

Notice of Modification

Section 75W of the *Environmental Planning and Assessment Act 1979*

As delegate of the Minister for Planning, I modify the project approval referred to in Schedule 1, as set out in Schedule 2.



Ben Harrison
A/Executive Director Resource Assessments and Compliance

Sydney 22 JANUARY

2019

SCHEDULE 1

The Project Approval (MP 05_0103B) for the Cudgen Lakes Sand Extraction Project granted by the Minister for Planning on 16 June 2009.

SCHEDULE 2

1. In SCHEDULE 1, delete all words after "Cudgen Lakes Sand Extraction Project" and replace with:

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DEFINITIONS

AHD	Australian Height Datum
Annual Review	The review required by condition 13 of Schedule 5
BCA	Building Code of Australia
CCC	Community Consultative Committee
Conditions of approval	Conditions contained in Schedules 2 to 5 inclusive
Construction	The demolition of buildings or works, carrying out of works and erection of buildings covered by this approval
Council	Tweed Shire Council
Day	The period from 7.00 am to 6.00 pm on Monday to Saturday, and 8.00 am to 6.00 pm on Sundays and Public Holidays
Department	Department of Planning and Environment
Dol	Department of Industry – Lands and Water
DRG	Division of Resources and Geoscience within the Department
EA	The Environmental Assessment titled <i>Environmental Assessment of the Cudgen Lakes Sand Extraction Project</i> , prepared by R.W. Corkery & Co Limited, dated May 2008 and the associated Response to Submissions titled <i>Cudgen Lakes Sand Extraction Project Response to Public and Government Agency Submissions</i> , prepared by R.W. Corkery & Co Limited, dated August 2008
EA (Mod 1)	The Environmental Assessment titled <i>Environmental Assessment for the Modification of PA 05_0103</i> , prepared by R.W. Corkery & Co Limited and dated December 2015, and associated Response to Submission titled <i>Cudgen Lakes Sand Quarry – Response to Council Comments</i> , dated January 2016
EA (Mod 2)	The Environmental Assessment titled <i>Environmental Assessment for Modification No. 2 of PA 05_0103B</i> , prepared by R. W. Corkery & Co Limited, and the associated Response to Submissions, dated September 2018
EPA	NSW Environment Protection Authority
EP&A Act	<i>Environmental Planning and Assessment Act 1979</i>
EP&A Regulation	<i>Environmental Planning and Assessment Regulation 2000</i>
EPL	Environment Protection Licence under the POEO Act
Evening	The period from 6.00 pm to 10.00 pm
Feasible	Means what is possible and practicable in the circumstances
Incident	A set of circumstances that: <ul style="list-style-type: none"> • causes or threatens to cause material harm to the environment; or • results in non-compliance with this approval
Laden Trucks	Trucks transporting quarry products or materials to or from the site
Land	Has the same meaning as the definition of the term in section 4 of 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
Material harm	Is harm that: <ul style="list-style-type: none"> • involves actual or potential harm to the health or safety of human beings or to ecosystems that is not trivial, or • results in actual or potential loss or property damage of an amount, or amounts in aggregate, exceeding \$10,000, (such loss includes the reasonable costs and expenses that would be incurred in taking all reasonable and practicable measures to prevent, mitigate or make good harm to the environment) This definition excludes “harm” that is authorised under either this approval or any other statutory approval
Minister	NSW Minister for Planning (or delegate)
Mitigation	Activities associated with reducing the impacts of the project
Modification 2	The modification as described in EA (Mod 2)
Negligible	Small and unimportant, such as to be not worth considering
Night	The period from 10.00 pm to 7.00 am on Monday to Saturday, and 10.00 pm to 8.00 am on Sundays and Public Holidays
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, petroleum or extractive industry company (or its subsidiary)
Project	The development as described in the documents listed in condition 3 of Schedule 2
Project layout	The plan at Appendix 1 of this approval
Proponent	Gales-Kingscliff Pty Ltd, or any other person carrying out development to which this approval applies
Public infrastructure	Linear and other infrastructure that provides services to the general public, such as roads, railways, water supply, drainage, sewerage, gas supply, electricity, telephone, telecommunications, etc.
Quarrying operations	The extraction, processing, stockpiling and transportation of extractive materials carried out on the site and the associated removal, storage and/or emplacement of vegetation, topsoil and overburden
Quarry products	Includes all saleable quarry products, but excludes tailings, other wastes and rehabilitation material

Reasonable	Means applying 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, to ensure it is safe, stable and non-polluting
RMS	Roads and Maritime Services
Secretary	Planning Secretary under the EP&A Act or nominee
Shoulder	The period from 6.00 am to 7.00 am
Site	The land described in Schedule 1
Site establishment	Includes preparatory works for sand processing and dredging operations as described in the EA
Statement of Commitments	The Proponent's commitments in Appendix 2
VENM	Virgin excavated natural material, as defined in the POEO Act.

**SCHEDULE 2
ADMINISTRATIVE CONDITIONS**

OBLIGATION TO MINIMISE HARM TO THE ENVIRONMENT

1. In addition to meeting the specific performance measures and criteria established under this approval, the Proponent must implement all reasonable and feasible measures to prevent, and if prevention is not reasonable and feasible, minimise any material harm to the environment that may result from the construction and operation of the project, and any rehabilitation required under this approval.

TERMS OF APPROVAL

2. The Proponent, in acting on this approval, must carry out the project in accordance with:
 - (a) the conditions of this approval; and
 - (b) all written directions of the Secretary.
3. The Proponent, in acting on this approval, must carry out the project generally in accordance with the EA, EA (Mod 1), EA (Mod 2) and project layout.
4. The conditions of this approval and directions of the Secretary prevail to the extent of any inconsistency, ambiguity or conflict between them and a document referenced in condition 3 of this Schedule. In the event of an inconsistency, ambiguity or conflict between any of the documents referenced in condition 3 of this Schedule, the most recent document prevails.
5. Consistent with the requirements of this approval, the Secretary may make written directions to the Proponent in relation to:
 - (a) the content of any strategy, study, system, plan, program, review, audit, notification, report or correspondence submitted under or otherwise made in relation to this approval, including those that are required to be, and have been, approved by the Secretary; and
 - (b) the implementation of any actions or measures contained in any such document referred to in (a) above.

Note: For the purposes of this condition, there will be an inconsistency between documents if it is not possible to comply with both documents, or in the case of a condition of approval or direction of the Secretary, and a document, if it is not possible to comply with both the condition or direction, and the document.

LIMITS ON APPROVAL

Quarrying Operations

6. The Proponent may carry out quarrying operations on the site until 31 December 2047.

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

7. The Proponent must not undertake extraction of extractive materials to a depth greater than -20 metres AHD.
8. The Proponent must not extract more than 650,000 cubic metres of quarry products from the site in any financial year.

Quarry Product Transport

9. The Proponent must not transport more than 300,000 tonnes of quarry products from the site by road in any financial year.
10. The Proponent must not import more than 45,000 tonnes of VENM (or material that otherwise meets the classification of VENM as approved by the EPA) to the site in any financial year. The Proponent must ensure that all VENM imported to the site does not contain waste.
11. Prior to the upgrade of Altona Road and the Tweed Coast Road / Crescent Street intersection, as required under conditions 27 and 29 of Schedule 3, the Proponent may dispatch up to:
 - (a) 4 laden trucks per hour; and
 - (b) 10 laden trucks per day;between the hours of 9.00 am and 3.00 pm.

12. Following the completion of road upgrades required under conditions 27 and 29 of Schedule 3, the Proponent must not dispatch more than 12 laden trucks from the site in any hour, during the hours specified in Table 1.

Hours of Operation

13. The Proponent must comply with the operating hours set out in Table 1.

Table 1: Operating Hours

Activity	Permissible Hours
Site establishment, dry processing, product transport by road, VENM receipts, other quarrying operations not specified in this table	<ul style="list-style-type: none"> • 7.00 am to 6.00 pm Monday to Friday • 7.00 am to 1.00 pm Saturday • At no time on Sundays or public holidays
Sand extraction by dredging and pumping to the processing plant, wet processing.	<ul style="list-style-type: none"> • 7.00 am to 10.00 pm Monday to Friday • 7.00 am to 4.00 pm Saturday • At no time on Sundays or public holidays
Sand extraction by dredging and pumping to fill sites.	<ul style="list-style-type: none"> • 7.00 am to 6.30 pm Monday to Friday • 7.00 am to 1.00 pm Saturday • At no time on Sundays or public holidays
Operation of dredge to fill pipeline with water or pipeline flushing	<ul style="list-style-type: none"> • 6.30 am to 7.00 pm Monday to Friday • 6.30 am to 1.30 pm Saturday • At no time on Sundays or public holidays
Maintenance (if inaudible at neighbouring residences)	Any day

14. The following activities may be carried out outside the hours specified in condition 13 above:
- (a) delivery or dispatch of materials as requested by Police or other public authorities; and
 - (b) emergency work to avoid the loss of lives, property or to prevent environmental harm.

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

STRUCTURAL ADEQUACY

15. The Proponent must 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 project.

DEMOLITION

16. The Proponent must 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

17. Unless the Proponent and the applicable authority agree otherwise the Proponent must:
- (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 or as otherwise addressed by contributions required by condition 19 of Schedule 2.

OPERATION OF PLANT AND EQUIPMENT

18. The Proponent must ensure that all the plant and equipment used at the site, or to monitor the performance of the project is:
- (a) maintained in a proper and efficient condition; and
 - (b) operated in a proper and efficient manner.

CONTRIBUTIONS

19. The Proponent must pay to Council a financial contribution toward the upgrade and construction of distributor roads (other than Altona Road and the upgrade of the Tweed Coast Road / Crescent Street intersection). The contribution must be:
- (a) determined in accordance with the *Tweed Road Contributions Plan September 2016* (as indexed);
 - (b) paid prior to the dispatch of any laden trucks from the site, unless otherwise agreed by Council;
 - (c) reported in the Annual Review.

Note: The upgrade and maintenance of Altona Road is subject to conditions 25 and 26 of Schedule 3. The upgrade of the Tweed Coast Road / Crescent Street intersection is subject to condition 27 of Schedule 3.

COMPLIANCE

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

PRODUCTION DATA

21. The Proponent must:
- (a) from the commencement of quarrying operations provide annual quarry production data to DRG using the standard form for that purpose; and
 - (b) include a copy of this data in the Annual Review.

LIMITS OF EXTRACTION

22. The Proponent must ensure that the surveyed boundaries of the approved limits of extraction 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 3 of Schedule 2, and shown conceptually on the project layout plan in Appendix 1.

PIPELINE CORRIDOR

23. Prior to commencing work to install pipelines in the pipeline corridors (shown conceptually in Appendix 1), the Proponent must submit for the approval of the Secretary:
- (a) a survey plan of the route of the pipeline;
 - (b) evidence that this route does not require native vegetation clearing;
 - (c) evidence that the fill sites have approval for filling; and
 - (d) in relation to the eastern pipeline:
 - (i) evidence that any vegetation cleared from the eastern pipeline corridor following the date of this approval has been lawfully carried out in accordance with another approval;
 - (ii) details of proposed measures to protect vegetation during pipeline installation, operation and removal; and
 - (iii) details of measures, developed in consultation with OEH, to provide opportunities for the Wallum Froglet to cross the eastern pipeline.
24. The Proponent must maintain the pipelines, ensuring that any leak or maintenance issues are detected and repaired to the satisfaction of the Secretary.

PROCESSING AREA

25. The Proponent must ensure that the office facilities for the processing area:
- (a) are designed with ventilation emanating from the side facing away from the Kingscliff Waste Water Treatment Plant; and
 - (b) have air conditioning facilities installed prior to occupation.

**SCHEDULE 3
SPECIFIC ENVIRONMENTAL CONDITIONS**

NOISE

Operational Noise Criteria

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

Table 2: Noise criteria dB(A)

Receiver	Day and Evening <i>L_{Aeq} (15 minute) dB(A)</i>	Shoulder <i>L_{Aeq} (15 minute) dB(A)</i>
Residences on privately owned land	47	44

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 3 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 this agreement.

Cumulative Noise Criteria

2. The Proponent must take all reasonable and feasible measures to ensure that noise generated by the project combined with the noise generated by other industrial development does not exceed the following amenity criteria on any privately-owned land, to the satisfaction of the Secretary:
 - (a) *L_{Aeq}* (11 hour) 50 dB(A) – Day;
 - (b) *L_{Aeq}* (4 hour) 45 dB(A) - Evening and
 - (c) *L_{Aeq}*(9 hour) 40 dB(A) - Night

Operating Conditions

3. The Proponent must:
 - (a) implement best practice management to minimise the construction, operational and road transportation noise of the project;
 - (b) minimise the noise impacts of the project during meteorological conditions when the noise criteria in this approval do not apply (see Appendix 3);
 - (c) carry out attended noise monitoring (at least every 3 months or as otherwise agreed by the Secretary) to determine whether the project is complying with the operational noise criteria in Table 2 (see Appendix 3); and
 - (d) regularly assess noise monitoring data and modify and/or stop operations on site to ensure compliance with the relevant conditions of this approval, to the satisfaction of the Secretary.

Note: Monitoring under this approval is not required at all residences and the use of representative monitoring locations can be used to demonstrate compliance with criteria, if agreed to by the Secretary.

Noise Management Plan

4. The Proponent must prepare a Noise Management Plan for the project to the satisfaction of the Secretary. This plan must:
 - (a) be prepared by a suitably qualified and experienced person/s whose appointment has been endorsed by the Secretary;
 - (b) be submitted to the Secretary for approval within three months of the determination of Modification 2;
 - (c) be prepared in consultation with the EPA;
 - (d) describe the measures to be implemented to ensure:
 - compliance with the noise criteria and operating conditions of this approval;
 - best practice management is being employed; and
 - the noise impacts of the project are minimised during meteorological conditions under which the noise criteria in this approval do not apply (see Appendix 3);
 - (e) describe the proposed noise management system; and
 - (f) include a monitoring program to be implemented to measure noise from the project against the noise criteria in Table 2, and which evaluates and reports on the effectiveness of the noise management system on site.

The Proponent must implement the Noise Management Plan as approved from time to time by the Secretary.

AIR QUALITY

Air Quality Impact Assessment Criteria

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

Table 3: Air quality criteria

Pollutant	Averaging Period	Criterion
Particulate matter < 10 µm (PM ₁₀)	Annual	^{a,c} 25 µg/m ³
	24-hour	^b 50 µg/m ³
Particulate matter < 2.5 (PM _{2.5})	Annual	^{a, c} 8 µg/m ³
	24-hour	^b 25 µg/m ³
Total suspended particulates (TSP)	Annual	^{a,c} 90 µg/m ³
^d Deposited dust	Annual	^b 2 g/m ² /month ^a 4 g/m ² /month

Notes:

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

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

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

^d 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.

Operating Conditions

6. The Proponent must:
- implement best management practice to minimise the dust emissions of the project, including routinely watering haul roads being used by heavy vehicles and equipment;
 - regularly assess meteorological and air quality monitoring data to guide the day-to-day planning of operations and implementation of air quality mitigation measures to ensure compliance with the relevant conditions of this approval;
 - minimise the air quality impacts of the project during adverse meteorological conditions and extraordinary events (see Note c to Table 3 above);
 - monitor and report on compliance with the relevant air quality conditions in this approval; and
 - minimise surface disturbance of the site, other than as permitted under this approval, to the satisfaction of the Secretary.

Air Quality Management Plan

7. The Proponent must prepare an Air Quality Management Plan for the project to the satisfaction of the Secretary. This plan must:
- be prepared by suitably qualified and experienced person/s whose appointment has been endorsed by the Secretary;
 - be prepared in consultation with the EPA;
 - be submitted to the Secretary within three months of the determination of Modification 2;
 - describe the measures to be implemented to ensure:
 - compliance with the air quality criteria and operating conditions of this approval;
 - best practice management is being employed; and
 - the air quality impacts of the project are minimised during adverse meteorological conditions and extraordinary events;
 - describe the air quality management system in detail; and
 - include an air quality monitoring program that:
 - is capable of evaluating the performance of the project against the air quality criteria;
 - adequately supports the air quality management system; and
 - includes a protocol for determining any exceedances of the air quality criteria.

The Proponent must implement the Air Quality Management Plan as approved from time to time by the Secretary.

Meteorological Monitoring

8. For the life of the project, the Proponent must 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 and Analysis of Air Pollutants in New South Wales* guideline.

Greenhouse Gas Emissions

9. The Proponent must implement all reasonable measures to minimise the release of greenhouse gas emissions from the site.

SOIL AND WATER

Water Supply

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

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

Water Discharges

11. The Proponent must comply with the discharge limits in any EPL for the site, or with section 120 of the POEO Act.

Fines Management

12. The Proponent must ensure that:
 - (a) no potential acid sulfate soil is removed from the site, unless adequately neutralised in accordance with methods approved under the Soil and Water Management Plan (see condition 18 below);
 - (b) all excavated potential acid sulfate soil fines material is discharged into the dredge pond at a depth greater than 3 metres below the water surface as soon as possible to prevent oxidisation; and
 - (c) all fines are deposited to a final depth of at least 8 metres below the water surface, unless an alternative method(s) is approved by the EPA and the Secretary.

Note: Acid sulfate soils are as defined in the NSW Acid Sulfate Soils Manual.

Flood Management

13. All earthworks, including drainage and bunding works, must be contained wholly within the site.
14. The Proponent must cease dredging and processing activities not less than 24 hours prior to the commencement of overflow from any dredge pond. No dredging or processing may occur when the dredge ponds are overflowing.
15. The Proponent must ensure that the flood storage capacity of the site throughout all stages of the project is not less than the pre-project flood storage capacity, unless otherwise agreed by the Secretary. Details of the available flood storage capacity must be reported in each Annual Review.

Note: The Secretary may agree to a reduction in the pre-existing flood storage capacity of the site in the event that separate development consent is granted for development on the site.

16. The Proponent must ensure that the top of the earth bund around the extraction ponds does not exceed 1.8 metres AHD. Spillways must be provided at the eastern and western extents of each bund and must be a minimum of 50 metres wide and not exceed 1.3 metres AHD. Bunds and spillways must be suitably surfaced (for example grassed or rock lined) to avoid scour and erosion during storm and flood events.
17. The Proponent must ensure that the pad of the processing area does not exceed a height of 1.8 metres AHD.

Soil and Water Management Plan

18. Within three months of the determination of Modification 2, unless otherwise agreed by the Secretary, the Proponent must prepare a Soil and Water Management Plan for the project in consultation with EPA, Water

NSW, DoI and Council, to the satisfaction of the Secretary. This plan must be prepared by a suitably qualified expert whose appointment has been approved by the Secretary, and include:

- (a) a Site Water Balance;
- (b) an Erosion and Sediment Control Plan;
- (c) a Surface Water Monitoring Program;
- (d) a Groundwater Monitoring Program; and
- (e) a Blue-green Algae Management Plan.

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

19. The Site Water Balance must include details of:
 - (a) sources and security of water supply;
 - (b) water use and management on site;
 - (c) any off-site water transfers;
 - (d) reporting procedures; and
 - (e) measures to be implemented to minimise clean water use on site.
20. The Erosion and Sediment Control Plan must:
 - (a) be consistent with the relevant requirements of the Department of Housing's *Managing Urban Stormwater: Soil and Construction Manual*, the NSW Acid Sulfate Soil Advisory Committee's *Acid Sulfate Soil Manual*, and relevant Council codes, or most recent versions of these documents;
 - (b) describe construction and operational activities that could cause soil erosion, sedimentation or generation of acid sulfate soils;
 - (c) describe the location, function, and capacity of soil and water management and control structures during construction, stabilisation and operational stages;
 - (d) describe measures to minimise soil erosion and the potential for the transport of sediment to downstream waters;
 - (e) define procedures for managing the potential acid sulfate soils on the site;
 - (f) define procedures for managing water releases from the site; and
 - (g) define procedures for the maintenance of soil and water management structures on the site during the life of the project.
21. The Surface Water Monitoring Program must include:
 - (a) a detailed description of the surface water management system;
 - (b) surface water impact assessment criteria;
 - (c) a program to monitor bank and bed stability;
 - (d) a program to monitor and manage pH in the dredge pond;
 - (e) a program to monitor and report on adverse impacts of the project on surface water flows and quality, including any surface water discharges; and
 - (f) a protocol for the investigation, notification and mitigation of identified exceedances of the surface water impact assessment criteria.
22. The Groundwater Monitoring Program must include:
 - (a) detailed baseline data on groundwater levels and quality, based on statistical analysis;
 - (b) groundwater impact assessment criteria;
 - (c) a program to monitor and report on adverse impacts of the project on groundwater flows and quality;
 - (d) a program to monitor groundwater level effects on vegetation, and on groundwater supply to adjoining properties; and
 - (e) a protocol for the investigation, notification and mitigation of identified exceedances of the groundwater impact assessment criteria.
23. The Blue-Green Algae Management Plan must:
 - (a) be consistent with extant guidelines for blue-green algae management including the National Health and Medical Research Council's *Guidelines for Managing Risks in Recreational Water*;
 - (b) describe the measures that would be implemented to prevent and control the sources of algal blooms over the short, medium and long term;
 - (c) include a detailed recovery plan that aims to reduce algae levels to meet the water quality completion criteria in the Rehabilitation Management Plan;
 - (d) include reasonable and feasible measures to reduce nutrient levels in the pond/s over the short, medium and long term, and include interim water quality targets for nutrients based on continual improvement and established water quality objectives for the Tweed River catchment; and
 - (e) define procedures for the management and notification of identified algal blooms.

Additional Groundwater Requirements

24. Within six months of the determination of Modification 2, the Proponent must:
 - (a) review the site's existing groundwater monitoring data (including water quality data) and groundwater management and mitigation measures;

- (b) identify any additional monitoring, management or mitigation measures required to achieve the site's groundwater impact assessment criteria, as required under condition 22(c) of this Schedule; and
 - (c) prepare an amended Groundwater Monitoring Program to reflect any additional measures, to the satisfaction of the Secretary.
25. Prior to extracting beyond the previously-proposed realigned Altona Drive (as shown in Figure 2 of the Department's Assessment Report for Modification 2), the Proponent, following consultation with DoI, must:
- (a) update the existing groundwater model for the project to address the consolidated extraction area as approved under Modification 2;
 - (b) re-assess the potential groundwater impacts of the project; and
 - (c) review and if necessary revise the Groundwater Monitoring Program and the groundwater management and mitigation measures for the project in response to the updated groundwater modelling;
- to the satisfaction of the Secretary.

TRANSPORT

Site Access

26. The Proponent must ensure that all heavy vehicle access to and from the site is via the Tweed Coast Road/Crescent Street/Altona Road route. Heavy vehicles must not travel via Crescent Street through Cudgen Village, except for local deliveries to Cudgen Village.

Upgrade and Maintenance of Altona Road

27. The Proponent must upgrade Altona Road between the site entrance and intersection with Crescent Street. This upgrade must:
- (a) include two additional passing bays along the current alignment of Altona Road, each having sufficient length to readily accommodate a laden truck and dog trailer combination, to the satisfaction of the Council; and
 - (b) be funded by the Proponent, or by a cost sharing agreement between the Proponent and the owner of the Tweed Sand Quarry, in consultation with Council.
28. By 20 August 2019, the Proponent must enter into a cost sharing agreement with the owner of the Tweed Sand Quarry, in consultation with Council, for the maintenance of Altona Road between the site entrance and intersection with Crescent Street. This agreement must:
- (a) provide for ongoing repairs and maintenance of the road;
 - (b) apply to the existing or any future approved alignment of Altona Road; and
 - (c) provide for proportionate and equitable contributions between the Proponent and the owner of the Tweed Sand Quarry (based on actual annual product road transport or other measure/s agreed by the parties).

If a cost sharing agreement cannot be reached or if there is any dispute regarding the finalisation of the terms of the cost sharing agreement, or its implementation, then either party may refer the matter to the Secretary for resolution.

Upgrade of the Crescent Street and Tweed Coast Road Intersection

29. The Proponent must upgrade the intersection of Crescent Street and Tweed Coast Road. This upgrade must:
- (a) provide for the construction of an acceleration lane of not less than 200 metres in length on Tweed Coast Road, northbound from the intersection, to the satisfaction of Council (as roads authority);
 - (b) provide for channelised right turn treatment (line marking only) on Tweed Coast Road for vehicles turning right into Crescent Street;
 - (c) be designed and constructed in accordance with Austroads Guidelines, Australian Standards and RMS Supplements; and
 - (d) be funded by the Proponent, or by a cost sharing agreement between the Proponent and the owner of the Tweed Sand Quarry, in consultation with Council;

If a cost sharing agreement cannot be reached or if there is any dispute regarding the finalisation of the terms of the cost sharing agreement, or its implementation, then either party may refer the matter to the Secretary for resolution.

Note: The proposed road works on Tweed Coast Road (MR450) will be captured by Section 138 of the Roads Act 1993. Concept Design is to be submitted to Tweed Shire Council for referral to Roads and Maritime for concurrence under Section 138 of the Roads Act 1993.

Operating Conditions

30. The Proponent must:

- (a) provide sufficient parking on the site for all project-related traffic and visitors, in accordance with any applicable Council parking code and ensure that no on street parking is undertaken;
- (b) ensure that trucks do not enter the site prior to 7.00 am on any day;
- (c) ensure that on-site parking and pedestrian facilities are adequately signposted;
- (d) ensure that all laden trucks entering or exiting the site have their loads covered;
- (e) ensure that all laden trucks exiting the site are cleaned of material that may fall from vehicles, before leaving the site;
- (f) use its best endeavours to ensure that appropriate signage is displayed on all trucks used to transport quarry products from the project so they can be easily identified by road users; and
- (g) keep accurate records of all laden truck movements to and from the site and publish a summary of these records on its website every month.

Transport Management Plan

31. The Proponent must prepare a Traffic Management Plan for the project to the satisfaction of the Secretary. This plan must:
- (a) be prepared by suitably qualified and experienced person/s whose appointment has been endorsed by the Secretary;
 - (b) be prepared in consultation with RMS, Transport for NSW and Council, and in accordance with the *RTA – Traffic Control at Worksites Manual*;
 - (c) describe the processes in place for the management of truck movements entering and exiting the site;
 - (d) prohibit trucks departing the site from turning right from Crescent Street to Tweed Coast Road;
 - (e) include a Drivers' Code of Conduct that includes:
 - details of the safe and quiet driving practices that must be used by drivers travelling to and from the quarry;
 - a map of the primary haulage route;
 - safety initiatives for haulage through residential areas, school zones and along school bus routes;
 - an induction process for vehicle operators and regular toolbox meetings;
 - complaints resolution and disciplinary procedures; and
 - details of community consultation measures for peak haulage periods.
 - (f) describe the measures to be put in place to ensure compliance with the Drivers' Code of Conduct;
 - (g) include details of the measures to be implemented to minimise traffic safety issues and disruption to local road users during road upgrade works; and
 - (h) propose measures to minimise the transmission of dust and tracking of material onto the surface of public roads from vehicles leaving the quarry.

The Proponent must not dispatch any trucks from the site until the Traffic Management Plan is approved by the Secretary.

The Proponent must implement the approved Traffic Management Plan as approved from time to time by the Secretary.

REHABILITATION

Rehabilitation Objectives

32. The Proponent must rehabilitate the site to the satisfaction of the Secretary. This rehabilitation must be generally consistent with the proposed rehabilitation activities described in the documents listed in condition 3 of Schedule 2, and comply with the objectives in Table 4.

Table 4: Rehabilitation Objectives

Feature	Objective
All areas of the site affected by the project	<ul style="list-style-type: none"> • Safe • Hydraulically and geotechnically stable, including the dredge pond margins (particularly where subject to regular wind and wave action) • Non-polluting • Fit for the intended post-extraction land use(s) • Final landform integrated with surrounding natural landforms as far as is reasonable and feasible, and minimising visual impacts when viewed from surrounding land
Surface Infrastructure	<ul style="list-style-type: none"> • Decommissioned and removed, unless otherwise agreed by the Secretary
Dredge Pond	<ul style="list-style-type: none"> • Perimeter of dredge pond landscaped and vegetated using native tree and understory species and, where necessary, non-invasive groundcover suitable for the final land use

	<ul style="list-style-type: none"> • Natural looking bank design with curved lake boundaries, with a variety of bank treatments (eg beaches, wetlands) providing a variety of habitats. • Minimise the extent and persistence of algae blooms • Water quality fit for the intended post-extraction land use(s)
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Progressive Rehabilitation

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

Rehabilitation Management Plan

34. The Proponent must prepare a Rehabilitation Management Plan for the project to the satisfaction of the Secretary. This plan must:
- (a) be prepared by a suitably qualified and experienced person/s whose appointment has been endorsed by the Secretary;
 - (b) be prepared in consultation with Council, Water NSW, DoI and OEH;
 - (c) be submitted to the Secretary within three months of the determination of Modification 2, unless the Secretary agrees otherwise;
 - (d) describe how the rehabilitation of the site and pipeline corridors would achieve the objectives identified in Table 4;
 - (e) describe the short, medium, and long term measures that would be implemented to:
 - rehabilitate and stabilise the site and pipeline corridors; and
 - manage the restored vegetation and wetland habitat established on the site;
 - (f) include detailed performance and completion criteria for the rehabilitation and stabilisation of the site (including appropriate water quality criteria);
 - (g) include a detailed description of the measures to be implemented to:
 - enhance existing vegetation and increase littoral and terrestrial habitat potential;
 - protect areas outside the disturbance areas, including vegetation adjoining pipelines;
 - manage impacts on fauna, including measures to enable Wallum Froglet to cross the eastern pipeline;
 - control terrestrial and aquatic weeds and pests;
 - control access; and
 - reduce the visual impacts of the project;
 - (h) include a program to monitor, independently audit and report on the effectiveness of the measures in paragraph (g) above, and progress against the detailed performance and completion criteria in paragraph (f);
 - (i) include a vegetation clearance protocol;
 - (j) include a Long-Term Management Strategy, which:
 - defines the objectives and criteria for quarry closure and post-extraction management;
 - investigates options for the future use of the site;
 - describes the measures that would be implemented to minimise or manage the ongoing environmental effects of the project; and
 - describes how the performance of these measures would be monitored over time;
 - (k) describe the potential risks to successful rehabilitation and/or revegetation, including a description of the contingency measures that would be implemented to mitigate these risks; and
 - (l) detail who is responsible for monitoring, reviewing, and implementing the plan.

The Proponent must implement the approved Rehabilitation Management Plan as approved from time to time by the Secretary.

Rehabilitation bond

35. Within 6 months of the approval of the Rehabilitation Management Plan, the Proponent must lodge a Rehabilitation Bond with the Department to ensure that the rehabilitation of the site is undertaken in accordance with the performance and completion criteria set out in the plan and the relevant conditions of approval. The sum of the bond must be an amount agreed to by the Secretary and determined by:
- (a) calculating the cost of rehabilitating all disturbed areas of the site, taking into account the likely surface disturbance over the next 3 years of quarrying operations; and
 - (b) employing a suitably, independent and experienced person to verify the calculated costs.

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

36. The Rehabilitation Bond must be reviewed and if required, an updated bond must be lodged with the Department within 3 months following:
- any update or revision to the Rehabilitation Management Plan;
 - the completion of an Independent Environmental Audit; or
 - in response to a request by the Secretary.

Notes:

- If the rehabilitation of the site area is completed (or partially completed) to the satisfaction of the Secretary, then the Secretary will release the bond (or relevant part of 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.*
- If capital and other expenditure required by the Rehabilitation Management Plan is largely complete, the Secretary may waive the requirement for lodgement of a bond in respect of the remaining expenditure.*

ABORIGINAL CULTURAL HERITAGE

Aboriginal Cultural Heritage Management Plan

37. The Proponent must prepare an Aboriginal Cultural Heritage Management Plan to the satisfaction of the Secretary. This plan must:
- be prepared in consultation with the relevant Aboriginal communities;
 - be submitted to the Secretary for approval prior to carrying out any development; and
 - include a description of the:
 - Aboriginal cultural heritage induction protocol for employees;
 - process for Aboriginal inspection of excavations for the northern pipeline corridor;
 - measures that would be implemented if any new Aboriginal objects or skeletal remains are discovered during the project either within or beyond the area of disturbance; and
 - process for identifying a long-term storage location should Aboriginal relics be discovered within the project site requiring salvage.

The Proponent must implement the approved Aboriginal Cultural Heritage Management Plan as approved from time to time by the Secretary.

VISUAL

38. The Proponent must establish and subsequently maintain the vegetation screen around the extraction area within 12 months of the date of this approval.

Note: The vegetation screen must be detailed in the Rehabilitation Management Plan required under condition 34 of Schedule 3.

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

WASTE

40. The Proponent must:
- manage on-site sewage treatment and disposal in accordance with the requirements of its EPL, and to the satisfaction of the EPA and Council;
 - minimise the waste generated by the project;
 - ensure that the waste generated by the project is appropriately stored, handled, and disposed of; and
 - report on waste management and minimisation in the Annual Review, to the satisfaction of the Secretary.
41. Except as expressly permitted in an EPL, the Proponent must not receive waste at the site for storage, treatment, processing, reprocessing or disposal.

LIQUID STORAGE

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

DANGEROUS GOODS

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

**SCHEDULE 4
ADDITIONAL PROCEDURES**

NOTIFICATION OF EXCEEDANCES

1. As soon as practicable and no longer than 7 days after obtaining monitoring results showing an exceedance of any criteria in Schedule 3 the Proponent must:
 - (a) notify the affected land owners and tenants in writing of the exceedance, and provide quarterly monitoring results, to each affected party until the project is again complying with the relevant criteria; and
 - (b) publish on its website the full details of the exceedance.

Any exceedance of any criteria in Schedule 3 is an incident that must be notified to the Department in accordance with conditions 9 to 12 of Schedule 5.

For any exceedance of the air quality criteria or air quality measures in Schedule 3, the Proponent must also provide to any affected land owners and tenants a copy of the fact sheet entitled "*Mine Dust and You*" (NSW Minerals Council, 2011).

INDEPENDENT REVIEW

2. If a landowner considers the project to be exceeding the relevant criteria in Schedule 3, they may ask the Secretary in writing for an independent review of the impacts of the project on their land.

If the Secretary is not satisfied that an independent review is warranted, the Secretary will notify the landowner in writing of that decision, and the reasons for that decision, within 21 days of the request for a review.

If the Secretary is satisfied that an independent review is warranted, within 3 months, or as otherwise agreed by the Secretary and the landowner, the Proponent 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 their concerns;
 - conduct monitoring to determine whether the project is complying with the relevant criteria in Schedule 3; and
 - if the project is not complying with that criteria, identify measures that could be implemented to ensure compliance with the relevant criteria;
- (b) give the Secretary and landowner a copy of the independent review; and
- (c) comply with any written requests made by the Secretary to implement any findings of the review.

SCHEDULE 5
ENVIRONMENTAL MANAGEMENT, REPORTING AND AUDITING

ENVIRONMENTAL MANAGEMENT

Environmental Management Strategy

1. The Proponent must prepare an Environmental Management Strategy for the project to the satisfaction of the Secretary. The strategy must:
 - (a) be submitted to the Secretary for approval within three months of the determination of Modification 2;
 - (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 to be implemented to:
 - keep the local community and relevant agencies informed about the operation and environmental performance of the project;
 - receive, record, handle and respond to complaints;
 - resolve any disputes that may arise during the course of the project;
 - respond to any non-compliance; and
 - respond to emergencies; and
 - (f) include:
 - reference to any strategies, plans and programs approved under the conditions of this approval; and
 - a clear plan depicting all the monitoring to be carried out under the conditions of this approval.

The Proponent must implement the Environmental Management Strategy as approved from time to time by the Secretary.

Management Plan Requirements

2. The Proponent must ensure that the management plans required under this approval are prepared in accordance with any relevant guidelines, and include:
 - (a) a summary of relevant background or 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 project or any management measures;
 - (c) a description of the measures to 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 project; and
 - 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:
 - incidents;
 - complaints; and
 - non-compliances with statutory requirements;
 - (h) a protocol for periodic review of the plan; and
 - (i) a document control table that includes version numbers, dates when the management plan was prepared and reviewed, names and positions of the person/s who prepared and reviewed the management plan, a description of any revisions made and the date of the Secretary's approval.

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

Application of Existing Management Plans

3. The Proponent must continue to apply existing approved management plans, strategies or monitoring programs that have most recently been approved under this approval, until the approval of a similar plan, strategy or program following a modification to this approval.

Revision of Strategies, Plans & Programs

4. Within 3 months of:
 - (a) the submission of an incident report under condition 10 of this Schedule;
 - (b) the submission of an Annual Review under condition 13 of this Schedule;
 - (c) the submission of an Independent Environmental Audit under condition 14 of this Schedule; or
 - (d) the approval of any modification to the conditions of this approval.the Proponent must review the suitability of all strategies, plans and programs required under this approval. Where this review leads to revisions in any such document, then within 6 weeks of the review the revised document must be submitted for the approval of the Secretary.

Notes:

- *This is to ensure that strategies, plans and programs are regularly updated to incorporate any measures recommended to improve the environmental performance of the project.*

Staging, Combining and Updating Strategies, Plans or Programs

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

Evidence of Consultation

6. Where the conditions of this approval require consultation with an identified party, the Proponent must:
 - (a) consult with the relevant party prior to submitting the subject document; and
 - (b) provide details of the consultation undertaken, including:
 - the outcome of that consultation, matters resolved and unresolved; and
 - details of any disagreement remaining between the party consulted and the Proponent and how the Proponent has addressed any unresolved matters.
7. However, if the Secretary agrees, a strategy, plan or program may be prepared without consultation being undertaken with an identified party required under a condition of this approval.

COMMUNITY CONSULTATIVE COMMITTEE

8. The Proponent must operate a Community Consultative Committee (CCC) for the project to the satisfaction of the Secretary. The CCC must be operated in general accordance with the Department's *Community Consultative Committee Guidelines: State Significant Projects (2016)*, for the duration of quarrying operations and for at least 6 months following the completion of quarrying operations.

Notes:

- *The CCC is an advisory committee.*
- *In accordance with the guidelines, the Committee should comprise an independent chair and appropriate representation from the Proponent, Council and the local community.*

REPORTING

Incident Notification, Reporting and Response

9. The Department must be notified in writing to compliance@planning.nsw.gov.au immediately after the Proponent becomes aware of an incident.
10. Within 7 days of the date of the incident, the Proponent must provide the Secretary and any relevant agencies with a detailed report on the incident, and such further reports as may be requested. This report must include the time and date of the incident, details of the incident, measures implemented to prevent re-occurrence and must identify any non-compliance with this approval.
11. Any written requirements of the Secretary or relevant public authority (as determined by the Secretary) which may be given at any point in time, to address the cause or impact of an incident must be complied with and within any timeframe specified by the Secretary or relevant public authority.

12. If statutory notification is provided to EPA as required under the POEO Act in relation to the project, such notification must also be provided to the Secretary within 24 hours after the notification was provided to EPA.

Annual Review

13. By the end of September each year, or other timing as may be agreed by the Secretary, the Proponent must submit a report to the Department reviewing the environmental performance of the project, to the satisfaction of the Secretary. This review must:
- (a) describe the project (including any rehabilitation) that was carried out in the previous financial year, and the project 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 project 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 approval;
 - monitoring results of years prior; and
 - relevant predictions in the documents listed in condition 3 of Schedule 2;
 - (c) detail any non-compliance over the past financial year, and describe what actions were (or are being) taken to rectify the non-compliance and avoid reoccurrence;
 - (d) evaluate and report on:
 - the effectiveness of the noise and air quality management systems; and
 - compliance with the performance measures, criteria and operating conditions in this approval;
 - (e) identify any trends in the monitoring data over the life of the project;
 - (f) identify any discrepancies between the predicted and actual impacts of the project, and analyse the potential cause of any significant discrepancies; and
 - (g) describe what measures will be implemented over the current financial year to improve the environmental performance of the project.

The Proponent must ensure that copies of the Annual Review are submitted to Council and are available to the CCC and any interested person upon request.

INDEPENDENT ENVIRONMENTAL AUDIT

14. Within two years of the commencement of quarrying operations and every 3 years thereafter, unless the Secretary directs otherwise, the Proponent must commission and pay the full cost of an Independent Environmental Audit of the project. The primary purposes of the audit are to ascertain information in relation to the environmental performance of the project and the adequacy of strategies, plans and programs. Audits must:
- (a) be led and 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 and the CCC;
 - (c) assess the environmental performance of the project and whether it is complying with the relevant requirements in this approval and any relevant EPL or 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;
 - (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; and
 - (f) be conducted and reported to the satisfaction of the Secretary.

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

15. Within 12 weeks of commencing each audit, unless otherwise agreed by the Secretary, the Proponent must submit a copy of the audit report to the Secretary and any other agency that requests it, together with its response to any recommendations contained in the audit report, and a timetable for the implementation of the recommendations. The Proponent must implement these recommendations, to the satisfaction of the Secretary.

ACCESS TO INFORMATION

16. Within 1 month of the determination of Modification 2, and for the life of the project, the Proponent must:
- (a) make the following information and documents (as they are obtained or approved) publicly available on its website:
 - the documents listed in conditions 2 and 3 of Schedule 2;
 - current statutory approvals for the project;
 - all approved strategies, plans and programs required under the conditions of this approval;
 - regular reporting on the environmental performance of the project in accordance with the reporting arrangements in any plans or programs approved under the conditions of this approval;

- 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;
 - a summary of the current stage and progress of the project;
 - contact details to enquire about the project or to make a complaint;
 - a complaints register, updated monthly;
 - the Annual Review's of the project;
 - any Independent Environmental Audit as described in condition 14 above, and the Proponent's response to the recommendations in any audit; and
 - 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

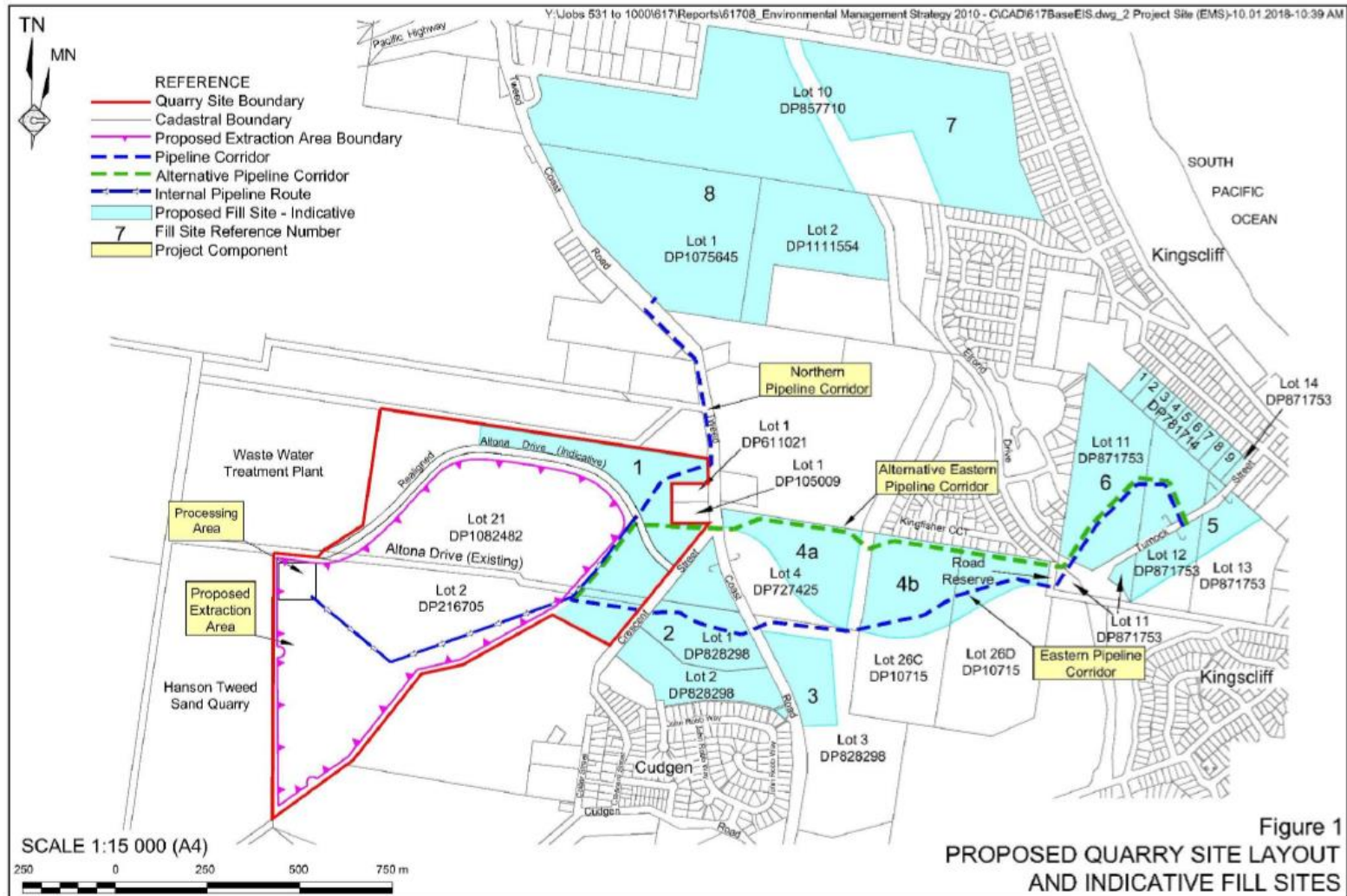


Figure 1 – Project Layout

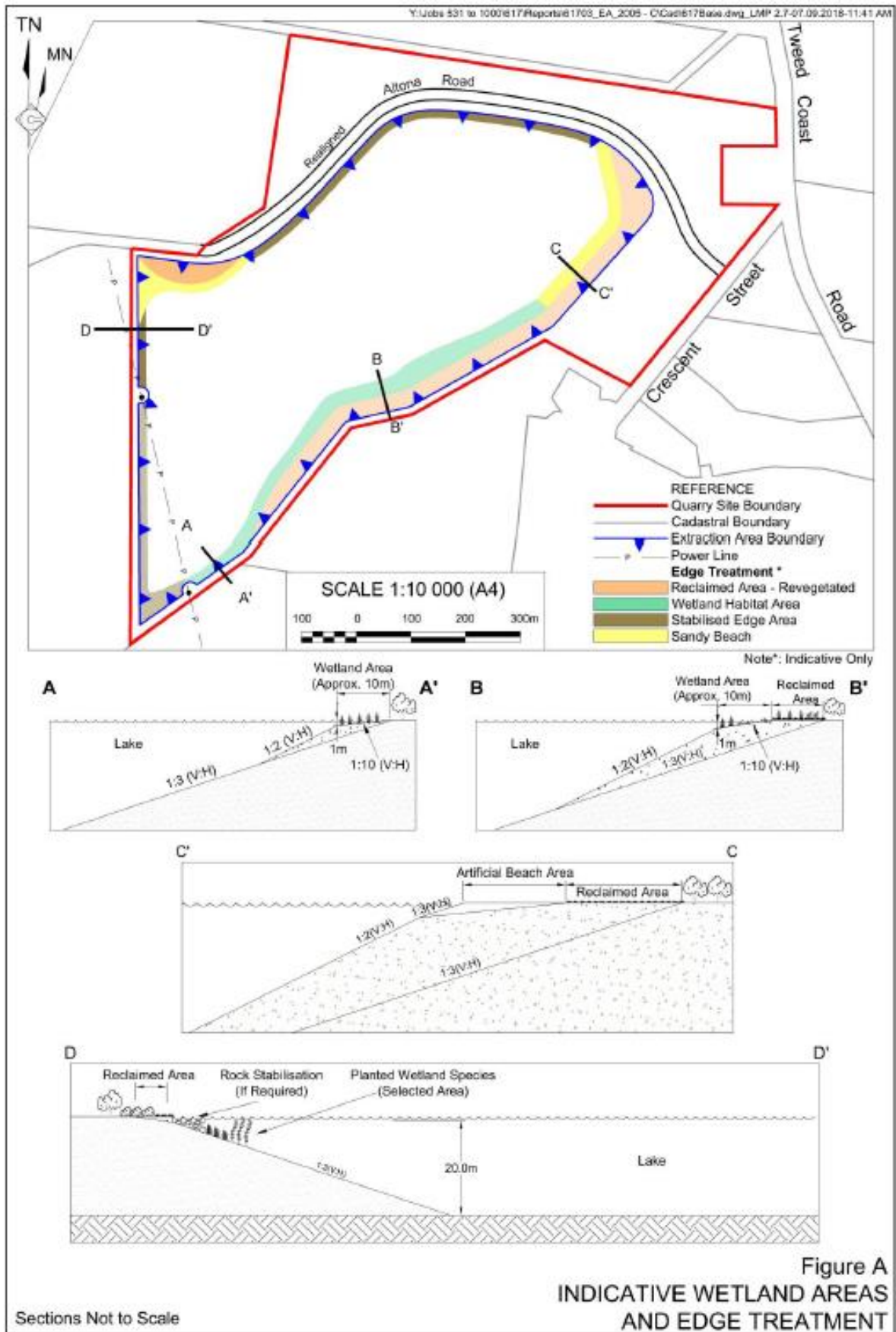


Figure 2 – Conceptual Final Landform

**APPENDIX 2
STATEMENT OF COMMITMENTS**

Desired Outcome	Action	Timing
1. Sand Extraction and Processing		
Final extraction boundaries remain stable.	1.1 Ensure terminal extraction batters are formed no steeper than 1:3 (V:H) (excludes stabilised backfilled final landform batters).	Continuous.
2. Waste Management		
Minimisation of general waste creation and maximisation recycling wherever possible.	2.1 Dispose all recyclables and general waste in appropriate waste receptacles.	As required.
Minimisation of the potential risk of environmental impact due to waste creation, storage and / or disposal.	2.2 Use non-saleable oversize materials for final landform creation / return to the extraction area.	As required.
	2.3 Intern any oversize materials suspected of being acid generating so they settle beneath at least 8m of water.	As required.
3. Rehabilitation		
The creation of a stable final landform, available for the proposed future use(s) of recreation and nature conservation.	3.1 Progressively backfill selected finalised sections of the extraction pond to create wetland areas.	When suitable backfill and backfill areas are available
	3.2 Stabilise all earthworks and disturbed areas no longer required for Quarry-related activities in order to minimise erosion and sedimentation, dust lift-off and to reduce visual intrusion.	As areas become available.
	3.3 Cross-rip all unsealed roads and remove all buildings and structures not required for the final land use.	Following completion of operations.
4. Flooding and Drainage		
Minimisation of potential flooding impacts upon the Quarry operations and surrounding land users and property.	4.1 Construct and maintain shallow spillways (approximate elevation 1.3m AHD) within the bunds surrounding the extraction pond at the eastern and western extents of the bunding.	Continuous whilst bunding in place.
	4.2 Remove sections of bunding once floodwaters have peaked to allow floodwaters trapped behind the bunds to drain freely to the western drainage channel as the flood recedes.	During/post flood event.
	4.3 Maintain drainage paths outside of the bunded and filled areas to allow floodwaters to drain freely.	Continuously.
	4.4 Prepare a flood evacuation plan to ensure that personnel respond appropriately to a warning of an imminent Tweed River overbank flood.	Prior to commencement of operations.
	4.5 Realign the western drainage channel within the Altona Road reserve to provide an equivalent or more efficient drain.	During realignment of Altona Road.
5. Groundwater		
Minimisation of potential groundwater quality or quantity impacts upon surrounding groundwater users (including groundwater-dependent ecosystems).	5.1 Adjust sand extraction rates to ensure that groundwater drawdown levels remain within the predicted limits.	Ongoing during operations.
	5.2 Install a height gauge within the extraction pond so that water levels can be monitored daily to m AHD.	Following commencement of sand extraction.
	5.3 Continue groundwater monitoring following the cessation of extraction and placement of VENM.	In accordance with the approved Soil and

Desired Outcome	Action	Timing	
		Water Management Plan.	
	5.4	Compile an annual summary of all monitoring results and forward to Water NSW as part of the Annual Review for the Quarry.	Ongoing during monitoring.
	5.5	Consult with each likely affected landowner and investigate complaints of poor water quality in neighbouring dams/bores.	Ongoing during operations.
	5.6	Negotiate an agreement with each affected landholder to either: <ul style="list-style-type: none"> • deepen the existing bore or install a replacement bore; • pay a cash compensation equal to the assessed cost of deepening the bore; • provide an alternative water supply, such as from the extraction ponds or groundwater bore registered to the Proponent; or • provide an appropriately sized rainwater storage tank to enhance property water storage. 	If the water quality or quantity of available groundwater to the landholder is materially affected by Quarry operations.
	5.7	Implement the provision of an alternative water supply or other agreed compensation.	In the event water supplies are materially affected.
	5.8	Provide copies of any negotiated agreements to the Department of Planning and Environment and Water NSW for their records.	In the event an agreement is negotiated.
6. Surface Water			
Prevention of discharge of dirty, acidic or otherwise contaminated water from the Quarry Site.	6.1	Reduce sand extraction and temporarily cease VENM placement if a significant deterioration in extraction pond water quality occurs, until the source is identified and appropriate amelioration measures are implemented.	In the event significant deterioration of extraction pond water occurs.
	6.2	Regularly monitor surface water to provide an accurate assessment of the adequacy of practices implemented as part of the operation.	In accordance with the approved Soil and Water Management Plan.
7. Acid Sulfate Soils and Sediments, Soil Contamination and Agricultural Suitability			
Minimisation of PASS and VENM(b) acidification and adequate treatment and storage of these materials.	7.1	Convey return water (from both the wash plant and fill sites) in a manner which ensures fines / silts remain in suspension and do not settle in the return pipelines or are otherwise flushed from the pipeline. If a pipeline is not used, undertake sluicing in a manner that ensures turbulent flow and sufficient velocity to prevent the deposition of fines material within the drainage line.	Ongoing during processing and hydraulic transportation of fill sand.
	7.2	Do not extract residual clay material from the base of the sand resource.	Ongoing during extraction.
	7.3	Ensure a suitably qualified or trained person assesses imported material (VENM) in accordance with the Acid Sulfate Soil Management Plan and confirms its classification as VENM prior to acceptance at the Quarry Site.	Ongoing during VENM receipt.
	7.4	Place VENM(b) received at the premises which is intended to be dredged or interned at the base of the extraction pond within the nominated period.	In accordance with the Acid Sulfate Soil Management Plan.
The level of documentation for managing and reporting matters relating to Potentially Acid Sulfate Soils	7.5	Retain records of monitoring together with the application rates of the alkaline amendment used as neutralising agents. Provide these records to statutory authorities upon request.	Ongoing.

Desired Outcome	Action	Timing
and Sediments is comprehensive and appropriately maintained.	7.6 Obtain documentation for each truck load of VENM(b) received at the Quarry Site that demonstrates that the excavation of VENM(b) and its transport and handling has been conducted in accordance with the Acid Sulfate Soil Management Plan to prevent the generation of acid.	Ongoing during VENM(b) receipt.
	7.7 Retain documentation for each truck load of VENM(b) received at the site which indicates: <ul style="list-style-type: none"> the details of the originating site (name, address, owner and developer, contact details); the details of the transportee (name, address, contact details, vehicle registration); date and time of the extraction of the VENM(b); pH of the VENM(b) at the time of its extraction, and at the time immediately prior to its placement underwater; and the name of the person (certified practicing soil scientist) who assessed the material and classified it as VENM(b). 	Ongoing during VENM(b) receipt.
	7.8 Ensure verification of neutralising agent application volumes and verification results are available.	Prior to burial of VENM(b) that has acidified.
Prevention of any off-site impacts as a result of acidification of acid sulfate material or water.	7.9 Treat any acid sulfate material excavated on site at determined rates prior to use in earthen bunds or for rehabilitation.	In accordance with the approved Acid Sulfate Soil Management Plan.
	7.10 Collect and analyse samples of acid sulfate soil material that is to be recovered through excavation (i.e. not dredged) and is not to be washed using a hydrocyclone (or similar).	In accordance with the approved Acid Sulfate Soil Management Plan.
	7.11 Incorporate an alkaline amendment into the excavated acid sulfate material at the calculated rate (based on the results of sampling).	Prior to removal or following placement on treatment pads.
	7.12 Complete the validation sampling of treated material in accordance with the approved Acid Sulfate Soil Management Plan.	Following treatment and prior to sale of any product containing treated acid sulfate material.
	7.13 Construct bunding around the extraction and processing areas to control drainage.	During site establishment and ongoing adjustments during operations.
	7.14 Ensure all surface water and runoff from the extraction and processing area drains or is pumped into the extraction pond.	Ongoing throughout operations.
Demonstration that adverse impacts arising from Potentially Acid Sulfate Soils and Sediments are not evident on site.	7.15 Audit the effectiveness of the operational safeguards and monitoring by an external environmental consultant.	In accordance with the approved Acid Sulfate Soil Management Plan.
	7.16 Test the pH of the water into which the VENM(b) is placed to ensure it is not less than 6.5 at any time.	In accordance with the approved Soil and Water Management Plan.
	7.17 Undertake monitoring in accordance with the approved Acid Sulfate Soil Management Plan in relation to VENM(b) receipt and processing / internment.	Ongoing during disposal of VENM.
	7.18 Undertake monitoring in accordance with the approved Acid Sulfate Soil Management Plan in	Ongoing during disposal of VENM.

Desired Outcome	Action	Timing
	relation to VENM(b) receipt and processing / interment.	
	7.19 Test the pH of the VENM(b) immediately prior to under-water disposal / backfilling to ensure the pH is not less than 5.5.	Prior to underwater disposal on VENM(b).
	7.20 Undertake internal environmental audits of VENM(b) receipt and treatment during the initial stages of the operation to ensure appropriate treatment is being conducted and records are up to date.	In accordance with the approved Acid Sulfate Soil Management Plan.
Appropriate procedures are in place to manage any departures from nominated procedures or criteria.	7.21 Complete the following in the event that validation or monitoring criteria are exceeded for any extracted materials. <ul style="list-style-type: none"> • Test the acid neutralising capacity of the material. • Incorporate alkaline amendments at the appropriate rate if the measured acid neutralising capacity is insufficient to neutralise the existing and potential acidity. • Undertake validation testing following treatment and apply additional alkaline amendments as required. Repeat process until compliance with action criteria is met. 	In the event validation or monitoring criteria are exceeded.
Appropriate procedures are in place to manage any departures from nominated procedures or criteria.	7.22 Terminate VENM(b) receipt at the premises if the pH of the water falls below accepted levels until approval to continue is received in writing from the EPA.	In the event trigger action response criteria are exceeded.
	7.23 Complete the following in the event monitoring criteria are exceeded for imported VENM(b). <ul style="list-style-type: none"> • Test the acid neutralising capacity of the material. • Incorporate alkaline amendments at the appropriate rate if the measured acid neutralising capacity is insufficient to neutralise the existing and potential acidity. • Undertake validation testing following treatment and apply additional alkaline amendments as required. Repeat process until compliance with action criteria is met. 	In the event monitoring criteria are exceeded.
	7.24 Undertake the following as soon as possible after becoming aware that any waste/material accepted at the premises is not VENM. <ul style="list-style-type: none"> • Notify the EPA in writing. • Remove the material/waste from the premises and dispose of it at a facility licensed to take such waste, or otherwise as directed by the EPA. 	In the event waste/material not classified as VENM accepted onto the Quarry Site.
	7.25 Implement a procedure to audit all further incoming loads from that waste origin site prior to accepting any further waste, until such time as the results of such audits demonstrate that the waste origin site's screening and assessment procedures have been corrected to prevent further miss-classification of waste.	
	7.26 Introduce hydrated lime at the appropriate rate if the extraction pond water quality fails accepted levels and ensure target pH level of 6.5 is not "overshot" leading to severely alkaline conditions (pH>9.0).	In event pH of extraction ponds fall below trigger action response criteria in accordance with the approved Acid Sulfate Soil Management Plan.
8. Flora and Fauna		

Desired Outcome	Action	Timing
Minimisation of short and long term impacts on flora within the Quarry Site and pipeline corridors.	8.1 Progressively rehabilitate completed works within the Quarry Site to maximise cover of native vegetation in appropriate areas and minimise opportunities for erosion and weed invasion.	As areas become available for rehabilitation.
	8.2 Define and clearly mark vegetation for retention to ensure that native vegetation clearing is confined only to those areas required.	Prior to placement of the pipeline within the eastern pipeline corridor.
	8.3 Control noxious weeds on the Quarry Site.	Ongoing.
	8.4 Place pipelines within pipeline corridors so as to avoid the need to clear trees or shrubs wherever possible.	During placement of pipes.
Establishment of native vegetation with ecological and conservation value.	8.5 Utilise local native plant species, such as recommended by Idyll Spaces (2008), for rehabilitation and landscaping in appropriate areas within and adjacent to the final lake (Note: vegetation set back from the final lake would reflect the specific land use – e.g. sporting fields, gardens, etc).	During rehabilitation and landscaping activities.
	8.6 Undertake replacement planting of the same tree species within the same area in the event that trees are required to be removed for the laying of the pipelines, or otherwise in accordance with approval conditions.	In the event trees are required to be removed within the pipeline corridor.
9. Aquatic Ecology		
Minimisation of short and long term impacts on aquatic ecology within and surrounding the Quarry Site.	9.1 During the realignment of the western drainage channel as part of the realignment of Altona Road, unless otherwise specified in approval conditions, <ul style="list-style-type: none"> maintain the original connection to other upstream and downstream drainage channels; avoid stranding native fish and, where possible, relocate them to similar habitat; ensure fish free passage through the channel is made available where permanent crossings are to be constructed (e.g. access road crossings); and consult with DPI - Fisheries officers during the realignment process. 	During the realignment of Altona Road and the western drainage channel.
	9.2 Create wetlands along finalised sections of the extraction pond in accordance with the approved Landscape Management Plan.	Ongoing.
	9.3 Undertake frequent and regular monitoring of temperature, dissolved oxygen, nutrients, colour and concentrations of blue-green algae.	In accordance with the approved Blue Green Algae Management Plan
	9.4 Obtain samples and readings from the dredge pond in accordance with the approved Blue Green Algae Management Plan.	Ongoing.
10. Traffic and Transport		
Vehicle movements related to the Project do not have undue effects on traffic flow and accident rates on the surrounding road network.	10.1 No vehicles permitted to turn right from Crescent Street to Tweed Coast Road. (Note: Light vehicles travelling south from the Quarry Site would be directed to travel on Crescent Street/Cudgen Road.	Continuous.
	10.2 No heavy vehicles to turn right from Altona Road to Crescent Street.	Continuous or until suitable upgrade or reconfiguration of Altona Road / Crescent Street / Tweed Coast Road intersection.

Desired Outcome	Action	Timing
	10.3 Weigh all product trucks using the on-site weighbridge or other suitable weigh system and ensure all RMS weight restrictions are adhered to.	Ongoing during product despatch.
	10.4 Inform all truck drivers and staff of road rules, speed restrictions and considerate driving practices.	On engagement of each driver.
Vehicle movements related to the Project do not have undue effects on traffic flow and accident rates on the surrounding road network.	10.5 Ensure all drivers are aware of all relevant operational hours.	On engagement of each driver.
	10.6 Undertake mechanical road sweeping of Altona Road and site access roads.	As required for Quarry-related mud/sand tracking.
	10.7 Cover all product loads to reduce dust lift off.	Continuous during product despatch.
	10.8 Realign Altona Road in accordance with DA 05/1450 (or other applicable development consent).	Prior to sand extraction encroaching into the existing alignment of Altona Road.
	10.9 Implement appropriate management controls including the use of warning signs and manual traffic control during the laying of pipelines adjacent to Tweed Coast Road and during the underboring of the road crossings.	As required during works within the public road reserves.
	10.10 Establish a telephone complaints line to enable any traffic-related incidents, unsafe operation or general concern to be reported. Investigate all complaints and act decisively on substantiated incidents.	Ongoing during site establishment and operations.
	10.11 Implement a truck driver's code of conduct required to be signed by all Company employed truck drivers or drivers contracted by the Company. The code will outline each truck driver's responsibility and the process to be undertaken in the event of a complaint.	Prior to product despatch or VENM receipt.
11. Noise		
All activities are undertaken in such a manner as to reduce the noise level generated, minimise impacts on surrounding landholders and/or residents and ensure noise levels remain below relevant EPA criteria.	11.1 Fit all mobile earthmoving equipment on the site with broadband type reversing beepers or alternative safety devices such as strobe lights and / or cameras.	Prior to use of vehicle.
	11.2 Regularly service all equipment on site.	Ongoing.
	11.3 Maintain the internal road network to an acceptable standard to limit body noise from empty trucks.	Ongoing.
	11.4 Undertake a monitoring program to demonstrate that noise emissions from the Quarry Site are within the Quarry specific noise limits at the surrounding assessment locations.	In accordance with the approved Noise Management Plan.
	11.5 Regularly review the extent of noise monitoring throughout the life of the Quarry to ensure meaningful data is being collected.	Ongoing.
12. Air Quality		
Site activities are undertaken without exceeding DECC air quality criteria or adversely impacting on surrounding receivers.	12.1 Install water sprays or other suitable controls to minimise dusts generated during screening and dry processing.	During processing and blending.
	12.2 Undertake progressive rehabilitation / stabilisation of available areas of disturbance (e.g. finalised sections or backfilled areas of the extraction pond).	As areas become available.
	12.3 Clean accumulated tracked road mud, dry dusts, sand or spillages on Altona Road using a street sweeper.	As required.
	12.4 Cover product trucks loads to prevent wind-borne losses and spillages.	Continuously for <u>all</u> product trucks.

Desired Outcome	Action	Timing
	12.5 Undertake monitoring in accordance with the Air Quality Monitoring Program	Ongoing.
	12.6 Annually review the dust monitoring program to ensure that the data being collected is meaningful.	Annually.
	12.7 Ensure the screening and blending plant does not exceed a daily <u>average</u> processing rate greater than 100tph.	During screening and blending.
13. Aboriginal Heritage		
Site activities are undertaken without impacting upon any known Aboriginal heritage items.	13.1 Invite Aboriginal stakeholders to observe during the burying of the pipelines within the northern pipeline corridor.	During installation of northern pipeline.
	13.2 Stop works at and adjacent to any Aboriginal sites or relics, if found.	During site establishment, construction or operational works.
	13.3 Contact the regional archaeologist of the Coffs Harbour OEH and relevant Aboriginal Stakeholders if any Aboriginal sites or relics found.	During site establishment, construction or operational works.
	13.4 Receive authorisation from the OEH and Tweed Byron LALC prior to proceeding with any works in the vicinity of any identified Aboriginal sites or relics, if found.	During site establishment, construction or operational works.
	13.5 Complete inductions and training in accordance with the approved Aboriginal Cultural Heritage Management Plan,	Ongoing as required.
	13.6 Undertake consultation with Aboriginal representatives in relation to the ongoing management of identified items of Aboriginal heritage, if found.	In the event items of Aboriginal heritage are identified within the Quarry Site.
14. Visibility		
Reduced visual amenity impacts upon surrounding landholders and the local community.	14.1 Construct a 2m high bund on the eastern and southern perimeter of the processing area and plant with native shrub species.	During construction of the processing area.
	14.2 Progressively rehabilitate the Quarry Site such that non-vegetated areas are minimised.	As areas become available.
	14.3 Maintain the Quarry Site in a clean and tidy condition at all times.	Continuous.
	14.4 Position and direct floodlights or other lighting to minimise light emissions, with lighting not required at any given time not used.	Ongoing.

APPENDIX 3 NOISE COMPLIANCE ASSESSMENT

Applicable Meteorological Conditions

1. The noise criteria in Table 2 are to apply under all meteorological conditions except the following:
 - (a) wind speeds greater than 3 m/s at 10 m above ground level; or
 - (b) temperature inversion conditions between 1.5°C and 3°C/100 m and wind speed greater than 2 m/s at 10 m above ground level; or
 - (c) temperature inversion conditions greater than 3°C/100 m.

Compliance Monitoring

2. Within three months of the determination of Modification 2, unless otherwise agreed by the Secretary, the Applicant must undertake a noise compliance assessment. The assessment must be conducted by a suitably qualified and experienced acoustical practitioner and must assess compliance with noise criteria presented above. A report must be provided to the Department and EPA within 1 month of the assessment.
3. Unless the Secretary agrees otherwise, 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) equipment used to collect noise data, and conformity with Australian Standards relevant to such equipment;
 - (c) modifications to noise data collected, including for the exclusion of extraneous noise and/or penalties for modifying factors apart from adjustments for duration; and
 - (d) the use of an appropriate modifying factor for low frequency noise to be applied during compliance testing at any individual residence if low frequency noise is present (in accordance with the *NSW Noise Policy for Industry* (2017, or its latest version) Fact Sheet C) and before comparison with the specified noise levels in the approval.