applicant must notify the Department within 24 hours of becoming aware of an incident. The notification must be made via the NSW planning portal (Major Projects) and address details of the incident including:

- (a) date, time and location;
- (b) a brief description of what occurred and why it has been classified as an incident;
- (c) a description of what immediate steps were taken in relation to the incident; and
- (d) identifying a contact person for further communication regarding the incident.

- D8. The Applicant must provide the Department with a subsequent incident report in accordance with the requirements set out in Appendix 7.

Non-Compliance Notification

- D9. Within seven days of becoming aware of a non-compliance, the Applicant must notify the Department of the non-compliance. The notification must be in writing and must be submitted via the NSW planning portal (Major Projects). The notification must identify the development (including the development application number and name), set out the condition of this consent that the development is non-compliant with, why it does not comply, the reasons for the non-compliance (if known), and what actions have been undertaken, or will be undertaken, and when, to address the non-compliance

Note: *A non-compliance which has been notified as an incident does not need to also be notified as a non-compliance.*

Annual Review

- D10. By the end of March in each year after the commencement of development, or other timeframe agreed by the Planning Secretary, a report must be submitted to the Department reviewing the environmental performance of the development, to the satisfaction of the Planning Secretary. This review must:

- (a) describe the development (including any rehabilitation) that was carried out in the previous calendar year, and the development that is proposed to be carried out over the current calendar year;
- (b) include a comprehensive review of the monitoring results and complaints records of the development over the previous calendar year, including a comparison of these results against the:
 - (i) relevant statutory requirements, limits or performance measures/criteria;
 - (ii) requirements of any plan or program required under this consent;
 - (iii) monitoring results of previous years; and
 - (iv) relevant predictions in the documents listed condition A2(c).
- (c) identify any non-compliance or incident which occurred in the previous calendar year, and describe what actions were (or are being) taken to rectify the non-compliance and avoid reoccurrence;
- (d) evaluate and report on:
 - (i) the effectiveness of the noise, blasting, air quality and water management systems; and
 - (ii) compliance with the performance measures, criteria and operating conditions in this consent;
- (e) identify any trends in the monitoring data over the life of the development;
- (f) identify any discrepancies between the predicted and actual impacts of the development, and analyse the potential cause of any significant discrepancies; and
- (g) describe what measures will be implemented over the current calendar year to improve the environmental performance of the development.

- D11. Copies of the Annual Review must be submitted to Council and Hunter Water and made available to the CCC and any interested person upon request.

Independent Environmental Audit

- D12. Within one year of the commencement any development under this consent, and every three years after, unless the Planning Secretary directs otherwise, the Applicant must commission and pay the full cost of an Independent Environmental Audit of the development. The audit must:
- (a) be led and conducted by a suitably qualified, experienced and independent team of experts whose appointment has been endorsed by the Planning Secretary;
 - (b) be carried out in consultation with the relevant agencies and the CCC;
 - (c) assess the environmental performance of the development and whether it is complying with the relevant requirements in this consent, water licences and EPL for the development (including any assessment, strategy, plan or program required under these approvals);
 - (d) review the adequacy of any approved strategy, plan or program required under this consent and the other abovementioned approvals;
 - (e) recommend appropriate measures or actions to improve the environmental performance of the development and any assessment, strategy, plan or program required under this consent and the other abovementioned approvals; and
 - (f) be conducted and reported to the satisfaction of the Planning Secretary.
- D13. Independent Environmental Audits of the development must be conducted and carried out in accordance with the Independent Environmental Audit Post Approval Requirements (2020) or as updated from time to time and published on the Department's website.
- D14. Within three months of commencing an Independent Environmental Audit, or within another timeframe agreed by the Planning Secretary, the Applicant must submit a copy of the audit report to the Planning Secretary, and any other NSW agency that requests it, together with its response to any recommendations contained in the audit report, and a timetable for the implementation of the recommendations. The recommendations must be implemented to the satisfaction of the Planning Secretary.

Note: *The audit team must be led by a suitably qualified auditor and include experts in any fields specified by the Planning Secretary.*

Monitoring and Environmental Audits

- D15. Any condition of this consent that requires the carrying out of monitoring or an environmental audit, whether directly or by way of a plan, strategy or program, is taken to be a condition requiring monitoring or an environmental audit under Division 9.4 of Part 9 of the EP&A Act. This includes conditions in respect of incident notification, reporting and response, non-compliance notification, compliance report and independent audit.
- For the purposes of this condition, as set out in the EP&A Act, "monitoring" is monitoring of the development to provide data on compliance with the consent or on the environmental impact of the development, and an "environmental audit" is a periodic or particular documented evaluation of the development to provide information on compliance with the consent or the environmental management or impact of the development.
- D16. Noise, blast and/or air quality monitoring under this consent may be undertaken at suitable representative monitoring locations instead of at privately-owned residences or other locations listed in PART B of this consent, providing that these representative monitoring locations are set out in the respective management plan/s.

ACCESS TO INFORMATION

- D17. Before the commencement of construction until the completion of all rehabilitation required under this consent, the Applicant must:
- (a) make the following information and documents (as they are obtained, approved or as otherwise stipulated within the conditions of this consent) publicly available on its website:
 - (i) the document/s listed in condition A2(c);
 - (ii) all current statutory approvals for the development;
 - (iii) construction progress updates at appropriate milestones, including any substantial delays;
 - (iv) all approved strategies, plans and programs required under the conditions of this consent;
 - (v) minutes of CCC meetings;
 - (vi) regular reporting on the environmental performance of the development in accordance with the reporting requirements in any plans or programs approved under the conditions of this consent;
 - (vii) a comprehensive summary of the monitoring results of the development, reported in accordance with the specifications in any conditions of this consent, or any approved plans and programs;
 - (viii) a summary of the current stage and progress of the development;
 - (ix) contact details to enquire about the development or to make a complaint;
 - (x) a complaints register, updated monthly;

- (xi) the Annual Reviews of the development;
 - (xii) audit reports prepared as part of any Independent Environmental Audit of the development and the Applicant's response to the recommendations in any audit report;
 - (xiii) any other matter required by the Planning Secretary; and
- (b) keep such information up to date, to the satisfaction of the Planning Secretary.

APPENDIX 1: SCHEDULE OF LAND

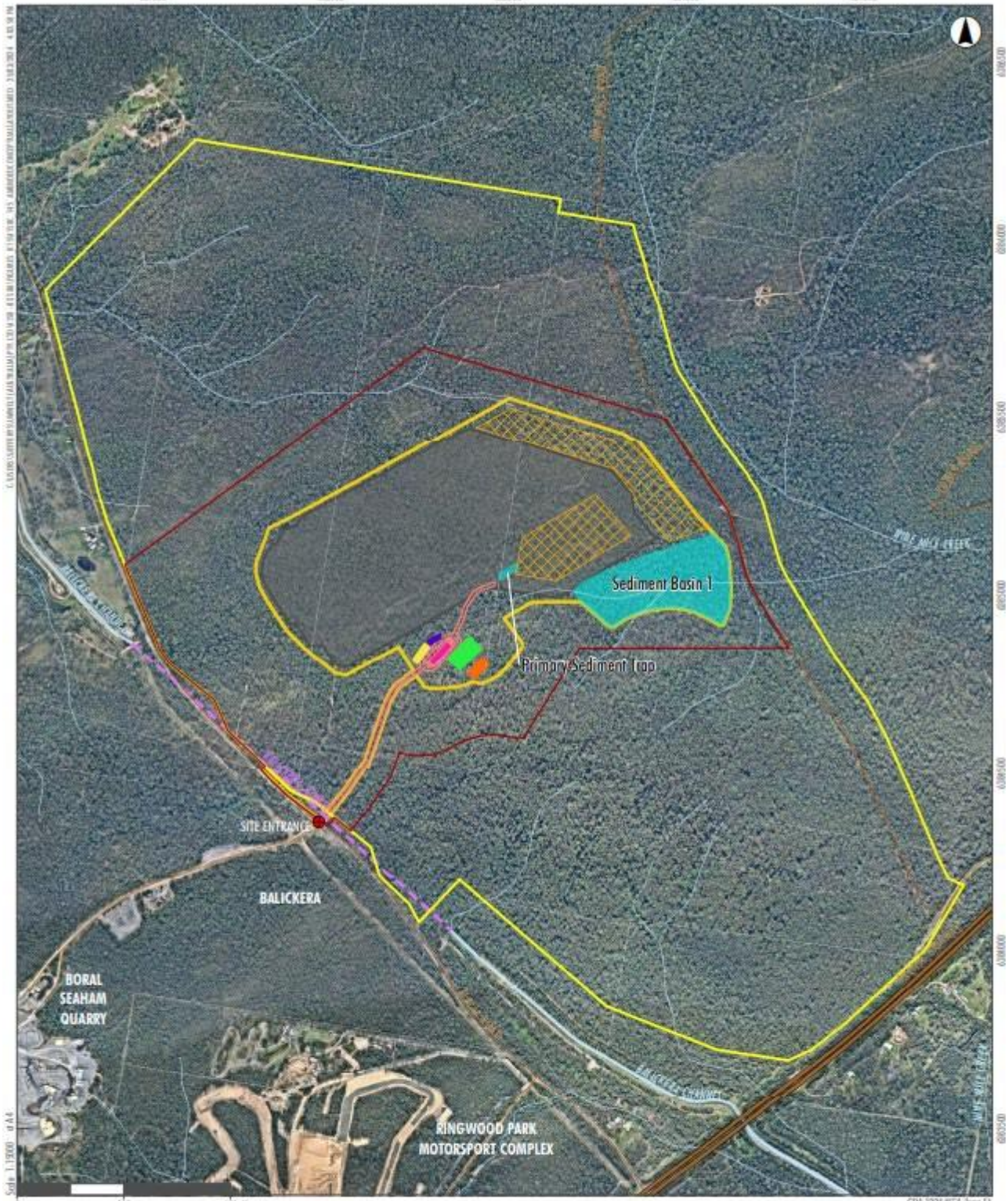
Lot 1 DP724372

Lot 36 DP753200

Lot 65 DP753200

Lot 540 DP1207159

APPENDIX 2: DEVELOPMENT LAYOUT PLAN



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

FIGURE 3.1
Amended Conceptual Quarry Layout

APPENDIX 3: RECEIVER LOCATIONS

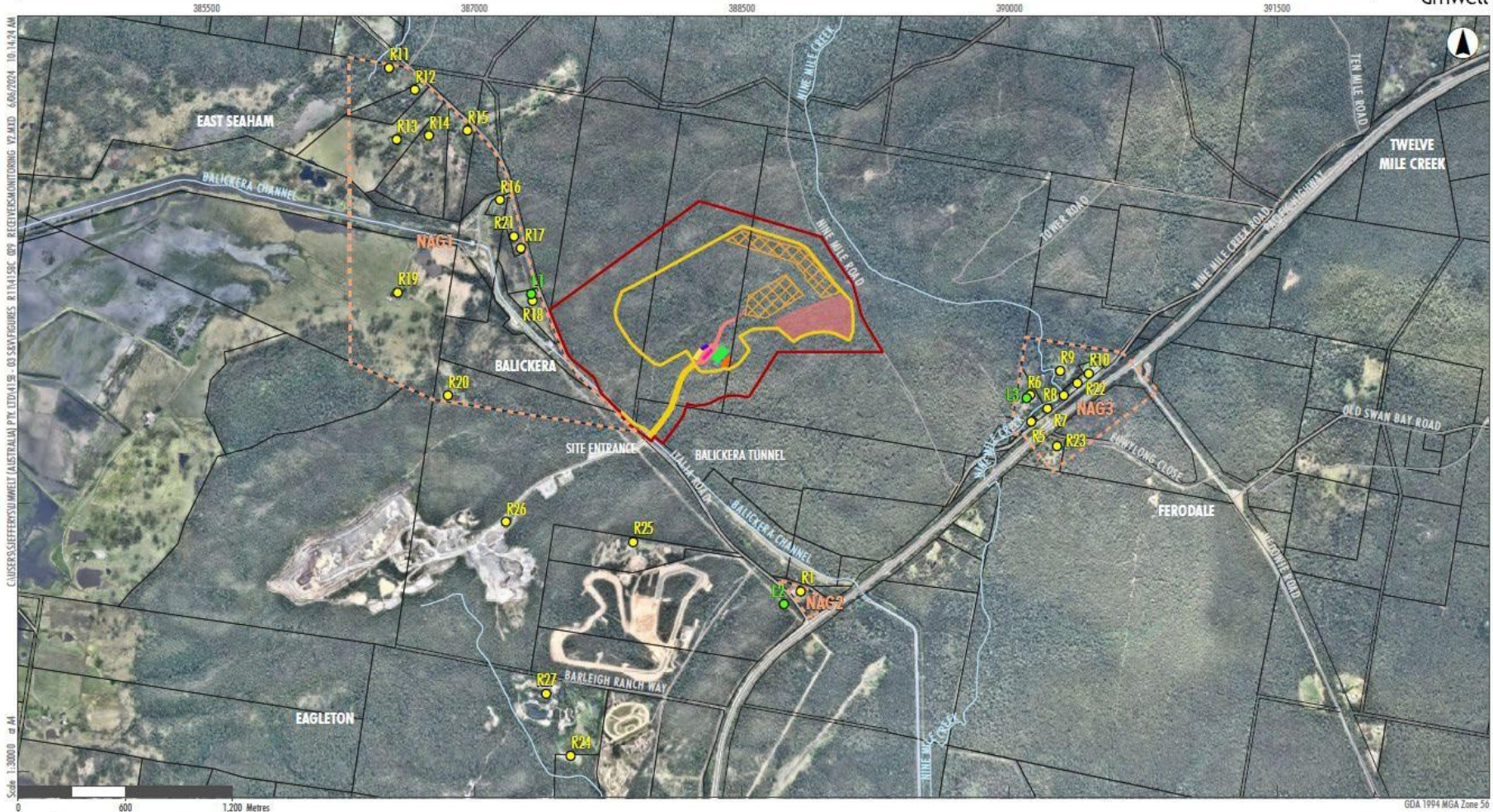


FIGURE 1.3

Sensitive Receivers and Noise Monitoring Locations

Image Source: Nearmap (2022) Data source: NSW F50F (2022)

APPENDIX 5: NOISE COMPLIANCE ASSESSMENT

Applicable Meteorological Conditions

1. The noise criteria in Table 2 of the conditions are to apply the meteorological conditions set out in Table 7. For those meteorological conditions not referred to Table 7, the noise criteria that apply are those in Table 2 plus 5dB.

Table 7: Meteorological conditions for noise compliance assessment

Assessment period	Meteorological conditions
Day & Evening	Stability categories A, B, C and D with wind speeds up to and including 0.5m/s at 10m above ground level
Morning shoulder	Stability categories A, B, C, D and E with wind speeds up to and including 3m/s at 10m above ground level; or Stability category F with wind speeds up to and including 2m/s at 10m above ground level

Determination of Meteorological Conditions

2. For the purpose of determining meteorological conditions:
 - (a) the data to be used shall be that recorded by the meteorological station required under B20; and
 - (b) Stability category shall be determined using the sigma-theta method (section D1.4) from *Fact Sheet D* of the *NSW Noise Policy for Industry* (EPA, 2017).

Compliance Monitoring

3. A noise compliance assessment must be undertaken within two months of commencement of the road transportation of quarry products. The assessment must be conducted by a suitably qualified and experienced acoustical practitioner and must assess compliance with noise criteria presented above. A report must be provided to the Department and EPA within 1 month of the assessment.
4. Unless otherwise agreed by the Planning Secretary, attended compliance monitoring must be carried out in accordance with the relevant requirements for reviewing performance set out in the *NSW Noise Policy for Industry* (EPA, 2017), in particular the requirements relating to:
 - (a) monitoring locations for the collection of representative noise data;
 - (b) meteorological conditions during which collection of noise data is not appropriate;
 - (c) equipment used to collect noise data, and conformity with Australian Standards relevant to such equipment; and
 - (d) modifications to noise data collected, including for the exclusion of extraneous noise and/or penalties for modifying factors apart from adjustments for duration,

with the exception of applying appropriate modifying factors for low frequency noise during compliance testing. This should be undertaken in accordance with *Fact Sheet C* of the *NSW Noise Policy for Industry* (EPA, 2017).

APPENDIX 6: CONCEPTUAL REHABILITATION PLAN

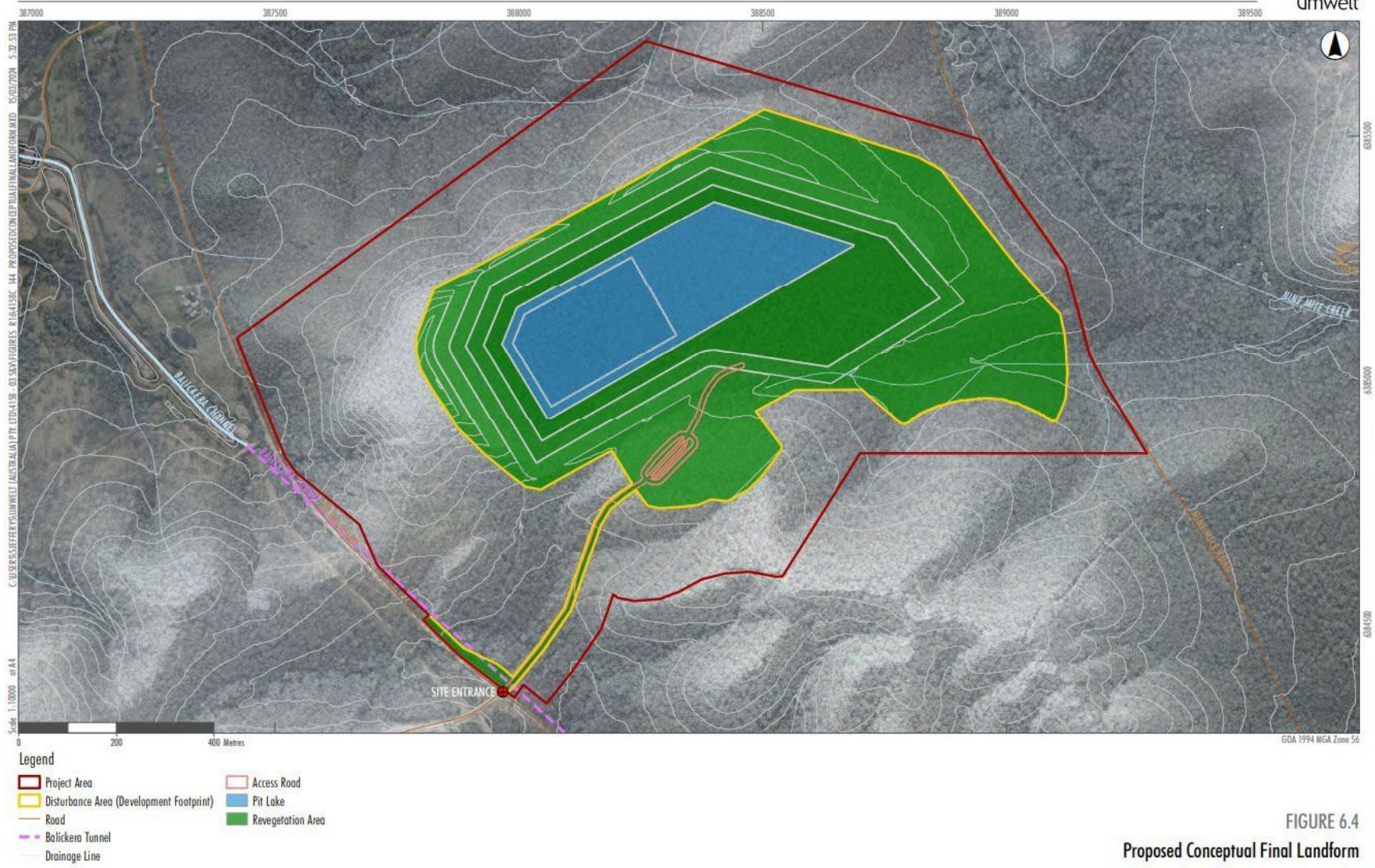


FIGURE 6.4
Proposed Conceptual Final Landform

APPENDIX 7: INCIDENT NOTIFICATION AND REPORTING REQUIREMENTS

Written Incident Notification Requirements

1. All incident notifications and reports must be submitted via the NSW planning portal (Major Projects).
2. The Applicant must provide notification as required under these requirements, even if the Applicant fails to give the notification required under condition D7 or, having given such notification, subsequently forms the view that an incident has not occurred.
3. Within 7 days (or as otherwise agreed by the Planning Secretary) of the Applicant making the immediate incident notification (in accordance with condition D7), the Applicant is required to submit a subsequent incident report that:
 - a) identifies how the incident was detected;
 - b) identifies when the Applicant became aware of the incident;
 - c) identifies any actual or potential non-compliance with conditions of consent;
 - d) identifies further action(s) that will be taken in relation to the incident;
 - e) a summary of the incident;
 - f) outcomes of an incident investigation, including identification of the cause of the incident;
 - g) details of the corrective and preventative actions that have been, or will be, implemented to address the incident and prevent recurrence, including the period for implementing any corrective and/or preventative actions; and
 - h) details of any communication with other stakeholders regarding the incident.
4. The Applicant must submit any further reports as directed by the Planning Secretary.

Appendix C - Consolidated Management Measures

ARDG will be responsible for implementing the management and mitigation measures identified in the EIS. The management and mitigation measures will be implemented through a Construction Environmental Management Plan (CEMP) and Operational Environmental Management Plan (OEMP). These plans will be prepared sequentially, prior to each stage of the Project by ARDG and the relevant contractor, and in consultation with relevant Government Agencies. The following table provides a consolidated list of the management and mitigation measures applicable to the Project and relevant timing for implementation.

Aspect	Management/Mitigation Measure	Timing
General	ARDG will prepare and implement a Construction Environmental Management Plan (CEMP) for the Project, incorporating all relevant management and mitigation measures outlined in the EIS and Amendment Report.	Prior to the commencement of construction
	ARDG will prepare and implement an Operation Environmental Management Plan (OEMP) for the Project, incorporating all relevant management and mitigation measures outlined in the EIS and Amendment Report.	Prior to the commencement of operation
	<p>The proposed construction hours will be in accordance with the Interim Construction Noise Guidelines (DECC, 2009) which identify standard hours for construction activities in NSW:</p> <ul style="list-style-type: none"> • Monday to Friday: 7.00 am to 6.00 pm • Saturday: 8.00 am to 1.00 pm • Sunday and Public Holidays: no work. 	Construction phase
	<p>The proposed hours of operation for the key quarry activities include:</p> <p>Blasting: 9.00 am to 5.00 pm Monday to Friday Anticipated need for 1 to 2 blasts per fortnight</p> <p>Quarrying and processing:</p> <ul style="list-style-type: none"> • 7.00 am to 6.00 pm Monday to Friday • 7.00 am to 3.00 pm Saturday <p>Truck loading, product transport and maintenance:</p> <ul style="list-style-type: none"> • 6.00 am to 10.00 pm Monday to Friday • 7.00 am to 3.00 pm Saturdays <p>No operation on Sundays or Public Holidays apart from maintenance activities as required</p>	Operation phase

Aspect	Management/Mitigation Measure	Timing
Noise	<p>The CEMP and OEMP will include the following monitoring and management controls to manage potential noise impacts associated with construction activities and site operations:</p> <ul style="list-style-type: none"> • noise objectives and targets consistent with the Project approval • noise management measures in place at the site • provision of general noise awareness training for key operational staff • noise monitoring processes implemented at the site to provide for ongoing noise management, including: <ul style="list-style-type: none"> ○ monitoring and determination of compliance with relevant noise criteria provided in the Project approval ○ stakeholder consultation ○ complaint/enquiry handling process including maintenance of a 24-hour community contact line ○ a roles and responsibilities matrix, with responsibilities being clearly defined through all levels within the operation. 	Construction and operation
	<p>Compliance monitoring will be undertaken annually via attended monitoring at defined locations. Attended monitoring for compliance assessment will be undertaken at three locations surrounding the Project Area that are considered to be representative of the most sensitive noise receivers, with one in each NAG. The attended noise monitoring locations will be reviewed periodically to ensure monitoring is undertaken at appropriate representative locations. Any changes will be reflected in amendments to the OEMP prior to being implemented.</p> <p>Annual validation monitoring will also be undertaken to confirm the noise model predictions and accuracy of the noise model. For efficiency purposes, it is likely that compliance monitoring and validation monitoring will be undertaken concurrently.</p>	Construction and operation
	<p><u>ARDG will offer to install double glazing (if not already installed) on all windows at residence R1, and if the resident confirms that they would like it to be installed, arrange for and pay for that installation.</u></p>	<p><u>Prior to the commencement of any haulage down Italia Road</u></p>
	<p><u>ARDG will offer to install double glazing (if not already installed) on all east- and south-facing windows (i.e. facing from 045° to 180° from True North) of residences R16, R17, R18 and R21, and if the residents confirm they would like to be installed, arrange for and pay for that installation.</u></p>	<p><u>Prior to the commencement of quarrying operations on Stage 5</u></p>

Blasting	<p>The following blast emission control measures will be implemented to minimise blasting impacts (including ground vibration, airblast overpressure and flyrock impacts) on the surrounding environment:</p> <ul style="list-style-type: none"> • use of ground vibration and airblast predictive models to estimate potential impacts for critical receptors • use of appropriate charge mass design and avoidance of overcharging holes • use of an appropriate initiation sequence to minimise the possibility of hole interactions, ideally aiming for single hole initiation • application of appropriate quality stemming material and stemming height to facilitate explosives confinement and therefore minimise airblast overpressure emissions, stemming ejection and/or flyrock incidents • maintain appropriate burden specification for the front row holes to avoid face bursts and related flyrock incidents. 	Operation
	<p>ARDG will implement a Blast Monitoring, consisting of three monitoring stations to capture ground vibration and airblast overpressure impacts from blasting at the Project site. Located to the north-west (representative of private residences in the Balickera area, HWC infrastructure and Balickera House), south-east (representative of private residences in the Ferodale area) and south of the Project (in the vicinity of R1).</p>	Operation
	<p>ARDG will implement a Pre-Blast Assessment Protocol to manage blasting and to minimise the impacts on the surrounding area. The protocol would be reviewed on a regular basis to address the physical changes in the quarry.</p>	Operation
	<p>ARDG will implement a Road Closure Management Plan developed in consultation with the relevant road authorities and PSC to manage blasting impacts on public roads which, depending on the operational stage of the quarry, will be located within 0.5 km of the extraction area.</p>	Operation
	<p>ARDG will implement a Residence Notification System to provide information on the dates and times of proposed blasting to the private residences in close proximity.</p>	Operation
	<p>ARDG will continue to liaison with adjacent quarries to prevent concurrent blasting times to avoid cumulative blast impacts and to minimise impact on the local community.</p>	Operation
	<p>ARDG will develop and implement an adaptive management plan (in accordance with Section 8.4.2 of the BAM) for microbats roosting in the Balickera Tunnel prior to the commencement of blasting activities associated with the Project. This will include a monitoring program to confirm the level of predicted impact of blasting on microbats and, if necessary, implement additional management measures to mitigate any observed impacts attributable to blasting associated with the Project.</p>	Operation

Air Quality	<p>The CEMP and OEMP will include the following monitoring and management controls to manage potential air quality impacts associated with construction activities and site operations:</p> <ul style="list-style-type: none"> • minimising the area of disturbed land at any one time, in line with an approved Quarry Operations Plan • implementation of timely progressive rehabilitation • review of meteorological conditions prior to blasting • consideration of meteorological conditions in planning the loading and unloading of overburden and product materials • minimising fall distance during loading and unloading of materials. • Procedures for monitoring background PM10 levels at Beresfield and additional dust management controls in event that 1-hr average PM10 levels at Beresfield EPA monitor exceed 80 µg/m³ 		Construction and operation																	
	<p>The following emission management measures will be implemented:</p> <table border="1"> <thead> <tr> <th>Activity</th> <th>Emission Management Measures</th> <th>Assumed emission control (%)</th> </tr> </thead> <tbody> <tr> <td>Drilling rock</td> <td>Water sprays (as required) Minimising activities when excessive visible dust is generated</td> <td>70%</td> </tr> <tr> <td>Hauling on roads</td> <td>Watering of unsealed haul routes/roads Restricting vehicle speeds Clearly marked haul routes</td> <td>50%</td> </tr> <tr> <td>Crushing and screening</td> <td>Enclosures Water sprays (as required)</td> <td>70%</td> </tr> <tr> <td>Conveyors between process units</td> <td>Water sprays (as required)</td> <td>50%</td> </tr> <tr> <td>Wind erosion</td> <td>Water sprays Minimising activities when excessive visible dust is generated Stabilising and minimising the extent of materials stored on-site Progressive rehabilitation of exposed areas</td> <td>50 to 65%</td> </tr> </tbody> </table>		Activity	Emission Management Measures	Assumed emission control (%)	Drilling rock	Water sprays (as required) Minimising activities when excessive visible dust is generated	70%	Hauling on roads	Watering of unsealed haul routes/roads Restricting vehicle speeds Clearly marked haul routes	50%	Crushing and screening	Enclosures Water sprays (as required)	70%	Conveyors between process units	Water sprays (as required)	50%	Wind erosion	Water sprays Minimising activities when excessive visible dust is generated Stabilising and minimising the extent of materials stored on-site Progressive rehabilitation of exposed areas	50 to 65%
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	<p>The following measures will be implemented to manage diesel exhaust emissions:</p> <ul style="list-style-type: none"> • servicing machinery in accordance with maintenance contracts and adopting original equipment manufacturer recommendations for maintenance • additional maintenance where needed to ensure equipment remains fit for purpose over its whole life cycle • defining failure modes to help minimise potential equipment failure. 		Construction and operation																	

Greenhouse Gas Emissions	<p>The following measures will be implemented to reduce the level of future greenhouse gas emissions:</p> <ul style="list-style-type: none"> ensuring that mobile plant and equipment are maintained and operated in an efficient manner so that unnecessary fuel usage is avoided, including the shutting down of plant and equipment when not in use and ensuring they are operated in the most efficient mode minimising the extent of vegetation clearance and implementing revegetation and regeneration of completed areas as soon as practicable. raising awareness of climate change issues amongst all stakeholders. <p>The feasibility of introducing lower emission equipment will be investigated during the replacement cycle for machinery.</p>	<p>Construction and operation</p>
Surface Water	<p>The conceptual operational Water Management System (WMS) as described in Section 6.5.1.2 of the EIS will be implemented and maintained for the life of the operations.</p> <p>A detailed Soil and Water Management Plan (SWMP) will be prepared and incorporated into the CEMP/OEMP, by a suitably qualified person to facilitate implementation of best practice erosion and sediment controls during all stages of the Project. All erosion and sediment controls will be installed, managed and maintained in general accordance with the Blue Book (Landcom, 2004) to:</p>	<p>Construction and operation</p>
	<ul style="list-style-type: none"> divert clean water around site prevent sediment moving off-site and sediment laden water entering any watercourse, drainage line, or drain inlet reduce water velocity and capture sediment on site minimise the amount of material transported from site to surrounding pavement surfaces. <p>During all stages of the Project, including the construction phase, erosion and sediment controls will be established in general accordance with <i>Managing Urban Stormwater – Soils and Construction Volume 1 (Landcom, 2004)</i> and <i>Volume 2E: Mines and quarries (the Blue Book) (Department of Environment and Climate Change, 2008)</i>.</p>	

	<p>The CEMP and OEMP will include the following monitoring and management controls to manage potential impacts to surface water associated with construction activities and site operations:</p> <ul style="list-style-type: none"> • To minimise ground disturbance, construction and operational activities including vehicle and machinery movements, stockpiling, temporary vehicle parking and material laydown will be restricted to designated work areas. The disturbance boundary is to be clearly delineated with construction fencing or barrier tape. • All fuels, chemicals and liquids will be stored in an impervious bunded area, a minimum of 50 m away from drainage lines or waterways and all refuelling of plant and equipment is to be undertaken within this area. • Emergency spill kits will be kept on site at all times. All workers will be made aware of the location of the spill kits and trained in their use. • Any concrete washout undertaken on site will be in a bunded area that is not on waterfront land and at least 10 m from drains. • Where possible, topsoil will be stripped and handled only when it is moist (not wet or dry) to avoid decline of soil structure. • Topsoil stockpiles will be stabilised with vegetation (seeded) if they are to be inactive for long periods. • Stockpiles of erodible material that have the potential to cause environmental harm if displaced will be located away from concentrated surface flow and excessive up-slope stormwater surface flows. • Wherever reasonable and practicable, 'clean' surface waters will be diverted away from sediment control devices and any untreated, sediment-laden waters. • All runoff from the works will pass through sediment controls which will be located as close to the source of the sediment as practicable. • Sediment control devices will be de-silted and made fully operational as soon as reasonable and practicable after a sediment-producing event. Sediment traps will be maintained to ensure that no more than 30% of their design capacity is lost to accumulated sediment. • Sediment removed from any trapping device will be disposed of in locations where further erosion and consequent pollution to downslope lands and waterways will not occur. • Temporary soil and water management structures will be removed only after the Project Area is stabilised appropriately. 	<p>Construction and operation</p>
	<p>ARDG will obtain an Environment Protection Licence (EPL) for carrying out a premises-based activity listed in Schedule 1 of the <i>Protection of the Environment Operations Act 1997</i> (i.e., extractive activities greater than 30,000 tonnes/year and crushing, grinding separating works). ARDG will include a request for at least one licensed discharge point in the EPL application to allow controlled discharges of surplus water from the quarry WMS.</p>	<p>Construction and operation</p>

	<p>ARDG will implement a surface water quality monitoring program including a continuation of monitoring in the three receiving waters reference sites in Nine Mile Creek plus an additional downstream site in a tributary of Caswells Creek, adjacent to Italia Road. Monitoring of water quality would also be undertaken within Sediment Basin 1, Sediment Basin 2, Main Pit Sump and the quarry licensed discharge point.</p> <p>Stored water volumes and discharge flow rates and volumes would also be monitored across the WMS and an automatic weather station installed to provide continuous recording of rainfall depth.</p> <p>Routine stream stability monitoring will be undertaken as recommended in the baseline stream stability assessment that will be completed prior to construction.</p> <p>An inspection and water quality testing program for potable water stored in tanks on site will also be implemented to ensure amenities water quality meets the relevant Australian Drinking Water Guidelines.</p>	Construction and operation
Groundwater	<p>The CEMP and OEMP will include a groundwater monitoring program to:</p> <ul style="list-style-type: none"> • inform estimates of groundwater inflow into the pit (noting that a significant percentage is likely to evaporate on pit walls and in sumps and is not directly measurable) • assess potential impacts to groundwater levels and quality on other groundwater users in the vicinity • identify groundwater issues such as higher than predicted drawdowns that may impact receptors as early as possible • provide data which can be used to calibrate the analytical model and update the groundwater inflow predictions • measure groundwater level recovery post-closure and provide data which can be used to predict the length of time a WAL may be required after the Project is completed. 	Construction and operation
	<p>ARDG will install a monitoring bore approximately 1 km from the Project Area, to the north-west, to confirm drawdown predictions in the GWIA and inform ARDG of any higher than predicted impacts on drawdown which may affect private bores before the pit depth reaches a point at which it may impact those bores. The precise location of this bore will be identified in the OEMP and will be installed, and monitoring commissioned prior to the development quarrying below the water table. Other than this additional bore, all other aspects of the monitoring program will be implemented prior to commencement of extraction. The groundwater monitoring program will include regular monitoring of water levels and water quality. Given access to some bores may be difficult in very wet weather data, loggers will be installed in at least two monitoring bores outside of the final quarry footprint, to provide a continuous record. Estimates of groundwater inflows will be obtained through an interpretation of rainfall, evaporation, bore data and pumping data from the pit.</p>	Operation
	<p>Prior to the pit floor in the Main Pit (not including the sump) progressing below 28m AHD, a GDE monitoring and management plan (GDEMMP) will be developed and implemented. The GDEMMP will be designed to identify the magnitude of drawdown</p>	Operation – prior to mining below 28m AHD
	<p>impacts to the north of the Project Footprint as quarry operations in North Pit and Main pit progress below the interpolated water table. The Plan will be informed by updated drawdown predictions and an improved understanding (or conservative assumptions) around groundwater dependency and ecological value of vegetation communities identified as being probable GDEs. Triggers for management actions will be developed where groundwater and vegetation monitoring indicates groundwater drawdown is having, or likely to have, an impact on vegetation that is outside that which would be expected through natural variability.</p>	

Biodiversity	<p>The CEMP and OEMP will include the following management measures to mitigate the residual impacts (direct, indirect and prescribed) associated with the Project:</p> <ul style="list-style-type: none"> • Workforce Education and Training – to create awareness of the key ecological issues, understand policies being implemented to protect biodiversity and responsibilities relating to weed management. • Vegetation Protection Zones for retained vegetation – appropriate temporary fencing and clear and visible signage. • Ecologist pre-clearance survey and supervision of work – pre-clearing relocation survey for fauna, staged clearing work, management of fauna during clearing, ecologist supervision of all hollow tree felling and nest box installation. • Erosion and Sediment Control – minimising disturbance, erosion and sediment control structures, surface water management structures and stabilisation of disturbed areas.’ • Weed Management – survey and treatment of invasive weeds, ongoing inspections and treatment, cleaning of machinery prior to entering the site. • Fencing, access control and fauna exclusion – security fencing will assist with limiting fauna access to operational areas. 	Construction and operation																								
	<p>ARDG will develop a biodiversity offset strategy during the assessment process in consultation with FCNSW, BCD, DPPI and DCCEE. The biodiversity offset strategy will be based on the credits required to be retired to offset the impacts of the Project and the offset options available under the BC Act and BC Regulation including:</p> <ul style="list-style-type: none"> • Land based offsets through the establishment of new Stewardship Sites (and subsequent retirement of credits). ARDG would retire the required number and class of credits determined in accordance with the BDAR and the offset rules in the BC Regulation. • Securing (purchasing) credits through the open credit market, and/or • Paying into to the Biodiversity Conservation Fund (BCF). 	Construction																								
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	<p><u>The proponent will make a \$20,000 total annual contribution (to be indexed in accordance with the consumer price index (CPI) All Groups (Sydney) with the base date being 7 August 2025 as released by the Australian Bureau of Statistics on a quarterly basis) across one or more-wildlife or wildlife repatriation agencies in the region.</u></p>	<p><u>The first payment is to be made within 30 days, from the date construction commences, and following the issue of the Forestry Materials Licence.</u></p> <p><u>The contribution will then be paid annually, and no later than 30 days after the commencement of each annual period.</u></p>
	<p><u>The proponent will conduct on-ground biodiversity investigations in the Wallaroo State Forest to determine the suitability of offsets in relation to biodiversity features and likely credit generation in accordance with the like-for-like offsetting rules under the Biodiversity Conservation Regulation 2017.</u></p> <p><u>Following completion of this work, the outcomes will be reported to the Stone Ridge Quarry Community Consultative Committee.</u></p>	<p><u>Commenced within 6 months of receipt of a Forest Materials Licence.</u></p>
<p>Aboriginal Archaeology</p>	<p>The CEMP and OEMP will include the following management measures:</p> <ul style="list-style-type: none"> • ARDG will ensure that all parties involved in the Project (through induction processes) are aware that it is an offence under Section 86 of the <i>National Parks and Wildlife Act 1974</i> (NPW Act) to harm or desecrate an Aboriginal object (unless otherwise approved under the NPW Act or a development consent for SSD issued under the EP&A Act. • in the unlikely event that an Aboriginal object is exposed during works, all works in the vicinity of the object should cease and advice should be sought from an archaeologist and the RAPs in regard to management of the object(s). 	<p>Construction and operation</p>
<p>Historic Heritage</p>	<p>The CEMP and OEMP will include the following management measures:</p> <ul style="list-style-type: none"> • An unexpected finds protocol will be established and followed in the event that any unexpected historical archaeological deposits, artefacts, or structures of potential heritage significance are identified. 	<p>Construction and operation</p>
	<ul style="list-style-type: none"> • All Project team members and construction contractors will undergo a heritage-specific induction to support the use of the unexpected finds protocol prior to undertaking any activities within the Project Area. • In the unlikely event that unexpected finds are encountered during the Project, all work in the area will cease and a suitably qualified archaeologist will be contacted to determine an appropriate course of action. Depending on the extent and/or significance of the finds encountered, consultation with Heritage NSW may also be required prior to the re-commencement of works. 	

Traffic	<p>ARDG will implement the following traffic management and mitigation measures:</p> <ul style="list-style-type: none"> • No quarry product will be transported from the site until the Italia Road-Pacific Highway intersection works (the subject of a separate development application process by Boral) are completed to the satisfaction of Port Stephens Council/TfNSW. To prevent conflicts on the road network, heavy vehicles would only be permitted to turn left out of Italia Road onto the Pacific Highway. An acceleration lane is to be provided onto the Pacific Highway (as part of a separate development application process), essentially removing the left-turn movement in favour of a downstream merge movement. • No heavy vehicles would be permitted to travel west on Italia Road past the quarry access point (toward Seaham) either to or from the quarry site. • A new site access point would be constructed directly opposite the existing Boral Seaham Quarry on Italia Road. A Channelised Right Turn (CHR) treatment is to be provided on Italia Road at the site access, to enable safe right turns into the Project Area. • <u>Install speed bumps and limit traffic speed to 30km/h along the internal access road.</u> 	<p>Operation</p>
Geotechnical Stability	<p>ARDG will incorporate the following measures:</p> <ul style="list-style-type: none"> • When quarrying commences, regular site inspections will be undertaken to observe for signs of adverse geotechnical conditions. Furthermore, where site conditions are observed to deviate from those outlined in the Geotechnical Stability Review, additional intrusive investigation and/or defect mapping would be undertaken. This may include core sampling of key stratigraphic units, and laboratory testing to confirm the geomechanical properties and strength parameters of the material. • Ongoing groundwater monitoring of the Project Area will be undertaken. Where site conditions are observed to deviate from those outlined in the Geotechnical Stability Review, a full suite of stability analyses with the benefit of additional data obtained from the intrusive hydrological studies would be undertaken. 	<p>Construction and operation</p>

Aspect	Management/Mitigation Measure	Timing
Waste	<p>The following measures will be implemented to ensure that wastes are appropriately managed for the life of the Project:</p> <ul style="list-style-type: none"> • Waste streams will be classified and managed in accordance with the principles of the waste management hierarchy and EPA guidelines. • All wastes will be stored in appropriate containers/receptacles that are lidded where practical, within designated waste storage areas. • All wastes will be collected for reuse/recycling/disposal by appropriately licensed waste contractors. • Site inductions for employees and contractors will include waste management information. • Appropriate signage will be provided at all waste storage areas to clearly identify waste segregation and recycling procedures. 	Construction and operation
Bushfire	<p>A Bushfire Emergency Management Plan will be developed for the Project and incorporated into the CEMP and OEMP, in accordance with PBP 2019 and in consultation with the RFS (including the local Fire Control Centre and local brigades), DPFI, FCNSW and NPWS. The plan will identify all relevant bushfire risks and mitigation measures associated with the construction and operation of the Project, including:</p> <ul style="list-style-type: none"> • detailed measures to prevent or mitigate fires igniting, outlining: <ul style="list-style-type: none"> ○ APZ locations and management requirements ○ access locations, passing bays (if required) and any alternate emergency access ○ water supply and any other bush fire suppression systems • work that should not be carried out during total fire bans • availability of fire-suppression equipment • storage and maintenance of fuels and other flammable materials • notification of the local NSW RFS Fire Control Centre for any works that have the potential to ignite surrounding vegetation, proposed to be carried out during a bush-fire fire danger period to ensure weather conditions are appropriate • appropriate bush fire emergency management and relevant evacuation plan developed with consideration of the emergency response applicable to the surrounding State Forest. 	Construction and operation
Visual	<p>ARDG will implement the following mitigation and management measures:</p> <ul style="list-style-type: none"> • To the greatest extent practicable, the Project Area will be quarried in a manner that enables mobile equipment to remain shielded behind the active face as the ridge is lowered. • Vegetated buffers will be retained around the Disturbance Area and along road frontages. • Lighting will be directed downwards and away from residential areas and public roads in accordance with relevant Australian Standards (AS 4282 – Control of the Obtrusive Effects of Outdoor Lighting). • The Project Area will be maintained in a clean and tidy condition at all times. 	Construction and operation

Aspect	Management/Mitigation Measure	Timing
Social	<p>ARDG will implement the following strategies:</p> <ul style="list-style-type: none"> • Community Engagement Strategy comprising project-specific stakeholder analysis, mechanisms or methods to be utilised, periodic action plans, targets, and responsibilities for implementation. The strategy would also outline the development of a monitoring and evaluation framework throughout the life of the Project, which will complement the ongoing engagement through the established Community Consultative Committee (CCC). • Employment, Training and Procurement Strategy, including initiatives to proactively enable the maximisation of local employment and sourcing for the Project's construction and operational needs and could include investigation of options for prioritising the employment of local workers, supplier and servicing opportunities for local businesses and jobs, supplier, and servicing opportunities that target partnerships with local and enhancement strategies. • Social Impact Management Plan (SIMP) will be developed in collaboration with key stakeholders. ARDG will be responsible for the development, implementation and monitoring of the SIMP throughout the life of the Project. 	Prior to construction
Economic	<p>ARDG will implement the following economic management measures:</p> <ul style="list-style-type: none"> • Employment of regional residents preferentially where they have the required skills and experience and can demonstrate a cultural fit with the organisation. • Participating, as appropriate, in business group meetings, events or programs in the regional community. • Locally sourcing non-labour inputs to production where local producers can be cost and quality competitive. • Provision of community grants through various initiatives and programs within the local community, including the education, arts, sporting and culture sectors. 	Construction and operation
Rehabilitation	<p>The OEMP will include the development of a rehabilitation management plan and will include the following key management measures to be implemented throughout the quarry establishment and operational stages:</p> <ul style="list-style-type: none"> • Topsoil management – Topsoil material for rehabilitation will be sourced from soil stored on-site that has been stockpiled as part of the initial site preparation processes, although it is noted that the soil resource across the Disturbance Area is limited, and importation of additional material may be required at the time of rehabilitation. Where practicable, mulched vegetation will also be included to promote on-site growth medium availability. Prior to use for rehabilitation purposes, topsoil material will be analysed at a NATA registered laboratory to determine the application requirements for any soil ameliorants, if necessary. • Habitat enhancement – The salvage of hollow bearing trees, hollow logs, and fallen timber will be undertaken, where practical, during the vegetation clearing process. These resources will be stockpiled adjacent to the Disturbance Area along with topsoil stockpiles, with both being spread across flatter areas of the shaped landform once complete. The relocation of these habitat resources into post-quarrying rehabilitation areas is aimed at increasing habitat complexity, in order to make these areas more habitable for native species. With the approval of FCNSW, hollow logs, felled hollow bearing trees, and fallen timber material may also be emplaced within adjoining areas of the State Forest for habitat enhancement purposes where it is considered that the habitat benefits of the features unlikely to be retained for on-site rehabilitation purposes following extended stockpiling periods. 	Operation

Aspect	Management/Mitigation Measure	Timing
	<ul style="list-style-type: none"> • Weed and pest management – Weed and pest species may be inadvertently introduced to the Project Area through vehicle movements or could invade naturally into disturbed areas following the removal of native vegetation. Weed and pest management strategies will be detailed in the BRMP to ensure populations are appropriately controlled throughout the Project life. • Revegetation – A major issue to be considered in the revegetation of the upper quarry benches and surrounding ancillary areas is the shallow rock underlying the entire site. Topsoil and substrate depth and/or the ability of plant root systems to penetrate the subsoil is crucial to ensure plant survival, to allow access to water and support for root systems, especially for canopy species. If the roots of planted vegetation cannot reach sufficient depth, they may be susceptible to toppling as they age. Revegetation of quarry benches will therefore focus on the establishment of vegetation species suited to shallow rooting depth, providing a vegetated transition between the final void water storages and the surrounding forest. Other areas of the site with shallow soil material (e.g., outcrop areas or shallow rock) may also be subject to similar revegetation constraints and will have similar revegetation treatment to benches. Areas of the voids expected to be flooded within 10 years of closure will not be actively revegetated however natural regrowth in these areas (other than weeds) will not be discouraged as the presence of sucker material within the pit lakes can enhance long term biodiversity values. 	
	<p>A Detailed Quarry Closure Plan will be developed 3 years prior to planned cessation of quarrying activities. The Detailed Quarry Closure Plan will be based on a final land use focused on promoting the surrounding forest landscape by re-establishing pockets of woodland species across the benches consistent with endemic vegetation types with retained access opportunities to the voids/lakes for safety purposes and future uses consistent with management objectives for the State Forest. Alternative land uses will be investigated as part of the development of the Detailed Quarry Closure Plan and will include consultation with FCNSW, Hunter Water, Port Stephens Council and DPE.</p>	<p>Operation – 3 years prior to planned closure</p>
<p><u>Further issues to be investigated with public authorities</u></p>	<p><u>The proponent is committed to exploring each of the items listed below with the public authorities named below. Following the completion of discussions with each public authority, the proponent will report the results of the discussion with each public authority to the Stone Ridge Quarry Community Consultative Committee .</u></p> <ol style="list-style-type: none"> 1. <u>Forestry Corporation of NSW (FCNSW)</u> <ol style="list-style-type: none"> a. <u>Confirm with FCNSW the efficacy of establishing an offset stewardship site on land adjoining the Quarry Site within the Wallaroo State Forest that meets the biodiversity credit requirements detailed in Table 5 of the Development Consent.</u> b. <u>Confirm with FCNSW whether the proponent can reasonably assist FCNSW in maintaining bushtracks in Wallaroo State Forest that are used for recreational and horse-riding activities.</u> 2. <u>Port Stephens Council (Council).</u> <ol style="list-style-type: none"> a. <u>Confirm with Council whether it is agreeable to lowering the existing speed limit along Italia Road to 60 km/h.</u> b. <u>Confirm with Council whether it considers it necessary to erect signage and road markings for koalas along Italia Road.</u> 	<p><u>Operation</u></p>

Aspect	Management/Mitigation Measure	Timing
	<p><u>c. If Council wishes to proceed with either (a) or (b) above, the proponent will use its reasonable endeavours to assist and not object to those actions being realised.</u></p> <p>3. <u>Hunter Water Corporation (Hunter Water)</u></p> <p><u>a. Confirm with Hunter Water the efficacy and viability of establishing a fauna land bridge constructed from timber/logs over the Balickera Canal to facilitate fauna movement; and</u></p> <p><u>b. If Hunter Water is agreeable to a fauna land bridge being constructed, confirm with Hunter Water the role that the proponent can play in facilitating construction of the fauna land bridge.</u></p> <p>4. <u>Boral, Port Stephens Council, Hunter Water and FCNSW:</u></p> <p><u>a. Liaise with the above-mentioned neighbouring landowners, as required, in relation to the efficacy of installing a crossing suitable for arboreal native fauna (e.g. rope ladder crossing or fauna underpasses) over or under Italia Road.</u></p> <p><u>b. If the relevant organisations agree, the proponent will use its best endeavours to assist in the realisation of any such crossing.</u></p>	