

Development Consent

Section 80 of the *Environmental Planning & Assessment Act 1979*

I, the Minister for Infrastructure and Planning, approve the Development Application referred to in Schedule 1, subject to the conditions in Schedules 2 to 5.

These conditions are required to:

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

Craig Knowles, MP
Minister for Infrastructure and Planning
Minister for Natural Resources

Sydney

2005

SCHEDULE 1

Development Application:	DA 195-8-2004.
Applicant:	Dunmore Sand and Soil Pty Limited (ABN: 62 003 497 229).
Consent Authority:	Minister for Infrastructure and Planning.
Land:	Part Lot 6 in DP 611159; Part Lot 3 and Lots 4 & 5 in DP 1030504; Part Lots 5 & 6 in DP1001931; and Lot 1 in DP 213575; and Lot 501 DP 1174897 and Lot 51 DP 1012246 Parish of Terragong, County of Camden.
Proposed Development:	Dunmore Lakes Sand Extraction Project (Stages 2, 3, 4, 5A and 5B).
State Significant Development:	The proposal is classified as State significant development under section 76A(7)(d) of the <i>Environmental Planning and Assessment Act 1979</i> , by virtue of a direction made by the Minister under section 89 of the Act on 11 November 2004.
Integrated Development:	The proposal is classified as integrated development under section 91 of the <i>Environmental Planning and Assessment Act 1979</i> , as it requires additional approvals under the: <ul style="list-style-type: none">• <i>Protection of the Environment Operations Act 1997</i>;• <i>Water Act 1912</i>; and• <i>Rivers and Foreshores Improvement Act 1948</i>.
Designated Development:	The proposal is classified as designated development under section 77A of the <i>Environmental Planning & Assessment Act 1979</i> , as it is for an extractive industry that meets the criteria for designated development in schedule 3 of the <i>Environmental Planning & Assessment Regulation 2000</i> .

Note:

- To find out when this development consent becomes effective, see Section 83 of the *Environmental Planning and Assessment Act 1979* (EP&A Act);
- To find out when this development consent is liable to lapse, see Section 95 of the EP&A Act; and
- To find out about appeal rights, see Section 97 of the EP&A Act.

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Blue type represents June 2016 modification

Red type represents March 2020 modification

Green type represents November 2020 modification

DEFINITIONS

Aboriginal object / Aboriginal place	Has the same meaning as the definition of the term in section 5 of the NP&W Act
Annual Review	The review required by condition 9 of Schedule 5
Applicant	Dunmore Sand and Soil Pty Ltd or any other person or persons who rely on this consent to carry out the development that is subject to this consent
Approved disturbance area	The area identified as such on the development layout plans, as modified by the conditions of this consent
ARI	Average Recurrence Interval
BC Act	Biodiversity Conservation Act 2016
BCA	Building Code of Australia
BCD	Biodiversity Conservation Division within the Department
BCT	Biodiversity Conservation Trust
CCC	Community Consultative Committee
Conditions of this consent	Conditions contained in Schedules 2 to 5
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	Shellharbour City Council
DA	Development Application
Day	Day is defined as the period from 7am to 6pm on Monday to Saturday, and 8am to 6pm on Sundays and Public Holidays
Decommissioning	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	Department of Planning, Industry & Environment
Development	The development described in the documents listed in condition 2(c) of Schedule 2
Development Layout Plans	The plans in Appendix 1
DPIE Crown Lands	Crown Lands Group within the Department
DPIE Water	Water Group within the Department
EA Mod 1	Modification application Mod 1 and the accompanying Environmental Assessment titled <i>Dunmore Lakes Sand Project (DA 195-8-2004) – Modification 1</i> dated 26 April 2016
EA Mod 2	Modification application Mod 2 and the accompanying Environmental Assessment titled <i>Dunmore Lakes Sand Extraction Project Modification 2 Environmental Assessment</i> dated April 2019 and associated Response to Submissions dated June 2019
EIS	Environmental Impact Statement for the <i>Dunmore Lakes Sand Extraction Proposal, Stages 2, 3 and 4: Environmental Impact Statement, Volumes 1 & 2</i> , dated August 2004 and supplementary information titled <i>Dunmore Lakes Sand Extraction Proposal, Stages 2, 3 and 4: Response to EIS Issues</i> , dated February 2005
Environment	Includes all aspects of the surroundings of humans, whether affecting any human as an individual or in his or her social groupings
EPA	Environment Protection Authority
EPL	Environment Protection Licence issued under the <i>Protection of the Environment Operations Act 1997</i>
EP&A Act	<i>Environmental Planning and Assessment Act 1979</i>
EP&A Regulation	<i>Environmental Planning and Assessment Regulation 2000</i>
Evening	Evening is defined as the period from 6pm to 10pm
Feasible	Means what is possible and practical in the circumstances
Financial year	A period of 12 months from 1 July to 30 June
Fisheries NSW	Fisheries Branch of the Primary Industries Group within the Department
GTA	General Term of Approval
Heritage NSW	Heritage NSW within the Department of Premier and Cabinet

Heritage Item	An Aboriginal object, an Aboriginal place, or a place, building, work, relic, moveable object, tree or precinct of heritage significance, that is listed under any of the following: <ul style="list-style-type: none"> • the <i>National Parks and Wildlife Act 1974</i>; • the State Heritage Register under the <i>Heritage Act 1977</i>; • a state agency heritage and conservation register under section 170 of the <i>Heritage Act 1977</i>; • a Local Environmental Plan under the EP&A Act; • the World Heritage List; • the National Heritage List or Commonwealth Heritage List under the EPBC Act; or • anything identified as a heritage item under the conditions of this consent.
Incident	An occurrence or set of circumstances that causes or threatens to cause material harm and which may or may not be or cause a non-compliance
Laden trucks	Trucks transporting materials or products to or from the site
Land	As defined in the EP&A Act, except where the term is used in the noise and air quality conditions in Schedules 3 and 4 of this consent, where it is defined as 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.
Material harm	Is harm to the environment that: <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) This definition excludes "harm" that is authorised under either this consent or any other statutory approval
MEG	Regional NSW - Mining, Exploration and Geoscience
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
Modification 2	The modification described in EA Mod 2
Negligible	Small and unimportant, such as to be not worth considering
Night	Night is defined as the period from 10pm to 6am on Monday to Saturday, and 10pm to 8am on Sundays and Public Holidays
Noise sensitive areas	Areas where quarrying operations are being carried out that have potential to lead to increased noise at privately-owned residences, such as elevated areas or areas near the boundary of the site
Non-compliance	An occurrence, set of circumstances or development that is a breach of this consent
Privately-owned land	Land that is not owned by a public agency, a quarrying company or its subsidiary; or where relevant, land that is not covered by a private agreement between the Applicant and the land owner that specifically allows for variances to criteria for environmental performance in this consent
Planning Secretary	Secretary of the Department, or nominee
POEO Act	Protection of the Environment Operations Act 1997
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 carried out on the site and the associated removal of vegetation, topsoil and overburden

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	Means the Registered Aboriginal Parties for the project who were determined in accordance with 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
SEE Mod 3	Modification application Mod 3 and the accompanying Statement of Environmental Effects titled <i>Dunmore Sand and Soil: DA195-8-2004 Proposed Modification 3</i> dated 24 June 2019, associated Response to Submissions dated 31 October 2019 and responses to information requests dated 21 January 2020 and 11 February 2020
Shoulder	Time interval from 6am to 7am, Monday to Saturday
Site	Land to which the DA applies
TfNSW	Transport for NSW
VENM	Virgin Excavated Natural Material, as defined in the <i>Protection of the Environment Operations Act 1997</i>
Waste	Has the same meaning as the definition of the term in the Dictionary to the POEO Act

SCHEDULE 2 ADMINISTRATIVE CONDITIONS

Obligation to Minimise Harm to the Environment

1. 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 Approval

2. The Applicant must carry out the development:
 - a) in compliance with the conditions of this consent;
 - b) in accordance with all written directions of the Planning Secretary;
 - c) generally in accordance with the EIS, EA Mod 1, SEE Mod 3 and EA Mod 2; and
 - d) generally in accordance with the Development Layout in Appendix 1.

Note: The Development Layout Plan is included in Appendix 1.

3. If there is any inconsistency between the documents identified in condition 2(c), the more recent document shall prevail to the extent of the inconsistency. The conditions of this consent shall prevail to the extent of any inconsistency with the documents identified in condition 2(c).
4. The Applicant must comply with any reasonable requirement/s of the Planning Secretary arising from the Department's assessment of:
 - a) any strategies, plans, programs, reviews, audits, reports or correspondence that are submitted in accordance with this consent (including any stages of these documents);
 - b) any reviews, reports or audits commissioned by the Department regarding compliance with this consent; and
 - c) the implementation of any actions or measures contained in these documents.

Limits on Approval

3. Quarrying operations may be carried out on the site until 15 May 2031.

Notes:

- *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.*
 - *Any on-going use of the site for processing and blending activities after quarrying operations cease would be the subject of a separate application.*
6. The Applicant must not produce or transport more than 800,000 tonnes of product each financial year from the site.

Structural Adequacy

7. The Applicant must ensure that any new buildings and structures, and any alterations or additions to existing buildings and structures, are 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 any building works.*
- *Part 8 of the EP&A Regulation sets out the detailed requirements for the certification of development.*

Demolition

8. The Applicant must ensure that all demolition work is carried out in accordance with AS 2601-2001: *The Demolition of Structures* (Standards Australia, 2001), or its latest version.

Protection of Public Infrastructure

9. 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 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 caused as a result of general road usage or otherwise addressed by the Road Pavement Dilapidation Report required by condition 53B of Schedule 3 of this consent.

Operation of Plant and Equipment

10. **The Applicant must** ensure that all plant and equipment at the site, or used in connection with the development, are:
 - a) maintained in a proper and efficient condition; and
 - b) operated in a proper and efficient manner.

Notification of Commencement

11. The Department must be notified in writing of the date of commencement of any of the following phases of the development, at least two weeks before that date:
 - a) construction activities associated with Modification 2;
 - b) quarrying operations in each of Stages 5A and 5B;
 - c) cessation of quarrying operations (i.e. quarry closure); and
 - d) any period of suspension of quarrying operations (i.e. care and maintenance).

Staging, Combining and Updating Strategies, Plans or Programs

12. 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);
 - 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); and
 - d) combine any strategy, plan or program required by this consent with any similar strategy, plan or program required by an adjoining quarrying consent or approval, in common ownership or management.
13. If the Planning Secretary agrees, a strategy, plan or program may be staged without addressing particular requirements of the relevant condition of this consent if those requirements are not applicable to the particular stage.
14. 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.

Application of Existing Strategies, Plans or Programs

15. The Applicant must continue to apply existing management strategies, plans or monitoring programs required under this consent prior to the approval of Modification 2, until the approval of a similar plan, strategy or program following the approval of Modification 2.

Compliance

16. 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

17. 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 inclusion (or later update) in the condition.
18. However, consistent with the conditions of this consent and without altering any limits or criteria in this consent, the Planning Secretary may, in respect of ongoing monitoring and management obligations,

agree to or require compliance with an updated or revised version of such a guideline, protocol, Standard or policy, or a replacement of them.

Crown Land

19. The Applicant must consult with DPIE – Crown Lands prior to undertaking any development on Crown Land or Crown Roads.

SCHEDULE 3 SPECIFIC ENVIRONMENTAL CONDITIONS

GENERAL EXTRACTION AND PROCESSING PROVISIONS

Identification of Boundaries

1. Within 6 months of the date of this consent and prior to the commencement of extraction operations in each of Stage 5A and Stage 5B, the Applicant must:
 - a) engage a registered surveyor to mark out the boundaries of the approved limits of extraction for Stages 2, 3, 4, 5A and 5B (as set out conceptually in Appendix 1 and as amended by the conditions of this consent);
 - b) submit a survey plan of these boundaries and their GPS coordinates to the Planning Secretary; and
 - c) ensure that these boundaries are clearly marked at all times in a permanent manner that allows operating staff and inspecting officers to clearly identify those limits.

Stages 2 – 4 Extraction Areas

2. The Applicant must not undertake extraction within 3 metres of the project site boundary for Stages 2 - 4. Batter slopes from this extraction limit must be no steeper than 1:3 (V:H).
3. The Applicant must not undertake any stockpiling of material in the area marked 'Potential Future Stockpiling Area' on Figure 2.2 of the EIS.

Stage 4 – Tabbita Road Corridor

4. The Applicant must not undertake any extraction in Stage 4 without the prior approval of the Planning Secretary. An application to undertake extraction in Stage 4 must be accompanied by an extraction management plan that must:
 - a) detail the proposed realignment and rehabilitation of Tabbita Road and associated infrastructure;
 - b) assess the environmental impacts of the proposed realignment; and
 - c) include appropriate agreements with affected parties, to the satisfaction of the Planning Secretary.

Western, Northern and Eastern Tributaries

Note: The Applicant is required to obtain a Controlled Activity Approval from DPIE Water under the Water Management Act 2000 prior to undertaking any works within 40 metres of Rocklow Creek or the Western, Northern and Eastern Tributaries, or any water feature connected to these protected waters.

5. The Applicant must not undertake extraction within 3 metres of the bank of the Eastern Tributary. Batter slopes from this extraction limit must be no steeper than 1:3 (V:H).
6. The Applicant must maintain the integrity of the Northern and Western Tributaries for as long as practicable. In this regard, the Applicant must only extract sand within 3 metres of the bank of the tributaries in accordance with an approved Riparian Area Management Plan (see condition **Error! Reference source not found.**). Batter slopes from this extraction limit must be no steeper than 1:2 (V:H).

Southern, North-eastern and North-western Wetlands

7. The Applicant must not undertake extraction within 10 metres of the bank of the southern or north-eastern wetlands. Batter slopes from this extraction limit must be no steeper than 1:2 (V:H).
8. The Applicant must commission a suitably qualified ecologist, whose appointment has been endorsed by the Planning Secretary, to mark out the extraction limit to the southern and north-eastern wetlands.

Note: The southern and north-eastern wetlands are defined as the area that constitutes Freshwater Wetlands on Coastal Floodplains, an endangered ecological community under the former Threatened Species Conservation Act 1995.

9. The Applicant must ensure that extraction within 40m of the southern, north-eastern and north-western wetlands occurs towards the end of dredging when the dredge pond water volume is maximised, and in accordance with an approved Riparian Area Management Plan (see condition **Error! Reference source not found.**). The plan must include an assessment by a suitably qualified hydrogeologist justifying the extraction limit referred to in condition 7, based on data obtained from the site.

Rocklow Creek Realignment

10. Prior to the commencement of extraction in [Sub-Stage 3C1 \(see Appendix 1\)](#), the Applicant must complete the realignment and rehabilitation of Rocklow Creek, to the satisfaction of the [Planning Secretary](#). The realignment **must** be undertaken in accordance with an approved Riparian Area Management Plan (see condition 45). The realigned channel **must** be designed so as to safely convey, without bed or bank erosion, the 1 in 20 year ARI peak flow.
11. [The Applicant must](#) not undertake extraction within 3 metres of the bank of the realigned Rocklow Creek. Batter slopes from this extraction limit **must** be no steeper than 1:2 (V:H).
12. [The Applicant must](#) provide for the ultimate redirection of the realigned Rocklow creek into the lake in Stage 3, unless otherwise approved by the [Planning Secretary](#). The redirection **must** be undertaken in accordance with an approved Riparian Area Management Plan (see condition **Error! Reference source not found.**).

Stage 5 Extraction Areas

- 12A. The Applicant must not undertake extraction within 3 metres of the project boundary for Stage 5A adjacent to Riverside Drive or the project boundary for Stage 5B adjacent to the private property at 79 Fig Hill Lane.
- 12B. The Applicant is not permitted to undertake any vegetation clearance, construction or extraction activities within lands zoned as E3 under the *Shellharbour Local Environment Plan 2013*. In this regard, the Applicant must adjust its final flood bund design and extraction footprint for Stage 5B and the location of ancillary infrastructure (including water management infrastructure) to stand off these lands.

NOISE

Operational Noise Criteria

13. Except for the carrying out of approved construction works, the Applicant must ensure that the noise generated by the development does not exceed the criteria specified in Table 1.

Table 1: Noise impact assessment criteria dB(A)

Residential Location	Shoulder L _{Aeq} (15 mins)	Day L _{Aeq} (15 mins)	Evening L _{Aeq} (15 mins)	Night L _{Aeq} (15 mins)
Dunmore Village residences – 31 Shellharbour Road	47	49	44	41
R20	47	49	44	38
R3, R11, R12, R13, R14, R15, R16, R17, R18, 79 Fig Hill Lane	48	48	43	38
R19	46	47	43	38
R4, R5, R6, R7, R8, R9, R10	43	47	43	38
Renton (183 James Road Dunmore)	46	46	43	37
All other residences	35	40	35	35

- 13A. Noise generated by the development must be monitored and measured in accordance with the relevant procedures and exemptions (including certain meteorological conditions) of the *NSW Noise Policy for Industry* (EPA, 2017).
- 13B. The noise criteria in Table 1 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.

Operating Hours

14. ¹ The Applicant must comply with the operating hours in Table 2:

Table 2: Operating Hours

Activity	Day	Time
Dredging and processing	Monday – Saturday	6:00am to 6:00pm
	Sunday and Public Holidays	8:00am to 4:00pm
Excavator extraction	Monday – Saturday	6:30am to 6:00pm
	Sunday and Public Holidays	Nil
Delivery, distribution and maintenance	Monday – Friday	5:00am to Midnight
	Saturday	6:00am to 6:00pm
	Sunday and Public Holidays	8:00am to 4:00pm
Delivery and distribution via Shellharbour Road and Riverside Drive	Monday – Friday	7:00am to 10:00pm
	Saturday	7:00am to 6:00pm
	Sunday and Public Holidays	8:00am to 4:00pm
Maintenance (if inaudible at neighbouring residences)	Anytime	Anytime

15. ²The following activities may be carried out at the premises outside the hours specified in Table 2:
- the delivery or dispatch of materials as requested by Police or other public authorities for safety reasons; and
 - emergency work to avoid the loss of lives, property and/or to prevent environmental harm. In such circumstances the Applicant must notify the Department and affected residents prior to undertaking the works, or within a reasonable period in the case of emergency.

Construction Hours

- 15A. Approved construction works must be undertaken during standard construction hours (7 am to 6 pm, Monday to Friday and 8 am to 1 pm on Saturdays), unless the Planning Secretary agrees otherwise.

Noise Operating Conditions

16. The Applicant must:
- take all reasonable steps to minimise noise from construction and operational activities, including low frequency noise and other audible characteristics, as well as road noise associated with the development;
 - implement reasonable and feasible noise attenuation measures on all plant and equipment that will operate in noise sensitive areas;
 - operate a noise management system to guide day to day planning of quarrying operations and implementation of both proactive and reactive noise mitigation measures to ensure compliance with the relevant conditions of this consent;
 - take all reasonable steps to minimise the noise impacts of the development during noise-enhancing meteorological conditions;
 - carry out regular attended noise monitoring to determine whether the development is complying with the relevant conditions of this consent; and
 - regularly assess the noise monitoring data and modify or stop operations on the site to ensure compliance with the relevant conditions of this consent.

Noise Management Plan

17. The Applicant must prepare a Noise Management Plan for the development to the satisfaction of the Planning Secretary. This plan must:
- be prepared by a suitably qualified and experienced person/s whose appointment has been endorsed by the Planning Secretary;
 - describe the noise management system and measures to be implemented to ensure:
 - compliance with the noise criteria and operating conditions in this consent;
 - leading practice management is being employed;
 - noise impacts of the development are minimised during noise-enhancing meteorological conditions;

¹ Incorporates EPA GTA

² Incorporates EPA GTA

- c) include a protocol for distinguishing noise emissions of the development from other nearby or neighbouring developments; and
- d) include a monitoring program that:
 - is capable of evaluating the performance of the development against the construction and operational noise criteria;
 - monitors noise at the nearest and/or most affected residences or other representative monitoring locations set out in the Noise Management Plan;
 - adequately supports the noise management system; and
 - includes a protocol for identifying any noise-related exceedance, incident or non-compliance and notifying the Department and relevant stakeholders of any such event.

18. The Applicant must implement the Noise Management Plan as approved by the Planning Secretary.

AIR QUALITY

Air Quality Criteria

19. The Applicant must ensure that particulate matter emissions generated by the development do not cause exceedances of the criteria in Table 3 at any residence on privately-owned land.

Table 3: Air quality criteria

Pollutant	Averaging period	Criterion
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.

20. The air quality criteria in Table 3 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 Operating Conditions

- 20A. The Applicant must:
- a) take all reasonable steps to:
 - minimise odour, fume and particulate matter (including PM₁₀ and PM_{2.5}) emissions of the development;
 - minimise visible off-site air pollution generated by the development; and
 - minimise the extent of potential dust generating surfaces exposed on the site at any given point in time;
 - b) operate an air quality management system to guide the day to day planning of quarrying operations and implementation of both proactive and reactive air quality mitigation measures to ensure compliance with the relevant conditions of this consent;
 - c) minimise the air quality impacts of the development during adverse meteorological conditions and extraordinary events;
 - d) carry out regular air quality monitoring to determine whether the development is complying with the relevant conditions in this consent; and
 - e) 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.

Air Quality Management Plan

- 20B. The Applicant must prepare an Air Quality Management Plan for the development to the satisfaction of the Planning Secretary. This plan must:
- a) be prepared by a suitably qualified and experienced person/s whose appointment has been endorsed by the Planning Secretary;

- b) describe the measures to be implemented to ensure:
 - compliance with the air quality criteria and operating conditions in this consent;
 - leading practice management is being employed (including in respect of minimisation of greenhouse gas emissions from the site); and
 - air quality impacts of the development are minimised during adverse meteorological conditions and extraordinary events;
- c) describe the air quality management system; and
- d) include an air quality monitoring program that:
 - is capable of evaluating the performance of the development against the air quality criteria;
 - adequately supports the air quality management system; and
 - includes a protocol for identifying any air quality-related exceedance, incident or non-compliance and notifying the Department and relevant stakeholders of any such event.

20C. The Applicant must implement the Air Quality Management Plan as approved by the Planning Secretary.

Odour

21. ³ The Applicant must not cause or permit the emission of offensive odour from the site.

Note: 'Offensive odour' is defined in the Protection of the Environment Operations Act 1997.

SURFACE AND GROUND WATER

Water Supply

- 21A. The Applicant must ensure that it has sufficient water for all stages of the development prior to the take of water occurring, and if necessary, adjust the scale of the development to match its available water supply.
- 21B. The Applicant must report on water extracted from the site each year (direct and indirect) in the Annual Review, including 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.

Pollution of Waters

22. Except as may be expressly provided by an EPL, the Applicant must comply with section 120 of the Protection of the Environment Operations Act 1997 during the carrying out of the development.

Water Discharge Limit

23. Except as may be expressly provided by an EPL, the Applicant must ensure that the discharges from any licenced discharge point/s do not cause additional exceedances of the criteria in Table 4:

Table 4: Water Discharge Pollution Limits

Pollutant	Unit of Measure	100 Percentile Concentration Limit
Total Suspended Solids	mg/L	50
pH	pH	± 1.0

Water Quality Objectives

24. The Applicant must ensure that water quality in the dredge ponds and in groundwater comply with the water quality objectives in Table 5, or other such level as approved by the Planning Secretary:

Table 5: Water Quality Objectives

Pollutant	Unit of Measure	Water Quality Objective
Turbidity	NTU	5-20
pH	pH	6.5 – 8.5
Salinity	µS/cm	<1,500
Dissolved oxygen	mg/L	>6
Total phosphorus	µg/L	5-50
Total nitrogen	µg/L	100-500

³ Incorporates EPA GTA

Pollutant	Unit of Measure	Water Quality Objective
Chlorophyll-a	µg/L	2-10
Faecal coliforms	Median No./100mL	<1000
Enterococci	Median No./100mL	<230
Algae and blue-green algae	No.cells/mL	<15,000
Sodium	mg/L	400
Potassium ion	mg/L	50
Magnesium ion	mg/L	50
Chloride ion	mg/L	300
Sulphate ion	mg/L	250
Bicarbonate ion	mg/L	750
Soluble Iron ion	mg/L	6
Ammonium ion	mg/L	20

Notes:

- The objectives for dissolved oxygen, turbidity and algae are relevant to surface water only;
- The Department acknowledges that short term exceedances of these objectives may occur during natural events such as heavy rainfall or tidal saline water inflow.

Stormwater Management

25. ⁴ The Applicant must ensure that any pond subject to dredging or backfilling, or containing turbid water due to recent dredging or backfilling, must be maintained and operated to prevent discharges of any turbid water (as defined in Tables 4 and 5) from these ponds.
26. ⁵ The Applicant must cease backfilling activities not less than 12 hours prior to the commencement of overflow from any dredge pond. No backfilling must occur when the dredge ponds are overflowing.

Flood Management

27. The Applicant must ensure that the flood storage capacity of the site is no less than the pre-existing flood storage capacity at all stages of the development, unless otherwise approved in writing by the Planning Secretary. Details of the available flood storage capacity must be reported in the Annual Review.
28. ⁶The access road entrance off Tabbita Road, processing and stockpile area, and the fines return pond(s) must be constructed and maintained so as to prevent inundation by floodwaters caused by the 1 in 100 year ARI flood level. Prior to the commissioning of the processing area, the Applicant must provide certification to the Planning Secretary that this condition has been complied with.
29. Following the cessation of dredging and backfilling operations, the Applicant must commission a suitably qualified hydrologist to define the flood-related limits of the final landform. The flood study must be undertaken in consultation with the Department and Shellharbour Council, and to the satisfaction of the Planning Secretary.

Stage 5 Flood Mitigation

- 29A. Prior to undertaking any development in Stage 5A, the Applicant must provide the Planning Secretary with the detailed design of the Stage 5A flood mitigation bunds which demonstrates that the bunds can prevent inundation of the Stage 5A pond by floodwaters associated with the 1 in 100 year ARI flood level.
- 29B. Prior to undertaking any development in Stage 5B, the Applicant must provide the Planning Secretary with the detailed design of the Stage 5B flood mitigation bunds which demonstrates that the bunds can prevent inundation of the Stage 5B pond and carparking area by floodwaters associated with the probable maximum flood event. Any increase in the height of the bunds required to achieve this outcome must be accompanied by an appropriate increase in width to ensure the stability and visual aesthetics of the bunds in the landscape, to the satisfaction of the Secretary.
- 29C. The Applicant must retain and maintain the flood bunds around the Stage 5B area to prevent interactions with the probable maximum flood, unless otherwise agreed in writing by the Planning Secretary.

Upon receiving a written request from the Applicant seeking to remove the bunds, the Planning Secretary will determine whether the flood bunds should be removed and the Stage 5B pond rehabilitated and integrated into the Minnamurra River floodplain. If the water quality in the pond meets relevant ANZECC

⁴ Incorporates EPA GTA

⁵ Incorporates EPA GTA

⁶ Incorporates EPA GTA

Guidelines, water quality standards imposed under any EPL and does not represent a material environmental risk to the Minnamurra River floodplain, the Planning Secretary will provide a written approval stipulating the timing and rehabilitation requirements associated with the removal of the bunds.

Alternatively, with the written approval of the Planning Secretary, the Applicant may satisfy its maintenance obligations under this condition through the establishment of a suitable funding agreement with an appropriate public authority. This public authority would then be responsible for the oversight and carriage of these in perpetuity works.

- 29D. The Applicant must undertake regular monitoring of the stability of flood bunds throughout the extraction, rehabilitation and closure phases of the Stage 5 quarry operations.

Soil and Water Management Plan

30. The Applicant must prepare a Soil and Water 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 whose appointment has been endorsed by the Planning Secretary;
 - b) be prepared in consultation with EPA and DPIE Water; and
 - c) include a:
 - (i) **Site Water Balance** that includes details of:
 - predicted annual inflows to and outflows from the site;
 - sources and security of water supply for the life of the development (including authorised entitlements and licences);
 - water storage capacity, use and management on the site;
 - licenced discharge points and limits; and
 - reporting of annual water extraction and maximum instantaneous pumping rates to the Department; and
 - procedures for the annual preparation of an updated site water balance; and
 - (ii) **Erosion and Sediment Control Plan** that:
 - is consistent with the requirements of *Managing Urban Stormwater: Soils and Construction - Volume 1: Blue Book* (Landcom, 2004) and *Volume 2E: Mines and Quarries* (DECC, 2008);
 - identifies activities that could cause soil erosion, generate sediment or affect flooding;
 - includes a program to review the adequacy of existing flood protection works;
 - describes measures to minimise soil erosion and the potential for the transport of sediment to downstream waters, and manage flood risk;
 - describes the location, function, and capacity of erosion and sediment control structures and flood management structures; and
 - describes what measures would be implemented to maintain (or if necessary decommission) the structures over time;
 - (iii) **Surface Water Management Plan**, that includes:
 - detailed baseline data on surface water flows and quality in watercourses, water bodies, wetlands and/or fish habitat that could potentially be affected by the development;
 - a detailed description of the surface water management system on the site, including the:
 - clean water diversion system;
 - erosion and sediment controls;
 - dirty water management system; and
 - water storages;
 - a program to monitor and evaluate:
 - any surface water discharges;
 - bank and bed stability;
 - the effectiveness of the water management system;
 - impacts on water supply for other water users; and
 - surface water flows and quality in watercourses, waterbodies, wetlands and/or fish habitats that could potentially be impacted by the development;
 - surface water impact assessment criteria and performance measures, including trigger levels for investigating and responding to potentially adverse impacts; and
 - a protocol for identifying and investigating any exceedances of the surface water impact assessment criteria and for notifying the Department and relevant stakeholders of these events;
 - (iv) **Groundwater Management Plan** that includes:

- detailed baseline data of groundwater levels, flows and quality for groundwater resources and groundwater dependent ecosystems potentially impacted by the development;
 - a detailed description of the groundwater management system;
 - a program to monitor and evaluate:
 - water loss/seepage from water storages into the groundwater system, including from any final void;
 - groundwater inflows, outflows and storage volumes, to inform the Site Water Balance;
 - impacts on groundwater supply for other water users;
 - impacts on groundwater dependent ecosystems;
 - the hydrogeological setting of any nearby alluvial aquifers and the likelihood of any indirect impacts from the development; and
 - the effectiveness of the groundwater management system;
 - groundwater impact assessment criteria and performance measures, including trigger levels for investigating and responding to potentially adverse groundwater impacts (or trends) associated with the development on regional and local aquifers and/or the groundwater supply for other water users such as licensed privately-owned groundwater bores;
 - 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.
31. The Applicant must implement the Soil and Water Management Plan approved by the Planning Secretary.
32. The Applicant must not commence extraction in Stage 5 until the Soil and Water Management Plan is approved by the Planning Secretary.

Stage 5 Acid Sulfate Soils Management

33. Prior to commencing extraction in Stage 5, the Applicant must prepare an Acid Sulfate Soils Management Plan for Stage 5 operations, to the satisfaction of the Planning Secretary. The plan must:
- a) be prepared in consultation with EPA and by a suitably qualified person whose appointment has been approved by the Planning Secretary;
 - b) describe the measures that would be implemented to limit the risk of acid sulfate soils being mobilised during Stage 5 operations;
 - c) describe the measures that would be implemented to limit the risk of acid sulphate soils being imported with the VENM; and
 - d) include a Trigger Action Response Plan with a hierarchy of actions to avoid, mitigate and manage acid sulfate soils impacts.
34. Deleted
35. Deleted

METEOROLOGICAL MONITORING

36. Prior to the commencement of construction within the Stage 5 areas 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* (DEC, 2007); 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.

BIODIVERSITY

Endangered Ecological Community Compensatory Habitat

37. **The Applicant must** establish, conserve and maintain at least:
- a) 6 ha of Freshwater Wetlands on Coastal Floodplains (which may include areas of associated wetland pondage); and
 - b) 3 ha of Swamp Oak Floodplain Forest;
- in rehabilitation and visual screening plantings on the site, in a manner that integrates the compensatory habitats with existing similar habitats on and near the site.

Stage 5 Biodiversity Offsets

- 37A. Prior to any clearing of vegetation in Stage 5B, or other timeframe agreed by the Planning Secretary, the Applicant must retire the biodiversity credits listed in Table 6. The retirement of credits must be carried out in accordance with the Biodiversity Offsets Scheme of the BC Act, to the satisfaction of the BCT.

Table 6: Stage 5 Biodiversity credit requirements

Credit Type	Credits Required
Ecosystem Credits	
Bangalay Sand Forest of the Sydney Basin and South East Corner Bioregions (<i>PCT659 – Bangalay – Old-man Banksia open forest on coastal sands, Sydney Basin Bioregion and South East Corner Bioregion</i>)	71
Species Credits	
Southern Myotis (<i>Myotis Macropus</i>)	19
Masked Owl (<i>Tyto novaehollandiae</i>)	71
Barking Owl (<i>Ninox connivens</i>)	71

Flora and Fauna Management Plan

38. Prior to undertaking any vegetation clearing associated with Modification 2, the Applicant must update the Flora and Fauna Management Plan for the development to the satisfaction of the Planning Secretary. This plan must:
- be prepared by suitably qualified ecologist and experienced person/s whose appointment has been endorsed by the Planning Secretary;
 - be prepared in consultation with Shellharbour Council, Kiama Council and Fisheries NSW;
 - describe the short, medium and long-term measures to be undertaken to manage remnant vegetation and fauna habitat on the site;
 - describe the measures to be implemented within the approved disturbance areas to:
 - minimise the amount of clearing where practicable (eg through adaptive management of ancillary infrastructure) and delineate the areas of vegetation to be cleared;
 - ensure that clearing is undertaken progressively;
 - minimise impacts on fauna, including undertaking pre-clearance surveys;
 - provide for the reasonable salvage, transplanting and/or propagation of threatened flora found during pre-clearance surveys, in accordance with the *Guidelines for the Translocation of Threatened Plants in Australia* (Vallee et al., 2004); and
 - maximise the salvage of resources, including tree hollows, vegetation and soil resources, for beneficial reuse, including fauna habitat enhancement;
 - describe the measures to be implemented on the site to:
 - minimise impacts to threatened ecological communities listed under the BC Act and contribute to conservation strategies for these communities;
 - minimise impacts on fauna habitat resources such as hunting and foraging areas, habitat trees, fallen timber, hollow-bearing trees and downstream fish habitats;
 - enhance the quality of vegetation, vegetation connectivity and wildlife corridors including through the revegetation of appropriate canopy, sub-canopy, understorey and ground strata within the wetland vegetation to be established around the pond verges;
 - introduce naturally scarce fauna habitat features such as nest boxes and salvaged tree hollows in the final landform and promote the use of these introduced habitat features by threatened fauna species;
 - manage any potential conflicts with Aboriginal heritage values;
 - protect vegetation and fauna habitat outside of the approved disturbance areas;
 - manage the collection and propagation of seed from the local area;
 - control weeds, including measures to avoid and mitigate the spread of noxious weeds;
 - control feral pests with consideration of actions identified in relevant threat abatement plans;
 - control erosion;
 - manage any grazing and agriculture;

- (xii) control access to vegetated or revegetated areas; and
- (xiii) manage bushfire hazards;
- f) include a seasonally based program to monitor and report on the effectiveness of the above measures, progress against the detailed performance indicators and completion criteria, and identify any improvements that could be implemented to improve biodiversity outcomes;
- g) include a Compensatory Habitat Management Plan that:
 - (i) describes the compensatory habitat proposal;
 - (ii) justifies why the proposed area(s) is suitable for the compensatory habitat proposal, including how the area will integrate with existing habitat areas on and near the site;
 - (iii) establishes baseline data for the existing habitat in the proposed area(s);
 - (iv) describes how the compensatory habitat proposal would be implemented;
 - (v) sets completion criteria for the compensatory habitat proposal; and
 - (vi) describes how the performance of the compensatory habitat proposal would be monitored over time;
- h) include detailed performance and completion criteria for evaluating the performance of the compensatory habitat and offset requirements of conditions 37 and 37A and rehabilitation of the site, including triggers for remedial action, where these performance or completion criteria are not met; and
- i) include details of who would be responsible for monitoring, reviewing, and implementing the plan.

39. The Applicant must implement the Biodiversity Management Plan as approved by the Planning Secretary.

HERITAGE

Protection of Heritage Items

40. The Applicant must ensure that the development does not cause any direct or indirect impact on any identified heritage item located outside of the approved disturbance areas, beyond those impacts predicted in the documents listed in condition 2(c) of Schedule 2.

Heritage Management Plan

41. Prior to undertaking any development in Stage 5, the Applicant must prepare a Heritage Management Plan for the development to the satisfaction of the Planning Secretary. This Plan must:
- a) be prepared by suitably qualified and experienced persons whose appointment has been endorsed by the Planning Secretary;
 - b) be prepared in consultation with Registered Aboriginal Parties and Heritage NSW;
 - c) include consideration of the Aboriginal and non-Aboriginal cultural context and significance of the site;
 - d) describe the procedures and management measures to be implemented on the site to:
 - (i) ensure all workers receive suitable Aboriginal cultural heritage 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;
 - (ii) protect, monitor and manage identified non-Aboriginal heritage, Aboriginal objects and Aboriginal places (including any archaeological investigations of potential subsurface objects and salvage of objects within the approved disturbance areas, including 52-5-0907 (DLS Boral AFT 1) and 52-5-0908 (DLS Boral AFT 2) in accordance with the commitments made in the documents listed in condition 2(c) of Schedule 2;
 - (iii) protect non-Aboriginal heritage, Aboriginal objects and Aboriginal places located outside the approved disturbance area from impacts of the development;
 - (iv) manage the discovery of suspected human remains and any new Aboriginal objects or Aboriginal places, including provisions for burials, over the life of the development;
 - (v) maintain and manage reasonable access for relevant Aboriginal stakeholders to Aboriginal objects and Aboriginal places (outside of the approved disturbance area); and
 - (vi) facilitate ongoing consultation and involvement of Registered Aboriginal Parties in the conservation and management of Aboriginal cultural heritage on the site;
 - e) include a strategy for the care, control and storage of Aboriginal objects salvaged on site, both during the life of the development and in the long term;
 - f) include a protocol for managing interactions with the curtilage of the State heritage listed Dunmore House and identifying how this area would be rehabilitated to ensure the Dunmore House curtilage is restored without impacting the integrity or heritage values of the site; and
 - g) describe the measures to be implemented on the site to manage interactions with the Flora and Fauna Management Plan.

41A. The Applicant must implement the Heritage Management Plan approved by the Planning Secretary.

REHABILITATION

Rehabilitation

42. The Applicant must progressively rehabilitate the site to the satisfaction of the Planning Secretary, in a manner that is generally consistent with the concept final landform in the documents listed in condition 2(c) of Schedule 2 (see Appendix 2), and in accordance with the conditions of this consent.

Rehabilitation Management Plan

43. Prior to commencing extraction in Stage 5, the Applicant must update the Rehabilitation Management Plan for the development to the satisfaction of the Planning Secretary: This plan must:
- a) be prepared:
 - (i) by suitably qualified consultants, including a specialist hydrologist, wetlands ecologist and landscape architect, whose appointments have been approved by the Planning Secretary;
 - (ii) in consultation with Shellharbour Council, Kiama Council, BCD and the Department; and
 - (iii) in accordance with extant guidelines including the *Constructed Wetlands Manual, Volumes 1 & 2* and the *Shellharbour Visual Management Plan User Manual*;
 - b) provide detailed plans of the final landform based on current backfill estimates;
 - c) set detailed performance indicators and completion criteria for the rehabilitation of all areas disturbed by the development;
 - d) describe the measures that would be implemented to achieve the criteria in paragraph (c) and triggers for remedial actions;
 - e) include detailed design plans and scheduling for progressive rehabilitation to be initiated, undertaken and/or completed in the next 5 years;
 - f) include a program to monitor, independently audit and report on progress against the criteria in paragraph (c) and the effectiveness of the measures in paragraph (d); and
 - g) include any Riparian Area Management Plan/s prepared in accordance with condition 45 for those riparian areas to be disturbed/rehabilitated in the next 5 years.
44. The Applicant must implement the Rehabilitation Management Plan as approved by the Planning Secretary.

Riparian Area Management Plan

45. The Applicant must prepare a Riparian Area Management Plan in consultation with BCD and to the satisfaction of the Planning Secretary. For works involving:
- a) disturbance within 3m of an existing riparian area, the plan must:
 - describe the broader extraction staging and justify the need for extraction in the Riparian Area;
 - describe in detail the methods and timing for extraction within the Riparian Area;
 - provide for construction and stabilisation of appropriate diversion channels to divert the waterbody around the disturbance area, unless otherwise approved by BCD and the Planning Secretary; and
 - describe the methods for rehabilitation of the Riparian Area and diversion channels; and
 - b) construction/rehabilitation of Riparian Areas, the plan must:
 - detail proposed channel/bed designs, including scour protection measures;
 - include hydraulic modelling supporting the proposed design;
 - where applicable, include measures to replicate pre-existing tidal-estuarine conditions;
 - include detailed plans for rehabilitation and revegetation of the Riparian Area using locally endemic species;
 - describe measures for the protection, enhancement and integration with adjacent threatened communities, including *Freshwater Wetlands on Coastal Floodplains*, *Swamp Oak Floodplain Forest* and *Bangalay Sand Forest of the Sydney Basin and South East Corner Bioregions*.
46. The Applicant must implement the Riparian Area Management Plan as approved by the Planning Secretary.
47. Deleted

Rehabilitation and Conservation Bond

48. Within 6 months of the approval of Modification 2, the Applicant must lodge an updated Conservation and Rehabilitation Bond with the Department to ensure that the biodiversity offset, compensatory habitat and rehabilitation requirements of the site are implemented in accordance with the performance and

completion criteria set out in the Flora and Fauna Management Plan, Rehabilitation Management Plan and the relevant conditions of this consent. The sum of the bond must be an amount agreed by the Planning Secretary and determined by:

- a) calculating the full cost of implementing the biodiversity offset and compensatory habitat requirements of the consent at third party rates (other than land acquisition costs);
- b) calculating the cost of rehabilitating all disturbed areas of the site, taking into account the likely surface disturbance over the next 3 years of quarrying operations; and
- c) employing a suitably qualified, independent and experienced person to verify the calculated costs.

49. The calculation of the Conservation and Rehabilitation Bond must be submitted to the Department for approval at least 2 months prior to the lodgement of the bond.
- 49A. The Conservation and 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 Flora and Fauna, Rehabilitation or Riparian Area Management Plans;
 - b) the completion of an Independent Environmental Audit in which recommendations relating to the implementation of the biodiversity or rehabilitation requirements have been made; or
 - c) in response to a request by the Planning Secretary.
- 49B. If the biodiversity offset, compensatory habitat and rehabilitation requirements are 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.
- 49C. If the Biodiversity Offset Strategy or rehabilitation 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.

LONG TERM MANAGEMENT

Long Term Management Strategy

50. Within 12 months of the date of this consent **the Applicant must** prepare a Long Term Management Strategy for the site to the satisfaction of the **Planning Secretary**. The strategy must:
 - a) **be prepared in consultation with Shellharbour Council, Kiama Council and the CCC;**
 - b) define the objectives and criteria for quarry closure and post-extraction management;
 - c) investigate options for the future use of the site;
 - d) describe the measures that would be implemented to minimise or manage the ongoing environmental effects of the development; and
 - e) describe how the performance of these measures would be monitored over time.

Note: The Long Term Management Strategy may be prepared as part of the Rehabilitation Management Plan.

51. Within 3 years of providing the Long Term Management Strategy to the **Planning Secretary**, and every 4 years thereafter, **the Applicant must** review and update the strategy to the satisfaction of the **Planning Secretary**.

Long Term Management Trust

52. Within 4 years of the date of this consent **the Applicant must** establish a trust fund (or other mechanism as agreed by the **Planning Secretary**), that has available by the end of year 20 a minimum of \$300,000 for the long term management of the site, to the satisfaction of the **Planning Secretary**. Every 4 years following establishment of the trust, **the Applicant must** review, and if necessary revise, the trust sum to the satisfaction of the **Planning Secretary**. This review must consider:
 - a) the effects of inflation;
 - b) any changes to the total area of disturbance; and
 - c) the performance of the rehabilitation to date.

TRAFFIC AND TRANSPORT

North Kiama Bypass

53. **The Applicant must** not undertake any product despatch from the **development** until the completion of the 'Stage 2 – Kiama Bypass' by the **TfNSW**.

Note: 'Stage 2' refers to the north bound traffic carriageway due for completion in late 2005.

Stage 5 Access

- 53A. Prior to any heavy vehicle access to the Stage 5 extraction areas, the Applicant must construct a channelised right turn intersection with appropriate line marking from Riverside Drive to the Stage 5A extraction area, to the satisfaction of the relevant roads authority and in accordance with the AustRoads *Guide to Road Design Part 4: Intersections and Crossings –General*.

Road Pavement Dilapidation Report

- 53B. Prior to the construction of the intersection upgrade described in Condition 53A, the Applicant must:
- undertake a pre-construction road pavement survey for the section of Riverside Drive that would be subject to heavy vehicle movements associated with the development;
 - identify the likely risk of road pavement failure on Riverside Drive associated with the development;
 - prepare a post-dilapidation survey of the section of Riverside Drive that would be subject to heavy vehicle movements associated with the development within 1 month of the completion of VENM haulage to the Stage 5 area, or other timeframe agreed by the applicable roads authority; and
 - rehabilitate and/or make good any development-related damage identified in the post-dilapidation survey prepared under paragraph (c) within 3 months of completing the post-dilapidation survey, or other timing as may be agreed by the applicable roads authority, to the satisfaction of the applicable roads authority.
- 53C. If there is a dispute about the scope of any remedial works or the implementation of works required under condition 53B, then either party may refer the matter to the Planning Secretary for resolution.

Works within the Road Reserve

- 53D. Prior to the construction of the pipeline within the within the Princes Highway road reserve (including within the culvert), the Applicant must enter into a legally binding agreement with TfNSW, for the construction, operation and decommissioning of the pipeline. The Applicant must pay for the drafting and execution of this legally binding agreement.
- 53E. The applicant must obtain a Section 138 consent under the *Roads Act 1993* from TfNSW for works associated within the pipeline within the Princes Highway road reserve.

Parking

54. **The Applicant must** provide sufficient parking on-site for all quarry-related traffic, in accordance with Shellharbour Council's parking codes, and to the satisfaction of the **Planning Secretary**. All vehicular and pedestrian facilities **must** be in accordance with the TfNSW's *Guide to Traffic Generating Developments*.

Transport Operating Conditions

55. The Applicant must:
- keep accurate records of all laden truck movements and rail transport to and from the site (including time of arrival and dispatch);
 - ensure that all laden trucks and trains entering or exiting the site have their loads covered;
 - ensure that all laden trucks exiting the site are cleaned of material that may fall from vehicles, before leaving the site;
 - take all reasonable steps to minimise traffic safety issues and disruption to local road users; and
 - take all reasonable steps to ensure that appropriate signage is displayed on all trucks used to transport quarry products from the development so they can be easily identified by other road users.

Traffic Management Plan

56. Prior to undertaking any construction transportation activities relating to Modification 2, the Applicant must prepare a Traffic Management Plan for the development to the satisfaction of the Planning Secretary. This plan must:
- be prepared by suitably qualified and experienced person/s whose appointment has been endorsed by the Planning Secretary;
 - be prepared in consultation with TfNSW, Shellharbour Council and Kiama Council;
 - include details of all transport routes and traffic types to be used for development-related traffic;

- d) describe the processes in place for the control of truck movements entering and exiting the site;
- e) include details of the measures to be implemented to minimise traffic safety issues and disruption to local road users associated with quarry operations;
- f) detail the specific protocols to be observed for the construction of ancillary site infrastructure and site preparation works, including hours of operation, traffic controls and mitigation measures to ensure traffic on Riverside Drive is not significantly impeded by site traffic during construction;
- g) include a Drivers' Code of Conduct that includes procedures to ensure that drivers:
 - (iv) adhere to posted speed limits or other required travelling speeds;
 - (v) adhere to designated transport routes; and
 - (vi) implement safe and quiet driving practices;
- h) describe the measures to be put in place to ensure compliance with the Drivers' Code of Conduct;
- i) propose measures to minimise the transmission of dust and tracking of material onto the surface of public roads from vehicles exiting the site;
- j) propose measures (such as the installation of inclinometers) to monitor detect any ground movement adjacent to the Princes Highway as a result of the extraction in Stage 5B; and
- k) outline the procedures that would be implemented to respond to and address any material ground movements detected under paragraph (j) and demonstrate the long-term stability and safety of stage 5B extraction area on the Princess Highway road reserve.

56A. The Applicant must implement the Traffic Management Plan as approved by the Planning Secretary.

Rail Transport

- 57. The Applicant must maximise the use of rail transport for delivery/despatch outside the Illawarra Region, to the satisfaction of the Planning Secretary. Details of transportation modes and measures to assess and encourage rail transport must be provided in the Annual Review.

VISUAL IMPACT

- 58. The Applicant must minimise the visual impacts of the development to the satisfaction of the Planning Secretary.

Tree Screens

- 59. Prior to the commencement of any works, the Applicant must establish and subsequently maintain a tree screen along the eastern boundary (and northeastern and southeastern boundaries) of Stages 2-4, to the satisfaction of the Planning Secretary.
- 60. Within 2 months of completing construction of the processing area, the Applicant must establish and subsequently maintain a tree screen around the processing area to the satisfaction of the Planning Secretary.

Landscaping Plan

- 61. The Applicant must establish the tree screens identified in conditions 59 and 60 in accordance with a Landscaping Plan that has been prepared in consultation with Shellharbour Council and Kiama Council, and to the satisfaction of the Planning Secretary. The plan must be prepared by a suitably qualified ecologist/landscape architect and must:
 - a) be prepared in accordance with the *Shellharbour Visual Management Plan User Manual*;
 - b) comprise a full range of Swamp Oak Floodplain Forest species;
 - c) provide for the planting of trees of sufficient maturity that will ensure the prompt screening of the site;
 - d) provide for a sufficient planting width and density to ensure that the site will be effectively screened when viewed from the Princes Highway and residential areas.

Lighting Emissions

- 62. The Applicant must take all practicable measures to prevent and/or minimise any off-site lighting impacts from the development.
- 63. All external lighting associated with the development must comply with *Australian Standard AS4282 (INT) 1995 – Control of Obtrusive Effects of Outdoor Lighting*.

WASTE MANAGEMENT

Waste Minimisation

64. The Applicant must
- manage on-site sewage treatment and disposal in accordance with the requirements of an applicable EPL, and to the satisfaction of EPA and Shellharbour Council;
 - minimise the waste generated by the development;
 - ensure that the waste generated by the development is appropriately stored, handled, and disposed of; and
 - report on waste minimisation and management in the Annual Review.

Backfilling Material

65. ⁷ The Applicant must use VENM for the purpose of void backfilling.

Note: The definition of VENM may include soil that has been assessed by a certified practicing soil scientist in accordance with the Acid Sulfate Soil Management Advisory Council guidelines and determined to be Potential Acid Sulfate Soil (PASS) and which satisfies all of the requirements for classification as VENM, except that it contains sulfidic soils, that has been approved by EPA for disposal on the site, and that is managed in accordance with the procedures in the EPL for the development.

66. ⁸Backfilling of the voids must be undertaken in a manner, and with material with suitable physical characteristics, so that it does not significantly affect the direction or rate of groundwater flow from the site.
67. ⁹All fines separated from the dredged sand must be placed below the permanent water table within 12 hours of processing the dredged sand.

VENM Receipt and Processing

- 67A. The Applicant must not process and/or blend more than 120,000 tonnes of VENM per annum.
- 67B. 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 or reprocessing.

Waste Management Plan

68. ¹⁰Within 12 months of the date of this consent the Applicant must prepare and subsequently implement a Waste Management Plan for the development, in consultation with EPA, and to the satisfaction of the Planning Secretary. The plan must include:
- VENM receipt and acceptance, processing and blending procedures;
 - procedures for the management of fines from the processing plant;
 - procedures for managing potential acid sulfate soils; and
 - procedures for minimising and managing other wastes generated by the development.

- 68A. The Applicant must implement the Waste Management Plan as approved by the Planning Secretary.

BUSHFIRE MANAGEMENT

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

⁷ Incorporates EPA GTA

⁸ Incorporates EPA GTA

⁹ Incorporates EPA GTA

¹⁰ Incorporates EPA GTA

EMERGENCY AND HAZARDS MANAGEMENT

Dangerous Goods

70. [The Applicant must](#) ensure that the storage, handling, and transport of dangerous goods is conducted in accordance with the relevant Australian Standards, particularly AS1940 and AS1596, and the Dangerous Goods Code.

Safety

71. [The Applicant must](#) secure the development to ensure public safety to the satisfaction of the [Planning Secretary](#).

PRODUCTION DATA

72. [The Applicant must](#):
- a) provide annual production data to the [MEG](#) using the standard form for that purpose; and
 - b) include a copy of this data in the [Annual Review](#).

SCHEDULE 4 ADDITIONAL PROCEDURES

ADDITIONAL MITIGATION UPON REQUEST

1. Upon receiving a written request from the owner of any residence on the land listed in Table 7, the Applicant must implement additional noise mitigation measures (such as double-glazing, insulation and/or air conditioning) at the residence in consultation with the landowner.

Table 7: Land subject to additional mitigation upon request

Mitigation Basis	Land
Noise	79 Fig Hill Lane, Dunmore

Note: To interpret the land referred to in Table 7, see the applicable figure in Appendix 3.

These measures must be reasonable and feasible, consistent with the measures outlined in the *Voluntary Land Acquisition and Mitigation Policy for State Significant Mining, Petroleum and Extractive Industry Development (NSW Government, 2014)*, proportionate to the level of predicted impact and directed towards reducing the noise impacts of the development.

2. If within 3 months of receiving this request from the owner, the Applicant and the owner cannot agree on 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.

NOTIFICATION OF LANDOWNERS/TENANTS

3. Within one month of the date of this consent, the Applicant must notify in writing the owner of the residences on the land listed in Table 7 that they are entitled to ask the Applicant to install additional mitigation measures at the residence.
4. Prior to entering into any tenancy agreement for any land owned by the Applicant that is predicted to experience exceedances of the recommended dust and/or noise criteria, the Applicant must:
 - a) advise the prospective tenants of the potential health and amenity impacts associated with living on the land, and give them a copy of the fact sheet entitled "Mine Dust and You" (NSW Health, 2017); and
 - b) advise the prospective tenants of the rights they would have under this consent, to the satisfaction of the Planning Secretary.

NOTIFICATION OF EXCEEDANCES

5. As soon as practicable and no longer than 7 days after obtaining monitoring results showing an exceedance of any noise or air quality criterion in Schedule 3 of this consent, the Applicant must provide the details of the exceedance to any affected landowners, tenants and the CCC.
6. For any exceedance of any air quality criterion in Schedule 3 of this consent, the Applicant must also provide to any affected land owners and/or tenants a copy of the fact sheet entitled "Mine Dust and You" (NSW Health, 2017).

INDEPENDENT REVIEW

7. If a landowner considers the development to be exceeding any relevant noise or air quality criterion in Schedule 3 of this consent, they may ask the Planning Secretary in writing for an independent review of the impacts of the development on their residence or land.
8. 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.
9. If the Planning Secretary is satisfied that an independent review is warranted, within 3 months, or other timeframe agreed by the Planning Secretary and the landowner, of the Planning Secretary's decision, 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 criterion in Schedule 3 of this consent; and

- (iii) if the development is not complying with the relevant criterion, identify measures that could be implemented to ensure compliance with the relevant criterion; and
- 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.

**SCHEDULE 5
ENVIRONMENTAL MANAGEMENT, REPORTING AND AUDITING**

ENVIRONMENTAL MANAGEMENT

Environmental Management Strategy

1. If the **Planning Secretary** requires, the Applicant must prepare an Environmental Management Strategy for the development to the satisfaction of the **Planning Secretary**. This strategy must:
 - a) be submitted to the **Planning Secretary** for approval within 6 months of the **Planning Secretary** requiring preparation of the strategy by notice to the Applicant;
 - b) provide the strategic framework for the environmental management of the development;
 - c) identify the statutory approvals that apply to the development;
 - d) describe the role, responsibility, authority and accountability of all key personnel involved in the environmental management of the development;
 - e) describe the procedures that would be implemented to:
 - keep the local community and relevant agencies informed about the operation and environmental performance of the development;
 - receive, handle, respond to, and record complaints;
 - resolve any disputes that may arise during the course of the development;
 - respond to any non-compliance and any incident; and
 - respond to emergencies; and
 - f) include:
 - references to any strategies, plans and programs approved under the conditions of this development consent; and
 - a clear plan depicting all the monitoring to be carried out under the conditions of this consent.

- 1A. The Applicant must implement the Environmental Management Strategy as approved by the **Planning Secretary**.

Management Plan Requirements

2. The Applicant must ensure that the Management Plans required under this consent are prepared in accordance with any relevant guidelines, and include:
 - a) detailed baseline data;
 - b) a description of:
 - the relevant statutory requirements (including any relevant approval, licence or lease conditions);
 - any relevant limits or performance measures/criteria; and
 - 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) any relevant commitments or recommendations identified in the document/s listed in condition 2(c) of Schedule 2;
 - d) a description of the measures that would be implemented to comply with the relevant statutory requirements, limits, or performance measures and criteria;
 - e) a program to monitor and report on the:
 - impacts and environmental performance of the development; and
 - effectiveness of any management measures (see (c) above);
 - f) 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;
 - g) a program to investigate and implement ways to improve the environmental performance of the development over time;
 - h) a protocol for managing and reporting any:
 - incidents;
 - complaints;
 - non-compliances with statutory requirements; and
 - exceedances of the impact assessment criteria and/or performance criteria; and
 - i) 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 & Programs

3. Within 3 months of:
 - a) the submission of an incident report under condition 7 below;
 - b) the submission of an Annual Review under condition 9 below;
 - c) the submission of an audit report under condition 10 below; and
 - d) the approval of any modifications to this consent (unless the conditions require otherwise),the Applicant must review the suitability of existing strategies, plans, and programs required under this consent.

4. 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 the strategies, plans and programs are updated on a regular basis, and incorporate any recommended measures to improve the environmental performance of the development.

Adaptive Management

5. The Applicant must assess and manage development-related risks to ensure that there are no exceedances of the criteria and/or performance measures in Schedule 3. Any exceedance of these criteria and/or performance measures constitutes a breach of this consent and may be subject to penalty or offence provisions under the EP&A Act or EP&A Regulation.

Where any exceedance of these criteria and/or performance measures has occurred, the Applicant must, at the earliest opportunity:

- a) take all reasonable and feasible measures to ensure that the exceedance ceases and does not recur;
- b) consider all reasonable and feasible options for remediation (where relevant) and submit a report to the Department describing those options and any preferred remediation measures or other course of action; and
- c) implement remediation measures as directed by the Planning Secretary, to the satisfaction of the Planning Secretary.

COMMUNITY CONSULTATIVE COMMITTEE

6. The Applicant must operate a Community Consultative Committee (CCC) for the development, to the satisfaction of the Planning Secretary. This CCC must be operated in general accordance with the *Guidelines for Establishing and Operating Community Consultative Committees for Mining Projects* (Department of Planning, 2007, or its latest version)

Notes:

- *The CCC is an advisory committee. The Department and other relevant agencies are responsible for ensuring that the Applicant complies with this consent.*
- *In accordance with the guideline, the committee should be comprised of an independent chair and appropriate representation from the Applicant, Council, and the local community.*
- *The requirement for this CCC may be fulfilled by a regional CCC for any two or more of Boral's quarrying operations in the South Coast area.*

REPORTING

Incident Notification

7. The Applicant must immediately notify the Department and any other relevant agencies immediately after it becomes aware of an incident. The notification must be in writing through the Department's Major Projects Website and identify the development (including the development application number and name) and set out the location and nature of the incident.

Non-Compliance Notification

- 7A. 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 through the Department's Major Projects Website and 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 and the reasons for the non-compliance (if known) and what actions have been, or will be, undertaken 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.

Regular Reporting

8. The Applicant must provide regular reporting on the environmental performance of the development on its website, in accordance with the reporting arrangements in any plans or programs approved under the conditions of this consent.

ANNUAL REVIEW

9. By the end of September each year, or other timing as may be agreed by the Planning Secretary, the Applicant must review the environmental performance of the development to the satisfaction of the Planning Secretary. This review must:
 - a) describe the development (including rehabilitation) that was carried out in the previous financial year, and the development that is proposed to be carried out over the current financial year;
 - b) include a comprehensive review of the monitoring results and complaints records of the development over the previous financial year, which includes a comparison of these results against:
 - the relevant statutory requirements, limits or performance measures/criteria;

- requirements of any plan or program required under this consent;
 - the monitoring results of previous years; and
 - the relevant predictions in the documents listed in condition 2(c) of Schedule 2;
- c) identify any non-compliance or incident which occurred in the previous financial year, and describe what actions were (or are being) taken to rectify the non-compliance and avoid reoccurrence;
- d) evaluate and report on:
- the effectiveness of the noise and air quality management systems; and
 - compliance with the performance measures, criteria and operating conditions of 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 financial year to improve the environmental performance of the development.

The Applicant must ensure that copies of the Annual Review are submitted to the Planning Secretary and Council and are available to the Community Consultative Committee (see condition 6 of Schedule 5) and any interested person upon request.

INDEPENDENT ENVIRONMENTAL AUDIT

10. By 30 September 2017, and every 3 years thereafter, unless the Planning Secretary directs otherwise, the Applicant must commission and pay the full cost of an Independent Environmental Audit of the development. This audit must:
- a) be conducted by suitably qualified, experienced and independent team of experts whose appointment has been endorsed by the Planning Secretary;
 - b) include 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 and any relevant EPL and/or Water Licence (including any assessment, plan or program required under these approvals);
 - d) review the adequacy of any approved strategy, plan or program required under these approvals; and
 - e) recommend measures or actions to improve the environmental performance of the development, and/or any assessment, plan or program required under these approvals.

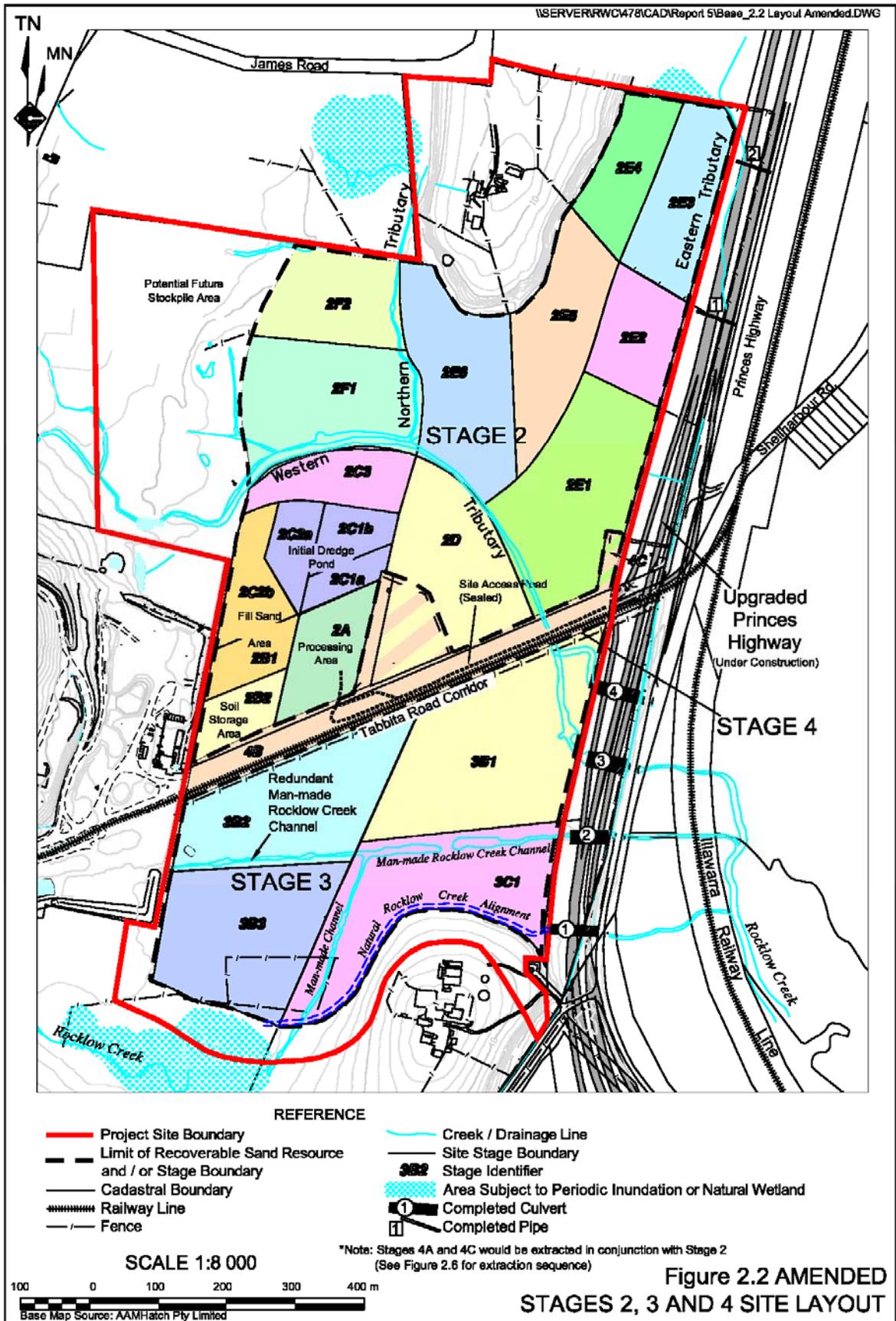
Note: This audit team must be led by a suitably qualified auditor and include experts in any fields specified by the Planning Secretary.

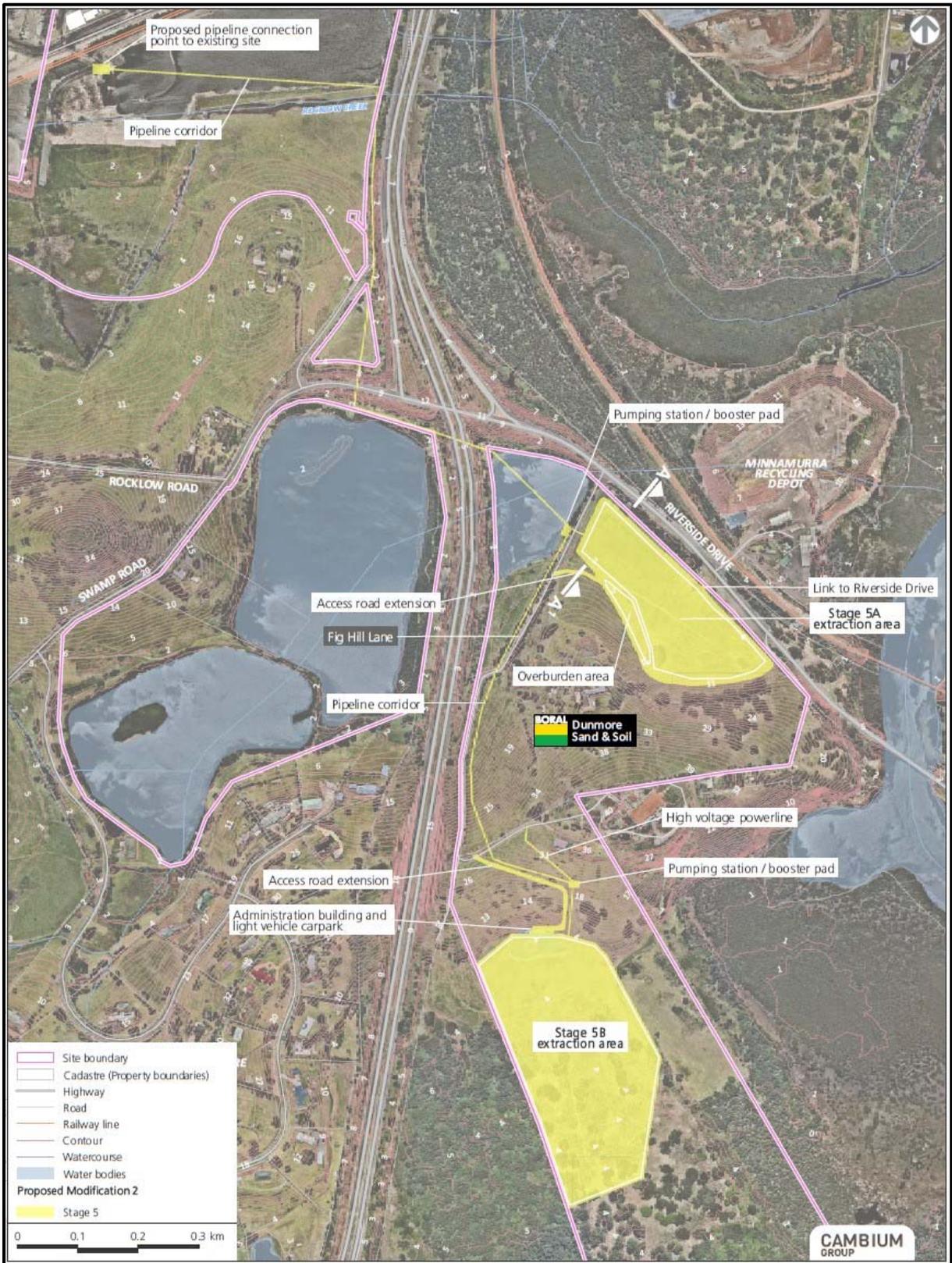
11. Within 6 weeks of commissioning this audit, or as otherwise agreed by the Planning Secretary, the Applicant must submit a copy of the audit report to the Planning Secretary, Council, EPA and any other NSW agency that requests it, together with its response to any recommendations contained in the audit report, and a timetable for the implementation of the recommendations. The recommendations must be implemented to the satisfaction of the Planning Secretary.

ACCESS TO INFORMATION

12. By 30 November 2016, unless otherwise agreed by the Planning Secretary, the Applicant must:
- a) make the following information publicly available on its website:
 - the documents listed in condition 2(c) of Schedule 2;
 - current statutory approvals for the development;
 - approved strategies, plans or programs;
 - a summary of the monitoring results of the development, which have been reported in accordance with the various plans and programs approved under the conditions of this consent;
 - minutes of CCC meetings;
 - a summary of the current phase and progress of the development;
 - contact details to enquire about the development or to make a complaint;
 - a complaints register, which is to be updated on a monthly basis;
 - the Annual Reviews of the development;
 - reports prepared as part of any independent environmental audit, and the Applicant's response to the recommendations in any audit report;
 - any other matter required by the Planning Secretary; and
 - b) keep this information up-to-date,
- to the satisfaction of the Planning Secretary.

APPENDIX 1
DEVELOPMENT LAYOUT PLAN





APPENDIX 2
CONCEPT FINAL LANDFORM

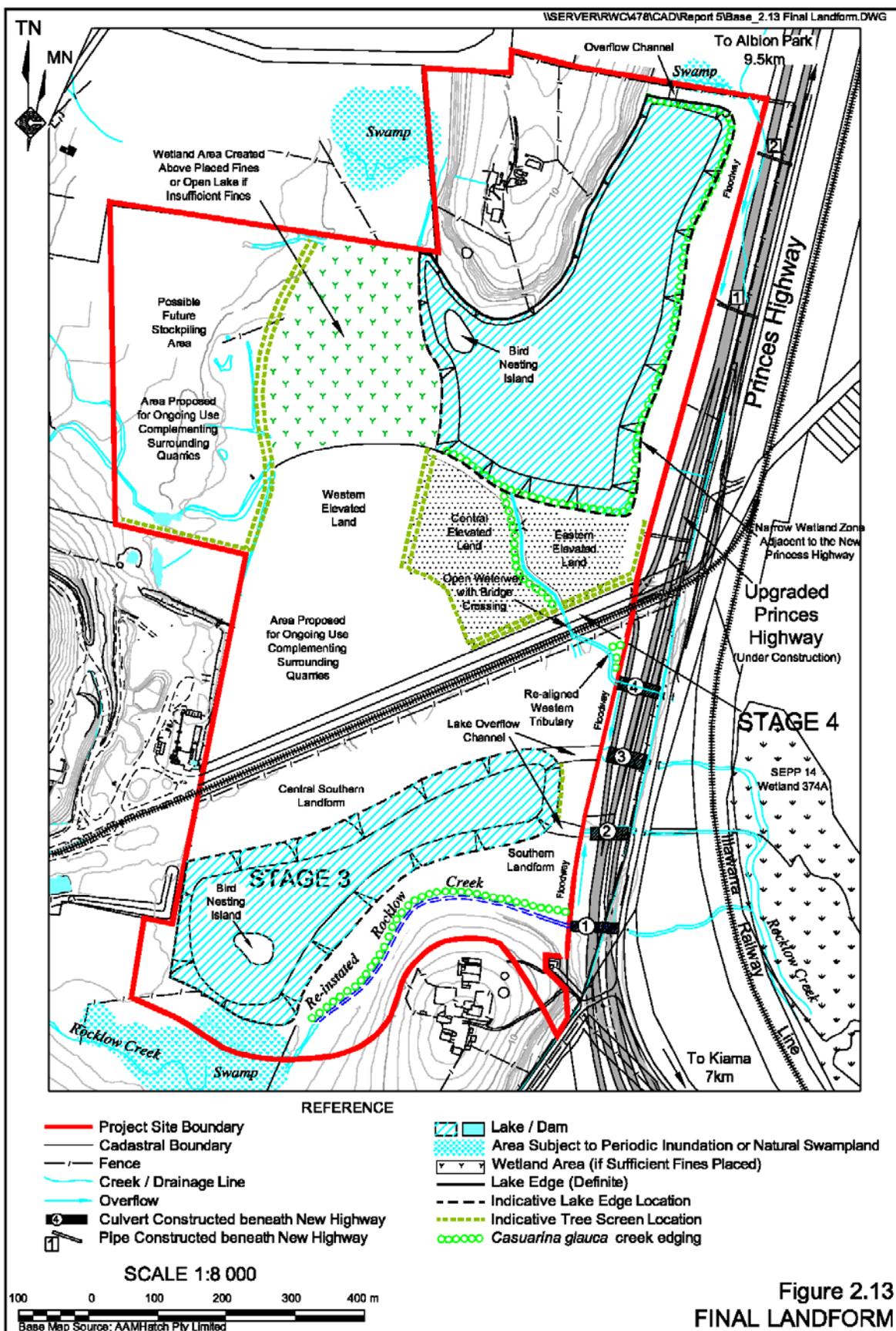
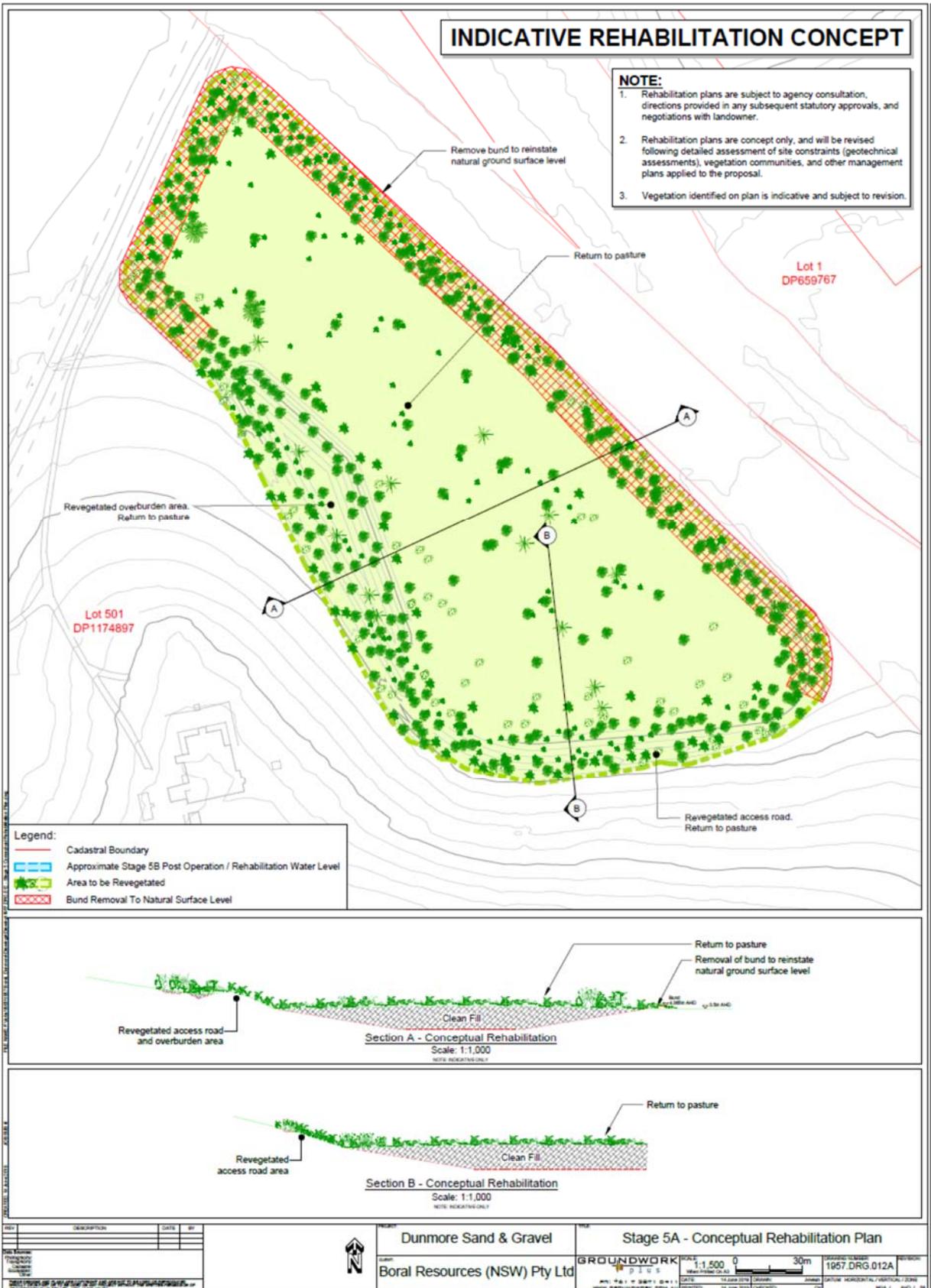
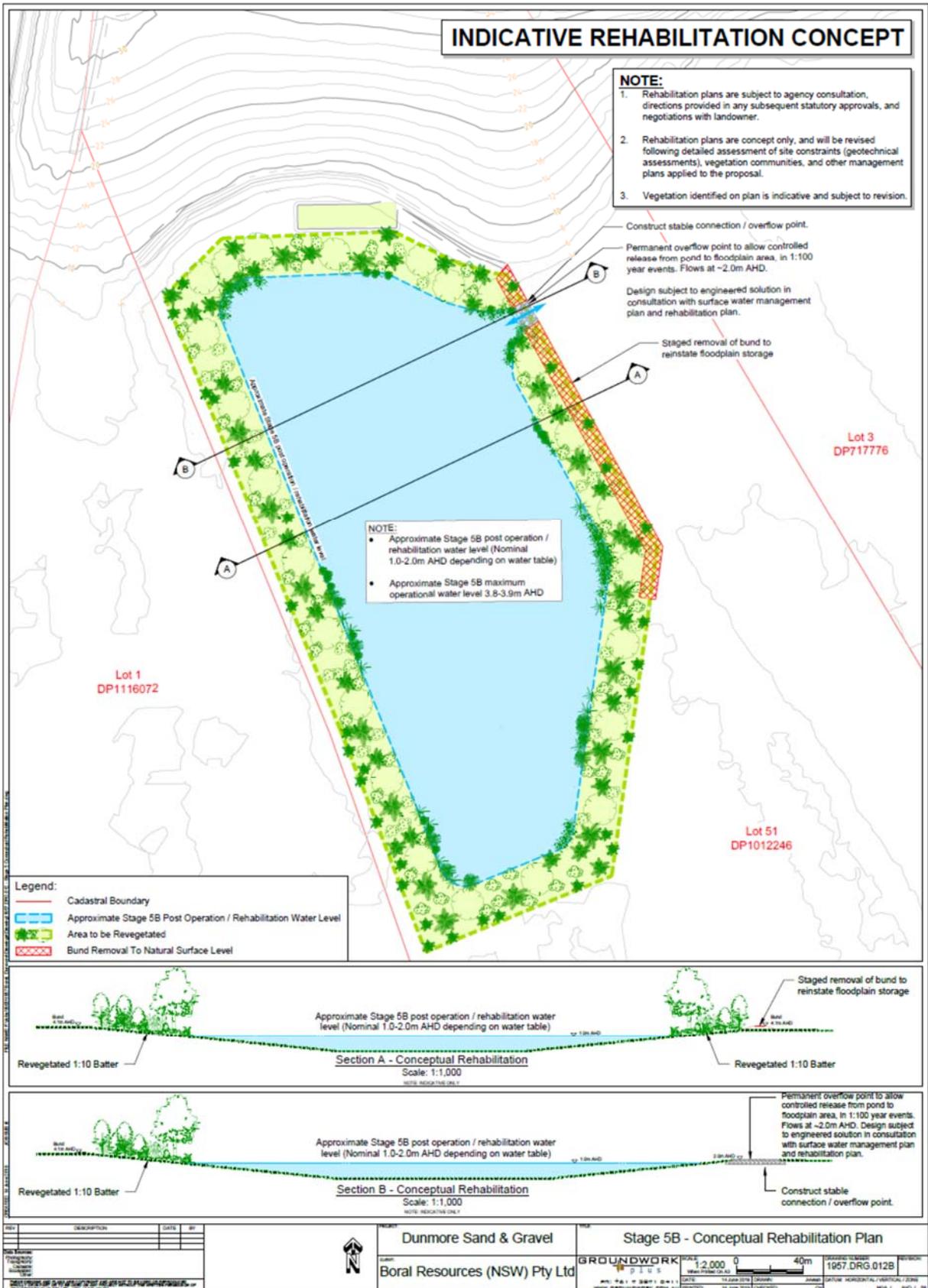


Figure 2.13
FINAL LANDFORM





APPENDIX 3
STAGE 5 NOISE RECEIVER LOCATIONS

