

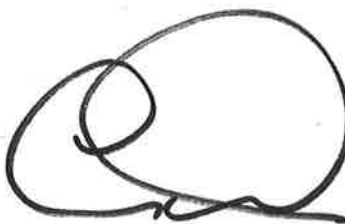
Project Approval

Section 75J of the Environmental Planning and Assessment Act 1979

As delegate for the Minister of Planning, I approve the project 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 project.



Chris Wilson
Executive Director
Development Assessment Systems & Approvals

Sydney

1 AUGUST

2014

SCHEDULE 1

Project Application:

MP 08_0173

Proponent:

Hanson Construction Materials Pty Ltd

Approval Authority:

Minister for Planning

Land:

Lot 33 DP 755246
Part Lot 118 DP 755246
Part Lot 10 DP 1090880

Project:

Central Coast Sand Quarry

TABLE OF CONTENTS

TABLE OF CONTENTS	2
DEFINITIONS	3
ADMINISTRATIVE CONDITIONS	5
Obligation to Minimise Harm to the Environment	5
Terms of Approval	5
Lapsing of Approval	5
Limits on Approval	5
Surrender of Existing Development Approvals	5
Structural Adequacy	6
Demolition	6
Protection of Public Infrastructure	6
Operation of Plant and Equipment	6
Updating and Staging of Strategies, Plans or Programs	6
Production Data	6
Identification of Approved Extraction Limits	6
ENVIRONMENTAL PERFORMANCE CONDITIONS	8
Soil And Water	8
Noise	9
Air Quality	11
Meteorological Monitoring	12
Transport	12
Biodiversity	13
Landscape	14
Visual	15
Waste	15
Dangerous Goods	15
Bushfire	16
ADDITIONAL PROCEDURES	17
Notification of Landowners	17
Independent Review	17
ENVIRONMENTAL MANAGEMENT, REPORTING AND AUDITING	18
Environmental Management	18
Reporting	19
Independent Environmental Audit	20
Access to Information	20
APPENDIX 1: PROJECT LAYOUT PLANS	21
APPENDIX 2: PLAN OF SUBDIVISION	25
APPENDIX 3: STATEMENT OF COMMITMENTS	26
APPENDIX 4: NOISE RECEIVER LOCATIONS	32
APPENDIX 5: NOISE COMPLIANCE ASSESSMENT	33
APPENDIX 6: CONCEPTUAL FINAL LANDFORM	34

DEFINITIONS

Annual review	The review required by condition 4 of Schedule 5
BCA	Building Code of Australia
CCC	Community Consultative Committee
Conditions of this approval	Conditions contained in Schedules 2 to 5 inclusive
Council	Gosford City Council
Day	The period from 7am to 6pm, Monday to Saturday and 8 am to 6pm Sunday and Public Holidays
DST	Daylight savings time
Department	Department of Planning and Environment
DRE	Division of Resources and Energy (within the Department of Trade and Investment, Regional Infrastructure and Services)
EA	Environmental Assessment of the project titled <i>Environmental Assessment – Central Coast Sands Project 08_0173</i> prepared by Insite Planning Services Pty Ltd dated February 2013, the Proponent's response to the issues raised in submissions dated August 2013, and additional information provided to the Department in September and October 2013, and July 2014.
Environmental Consequences	The environmental consequences of quarrying operations, including erosion, sedimentation and adverse impacts on water quality, water quantity and biodiversity
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>
EPL	Environment Protection Licence issued under the POEO Act
Evening	The period from 6pm to 10pm
Feasible	Feasible relates to engineering considerations and what is practical to build or carry out
GDEs	Groundwater Dependent Ecosystems
Heritage item	An item as defined under the <i>Heritage Act 1977</i> and/or an Aboriginal Object or Aboriginal Place as defined under the <i>National Parks and Wildlife Act 1974</i>
High priority GDEs	GDEs listed in Schedule 5 of the <i>Water Sharing Plan for the Kulnura Mangrove Mountain Groundwater Sources 2003</i> , including <i>Hawkesbury Coastal Banksia Woodland</i> and <i>Sandstone Hanging Swamps</i>
Incident	A set of circumstances that: <ul style="list-style-type: none"> causes, or threatens to cause, material harm to the environment; and/or breaches or exceeds the limits or performance measures/criteria in this 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 approval, 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 approval
m AHD	metres Australian Height Datum
Material harm to the environment	Actual or potential harm to the health or safety of human beings or to ecosystems that is not trivial
Minister	Minister for Planning, or delegate
Minor	Not very large, important or serious
Mitigation	Activities associated with reducing the impacts of the project
Morning Shoulder	The period from 6am to 7am, Monday to Saturday
NOW	NSW Office of Water
OEH	Office of Environment and Heritage
POEO Act	<i>Protection of the Environment Operations Act 1997</i>
Privately-owned land	Land that is not owned by a public agency or a mining or quarrying company (or its subsidiary)
Project	The project as described in the EA including existing quarrying operations and disturbance
Proponent	Hanson Construction Materials Pty Ltd or any person who seeks to carry out the approved project under this approval
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.
Quarry Extension Area	The area highlighted in yellow in the first figure of Appendix 1

Quarrying operations	The extraction, processing and transportation of extractive materials on the site and the associated removal of vegetation, topsoil and overburden
Reasonable	Reasonable relates to the application of judgement in arriving at a decision, taking into account: mitigation benefits, cost of mitigation versus benefits provided, community views and the nature and extent of potential improvements
Rehabilitation	The restoration of land disturbed by the project to a good condition and for the purpose of establishing a safe, stable and non-polluting environment
RMS	Roads and Maritime Services
Secretary	The Secretary of the Department, or nominee
Site	The land described in Schedule 1
Stage	The extraction staging as described in the EA and shown on the relevant plans in Appendix 1
Statement of commitments	The Proponent's commitments in Appendix 3

SCHEDULE 2 ADMINISTRATIVE CONDITIONS

OBLIGATION TO MINIMISE HARM TO THE ENVIRONMENT

1. In addition to meeting the specific performance criteria established under this approval, the Proponent shall implement all reasonable and feasible measures to prevent and/or minimise any harm to the environment that may result from the construction, operation, or rehabilitation of the project.

TERMS OF APPROVAL

2. The Proponent shall carry out the project generally in accordance with the:
 - (a) EA;
 - (b) project layout plans;
 - (c) proposed plan of subdivision;
 - (d) Statement of Commitments; and
 - (e) conditions of this approval.

Notes:

- *The general project layout plans of the project are shown in Appendix 1.*
- *The proposed plan of subdivision is shown in Appendix 2.*
- *The Proponent's statement of commitments is reproduced in Appendix 3.*

3. If there is any inconsistency between the above documents, the more recent document shall prevail to the extent of the inconsistency. However, the conditions of this approval shall prevail to the extent of any inconsistency.
4. The Proponent shall 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 approval;
 - (b) any reviews, reports or audits, commissioned by the Department regarding compliance with this approval; and
 - (c) the implementation of any actions or measures contained in these documents.

LAPSING OF APPROVAL

5. If the project has not been physically commenced within 5 years of the date of this approval, then this project approval shall lapse.

LIMITS ON APPROVAL

Quarrying Operations

6. The Proponent may carry out quarrying operations on the site until 30 June 2044.

Note: Under this approval, the Proponent is required to rehabilitate the site and carry out additional undertakings to the satisfaction of the Secretary. Consequently, this approval will continue to apply in all other respects other than the right to conduct quarrying operations until the rehabilitation of the site and those undertakings have been carried out to a satisfactory standard.

7. The Proponent shall not carry out quarrying operations below a level of 190 m AHD.

Note: This condition does not apply to the construction of any monitoring bores or drill holes.

Production Limit

8. The Proponent shall not extract, process and transport more than 310,000 tonnes of quarry products from the site in any calendar year.

SURRENDER OF EXISTING DEVELOPMENT APPROVALS

9. By the end of December 2015, or as otherwise agreed by the Secretary, the Proponent shall surrender all existing development consents that it holds for the site in accordance with Section 104A of the EP&A Act.

Note: This requirement does not extend to the surrender of construction and occupation certificates for existing and proposed building works under Part 4A of the EP&A Act. Surrender of consent should not be understood as implying that works legally constructed under a valid consent can no longer be legally maintained or used.

10. Prior to the surrender of any existing development consent, the conditions of this approval shall prevail to the extent of any inconsistency with the conditions of that consent.

STRUCTURAL ADEQUACY

11. The Proponent shall ensure that all 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 Proponent is required to obtain construction and occupation certificates for the proposed building works; and
- Part 8 of the EP&A Regulation sets out the requirements for the certification of the development or project.

DEMOLITION

12. The Proponent shall ensure that all demolition work is carried out in accordance with *Australian Standard AS 2601-2001: The Demolition of Structures*, or its latest version.

PROTECTION OF PUBLIC INFRASTRUCTURE

13. The Proponent shall:
- (a) repair, or pay the full costs associated with repairing, any public infrastructure that is damaged by the project; and
 - (b) relocate, or pay the full costs associated with relocating, any public infrastructure that needs to be relocated as a result of the project.

Note: This condition does not apply to damage to roads caused as a result of general road usage.

OPERATION OF PLANT AND EQUIPMENT

14. The Proponent shall ensure that all the plant and equipment used at the site is:
- (a) maintained in a proper and efficient condition; and
 - (b) operated in a proper and efficient manner.

UPDATING AND STAGING OF STRATEGIES, PLANS OR PROGRAMS

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

With the agreement of the Secretary, the Proponent may prepare a revision of or a stage of a strategy, plan or program without undertaking consultation with all parties nominated under the applicable condition in this approval.

Notes:

- While any strategy, plan or program may be submitted on a staged basis, the Proponent 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/s of the project to which the strategy, plan or program applies; the relationship of this stage/s to any future stages; and the trigger for updating the strategy, plan or program.
- For the avoidance of doubt, existing approved management plans, strategies or monitoring programs for the Central Coast Sand Quarry will continue to apply until the approval of a similar plan, strategy or program under this approval (see condition 9 above).
- See also condition 5 of Schedule 5.

PRODUCTION DATA

16. The Proponent shall:
- (a) provide annual quarry production data to DRE using the standard form for that purpose; and
 - (b) report this data in the Annual Review (see condition 4 of Schedule 5).

IDENTIFICATION OF APPROVED EXTRACTION LIMITS

17. By 30 September 2014, unless otherwise agreed with the Secretary, the Proponent shall:
- (a) engage a registered surveyor to mark out the boundaries of the approved limits of extraction within the entire site; and
 - (b) submit a survey plan of these boundaries with applicable GPS coordinates to the Secretary.

18. While quarrying operations are being carried out, the Proponent shall ensure that these boundaries are clearly marked at all times in a manner that allows operating staff to clearly identify the approved limits of extraction.

SCHEDULE 3 ENVIRONMENTAL PERFORMANCE CONDITIONS

SOIL AND WATER

Note: Under the Water Act 1912 and/or the Water Management Act 2000, the Proponent is required to obtain the necessary water licences for the project, including in respect of the extraction and/or interception of groundwater.

Water Supply

1. The Proponent shall ensure that it has sufficient water for all stages of the project, and if necessary, adjust the scale of operations under the approval to match its available water supply to the satisfaction of the Secretary.

Surface Water Audit and Water Management Improvement Program

2. Within three months of the date of this approval, the Proponent shall commission independent surface water expert/s, approved by the Secretary, to undertake an audit of current and proposed surface water management practices and infrastructure on the site. The audit shall:
 - (a) be undertaken in consultation with NOW;
 - (b) fully describe and audit site water management practices on the existing site;
 - (c) consider proposed water management practices for the Quarry Extension Area
 - (d) identify all reasonable and feasible measures to improve surface water management on the existing site and Quarry Extension Area, with particular reference to opportunities to divert clean water away from the site; and
 - (e) recommend design parameters for proposed water management systems on the site.
3. Unless otherwise agreed with the Secretary, the Proponent shall submit the Surface Water Audit report to the Secretary within six months of commissioning the audit. The report must be accompanied by a Water Management Improvement Program, based on the report's recommendations, to improve surface water management practices on the site, including a program of proposed timeframes for implementation. Should the Proponent propose to not implement any recommendation of the Audit, it must provide detailed justification to this effect.
4. The Proponent must implement the Water Management Improvement Program to the satisfaction of the Secretary.

Compensatory Water Supply

5. The Proponent shall provide a compensatory water supply to any owner of a privately-owned groundwater bore where monitoring indicates that the project is causing (or contributing to, in conjunction with another quarry project) a reduction in pumping yield of more than 10%, or a 2 metre decline in the water table, in consultation with NOW, and to the satisfaction of the Secretary.

The compensatory water supply measures must provide an alternative long-term supply of water that is equivalent to the loss attributed to the project. Equivalent water supply must be provided (at least on an interim basis) within 24 hours of the loss being identified.

If the Proponent and the landowner 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 Secretary for resolution.

If the Proponent is unable to provide an alternative long-term supply of water, then the Proponent shall provide alternative compensation to the satisfaction of the Secretary.

Pollution of Waters

6. Unless an EPL authorises otherwise, the Proponent shall comply with section 120 of the POEO Act during the carrying out of the project.

Water Management Plan

7. The Proponent shall prepare and implement a Water Management Plan for the project to the satisfaction of the Secretary. This plan must:
 - (a) be prepared by suitably qualified person(s), approved by the Secretary;
 - (b) be prepared in consultation with NOW, and be submitted to the Secretary for approval prior to undertaking quarrying operations in the Quarry Extension Area or by November 2014, whichever is the sooner; and
 - (c) include a:

- (i) Site Water Balance that includes:
 - details of:
 - sources and security of water supply;
 - water use and management on site;
 - any off-site water transfers;
 - reporting procedures; and
 - measures that would be implemented to minimise clean water use on site;
- (ii) Surface Water Management Plan, that includes:
 - detailed baseline data on surface water flows and quality in water bodies that could potentially be affected by the project;
 - a detailed description of the water management system on site, including the:
 - clean water diversion system;
 - erosion and sediment controls;
 - dirty water management system; and
 - water storages;
 - a program to monitor and report on surface water flows and quality in water bodies that could potentially be affected by the project; and
 - a comparison of monitoring results with modelled predictions;
- (iii) Groundwater Management Plan, that includes:
 - detailed baseline data on groundwater levels, yield and quality in local sandstone aquifers, privately-owned groundwater bores and in areas of high priority GDEs that could be affected by the project;
 - groundwater impact assessment criteria for local sandstone aquifers, privately-owned bores and high priority GDEs;
 - a program to monitor and report on:
 - groundwater inflows to the quarrying operations;
 - the impacts of the project on:
 - local sandstone aquifers;
 - privately-owned groundwater bores; and
 - high priority GDEs.
 - including provision for continuous groundwater monitoring; and
 - a program to validate the groundwater model for the project, and comparison of monitoring results with modelled predictions;
 - a protocol, developed in consultation with Grants Road Sand Quarry, to appropriately apportion responsibility for any potential impacts to privately-owned groundwater bores and/or high priority GDEs that may be affected cumulatively by the project and operations at Grants Road Sand Quarry; and
- (iv) a Surface and Ground Water Contingency Strategy, that includes:
 - a protocol for the investigation, notification and mitigation of identified exceedances of the surface water and groundwater impact assessment criteria;
 - measures to mitigate and/or compensate potentially affected landowners of privately-owned land including provision of alternative long-term supply of water to the affected landowner that is equivalent to the loss attributed to the project; and
 - the procedures that would be followed if any unforeseen impacts are detected during the project.

Note: In the event that there is a dispute between the Proponent and Grants Road Sand Quarry concerning the development, finalisation or implementation of the above protocol, then either party may refer the matter to the Secretary for resolution. The decision of the Secretary on the matter shall be final.

NOISE

Hours of Operation

8. The Proponent shall comply with the operating hours in Table 1.

Table 1: Operating Hours

Activity	Operating Hours
Transportation of quarry products from the site	6.00 am to 4.00 pm, Monday to Friday; and 6.00 am to 2.00 pm, Saturday. No transportation of quarry product from the site on Sundays or Public Holidays.
Other Quarrying operations	6.00 am to 6.00 pm ^a , Monday to Friday; and 6.00 am to 4.00 pm, Saturday. No quarrying operations on Sundays or Public Holidays.
Construction activities	7.00 am to 4.00 pm, Monday to Friday; and 7.00 am to 12.00 pm, Saturday,

	unless noise from these activities does not exceed 38dB(A) _{LAeq(15min)} at any privately-owned residence.
Maintenance activities	24 hours a day, 7 days per week, providing maintenance activities are inaudible at any privately-owned residence

Note for Table 1:

^a During DST, the processing plant may operate from 6am to 8pm, Monday to Friday.

9. The following activities may be carried out on the site outside the hours specified in Table 1:
 - (a) delivery or dispatch of materials as requested by Police or other authorities; and
 - (b) emergency work to avoid the loss of lives, property and/or to prevent environmental harm.

In such circumstances the Proponent shall notify the Secretary and affected residents prior to undertaking the activities, or as soon as is practical thereafter.

Operational Noise Impact Assessment Criteria

10. The Proponent shall ensure that the operational noise generated by the project does not exceed the criteria in Table 2 at any residence on privately-owned land.

Table 2: Operational noise criteria (dB(A) LAeq(15 min))

Receiver Location	Day	Evening	Morning Shoulder	
	L _{Aeq} (15 min)	L _{Aeq} (15 min)	L _{Aeq} (15 min)	L _{A1} (1 min)
B	37	35	37	47
C	37		38	
D	38		40	
G	36		38	
R	36		38	
All other privately-owned land	35		35	

Noise generated by the project is to be measured in accordance with the relevant requirements, and exemptions (including certain meteorological conditions), of the *NSW Industrial Noise Policy*. Appendix 5 sets out the meteorological conditions under which these criteria apply, and the requirements for evaluating compliance with these criteria.

However, the noise criteria in Table 2 do not apply if the Proponent has an agreement with the relevant landowner to exceed the noise criteria, and the Proponent has advised the Department in writing of the terms of the agreement.

Notes: To interpret the locations referred to in Table 2, see the applicable figures in Appendix 4.

Operating Conditions

11. The Proponent shall:
 - (a) implement best management practice to minimise the construction, operational and road noise of the project;
 - (b) regularly assess noise monitoring data and relocate, modify and/or stop operations on site to ensure compliance with the noise criteria in this approval;
 - (c) maintain the effectiveness of noise suppression equipment on plant and equipment on site;
 - (d) minimise the noise impacts of the project during meteorological conditions under which the noise criteria in this approval do not apply (see Appendix 5);
 - (e) ensure that the applicable acoustic bunds (as shown as earth mounds in Appendix 1) are constructed prior to the commencement of quarrying operations within any relevant stage of the project; and
 - (f) carry out regular noise monitoring to determine whether the project is complying with the relevant conditions of this approval,
 to the satisfaction of the Secretary.

Noise Management Plan

12. The Proponent shall prepare and implement a Noise Management Plan for the project to the satisfaction of the Secretary. This plan must:

- (a) be prepared in consultation with the EPA, and be submitted to the Secretary for approval prior to undertaking quarrying operations in the Quarry Extension Area or by November 2014, whichever is the sooner;
- (b) describe the measures that would be implemented to ensure:
 - (i) compliance with the relevant conditions of this approval;
 - (ii) best management practice is being employed; and
 - (iii) the noise impacts of the project are minimised during meteorological conditions under which the noise criteria in this approval do not apply;
- (c) describe the proposed noise management system; and
- (d) include a monitoring program that:
 - (i) uses attended monitoring to evaluate the compliance of the project against the noise criteria in this approval;
 - (ii) evaluates and reports on the effectiveness of the noise management system and the best practice noise management measures; and
 - (iii) defines what constitutes a noise incident at the project, and includes a protocol for identifying and notifying the Department and relevant stakeholders of any noise incidents.

AIR QUALITY

Air Quality Impact Assessment Criteria

13. The Proponent shall ensure that all reasonable and feasible avoidance and mitigation measures are employed so that particulate matter emissions generated by the project do not exceed the criteria listed in Tables 3, 4, 5 and 6 at any residence on privately-owned land.

Table 3: Long-term criteria for particulate matter

Pollutant	Averaging Period	^d Criterion
Total suspended particulate (TSP) matter	Annual	^a 90 µg/m ³
Particulate matter < 10 µm (PM ₁₀)	Annual	^a 30 µg/m ³

Table 4: Short-term criteria for particulate matter

Pollutant	Averaging Period	^d Criterion
Particulate matter < 10 µm (PM ₁₀)	24 hour	^a 50 µg/m ³

Table 5: Long-term criteria for deposited dust

Pollutant	Averaging Period	Maximum increase in deposited dust level	Maximum total deposited dust level
^c Deposited dust	Annual	^b 2 g/m ² /month	^a 4 g/m ² /month

Table 6: Impact assessment criterion for crystalline silica

Pollutant	Averaging Period	Criterion
^e Chronic Reference Exposure Level (REL) (PM ₄)	Annual	3 µg/m ³

Notes for Tables 3 to 6:

- ^a Total impact (ie incremental increase in concentrations due to the project plus background concentrations due to all other sources);
- ^b Incremental impact (ie incremental increase in concentrations due to the project on its own);
- ^c Deposited dust is to be assessed as insoluble solids as defined by Standards Australia, AS/NZS 3580.10.1:2003: Methods for Sampling and Analysis of Ambient Air - Determination of Particulate Matter - Deposited Matter - Gravimetric Method;
- ^d Excludes extraordinary events such as bushfires, prescribed burning, dust storms, sea fog, fire incidents, illegal activities or any other activity agreed to by the Secretary in consultation with the EPA; and
- ^e Crystalline silica must be analysed in accordance with a test method approved by the Department of Health.

Operating Conditions

14. The Proponent shall:
 - (a) implement best practice management to minimise the dust emissions of the project;
 - (b) regularly assess air quality monitoring data and relocate, modify and/or stop operations on site to ensure compliance with the air quality criteria in this approval;
 - (c) minimise the air quality impacts of the project during adverse meteorological conditions and extraordinary events (see note d under Table 6); and

- (d) implement all reasonable and feasible measures to minimise the release of greenhouse gas emissions from the site;
 - (e) minimise the area of surface disturbance and maximise progressive rehabilitation of the site; and
 - (f) carry out regular air quality monitoring to determine whether the project is complying with the relevant conditions of this approval,
- to the satisfaction of the Secretary.

Air Quality Management Plan

15. The Proponent shall prepare and implement an Air Quality Management Plan for the project to the satisfaction of the Secretary. This plan must:
- (a) be prepared in consultation with the EPA, and be submitted to the Secretary for approval prior to undertaking quarrying operations in the Quarry Extension Area or by November 2014, whichever is the sooner;
 - (b) describe the measures that would be implemented to ensure:
 - (i) compliance with the relevant conditions of this approval;
 - (ii) best practice management is being employed; and
 - (iii) the air quality impacts of the project are minimised during adverse meteorological conditions and extraordinary events;
 - (c) describe the proposed air quality management system; and
 - (d) include an air quality monitoring program that:
 - (i) is capable of evaluating the performance of the project;
 - (ii) includes a protocol for determining any exceedances of the relevant conditions of approval;
 - (iii) effectively supports the air quality management system; and
 - (iv) evaluates and reports on the adequacy of the air quality management system.

METEOROLOGICAL MONITORING

16. For the life of the project, the Proponent shall ensure that there is a suitable meteorological station operating in the vicinity of the site that complies with the requirements in the *Approved Methods for Sampling of Air Pollutants in New South Wales* guideline.

TRANSPORT

Monitoring of Product Transport

17. The Proponent shall:
- (a) keep accurate records of:
 - (i) the amount of quarry products transported from the site (per calendar month and year); and
 - (ii) the number of laden vehicle movements from the site (per hour, day, week, calendar month and year); and
 - (b) publish these records on its website biannually.

Operating Conditions

18. The Proponent shall ensure that:
- (a) all project-related heavy vehicles enter and exit the site in a forward direction;
 - (b) all laden vehicles entering or leaving the site have their loads covered; and
 - (c) all laden vehicles leaving the site are cleaned of sand and other material that may fall on the road, before leaving the site.

Grants Road Maintenance

19. The Proponent shall, in conjunction with the operator of the Grants Road Sand Quarry, cause to be prepared a road condition assessment and road maintenance contributions study of Grants Road. The study must:
- (a) be undertaken by a suitably qualified, experienced and independent person(s) endorsed by the Secretary;
 - (b) be undertaken in consultation with Council;
 - (c) be submitted to the Secretary by the end of March 2015;
 - (d) be co-funded by the Proponent and the operator of the Grants Road Sand Quarry on a basis which is proportionate to the maximum number of tonnes of quarry product expected to be dispatched from each quarry over the life of their major project approvals, and the length of Grants Road affected by laden vehicles from each quarry;
 - (e) assess current road condition of the length of Grants Road affected by laden vehicles from each quarry and future road maintenance requirements for this length of road over the life of the major project approvals for both quarries;

- (f) give consideration to the usage of Grants Road by laden vehicles from each quarry over the past five years and the predicted usage of Grants Road by each quarry over the life of their major project approval including any importation of Virgin Excavated Natural Material; and
- (g) recommend per tonne/per kilometre road maintenance contributions for the project for the haulage of quarry products on Grants Road.

If the Proponent and the operator of the Grants Road Sand Quarry cannot agree on any aspect of undertaking this study or the implementation of its recommendations, then either party may refer the matter to the Secretary for resolution. The decision of the Secretary on the matter shall be final.

- 20. The Proponent and the operator of the Grants Road Sand Quarry shall pay contributions for the maintenance of Grants Road, in accordance with the study required under condition 19, unless otherwise agreed by the Secretary.

Traffic Management Plan

- 21. The Proponent shall prepare and implement a Traffic Management Plan for the project, to the satisfaction of the Secretary. This plan must:
 - (a) be submitted to the Secretary for approval prior to the end of November 2014;
 - (b) include a drivers' code of conduct to minimise the impacts of project-related trucks on local residences and road users; and
 - (c) describe the measures that would be put in place to ensure compliance with the drivers' code of conduct.

BIODIVERSITY

Pre-Clearance Surveys

- 22. The Proponent shall undertake pre-clearance surveys prior to the clearance of any vegetation within the project area.
- 23. Prior to undertaking quarrying operations in the Quarry Extension Area, the Proponent shall commission suitably qualified expert/s, approved by the Secretary, to undertake targeted surveying for the Red-crowned Toadlet. The surveying shall be:
 - (a) undertaken in accordance with the *Threatened Species Survey and Assessment Guidelines: Field Survey Methods for Fauna - Amphibians* and any other relevant OEH threatened biodiversity guideline; and
 - (b) accompanied by recommended measures to manage or offset any impacts on the Red-crowned Toadlet, if it is identified on or near the site, to the satisfaction of the Secretary.
- 24. Within a month of completing the surveying, the Proponent shall submit a report to the Secretary containing the results of the survey and a detailed description of the surveying method undertaken and any recommended measures.
- 25. The Proponent shall undertake all reasonable and feasible measures to minimise potential impacts on any identified populations of Red-crowned Toadlet, to the satisfaction of the Secretary.

Biodiversity Performance Measures

- 26. The Proponent shall ensure that the project does not cause any exceedances of the performance measures in Table 7, to the satisfaction of the Secretary.

Table 7: GDE impact performance measures

Feature	Measure
High priority GDEs located within 1 kilometre of extraction operations	Minor environmental consequences <ul style="list-style-type: none"> • negligible erosion of the surface of the GDEs; • negligible sedimentation within the GDEs; • minor changes in the size of the GDEs; • no significant change to the composition or distribution of species within the swamp.

Offsets

- 27. If the Proponent exceeds the performance measures in Table 7 and the Secretary determines that:
 - (a) it is not reasonable or feasible to remediate the impact or environmental consequence; or
 - (b) remediation measures implemented by the Proponent have failed to satisfactorily remediate the impact or environmental consequence;

then the Proponent shall provide a suitable offset to compensate for the impact or environmental consequence, to the satisfaction of the Secretary.

Note: Any offset required under this condition must be proportionate with the significance of the impact or environmental consequence.

Groundwater Dependent Ecosystem Monitoring and Management Program

28. The Proponent shall undertake additional studies on the high priority GDEs located within 1 kilometre of extraction operations under the approval and potentially impacted by the project. The studies shall be undertaken in consultation with NOW and include:
- a description of the nature and extent of groundwater reliance for each GDE;
 - long-term monitoring of the condition of the GDEs;
 - performance indicators for project-related environmental consequences on GDEs and trigger levels to initiate mitigation/response measures; and
 - mitigation/response measures to ensure minor environmental consequences on the GDEs, to the satisfaction of the Secretary

LANDSCAPE

Rehabilitation Objectives

29. The Proponent shall rehabilitate the site to the satisfaction of the Secretary. This rehabilitation must be generally consistent with the rehabilitation strategy in the EA, as shown on the plans in Appendix 6, and comply with the objectives in Table 8.

Table 8: Rehabilitation objectives

Feature	Objective
Site (as a whole)	<ul style="list-style-type: none"> Safe, stable and non-polluting; Final landforms drain to the natural environment; and Minimise the visual impact of final landforms as far as is reasonable and feasible.
Surface Infrastructure	<ul style="list-style-type: none"> To be decommissioned and removed, unless the Secretary agrees otherwise.
Quarry Benches	<ul style="list-style-type: none"> Suitably landscaped and revegetated using native species.
Quarry Pit Floor	<ul style="list-style-type: none"> Suitably landscaped and revegetated land with at least 8 hectares of minimum Class 3 agricultural suitability land.
Community	<ul style="list-style-type: none"> Ensure public safety. Minimise the adverse socio-economic effects associated with quarry closure.

Progressive Rehabilitation

30. The Proponent shall rehabilitate the site progressively, that is, as soon as reasonably practicable following disturbance. All reasonable and feasible measures must be taken to minimise the total area exposed for dust generation at any time. Interim stabilisation measures must be implemented where reasonable and feasible to control dust emissions in disturbed areas that are not active and which are not ready for final rehabilitation.

Note: It is accepted that parts of the site that are progressively rehabilitated may be subject to further disturbance in future.

Landscape and Rehabilitation Management Plan

31. The Proponent shall prepare and implement a Landscape and Rehabilitation Management Plan for the site to the satisfaction of the Secretary. This plan must:
- be prepared by suitably qualified person(s) whose appointment has been approved by the Secretary;
 - be prepared in consultation with OEH, DRE and Council, and submitted to the Secretary for approval by the end of July 2015;
 - describe the short, medium and long-term measures that would be implemented to:
 - manage the remnant vegetation and habitat on the site; and
 - ensure compliance with the rehabilitation objectives and progressive rehabilitation obligations in this approval;
 - include detailed performance and completion criteria for evaluating the performance of the rehabilitation of the site, including triggers for any necessary remedial action;
 - include a detailed description of the measures that would be implemented over the next 3 years (to be updated for each 3 year period following initial preparation of the plan), including the procedures to be implemented for:
 - enhancing the quality of remnant vegetation and fauna habitat;

- (ii) landscaping the site (including the acoustic barriers) and along public roads to minimise visual and lighting impacts;
- (iii) restoring native endemic vegetation and fauna habitat;
- (iv) maximising the salvage of environmental resources within the approved disturbance area – including tree hollows, vegetative and soil resources – for beneficial reuse;
- (v) ensuring minimal environmental consequences for threatened species, populations and habitats;
- (vi) minimising the impacts on native fauna;
- (vii) controlling weeds and feral pests;
- (viii) controlling erosion;
- (ix) controlling access; and
- (x) bushfire management;
- (f) include a program to monitor the effectiveness of these measures, and progress against the performance and completion criteria;
- (g) identify the potential risks to rehabilitation of the site, and include a description of the contingency measures that would be implemented to mitigate these risks; and
- (h) include details of who would be responsible for monitoring, reviewing, and implementing the plan.

Rehabilitation Bond

32. The Proponent shall lodge a Rehabilitation Bond with the Department within 6 months of the approval of the Landscape and Rehabilitation Management Plan, to ensure that the rehabilitation of the site is implemented in accordance with the performance and completion criteria set out in the Plan. The sum of the bond shall be determined by:
- (a) calculating the cost of rehabilitating disturbed areas of the site, taking into account the likely surface disturbance over the next 3 years of quarrying operations; and
 - (b) employing a suitably qualified quantity surveyor or other expert to verify the calculated costs, to the satisfaction of the Secretary.

Notes:

- *If capital and other expenditure required by the Landscape and Rehabilitation Management Plan is largely complete, the Secretary may waive the requirement for the lodgement of a bond in respect of the remaining expenditure.*
- *If the rehabilitation of the site area is completed to the satisfaction of the Secretary, then the Secretary will release the bond. If the rehabilitation of the site is not completed to the satisfaction of the Secretary, then the Secretary will call in all or part of the bond, and arrange for the completion of the relevant works.*

33. Within 3 months of each Independent Environmental Audit (see condition 9 of Schedule 5), the Proponent shall review, and if necessary revise, the sum of the Rehabilitation Bond to the satisfaction of the Secretary. This review must:
- (a) consider the performance of the implementation of the rehabilitation of the site to date;
 - (b) consider the effects of inflation; and
 - (c) calculate the cost of rehabilitating the disturbed areas of the site (taking into account the likely surface disturbance over the next 3 years of quarrying operations).

VISUAL

34. The Proponent shall implement all reasonable and feasible measures to minimise the visual and off-site lighting impacts of the project to the satisfaction of the Secretary.

WASTE

35. The Proponent shall:
- (a) minimise and monitor the waste generated by the project;
 - (b) ensure that the waste generated by the project is appropriately stored, handled and disposed of;
 - (c) manage on-site sewage treatment and disposal in accordance with the requirements of Council; and
 - (d) report on waste management and minimisation in the Annual Review, to the satisfaction of the Secretary.

DANGEROUS GOODS

36. The Proponent shall ensure that the storage, handling, and transport of dangerous goods are done in accordance with the relevant *Australian Standards*, particularly AS1940 and AS1596, and the *Dangerous Goods Code*.

BUSHFIRE

37. The Proponent shall:
- (a) ensure that the project is suitably equipped to respond to any fires on site; and
 - (b) assist the Rural Fire Service and emergency services as much as possible if there is a fire in the vicinity of the site.

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 Proponent shall notify affected the landowners in writing of the exceedance, and provide regular monitoring results to each affected landowner until the project is again complying with the relevant criteria; and
 - (b) an exceedance of any relevant air quality criteria in Schedule 3, the Proponent shall 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 project 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 project on his/her land.

If the Secretary is satisfied that an independent review is warranted, then within 2 months of the Secretary's decision the Proponent shall:

- (a) commission a suitably qualified, experienced and independent person, whose appointment has been approved by the Secretary, to:
 - (i) consult with the landowner to determine his/her concerns;
 - (ii) conduct monitoring to determine whether the project is complying with the relevant criteria in Schedule 3; and
 - (iii) if the project 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. The Proponent shall prepare and implement an Environmental Management Strategy for the project to the satisfaction of the Secretary. The strategy must:
 - (a) be submitted to the Secretary for approval by the end of November 2014;
 - (b) provide the strategic framework for environmental management of the project;
 - (c) identify the statutory approvals that apply to the project;
 - (d) describe the role, responsibility, authority and accountability of all key personnel involved in the environmental management of the project;
 - (e) describe the procedures that would be implemented to:
 - (i) keep the local community and relevant agencies informed about the operation and environmental performance of the project;
 - (ii) receive, record, handle, and respond to complaints;
 - (iii) resolve any disputes that may arise during the course of the project;
 - (iv) respond to any non-compliance;
 - (v) respond to emergencies; and
 - (f) include:
 - (i) copies of any strategies, plans and programs approved under the conditions of this approval; and
 - (ii) a clear plan depicting all the monitoring to be carried out under the conditions of this approval.

Management Plan Requirements

2. The Proponent shall ensure that the management plans required under this approval are prepared in accordance with any relevant guidelines, and include:
 - (a) detailed baseline data;
 - (b) a description of:
 - (i) the relevant statutory requirements (including any relevant approval, licence or lease conditions);
 - (ii) any relevant limits or performance measures/criteria;
 - (iii) the specific performance indicators that are proposed to be used to judge the performance of, or guide the implementation of, the project 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:
 - (i) impacts and environmental performance of the project;
 - (ii) effectiveness of any management measures (see c above);
 - (e) a contingency plan to manage any unpredicted impacts and their consequences and to ensure that ongoing impacts reduce to levels below relevant impact assessment criteria as quickly as possible;
 - (f) a program to investigate and implement ways to improve the environmental performance of the project over time;
 - (g) a protocol for managing and reporting any:
 - (i) incidents;
 - (ii) complaints;
 - (iii) non-compliances with statutory requirements; and
 - (iv) 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.

Adaptive Management

3. The Proponent must assess and manage project-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 approval 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 Proponent must, at the earliest opportunity:

- (a) take all reasonable and feasible steps to ensure that the exceedance ceases and does not reoccur;

- (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.

Annual Review

4. By the end of March each year, or other timing as may be agreed by the Secretary, the Proponent shall review the environmental performance of the project to the satisfaction of the Secretary. This review must:
 - (a) describe the development (including any rehabilitation) that was carried out in the past calendar year, and the development that is proposed to be carried out over the current calendar year;
 - (b) include a comprehensive review of the monitoring results and complaints records of the project over the past calendar year, which includes a comparison of these results against the:
 - (i) relevant statutory requirements, limits or performance measures/criteria;
 - (ii) requirements of any plan or program required under this approval;
 - (iii) monitoring results of previous years; and
 - (iv) relevant predictions in the EA;
 - (c) identify any non-compliance over the past calendar 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 project;
 - (e) identify any discrepancies between the predicted and actual impacts of the project, and analyse the potential cause of any significant discrepancies; and
 - (f) describe what measures will be implemented over the current calendar year to improve the environmental performance of the project.

Revision of Strategies, Plans and Programs

5. Within 3 months of the submission of an:
 - (a) annual review under condition 4 above;
 - (b) incident report under condition 7 below;
 - (c) audit report under condition 9 below; or
 - (d) any modification to the conditions of this approval,
 the Proponent shall review the strategies, plans, and programs required under this approval, to the satisfaction of the Secretary. Where this review leads to revisions in any such document, then within 4 weeks of the review the revised document must be submitted for the approval of the Secretary.

Note: The purpose of this condition is to ensure that strategies, plans and programs are regularly updated to incorporate any measures recommended to improve environmental performance of the project.

Community Consultative Committee

6. If directed by the Secretary, the Proponent shall establish and operate a Community Consultative Committee (CCC) for the project to the satisfaction of the Secretary. Any such 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), and be operating by the end of November 2014.

Notes:

- *The CCC is an advisory committee. The Department and other relevant agencies are responsible for ensuring that the Proponent complies with this approval.*
- *In accordance with the Department's guideline, the CCC should be comprised on an independent chair and appropriate representation from the Proponent, Council (if available) and the local community.*
- *This CCC can be combined with any other CCC established under conditions of consent or approval for State Significant quarry developments on the Somersby Plateau.*

REPORTING

Incident Reporting

7. The Proponent shall immediately notify the Secretary and any other relevant agencies of any incident. Within 7 days of the date of the incident, the Proponent shall 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 Proponent shall provide regular reporting on the environmental performance of the project on its website, in accordance with the reporting arrangements in any plans or programs approved under the conditions of this approval.

INDEPENDENT ENVIRONMENTAL AUDIT

9. By 30 June 2015 and every 3 years thereafter, unless the Secretary directs otherwise, the Proponent shall commission and pay the full cost of an Independent Environmental Audit of the project. This audit must:
 - (a) be conducted by a suitably qualified, experienced and independent team of experts whose appointment has been endorsed by the Secretary;
 - (b) include consultation with the relevant agencies;
 - (c) assess the environmental performance of the project and assess whether it is complying with the requirements in this approval and any relevant EPL or necessary water licences for the project (including any assessment, strategy, plan or program required under these approvals);
 - (d) review the adequacy of strategies, plans or programs required under the abovementioned approvals; and
 - (e) recommend appropriate measures or actions to improve the environmental performance of the project, and/or any assessment, strategy, plan or program required under the abovementioned approvals.

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

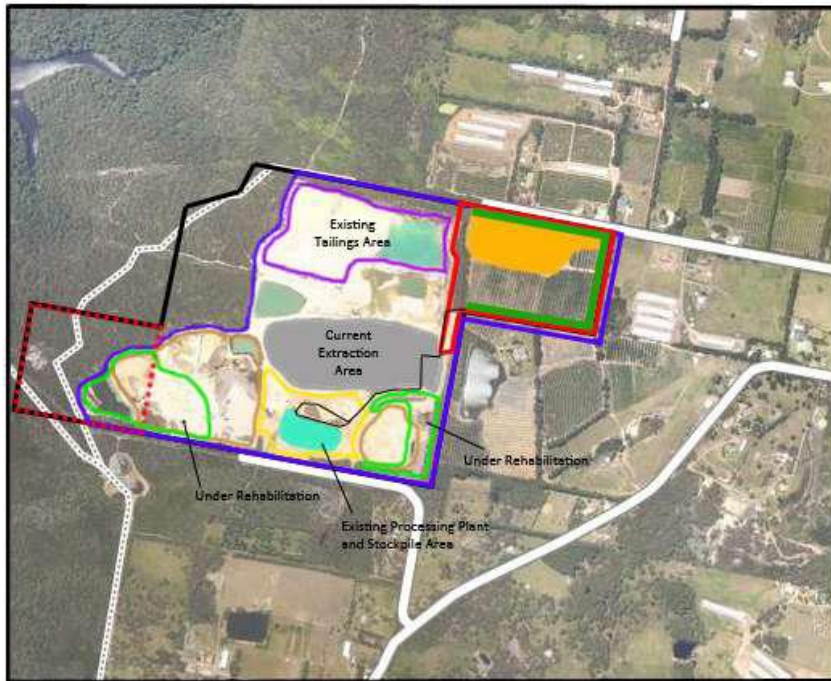
10. Within 6 weeks of completion of this audit, or as otherwise agreed by the Secretary, the Proponent shall submit a copy of the audit report to the Secretary, together with its response to any recommendations contained in the audit report.

ACCESS TO INFORMATION

11. By the end of November 2014, the Proponent shall:
 - (a) make copies of the following publicly available on its website:
 - (i) the documents referred to in condition 2 of Schedule 2;
 - (ii) all current statutory approvals for the project;
 - (iii) all approved strategies, plans and programs required under the conditions of this approval;
 - (iv) a comprehensive summary of the monitoring results of the project, reported in accordance with the specifications in any conditions of this approval, or any approved plans and programs;
 - (v) a complaints register, updated monthly;
 - (vi) the annual reviews of the project;
 - (vii) any independent environmental audit of the project, and the Proponent's response to the recommendations in any audit of the project;
 - (viii) minutes of CCC meetings;
 - (ix) any other matter required by the Secretary; and
 - (b) keep this information up-to-date, to the satisfaction of the Secretary.
-

APPENDIX 1:
PROJECT LAYOUT PLANS





CENTRAL COAST SANDS PROJECT CONSTRUCTION AND EXTRACTION STAGE 1

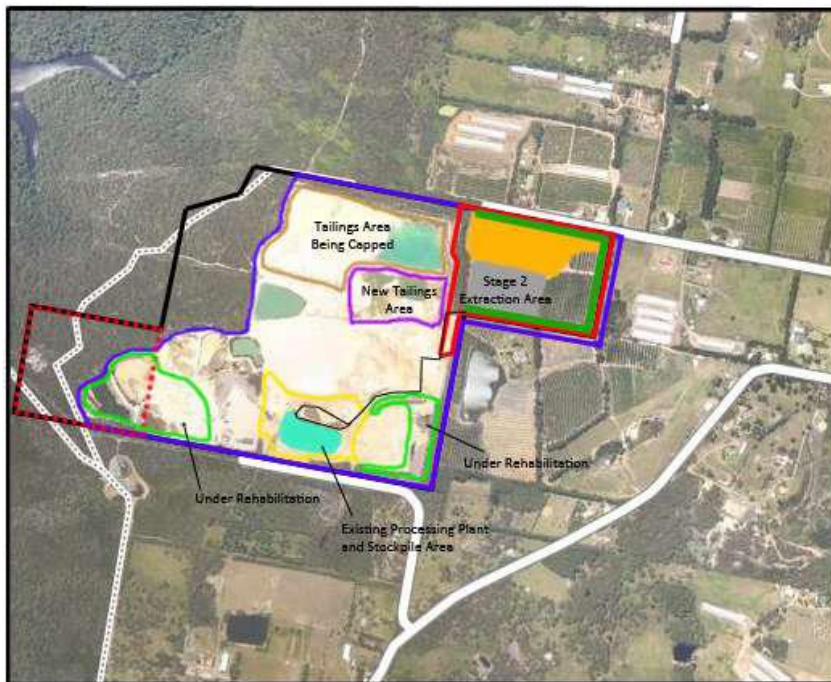
Legend

- Project Area
- Proposed Quarry Extension
- - - Mining Lease 6309
- Haul Route
- Future Extraction Area
- Existing Tailings Area
- Old Tailings Area - Capped or Being Capped
- Under Rehabilitation
- Existing Processing Plant and Stockpile Area
- Current Extraction Area
- Removal of Buildings and Chicken Sheds
- Construct 5m Earth Mounds and Plantings

NOT TO SCALE

The positional accuracy of features shown on this aerial photograph have not been verified by ground survey.

Source: NearMap 21.10.2011



CENTRAL COAST SANDS PROJECT EXTRACTION STAGE 2

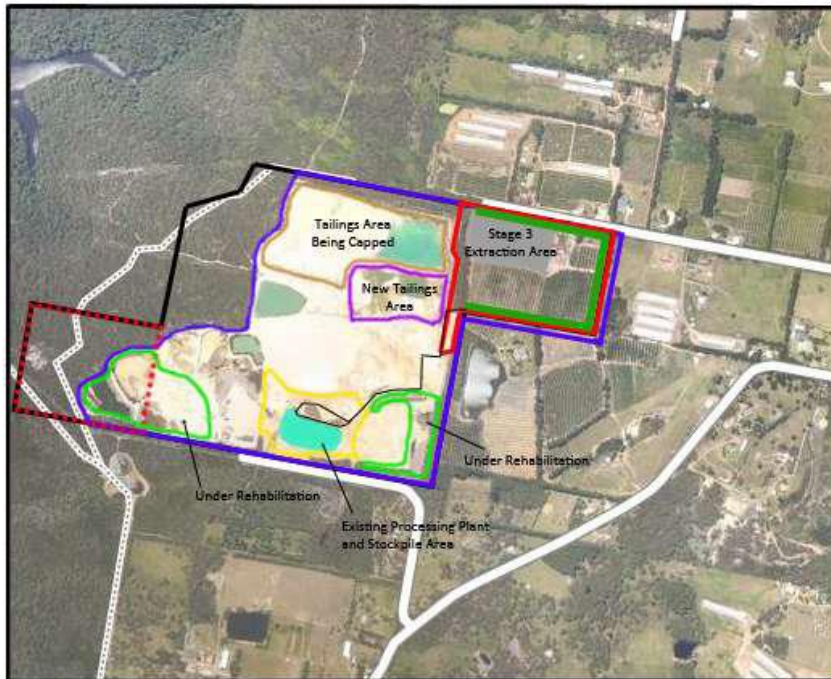
Legend

- Project Area
- Proposed Quarry Extension
- - - Mining Lease 6309
- Haul Route
- Future Extraction Area
- Stage 2 Extraction Area
- New Tailings Area
- Old Tailings Area Being Capped
- Under Rehabilitation
- Existing Processing Plant and Stockpile Area
- Revegetation Area - Temporary and with grass
- Earth Mounds and Plantings

NOT TO SCALE

The positional accuracy of features shown on this aerial photograph have not been verified by ground survey.

Source: NearMap 21.10.2011



CENTRAL COAST SANDS PROJECT EXTRACTION STAGE 3

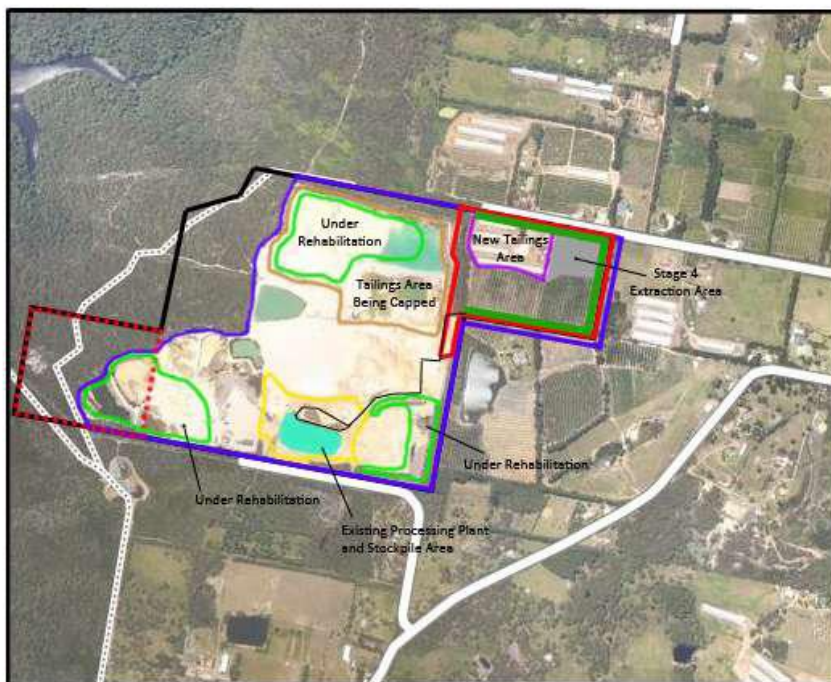
Legend

- Project Area
- Proposed Quarry Extension
- ⋯ Mining Lease 6309
- Haul Route
- Future Extraction Area
- Stage 3 Extraction Area
- New Tailings Area
- Old Tailings Area Being Capped
- Under Rehabilitation
- Existing Processing Plant and Stockpile Area
- Earth Mounds and Plantings

NOT TO SCALE

The positional accuracy of features shown on this aerial photograph have not been verified by ground survey.

Source: NearMap 21.10.2011



CENTRAL COAST SANDS PROJECT EXTRACTION STAGE 4

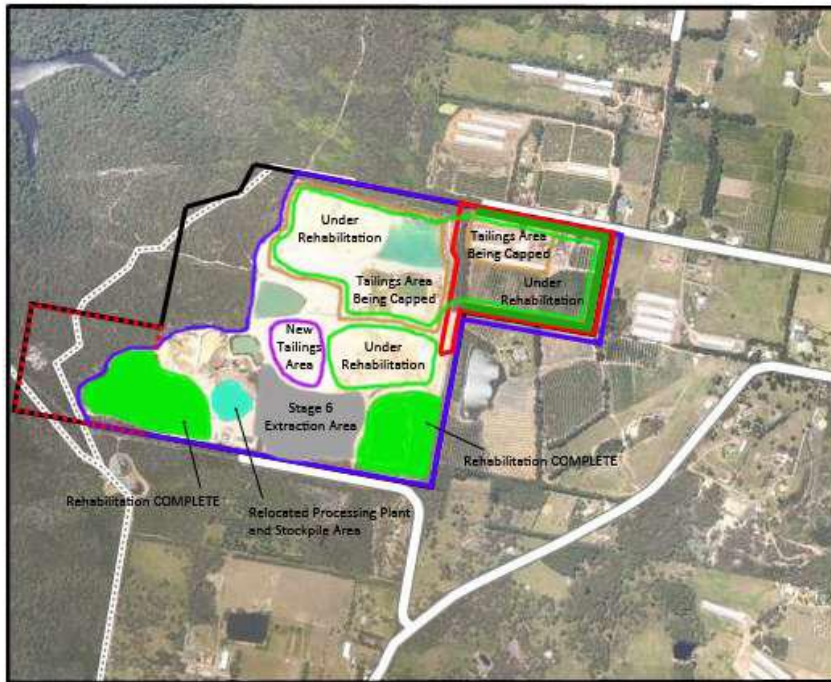
Legend

- Project Area
- Proposed Quarry Extension
- ⋯ Mining Lease 6309
- Haul Route
- Future Extraction Area
- Stage 4 Extraction Area
- New Tailings Area
- Old Tailings Area Being Capped
- Under Rehabilitation
- Existing Processing Plant and Stockpile Area
- Earth Mounds and Plantings

NOT TO SCALE

The positional accuracy of features shown on this aerial photograph have not been verified by ground survey.

Source: NearMap 21.10.2011



CENTRAL COAST SANDS PROJECT EXTRACTION STAGE 6

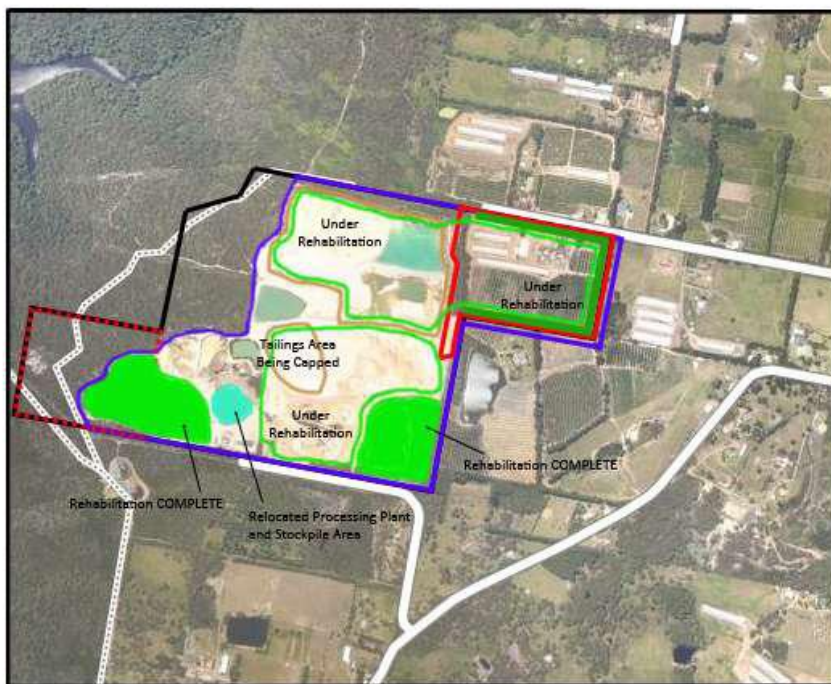
Legend

- Project Area
- Proposed Quarry Extension
- Mining Lease 6309
- Stage 6 Extraction Area
- New Tailings Area
- Old Tailings Area Being Capped
- Under Rehabilitation / Rehabilitation Complete
- Relocated Processing Plant and Stockpile Area
- Earth Mounds and Plantings

NOT TO SCALE

The positional accuracy of features shown on this aerial photograph have not been verified by ground survey.

Source: NearMap 21.10.2011



CENTRAL COAST SANDS PROJECT EXTRACTION STAGE 7

Legend

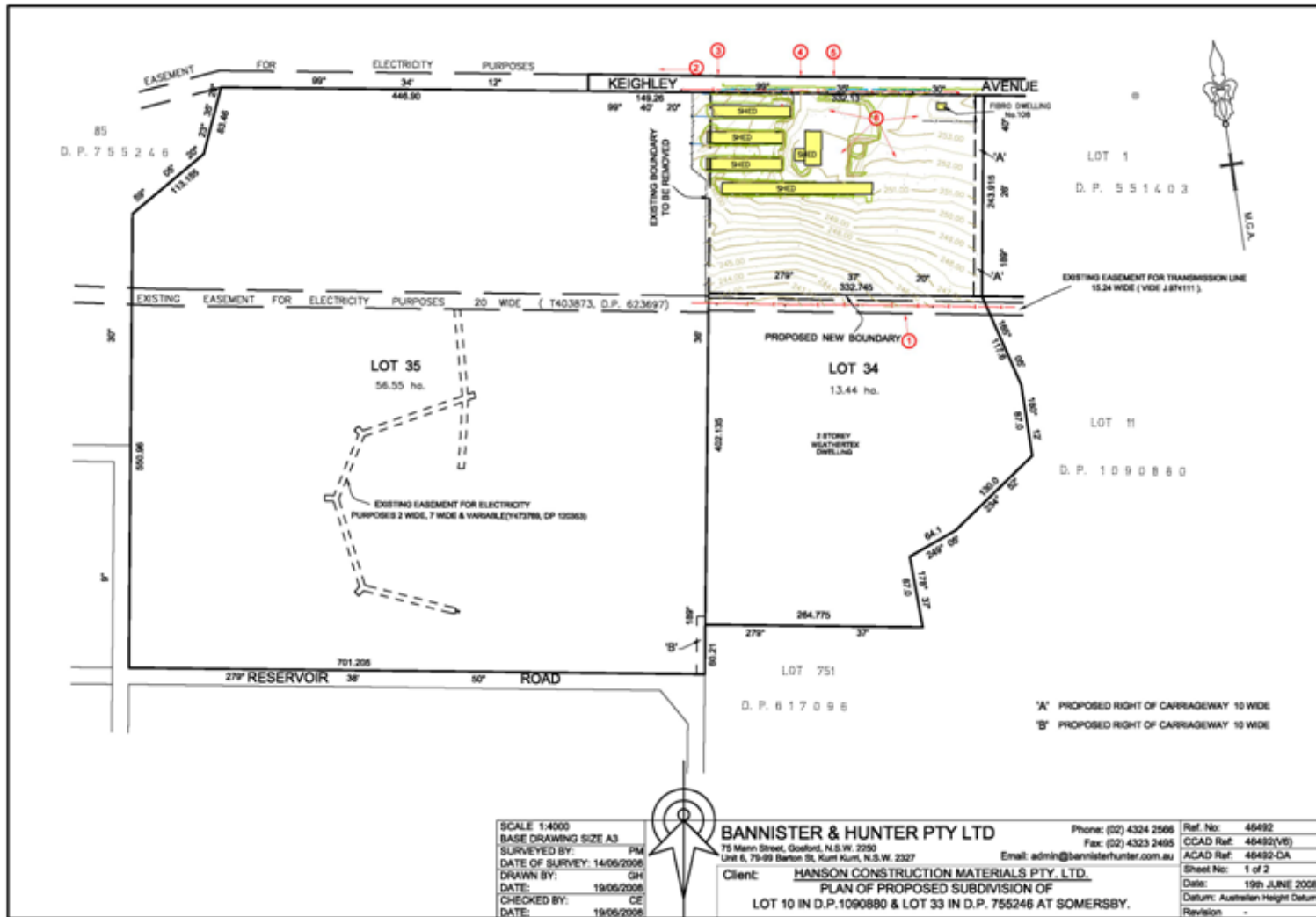
- Project Area
- Proposed Quarry Extension
- Mining Lease 6309
- Old Tailings Area Being Capped
- Under Rehabilitation / Rehabilitation Complete
- Relocated Processing Plant and Stockpile Area
- Earth Mounds and Plantings

NOT TO SCALE

The positional accuracy of features shown on this aerial photograph have not been verified by ground survey.

Source: NearMap 21.10.2011

APPENDIX 2: PLAN OF SUBDIVISION



APPENDIX 3: STATEMENT OF COMMITMENTS

ENVIRONMENTAL MANAGEMENT & STATEMENT OF COMMITMENTS

The following forms the basis for a revised statement of commitments by Hanson Construction Materials Ltd regarding mitigations and control measures for the Major Project Application proposal 08_0173.

Prior to Commencement of Extraction

All relevant licenses and approvals will be obtained. The proponent will prepare a formal Extraction Management Plan to set out the processes of mining and to deal with ongoing operational matters and conditions of consent. The extent of the approved extraction area and surrounding bunding shall be clearly and permanently marked with survey posts by a licensed surveyor. Noise attenuation berms are to be provided prior to the commencement of the operation (as identified in Section 8.7 of this Environmental Assessment). Prior to any demolition or works being undertaken on the site, an accredited asbestos consultant will be engaged to conduct a formal asbestos site audit to;

- Determine to the precise location/extent of asbestos in accordance with *Australian Standard 4964 – Method for the Qualitative Identification of Asbestos in Bulk Samples*. And;
- Where appropriate prepare a Hazardous Substances Management Plan (HSMP).

Extraction Operations

- All nearby residents will be provided with the contact details of a site management and relevant procedures for contact in the event of complaints.
- Only 1 x Excavator, 1 x Loader, 1 x Haul Truck and 1 x Water Cart may operate in the proposed extension area once the 5m high earth bund is constructed.
- One dozer can operate once the proposed extension area ground level reaches a depth of 5m below the existing ground level. We note that if the dozer operates in the proposed extension area, only the water cart may operate at the same time.
- The excavation/loosening of resource will be by ripping only (i.e. no blasting). The total excavation depth of approximately 63 metres Below Ground Level (BGL) is considered to be likely to be able to be ripped based on the rock type, strength testing results, visual observations and current extraction methods within the quarry's existing extraction pit.
- The extraction from the quarry extension will occur down to a maximum level of 63 metres below natural ground level.

Ecology

- Sediment and erosion control processes to be put in place, in accordance with the Sediment and Erosion Control Plan (**Attachment 23**), to assist in prevent *Lantana camara* (Lantana) seed dispersal.
- Pre-clearing inspections will be undertaken by an ecologist in wooded areas including during the removal of hollow bearing trees. Should the removal of hollow-bearing trees be required, then appropriate tree removal guidelines and certification should be implemented using a qualified ecologist onsite. This may involve the supervision of clearing and habitat augmentation.
- Retention of hollow-bearing trees with respect to the southern access (proposed easement), where practical, to provide continued habitat for fauna species.
- Where possible, the drainage line running east-west along the southern boundary of the proposed Quarry Extension Area will be protected from direct and indirect disturbance. Where any disturbance is required to occur it is recommended that an ecologist be present during works to ensure that and potential habitat for Red -rowned Toadlet (*Pseudophryne australis*) are relocated to appropriate adjoining suitable habitat.

Aboriginal Heritage

- During the course of proposed construction work, if suspected Indigenous cultural heritage material is encountered, work will cease in that vicinity immediately and the Office of Environment & Heritage (OEH, formerly DECCW) and a representative of the local Aboriginal Community (DLALC and GTLAC) will be immediately notified. Works will only recommence when an appropriate and approved management strategy has been agreed to by relevant stakeholders.
- In the event that skeletal remains are uncovered whilst operations are underway, work is to stop in the vicinity immediately, the NSW Coroner's Office and NSW Police will be contacted. If the remains are deemed to be of Aboriginal origin, a representative of the local Aboriginal Community (DLALC, and GTLAC) and the OEH are also to be contacted

European Heritage

If, during the course of clearing work unidentified 'relics' as defined by the *NSW Heritage Act 1977* are uncovered, works will cease in that vicinity immediately and an appropriately qualified and experienced archaeologist is called out to assess the find. Works must not recommence until an appropriate and approved management strategy is instigated. The Proponent must notify the Heritage Council of the discovery in accordance with Section 146 of the Heritage Act.

Visual Impacts

The following visual impact mitigation measures are recommended:

- To the maximum extent possible, existing hedge-row plantings are to be maintained along the northern, southern and eastern portions of the proposed Quarry Extension Area.
- The earth bunding established prior to extraction will be planted with suitable species to protect visual amenity (and prevent erosion). An appropriately qualified landscape consultant will select species that are suited to the locality and consistent with hedgerows planted in other nearby locations.
- As an interim measure, fencing (of appropriate height and materials) will be established along the northern property boundary (adjacent to Keighley Road) to ensure that visual amenity is maintained for nearby residences during the demolition process and the construction of required earth bunds/planting.

Acoustics/Noise

The 5 metre high earth bund will be constructed around the proposed extension area boundary (as shown in **Figure 42**). This bund will be a permanent fixture and will remain for the duration of quarry operations. All residents who will be potentially impacted by the short term construction of the required bund will need be informed in writing of the nature of works to be carried out, the expected noise levels and duration, as well as contact details for the site representative responsible for the construction works.

The construction of the bund is predicted to create noise levels above 43dBA but below 75dBA at the residences identified in the NIA as A to G. According to the INP it is recommended that:

- Standard hours Monday to Friday 7am to 6pm, Saturday 8am to 1pm, and no work Sundays or public Holidays be adopted.
- Where the predicted or measured LAeq (15 min) is greater than the noise affected level, the proponent should apply all feasible and reasonable work practices to meet the noise affected level.
- The proponent should also inform all potentially impacted residents of the nature of works to be carried out, the expected noise levels and duration, as well as contact details.

Hanson proposes to incorporate the above measures in a Construction Noise Management Plan (CNMP) for the noise bund as part of the modified Statement of Commitments. The CNMP will be drafted in consultation with the affected residences.

All mobile plant onsite be fitted with broadband 'quacker' type reversing alarms.

Air Quality

The extraction management plan will provide for appropriate dust suppression, including:

- Employing watering at a rate of 2 litres/m²/application to all internal haul roads;
- Periodic water application to other exposed areas;
- Minimising exposed area to the maximum extent possible; and
- Progressive rehabilitation / stabilisation of available areas of disturbance.

Ongoing monitoring will be undertaken for dust deposition at a minimum of three (3) locations to provide further indication of likely compliance with project air quality goals. Monitoring will be conducted in accordance with *Australian Standard 3580.10.1-2003 "Methods for Sampling and Analysis of Ambient Air - Determination of Particulates - Deposited Matter - Gravimetric Method"*.

Stage 6 - The area identified as Stage 6 is significantly further away from receptors A to P. As such the impacts of air emissions from the quarry operations associated with the pit extraction activities would be reduced for these residences. In regards to receptors Q to T, the extraction of Stage 6 is likely to vary the outcomes of the Air Quality Impact Assessment (AQIA) for two reasons:

1. The processing plant will be relocated a further 200m to the west of its current location.
2. The extraction activities are only temporarily at ground level and will be by large below the current surface level.

Notwithstanding this the proponent suggests that the impacts of Stages 1 & 6 could be assessed as part of the Project's Air Quality Management Plan. The Plan would demonstrate compliance with the Project's Air Emissions criteria to the satisfaction of the Director General prior to Stage 6 commencing.

Energy Use and Greenhouse Gas Emissions

The project will install appropriately sized, high efficiency motors which will be used on pumps & equipment. Variable speed drives (VSD's) will be provided on electric motors in order to ensure energy savings and to deal with the results of varying loads on equipment.

Timer switches will be provided for relevant electrical appliances across the site and sensor lights installed to reduce energy use. The fuel economy of vehicles will be considered when sourcing new vehicles for the operation. Idling time for vehicles shall be minimised by ensuring that vehicles are turned off during breaks in their use.

Regular servicing of vehicles will be undertaken, including maintaining optimum tyre pressures, to optimise fuel economy for vehicles. Driver training will be undertaken to ensure that vehicles are operated at maximum efficiency.

Appropriate day-to-day management of quarrying activities will ensure that double handling of materials is minimised.

Use of alternative fuels (such as biodiesel) and fuel additives will be investigated for the Major Project Application proposal.

Geotechnical

Soil Excavation - Soil overburden may be excavated without structural supports with a permanent batter slope of 1 (vertical): 2 (horizontal). Alternatively an appropriately designed retaining structure will be used.

Fill Placement – Fill is to be placed as part of the proposed site remediation. As it is understood that final uses shall not include construction of structures on the fill, the following placement specifications are appropriate:

- Engineered fill will be placed in layers of a maximum of 300 mm loose thickness and compacted (as specified within the geotechnical assessment completed by Marten's Consulting Engineers and included as Attachment 20). For sandy materials, a minimum ID of 75 % should be achieved, which can be reduced to 70 % in landscaped areas. For clayey soils (e.g. including weathered sandstone), engineered fill should be compacted to 95% SMDD.
- Where final uses may include the erection of structures an engineered fill solution will be designed prior to commencement of filling operations.
- Final fill batters will not exceed 1V:2H.
- Final surface will be free-draining to prevent excessive ingress of water.
- Should groundwater ingress through rock be observed then a subsoil drainage system may be required prior to placement of fill.
- Specific geotechnical advice is to be obtained prior to the commencement of filling operations in each rehabilitation area.

Noise Bund- The proponent will submit geotechnical design by a suitably qualified geotechnical engineer of the proposed noise earth mound to the Department of Planning & Infrastructure for approval prior to commencement of construction.

Rock Excavation - Based on slope stability modelling within the geotechnical assessment (**Attachment 20**) excavation batter slopes should not exceed 2V:1H. Batter slopes will be cut in maximum 15 m deep increments with 5 m wide benches between each increment. Benches will be graded to ensure stormwater; seepage and groundwater drain off the bench towards the desired location. If batter slopes show signs of failure then excavations will stop immediately and a geotechnical engineer will be consulted to determine appropriate action. The excavation/loosening of resource will be by ripping only (i.e. no blasting). The total excavation depth of approximately 190mAHD is considered to be likely to be able to be ripped based on the rock type, strength testing results, visual observations and current extraction methods within the quarry's existing extraction pit.

Retaining Structures - Any retaining structures to be constructed as part of site works will be backfilled with suitable free-draining materials and include suitable drainage measures, such as a geotextile enclosed 100 mm agricultural pipe, to redirect water that may collect behind the retaining walls.

Contingency Plan - In the event that the proposal works cause an adverse impact on overall site stability or on neighbouring properties, works will cease immediately. The nature of the impact shall be documented and the reason(s) for the adverse impact investigated.

Contamination

Prior to any works occurring on the site, the recommendations of the Stage 2 Contamination Scoping Report (**Attachment 19**) will be implemented and the testing regime completed. All recommendations from any subsequent report and the required works will be undertaken to ensure that all potential contamination issues are appropriately managed.

Hydrogeological

Hanson proposes to prepare a groundwater management plan that includes:

1. Installation of monitoring bores to assess any impacts on existing groundwater licence holders and high priority GDEs.
2. Establishment of groundwater level triggers and proposed make good provisions for impacted license holders.
3. Studies on the high priority GDEs to identify their reliance and long term monitoring of their condition.
4. A process for validating the numerical groundwater model and amending as required.

Hanson will secure sufficient water access licenses to account for any increase in groundwater take as a result of the lateral expansion of the quarry.

Hanson will commit to ongoing consultation and liaison with the NSW Office of Water to resolve issues relating to the existing groundwater and surface water take of the current operations and how best to regularise existing take under WSPs. Hanson will also provide further information about surface water harvesting on site, and the constructed storages in consultation with

NOW. Hanson will endeavour to secure sufficient water access licenses to account for any net surface water take in excess of the Harvestable Right for the site.

Surface Water Hydrology

As part of the extraction management plan, the current water cycle management be formalised to provide a well-structured and effective means of treating process water prior to its discharge to downstream receiving environments.

Water Quantity Treatment – the existing rip rap at the discharge point will be maintained as to prevent erosion and scour of tributaries of Mooney Mooney Creek.

Water Quality Treatment – A sedimentation basin will be incorporated into the water management plan to allow fines (to a size of 75 µm) to settle out prior to discharge. See the formal Surface Water Hydrology Assessment and Management report (Attachment 22) for further, more specific details.

Based on the Surface Water Hydrology Assessment and Management report, and the Constructed Wetlands Manual, a sedimentation basin with a surface area of 1335m² (approximately 21.1m wide x 63.3m long) and depth of 2.0m is required to capture fines to a size of 75µm. This can be accommodated within the existing make up dam.

To enhance the removal of colloidal clays and other sub 75µm material, the construction of a macrophyte zone at the outlet of the dam is proposed. The macrophyte zone is to extend 50m from the outlet pipes as shown on the attached plans in the Surface Water Hydrology Assessment and Management report. The macrophyte zone is to be regraded to provide a water depth of approximately 500mm and have an area of approximately 2500m².

Sediment & Erosion Control

All recommendations from the completed erosion & sediment control plan to be employed, including:

Sediment Basin Maintenance- The following procedures will take place to ensure the proper operation and maintenance of the sediment basin:

- The basin will be inspected weekly and following a rain events of greater than 20mm.
- The accumulated sediment depth will be checked to ensure remaining storage capacity is adequate for storm water and sediment deposition.
- Sediment shall be removed and the basin restored to its original dimensions when the sediment has accumulated to ½ the design depth of the basin. The removed sediment shall be deposited on the site outside of concentrated flow paths, be allowed to dewater and then be used in site rehabilitation works.

Jute Matting/Vegetation Maintenance- The recommended area of Jute Matting/vegetation should be inspected monthly or following heavy rainfall. Vegetation should be replaced as required.

Contingency- If NSW EPA Environment Protection License conditions are not met with the revised Sediment & Erosion Control Plan measures then sediment and erosion control management at the site is to be reviewed and changes are to be made to ensure license conditions are met.

Waste

All wastes from the site are to be managed in accordance with the completed Waste Management Plan (**Attachment 25**). All hazardous wastes (including asbestos) to be handled and disposed of in the appropriate manner, in accordance with all relevant requirements.

Prior to any demolition or works being undertaken on the site, an accredited asbestos consultant will be engaged to conduct a formal asbestos site audit to:

- Determine to the precise location/extend of asbestos in accordance with Australian Standard 4964 – 'Method For the Qualitative Identification of Asbestos in Bulk Samples'. And, where appropriate; and
- Prepare a Hazardous Substances Management Plan (HSMP).

The asbestos waste consultant will be appropriately experienced and accredited with suitable licensing from WorkCover NSW. All works will be undertaken by a suitably qualified consultant.

The following conditions would be adopted to ensure the demolition associated with the proposed development is carried out having regard to relevant legislation and does not unreasonably impact on the amenity of the locality or environment.

Demolition Conditions-Asbestos

1. Demolition of buildings where asbestos is determined to be present should only occur 7am – 5pm Monday to Saturdays, and must not occur on Sundays or Public Holidays, to ensure that the persons carrying out the work have access to WorkCover professionals if required.
2. All asbestos removal shall be undertaken in accordance with the occupational hygienists report submitted with the development application and in compliance with the requirements of WorkCover's 'Your Guide to Working with Asbestos' and Council's Asbestos Policy.
3. Written notice must be provided to Gosford Council five (5) working days (excluding public holidays) prior to commencement of any works.

Written notice is to include the following details:

Date the demolition will commence

Name, address, contact details (including after hours) and licence number of the demolisher and asbestos removalist (if different)

Work must not commence prior to the nominated demolition date.

Note: it is the responsibility of the persons undertaking demolition work to obtain the relevant WorkCover licences and permits.

4. The applicant is to notify all owners and occupiers of premises on either side, opposite and at the rear of the development site five (5) working days prior to demolition. Such notification is to be clearly written on A4 size paper stating the date the demolition will commence and is to be placed in the letterbox of every property (including every residential flat or unit, if any). The demolition must not commence prior to the date and time stated in the notification.
5. A demolition or asbestos removal contractor licensed under the Occupational Health and Safety Regulation 2001 must undertake removal of more than 10m² of bonded asbestos (or otherwise specified by WorkCover or relevant legislation).
Removal of friable asbestos material must only be undertaken by a contractor that holds a current AS1 Friable Asbestos Removal Licence.
6. Demolition sites that involve the removal of asbestos must display a standard commercially manufactured sign containing the words 'DANGER ASBESTOS REMOVAL IN PROGRESS' measuring not less than 400mm x 300mm is to be erected in a prominent visible position on the site to the satisfaction of Council's officers. The sign is to be erected prior to demolition work commencing and is to remain in place until such time as all asbestos has been removed from the site to an approved waste facility. This ensures compliance with Clause 259(2)c of the Occupational Health and Safety Regulation 2001.

Social & Economic

The operator of the quarry will continue to keep neighbours informed of the proposed works, including a regular newsletter to advise of any construction works, particularly those relating to demolition of existing buildings, construction of the earth bund or other works near to the boundary of the new extraction area. Prior to any works commencing, all adjoining neighbours will be provided with the contact details of the quarry management who will act as the initial point of contact for any complaints.

Hanson will provide contact details to Council staff in the event that any complaints are made directly to Council.

Rehabilitation

The proponent is proposing to incorporate the measures identified in Section 8.1.4, 8.1.5, 9 and 10 into ongoing site management plans as part of the project approval. In addition to contributing to soil structure and stabilising the battered slopes, native plants attract a diverse array of fauna.

Selection criteria for plant species included minimal maintenance self-sustaining, locally indigenous to the area and low water requirement. The site should be rehabilitated back to an agricultural grazing final landform to enable the opportunity to use the land for agricultural investment once extraction ceases. This can be achieved via the following recommendations:

- Topsoil stockpiling is not recommended as seed bank and genetic diversity will be lost over the 35 year mining lease life;
- Topsoil used for rehabilitation of the site should be sourced from a commercial wholesaler with the intent to grow mainly native grasses and legumes;
- Topsoil preparation outlined in Section 9.1.1 of the EA, should be followed to assist in the success of the rehabilitation of plants on site;
- It is recommended that revegetation takes place via direct seeding and the spreading of vegetation mulch containing seed;
- Planting should include coloniser and soil stabilizing grass species that will establish quickly;
- Watering of seedlings should be continued as required until all plants are established;
- Seeding should take place at the beginning of summer when rain periods are more likely to take place;
- If woody vegetation is desired, then use of locally occurring species is recommended. Their placement should enhance habitat connectivity and reduce detrimental visual impact; and

- Monitoring for a period of 5 years should be undertaken to ensure success of revegetation, stability of soils, whether weed invasion is apparent, that the landscape is retaining water and nutrients and is free draining

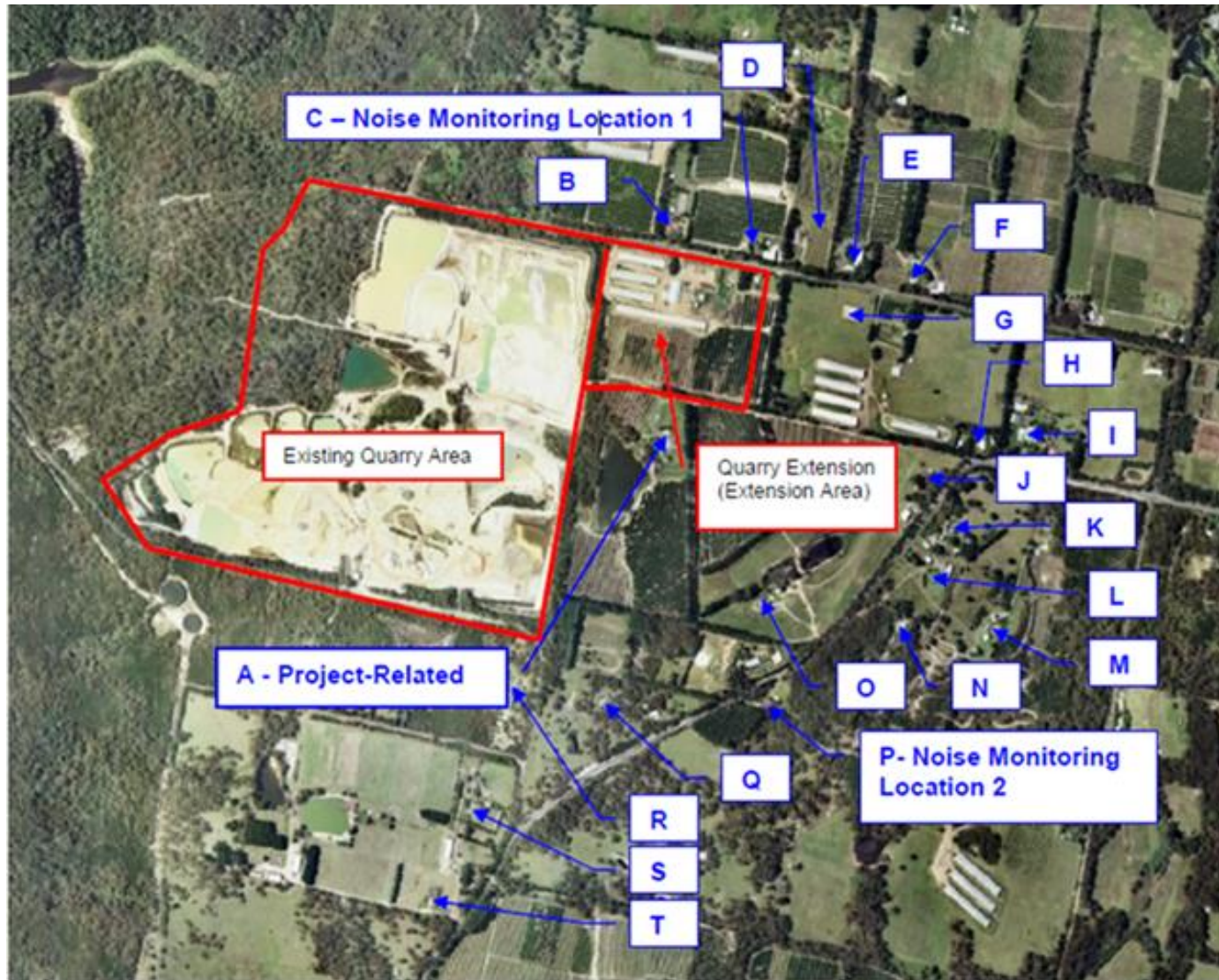
Lot 118

Upon the abandonment or completion of operations the Holder of ML6309 (Hanson) will:

- Fill in or protect any excavation or shaft opened up or used by the Holder as the Minister may direct;
- Rehabilitate or complete the rehabilitation of the Land within such time as the Minister may allow; and
- Leave the premises in a clean and tidy condition clear and free from rubbish and debris to the satisfaction of the Minister.

The Proponent will consult with Crown Lands regarding the acquisition or rehabilitation of the land.

APPENDIX 4:
NOISE RECEIVER LOCATIONS



APPENDIX 5: NOISE COMPLIANCE ASSESSMENT

Applicable Meteorological Conditions

1. The noise criteria in Table 2 is to apply under all meteorological conditions except the following:
 - (a) during periods of rain or hail; or
 - (b) wind speeds greater than 3 m/s measured at 10 m above ground level.

Determination of Meteorological Conditions

2. Except for wind speed at microphone height, the data to be used for determining meteorological conditions shall be that recorded by the meteorological station in the vicinity of the site.

Compliance Monitoring

3. Attended monitoring is to be used to evaluate compliance with the relevant conditions of this approval.
4. Unless otherwise agreed with the Secretary, this monitoring is to be carried out in accordance with the relevant requirements for reviewing performance set out in the *NSW Industrial Noise Policy* (as amended from time to time), in particular the requirements relating to:
 - (a) monitoring locations for the collection of representative noise data;
 - (b) meteorological conditions during which collection of noise data is not appropriate;
 - (c) equipment used to collect noise data, and conformity with Australian Standards relevant to such equipment; and
 - (d) modifications to noise data collected, including for the exclusion of extraneous noise and/or penalties for modifying factors apart from adjustments for duration.

APPENDIX 6: CONCEPTUAL FINAL LANDFORM

