

# 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

<b>Development Application:</b>	DA 195-8-2004.
<b>Applicant:</b>	Dunmore Sand and Soil Pty Limited (ABN: 62 003 497 229).
<b>Consent Authority:</b>	Minister for Infrastructure and Planning.
<b>Land:</b>	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, Parish of Terragong, County of Camden.
<b>Proposed Development:</b>	Dunmore Lakes Sand Extraction Project (Stages 2, 3 and 4).
<b>State Significant Development:</b>	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.
<b>Integrated Development:</b>	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"><li>• <i>Protection of the Environment Operations Act 1997</i>;</li><li>• <i>Water Act 1912</i>; and</li><li>• <i>Rivers and Foreshores Improvement Act 1948</i>.</li></ul>
<b>Designated Development:</b>	The proposal is classified as designated development under section 77A of the <i>Environmental Planning &amp; 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 &amp; 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

## DEFINITIONS

Annual Review Applicant	The review required by condition 9 of Schedule 5 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
ARI	Average Recurrence Interval
BCA	Building Code of Australia
CCC	Community Consultative Committee
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
Department	Department of Planning and Environment
Development	The development described in the documents listed in condition 2(a) of Schedule 2
DPI Fisheries	Department of Primary Industries – Fisheries
DPI Water	Department of Primary Industries – Water
DRE	Division of Resources and Energy, within the NSW Department of Industry
EA (MOD 1)	Modification application DA 195-8-2004 MOD 1 and the accompanying Environmental Assessment titled <i>Dunmore Lakes Sand Project (DA 195-8-2004) – Modification 1</i> dated 26 April 2016
EIS	Environmental Impact Statement for the <i>Dunmore Lakes Sand Extraction Proposal, Stages 2, 3 and 4: Environmental Impact Statement, Volumes 1 &amp; 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
EPA	Environment Protection Authority
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
GTA	General Term of Approval
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.
Minister	Minister for Planning, or delegate
Night	Night is defined as the period from 10pm to 6am on Monday to Saturday, and 10pm to 8am on Sundays and Public Holidays
OEH	Office of Environment and Heritage
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
RMS	Roads and Maritime Services
Secretary	Secretary of the Department, or nominee
Shoulder	Time interval from 6am to 7am, Monday to Saturday
Site	Land to which the DA applies
VENM	Virgin Excavated Natural Material, as defined in the <i>Protection of the Environment Operations Act 1997</i>

## SCHEDULE 2 ADMINISTRATIVE CONDITIONS

### Obligation to Minimise Harm to the Environment

1. **The Applicant must** implement all practicable measures to prevent and/or minimise any harm to the environment that may result from the construction, operation, or rehabilitation of the development.

### Terms of Approval

2. **The Applicant must** carry out the development:
  - a) generally in accordance with the EIS, EA (MOD 1) and the Development Layout Plan; and
  - b) in accordance with the conditions of this consent.

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

3. If there is any inconsistency between the documents identified in condition 2(a), 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(a).
4. **The Applicant must** comply with any reasonable requirement/s of the 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;
  - c) the implementation of any actions or measures contained in these documents.

### Limits on Approval

5. This consent shall lapse 25 years after the date it commences.

*Note: On-going use of the site for processing and blending activities after this time shall be the subject of a separate application.*

6. **The Applicant must** not produce or transport more than 800,000 tonnes of product per 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 4A 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*, or its latest version.

### Protection of Public Infrastructure

9. **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.

### 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.

## SCHEDULE 3 SPECIFIC ENVIRONMENTAL CONDITIONS

### GENERAL EXTRACTION AND PROCESSING PROVISIONS

#### Identification of Boundaries

1. Within 6 months of the date of this consent, **the Applicant must**:
  - a) engage a registered surveyor to mark out the boundaries of the approved limits of extraction;
  - b) submit a survey plan of these boundaries to the **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.

*Note: The limit of extraction includes the area described in the documents listed in condition 2 of schedule 2 (and shown conceptually on the plan in Appendix 1), as amended by the conditions below.*

#### General Limits on Extraction and Processing

2. **The Applicant must** not undertake extraction within 3 metres of the project site boundary. 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 **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 **Secretary**.

#### Western, Northern and Eastern Tributaries

*Note: The Applicant is required to obtain a Controlled Activity Approval from DPI 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 45). 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 **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 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 45). 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 [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 [Secretary](#). The redirection must be undertaken in accordance with an approved Riparian Area Management Plan (see condition 45).

## NOISE

### Noise Limits

13. <sup>1</sup> [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 <sub>Aeq</sub> (15 mins)	Day L <sub>Aeq</sub> (15 mins)	Evening L <sub>Aeq</sub> (15 mins)	Night L <sub>Aeq</sub> (15 mins)
Renton	46	46	43	37
Dunmore Village residences	47	49	44	41
Stocker	47	49	44	38

#### Notes:

- a) The criteria above apply to noise emissions under the following weather conditions:
  - wind speeds up to 3 m/s (at a height of 10m); and
  - Temperature inversions of up to 6°C/100m and wind speeds up to 2 m/s (at a height of 10m).
- b) The criteria do not apply where the Applicant and the affected landowner have reached a negotiated agreement in regard to noise, and a copy of the agreement has been forwarded to the [Secretary](#) and [EPA](#).
- c) Noise from the development is to be measured at the most affected point or within the residential boundary, or at the most affected point within 30 metres of a dwelling (rural situations) where the dwelling is more than 30 metres from the boundary, to determine compliance with the L<sub>Aeq(15 minute)</sub> noise limits in the above table. Where it can be demonstrated that direct measurement of noise from the development is impractical, [EPA](#) may accept alternative means of determining compliance (see Chapter 11 of the NSW Industrial Noise Policy). The modification factors in Section 4 of the NSW Industrial Noise Policy must also be applied to the measured noise levels where applicable.

## Operating Hours

14. <sup>2</sup> [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	Monday – Friday	7:00am to 10:00pm
	Saturday	7:00am to 6:00pm
	Sunday and Public Holidays	8:00am to 4:00pm

<sup>1</sup> Incorporates [EPA](#) GTA

<sup>2</sup> Incorporates [EPA](#) GTA

Activity	Day	Time
Maintenance (if inaudible at neighbouring residences)	Anytime	Anytime

15. <sup>3</sup>The following activities may be carried out at the premises outside the hours specified in Table 2:
- the delivery of materials as requested by Police or other 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 **EPA** and affected residents prior to undertaking the works, or within a reasonable period in the case of emergency.

#### Noise Monitoring Program

16. <sup>4</sup>Within 3 months of the date of this consent, **the Applicant must** prepare a Noise Monitoring Program for the development, in consultation with **EPA**, and to the satisfaction of the **Secretary**. This program must include a noise monitoring protocol for evaluating compliance with the noise impact assessment criteria in this consent.

**The Applicant must implement the approved monitoring program as approved from time to time by the Secretary.**

#### Noise Compliance Assessment Report

17. <sup>5</sup>Within 2 months of the date of commencement of extraction of production sand, and annually thereafter unless directed otherwise by the **Secretary**, **the Applicant must**:
- commission a suitably qualified person to assess whether the development is complying with the noise impact assessment criteria in Table 1, in general accordance with the *NSW Industrial Noise Policy* and *Australian Standard (AS) 1055-1997: Description and Measurement of Environmental Noise*; and
  - provide the results of this assessment to **EPA** and **Secretary** within a month of commissioning the assessment.

#### Noise Limit Exceedance Report

18. Within 7 days of detecting any exceedance of the noise limits in Table 1, **the Applicant must** report the exceedance to **EPA** and the **Secretary**. This report must include details of the date and time of the exceedance, the operational cause of the exceedance, the response initiated, and the measures proposed to ensure ongoing compliance with the noise limits.

### AIR QUALITY

#### Impact Assessment Criteria

19. **The Applicant must** ensure that dust generated by the development does not cause additional exceedances of the criteria listed in Tables 3 to 5 at any residence on, or on more than 25 percent of, any privately-owned land.

Table 3: Long term criteria for particulate matter

Pollutant	Averaging period	Criterion
Total suspended particulate (TSP) matter	Annual	90 µg/m <sup>3</sup>
Particulate matter < 10 µm (PM <sub>10</sub> )	Annual	30 µg/m <sup>3</sup>

Table 4: Short term criteria for particulate matter

Pollutant	Averaging period	Criterion
Particulate matter < 10 µm (PM <sub>10</sub> )	24 hour	50 µg/m <sup>3</sup>

<sup>3</sup> Incorporates **EPA** GTA

<sup>4</sup> Incorporates **EPA** GTA

<sup>5</sup> Incorporates **EPA** GTA

Table 5: Long term impact assessment criteria for deposited dust

Pollutant	Averaging period	Maximum increase in deposited dust level	Maximum total deposited dust level
Deposited dust	Annual	2 g/m <sup>2</sup> /month	4 g/m <sup>2</sup> /month

Note: Deposited dust is assessed as insoluble solids as defined by Standards Australia, 1991, AS 3580.10.1-1991: Methods for Sampling and Analysis of Ambient Air - Determination of Particulates - Deposited Matter - Gravimetric Method

#### Air Quality Monitoring Program

20. <sup>6</sup>Within 3 months of the date of this consent, the Applicant must prepare an Air Quality Monitoring Program for the development, in consultation with EPA, and to the satisfaction of the Secretary. This program must include an air monitoring protocol for evaluating compliance with the air quality criteria in this consent.

The Applicant must implement the approved monitoring program as approved from time to time by the Secretary.

Note: Initially, this program should concentrate on monitoring the dust deposition impacts of the development. However, in time, it may be expanded to include other pollutants.

#### Odour

21. <sup>7</sup> The Applicant must not cause or permit the emission of offensive odour beyond the boundary of the site.

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

#### SURFACE AND GROUND WATER

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

#### Pollution of Waters

22. Except as may be expressly provided by an Environment Protection Licence, 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 Environmental Protection Licence, the Applicant must ensure that the discharges from any licenced discharge point/s do not cause additional exceedances of the criteria in Table 6:

Table 6: 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 7, or other such level as approved by the Secretary:

<sup>6</sup> Incorporates EPA GTA

<sup>7</sup> Incorporates EPA GTA



Table 7: 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
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. <sup>8</sup> 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 6 and 7) from these ponds.
26. <sup>9</sup> 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. Details of the available flood storage capacity must be reported in the Annual Review.
28. <sup>10</sup> The 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 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 Secretary.

<sup>8</sup> Incorporates EPA GTA

<sup>9</sup> Incorporates EPA GTA

<sup>10</sup> Incorporates EPA GTA

## Monitoring and Management

30. Within 3 months of the date of this consent, **the Applicant must** prepare a Water Management Plan for the development, in consultation with **DPI Water** and the Department, and to the satisfaction of the **Secretary**. This plan must be prepared by a qualified hydrogeologist/hydrologist and include:
- a) a Water Balance;
  - b) an Erosion and Sediment Control Plan;
  - c) a Surface Water Monitoring Program;
  - d) a Ground Water Monitoring Program; and
  - e) a Surface and Ground Water Response Plan, to address any potential adverse impacts associated with the development.

**The Applicant must implement the approved management plan as approved from time to time by the Secretary.**

31. The Water Balance **must**:
- a) include details of all water extracted and used by the development; and
  - b) provide for the reporting of annual water extraction and maximum instantaneous pumping rates to the Department in accordance with the licence under the *Water Act 1912*.
32. The Erosion and Sediment Control Plan **must**:
- a) be consistent with the requirements of the Department of Housing's *Managing Urban Stormwater: Soils and Construction* manual;
  - b) identify activities that could cause soil erosion and generate sediment;
  - c) describe measures to minimise soil erosion and the potential for the transport of sediment to downstream waters;
  - d) describe the location, function, and capacity of erosion and sediment control structures; and
  - e) describe what measures would be implemented to maintain the structures over time.
33. The Surface Water Monitoring Program **must** include:
- a) detailed baseline data on surface water flows and quality in all waterbodies and wetlands within the site;
  - b) surface water impact assessment criteria;
  - c) a program to monitor surface water flows and quality;
  - d) a program to monitor bank and bed stability;
  - e) a protocol for the investigation, notification and mitigation of identified exceedances of the surface water impact assessment criteria; and
  - f) a program to monitor the effectiveness of the Erosion and Sediment Control Plan.
34. The Ground Water Monitoring Program **must** include:
- a) detailed baseline data on ground water levels, flows and quality, based on statistical analysis;
  - b) ground water impact assessment criteria;
  - c) a program to monitor regional ground water levels and quality;
  - d) a program to monitor ground water level effects on adjacent wetlands, vegetation, and on ground water supply to adjoining properties; and
  - e) a protocol for the investigation, notification and mitigation of identified exceedances of the groundwater impact assessment criteria.

## Reporting

35. Each year, **the Applicant must**:
- a) review the Water Management Plan;
  - b) update each sub-plan; and
  - c) report the results of this review in the **Annual Review**, including:
  - d) the results of monitoring;
  - e) details of the review for each sub-plan;
  - f) amendments to the sub-plans; and
  - g) details of the measures undertaken/proposed to address any identified issues.

## WEATHER MONITORING

36. <sup>11</sup> The Applicant must establish a rainfall monitoring gauge at a location approved by EPA, using the following specified units of measure, averaging period, frequency and sampling method.

Table 8: Weather Monitoring

Parameter	Unit of Measure	Averaging period	Frequency	Sampling method <sup>1</sup>
Rainfall	mm	24 hr	Continuous	AM-4
Siting	-	-	-	AM-1

<sup>1</sup> NSW EPA, 2001, Approved Methods for the Sampling and Analysis of Air Pollutants in NSW.

## FLORA AND FAUNA

### Endangered Ecological Community Compensatory Habitat

37. The Applicant must establish, conserve and maintain at least:
- 6 ha of Freshwater Wetlands on Coastal Floodplains (which may include areas of associated wetland pondage); and
  - 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.

### Flora and Fauna Management Plan

38. Within 12 months of the date of this consent the Applicant must prepare a Flora and Fauna Management Plan for the development to the satisfaction of the Secretary. This plan must be prepared by a suitably qualified ecologist and include:
- a Vegetation Clearing Protocol;
  - a Compensatory Habitat Management Plan; and
  - a Pest and Weed Management Plan.

The Applicant must implement the approved management plan as approved from time to time by the Secretary.

39. The Vegetation Clearing Protocol must be prepared prior to the commencement of any vegetation clearing works, and must:
- delineate the areas of vegetation to be cleared; and
  - describe the procedures that would be implemented for;
    - pre-clearance surveys;
    - progressive clearing;
    - fauna management;
    - conserving and reusing topsoil;
    - collecting seed from the site;
    - salvaging and reusing material from the site;
    - managing waste vegetation; and
    - controlling weeds.
40. The Compensatory Habitat Management Plan must:
- describe the compensatory habitat proposal;
  - justify 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;
  - establish baseline data for the existing habitat in the proposed area(s);
  - describe how the compensatory habitat proposal would be implemented;
  - set completion criteria for the compensatory habitat proposal; and
  - describe how the performance of the compensatory habitat proposal would be monitored over time.
41. The Pest and Weed Management Plan must be prepared in consultation with Shellharbour Council, OEH and DPI Fisheries, and must:
- identify potential terrestrial and aquatic pests and weeds that may be expected on the site;
  - describe the measures that would be implemented to prevent and eradicate the occurrence of pests and weeds on the site; and

<sup>11</sup> Incorporates EPA GTA

- c) describe how the performance of these measures would be monitored over time.

## REHABILITATION

### Rehabilitation

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

### Rehabilitation Management Plan

43. Within 12 months of the date of this consent the Applicant must prepare a Rehabilitation Management Plan for the development to the satisfaction of the Secretary. This plan must:
- identify the disturbed area at the site;
  - describe in general the short, medium, and long-term measures that would be implemented to rehabilitate the site;
  - describe in detail the measures that would be implemented over the next 5 years to rehabilitate the site;
  - define the final landform based on current backfill estimates;
  - set completion criteria for the rehabilitation of the site;
  - describe how the performance of these measures would be monitored over time;
  - include Riparian Area Management Plan/s for those riparian areas to be disturbed/rehabilitated in the next 5 years; and
  - include Landscaping Plan/s for the site.

The Applicant must implement the approved management plan as approved from time to time by the Secretary.

44. The Rehabilitation Management Plan must be prepared:
- in consultation with Shellharbour Council, Kiama Council, OEH, DRE, the CCC, and the Department;
  - by suitably qualified consultants, including a specialist hydrologist, wetlands ecologist and landscape architect, whose appointments have been approved by the Secretary;
  - in accordance with extant guidelines including the *Constructed Wetlands Manual, Volumes 1 & 2* and the *Shellharbour Visual Management Plan User Manual*, to the satisfaction of the Secretary.
45. The Riparian Area Management Plan/s must be prepared in consultation with OEH and the Department, and must:
- For works involving disturbance within 3m of an existing riparian area:
    - describe the broader extraction staging and justify the need for extraction in the riparian area at the proposed time;
    - 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 OEH and the Department; and
    - describe the methods for rehabilitation of the riparian area and diversion channels.
  - For works involving construction/rehabilitation of riparian areas:
    - detail proposed channel/bed designs, including scour protection measures;
    - include hydraulic modeling 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* and *Swamp Oak Floodplain Forest*.
46. The Landscaping Plan/s must be prepared in consultation with Shellharbour Council and Kiama Council and must include:
- concept design plans for the final landform; and
  - detailed design plans for the areas to be rehabilitated in the next 5 years.
47. Within 3 years of providing the Rehabilitation Management Plan to the Secretary, and every 4 years thereafter, the Applicant must review and update the Rehabilitation Management Plan in a manner similar to that described in condition 44, to the satisfaction of the Secretary.

## Rehabilitation and Conservation Bond

48. Within 12 months of the date of this consent, **the Applicant must** lodge a rehabilitation and conservation bond for the development with the **Secretary**. The sum of the bond **must** be calculated at:

- a) \$2.50/m<sup>2</sup> for the total area to be disturbed in each 4 year review period (see condition 49); and
  - b) \$1.00/m<sup>2</sup> for the total area of land previously disturbed and/or rehabilitated by the development,
- or as otherwise directed by the **Secretary**.

### Notes:

- *If the rehabilitation is completed to the satisfaction of the **Secretary**, the **Secretary** will release the rehabilitation and conservation bond.*
- *If the rehabilitation is not completed to the satisfaction of the **Secretary**, the **Secretary** will call in all or part of the rehabilitation and conservation bond, and arrange for the satisfactory completion of these works.*

49. Within 3 years of lodging the rehabilitation and conservation bond with the **Secretary**, and every 4 years thereafter, unless the **Secretary** directs otherwise, **the Applicant must** review, and if necessary revise, the sum of the rehabilitation bond to the satisfaction of the **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.

## 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, in consultation with Shellharbour Council, Kiama Council and the CCC, to the satisfaction of the **Secretary**. The strategy must:

- a) define the objectives and criteria for quarry closure and post-extraction management;
- b) investigate options for the future use of the site;
- c) describe the measures that would be implemented to minimise or manage the ongoing environmental effects of the development; and
- d) 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 **Secretary**, and every 4 years thereafter, **the Applicant must** review and update the strategy to the satisfaction of the **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 **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 **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 **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 proposal until the completion of the 'Stage 2 – Kiama Bypass' by the **RMS**.

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

### 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 **Secretary**. All vehicular and pedestrian facilities **must** be in accordance with the **RMS's Guide to Traffic Generating Developments**.

## Road Haulage

55. [The Applicant must](#) ensure that all loaded vehicles entering or leaving the site are covered.
56. [The Applicant must](#) ensure all loaded vehicles leaving the site are cleaned of materials that may fall on the road before they are allowed to leave the site.

## Rail Transport

57. [The Applicant must](#) maximise the use of rail transport for delivery/despatch outside the Illawarra Region, to the satisfaction of the [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 [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), to the satisfaction of the [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 [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 [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](#) minimise the amount of waste generated by the development to the satisfaction of the [Secretary](#).

### Backfilling Material

65. <sup>12</sup> [The Applicant must](#) only 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 Environmental Protection Licence for the development.*

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<sup>12</sup> Incorporates [EPA](#) GTA

66. <sup>13</sup>Backfilling 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. <sup>14</sup>All fines separated from the dredged sand must be placed below the permanent water table within 12 hours of processing the dredged sand.

#### **Waste Management Plan**

68. <sup>15</sup>Within 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 **Secretary**. The plan **must** include:
- a) VENM receipt and acceptance procedures;
  - b) procedures for the management of fines from the processing plant;
  - c) procedures for managing potential acid sulfate soils; and
  - d) procedures for minimising and managing other wastes generated by the development.

**The Applicant must implement the approved management plan as approved from time to time by the Secretary.**

#### **Wastewater Treatment**

69. Any on-site wastewater treatment system must comply with the requirements of the *Environment and Health Protection Guidelines – On-site Sewage Management for Single Households* (1998).

### **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 **Secretary**.

### **PRODUCTION DATA**

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

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<sup>13</sup> Incorporates **EPA** GTA

<sup>14</sup> Incorporates **EPA** GTA

<sup>15</sup> Incorporates **EPA** GTA

## **SCHEDULE 4 ADDITIONAL PROCEDURES**

### **Notification of Landowners**

1. As soon as practicable after obtaining monitoring results showing:
  - a) an exceedance of any relevant criteria in Schedule 3, the Applicant must notify the affected landowners in writing of the exceedance, and provide regular monitoring results to each affected landowner until the development is again complying with the relevant criteria; and
  - b) an exceedance of any relevant air quality criteria in Schedule 3, the Applicant must send a copy of the NSW Health fact sheet entitled "Mine Dust and You" (as may be updated from time to time) to the affected landowners and current tenants of the land (including the tenants of land which is not privately-owned).

### **Independent Review**

2. If an owner of privately-owned land considers the development to be exceeding the relevant criteria in Schedule 3, then he/she may ask the Secretary in writing for an independent review of the impacts of the development on his/her land.
3. If the Secretary is satisfied that an independent review is warranted, then within 2 months of the Secretary's decision the Applicant must:
  - a) commission a suitably qualified, experienced and independent person, whose appointment has been approved by the Secretary, to:
    - consult with the landowner to determine his/her concerns;
    - conduct monitoring to determine whether the development is complying with the relevant criteria in Schedule 3; and
    - if the development is not complying with these criteria then identify measures that could be implemented to ensure compliance with the relevant criteria; and
  - b) give the Secretary and landowner a copy of the independent review.



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

**ENVIRONMENTAL MANAGEMENT**

**Environmental Management Strategy**

1. If the Secretary requires, the Applicant must prepare an Environmental Management Strategy for the development to the satisfaction of the Secretary. This strategy must:
  - a) be submitted to the Secretary for approval within 6 months of the 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
    - respond to emergencies; and
  - f) include:
    - copies of any strategies, plans and programs approved under the conditions of this development consent; and
    - a clear plan depicting all the monitoring required to be carried out under the conditions of this consent.

The Applicant must implement any Environmental Management Strategy as approved from time to time by the 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) a description of the measures that would be implemented to comply with the relevant statutory requirements, limits, or performance measures/criteria;
  - d) a program to monitor and report on the:
    - impacts and environmental performance of the development; and
    - effectiveness of any management measures (see (c) above);
  - e) a contingency plan to manage any unpredicted impacts and their consequences;
  - 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:
    - incidents;
    - complaints;
    - non-compliances with statutory requirements; and
    - exceedances of the impact assessment criteria and/or performance criteria; and
  - h) a protocol for periodic review of the plan.

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

**Updating & Staging Submission of Strategies, Plans or Programs**

3. To ensure the strategies, plans or programs under this consent are updated on a regular basis, and that they incorporate any appropriate mitigation measures to improve the environmental performance of the development, the Applicant may at any time submit revised strategies, plans or programs to the Secretary for approval. With the agreement of the Secretary, the Applicant may also submit any strategy, plan or program required by this consent on a staged basis.

With the agreement of the Secretary, the Applicant may revise any strategy, plan or program approved under this consent without consulting with all the parties nominated under the applicable conditions of consent.

*Notes:*

- While any strategy, plan or program may be submitted on a progressive basis, the Applicant will need to ensure that the existing operations on site are covered by suitable strategies, plans or programs at all times.
- If the submission of any strategy, plan or program is to be staged, then the relevant strategy, plan or program must clearly describe the specific stage to which the strategy, plan or program applies, the relationship of this stage to any future stages, and the trigger for updating the strategy, plan or program.

## **Revision of Strategies, Plans & Programs**

4. Within 3 months of the submission of an:
  - a) incident report under condition 7 below;
  - b) Annual Review under condition 9 below;
  - c) audit report under condition 10 below; and
  - d) any modifications to this consent,the Applicant must review, and if necessary revise, the strategies, plans, and programs required under this consent, to the satisfaction of the Secretary.

*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 Secretary, to the satisfaction of the Secretary.

## **COMMUNITY CONSULTATIVE COMMITTEE**

6. The Applicant must operate a Community Consultative Committee (CCC) for the development, to the satisfaction of the 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 Reporting**

7. The Applicant must notify, at the earliest opportunity, the Secretary and any other relevant agencies of any incident that has caused, or threatens to cause, material harm to the environment. For any other incident associated with the development, the Applicant must notify the Secretary and any other relevant agencies as soon as practicable after the Applicant becomes aware of the incident. Within 7 days of the date of the incident, the Applicant must provide the Secretary and any relevant agencies with a detailed report on the incident, and such further reports as may be requested.

### **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 Secretary, the Applicant must review the environmental performance of the development to the satisfaction of the 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(a) of Schedule 2;
  - c) identify any non-compliance over the last year, and describe what actions were (or are being) taken to ensure compliance;
  - d) identify any trends in the monitoring data over the life of the development;
  - e) identify any discrepancies between the predicted and actual impacts of the development, and analyse the potential cause of any significant discrepancies; and
  - f) 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 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 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 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 the 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.

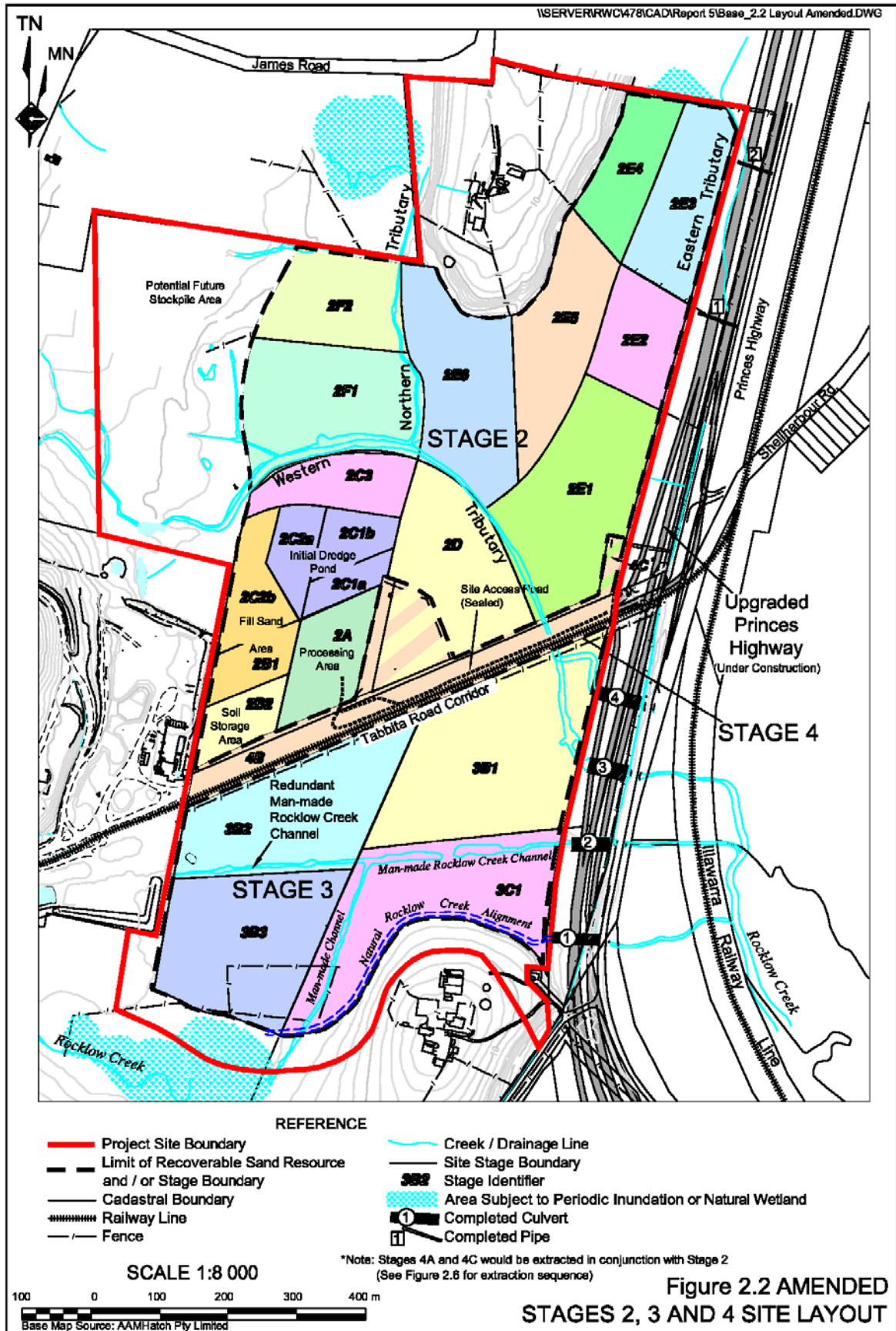
*Note: This audit team must be led by a suitably qualified auditor and include experts in any fields specified by the Secretary.*

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

## ACCESS TO INFORMATION

12. By 30 November 2016, unless otherwise agreed by the Secretary, the Applicant must:
  - a) make the following information publicly available on its website:
    - the documents listed in condition 2(a) 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;
    - a complaints register, which is to be updated on a quarterly basis;
    - the Annual Reviews (over the last 5 years);
    - any independent environmental audit, and the Applicant's response to the recommendations in any audit;
    - any other matter required by the Secretary; and
  - b) keep this information up-to-date, to the satisfaction of the Secretary.

# APPENDIX 1 DEVELOPMENT LAYOUT PLAN





## APPENDIX 2 CONCEPT FINAL LANDFORM

