

GALES-KINGSCLIFF

PTY LTD
ABN: 75 093 540 080

Annual Review

for the

Cudgen Lakes Sand Quarry

1 July 2015 to 30 June 2016

Compiled by:



R.W. CORKERY & CO. PTY. LIMITED

GALES-KINGSCLIFF

PTY LTD
ABN: 75 093 540 080

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Cudgen Lakes Sand Quarry

Compiled for:

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12 September 2016



R. W. CORKERY & CO. PTY. LIMITED

TITLE BLOCK

Name of Operation	Cudgen Lakes Sand Quarry
Name of Operator	Not operational
Development consent / project approval #	Project Approval 05_0103
Name of holder of development consent / project approval	Gales-Kingscliff Pty Ltd
Mining Lease #	Not Applicable
Name of holder of mining lease	Not Applicable
Water licence #	30BL179511
Name of holder of water licence	Gales-Kingscliff Pty Ltd
MOP/RMP start date	Not Applicable
MOP/RMP end date	Not Applicable
Annual Review start date	01/07/15
Annual Review end date	30/06/16
<p>I, Stephen Segal, certify that this audit report is a true and accurate record of the compliance status of the Cudgen Lakes Sand Quarry for the period 1 July 2015 to 30 June 2016 and that I am authorised to make this statement of behalf of Gales-Kingscliff Pty Ltd.</p> <p><i>Note.</i></p> <p>a) <i>The Annual Review is an 'environmental audit' for the purposes of section 122B(2) of the Environmental Planning and Assessment Act 1979. Section 122E provides that a person must not include false or misleading information (or provide information for inclusion in) an audit report produced to the Minister in connection with an environmental audit if the person knows that the information is false or misleading in a material respect. The maximum penalty is, in the case of a corporation, \$1 million and for an individual, \$250,000.</i></p> <p>b) <i>The Crimes Act 1900 contains other offences relating to false and misleading information: Section 192G (Intention to defraud by false or misleading statement – maximum penalty 5 years imprisonment); Section 307A, 307B and 307C (false or misleading application/information/documents – maximum penalty 2 years imprisonment or \$22,000, or both).</i></p>	
Name of authorised reporting officer	Stephen Segal
Title of authorised reporting officer	Managing Director
Signature of authorised reporting officer	
Date	12 September 2016

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1. STATEMENT OF COMPLIANCE

The compliance status of relevant approvals was reviewed for the reporting period and is summarised in **Table 1.1**. It was determined that there were two non-compliances during the reporting period. The non-compliances recorded during the reporting period have been ranked according to the risk matrix included in **Table 1.2**.

Table 1.1
Statement of Compliance

Were all conditions of the relevant approval(s) complied with?	Yes / No
Project Approval 05_0103	No
Environment Protection Licence 12385	Yes
Water Licence 30BL179511	Yes

Table 1.2
Non-compliances

Relevant Approval	Condition	Condition Description (summary)	Compliance Status	Comment	Where Addressed in Annual Review
PA 05_0103	2(3)	Surrender existing approvals within 18 months of Project Approval.	Non-compliant	DA 96/518 surrendered to (then) DP&I within 18 months. However, DA required to be surrendered to Council.	Section 11, Appendix 1
	5(10)	Within 1 month of the approval of any plans, audit or AEMR, provide a copy to Council and relevant agencies and make available on Company website.	Non-compliant	The approved 2009/2010 AEMR was not circulated and placed on the Company website within 1 month of approval.	Section 11, Appendix 1

Compliance Status Key

Risk level	Colour code	Description
High	Non-compliant	Non-compliance with potential for significant environmental consequences, regardless of the likelihood of occurrence.
Medium	Non-compliant	Non-compliance with: <ul style="list-style-type: none"> potential for serious environmental consequences, but is unlikely to occur; or potential for moderate environmental consequences, but is likely to occur.
Low	Non-compliant	Non-compliance with: <ul style="list-style-type: none"> potential for moderate environmental consequences, but is unlikely to occur; or potential for low environmental consequences, but is likely to occur.
Administrative non-compliance	Non-compliant	Only to be applied where the non-compliance does not result in any risk of environmental harm (e.g. submitting a report to government later than required under approval conditions).

2. INTRODUCTION

2.1 OVERVIEW OF OPERATIONS

The Cudgen Lakes Sand Quarry is located at Cudgen approximately 1km south of the Tweed River and 8km south of the New South Wales/Queensland Border (see **Figure 2.1**). Project Approval 05_0103 was granted 16 June 2009 and modified 19 February 2016. The approved layout of the operations is shown in **Figure 2.2** whilst surrounding land ownership, residences and registered groundwater bores are shown in **Figure 2.3**. To date operations have not yet commenced.

2.2 SCOPE AND FORMAT

This Annual Review for the Cudgen Lakes Sand Quarry (“the Quarry”) has been compiled by R.W. Corkery & Co. Pty. Limited on behalf of Gales-Kingscliff Pty Ltd (“the Company”).

This is the sixth Annual Review submitted for the Quarry, following one Annual Environmental Management Report, and is applicable for the period 01 July 2015 to 30 June 2016 (“the reporting period”). The information presented within this Annual Review has been compiled based on information compiled by R.W. Corkery & Co. Pty. Limited and provided by the Company.

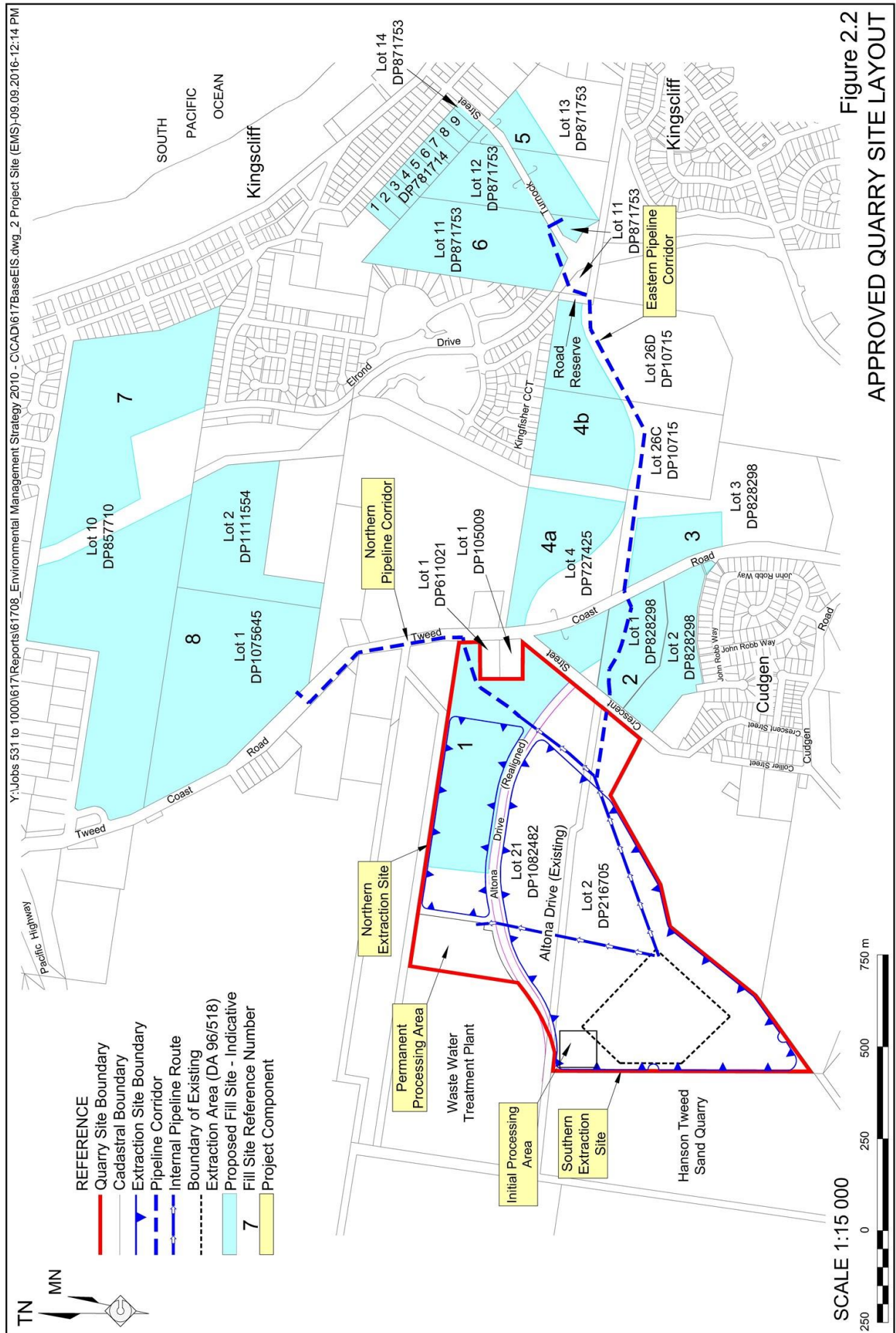
It should be noted that this Annual Review has been prepared based upon the approval and licencing requirements applicable for the reporting period, however, the report generally follows the format and content requirements identified in the *Annual Review Guideline* dated October 2015.

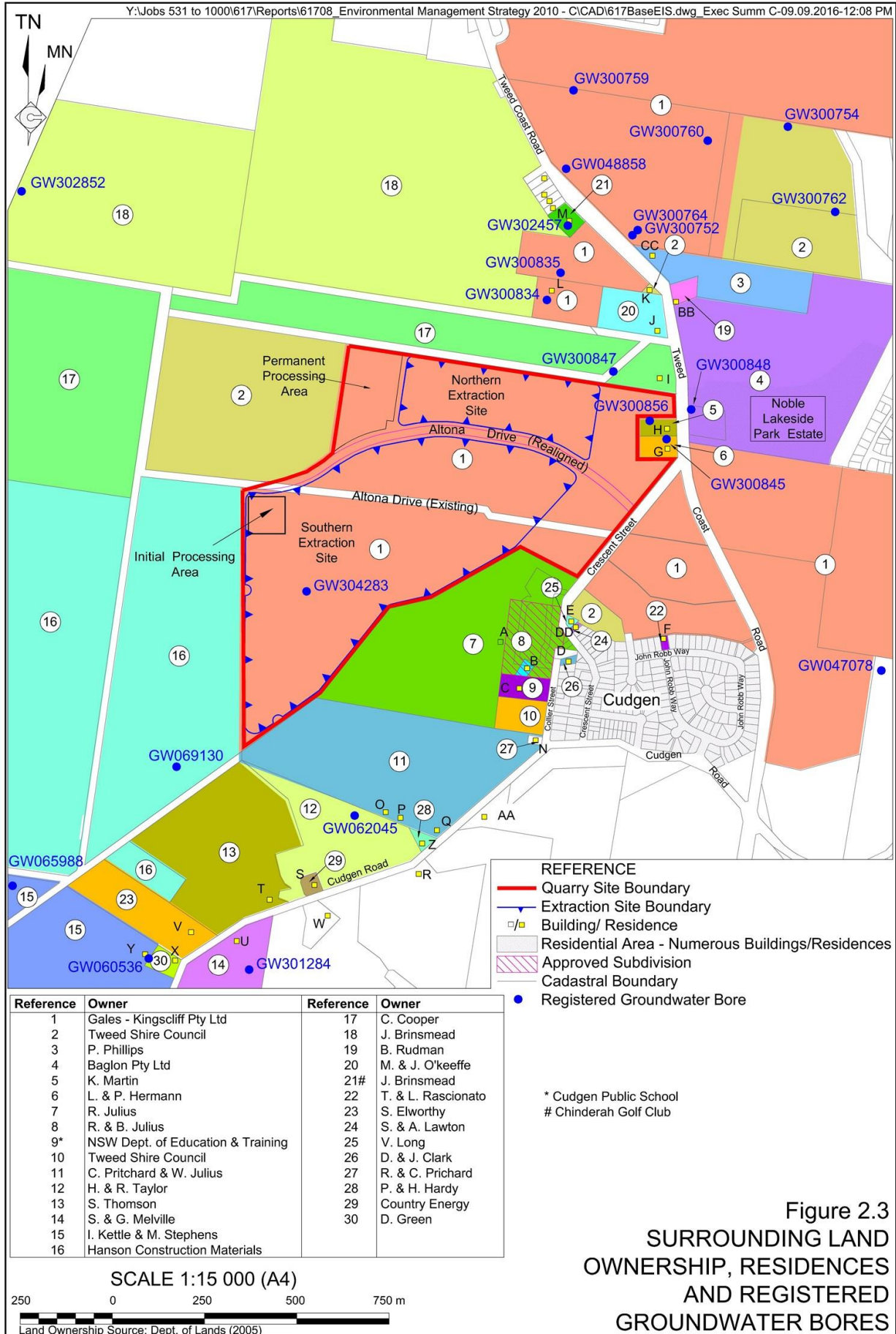
2.3 KEY PERSONNEL CONTACT DETAILS

The key personnel contact names, position and phone numbers are as follows.

Name	Position	24 Hour Contact
Stephen Segal	Managing Director	0414 322 455
Jeff Holloway	Site Caretaker	0402 427 938







3. APPROVALS

The Quarry will operate in accordance with the approvals listed in **Table 3.1**. During the reporting period a modification to Project Approval 05_0103 was lodged and approved on 19 February 2016. The modification provides for the use of an initial processing area south of Altona Drive. The modified conditions have been reflected in the compliance review (**Appendix 1**).

A modification to Environment Protection Licence 12385 was also lodged on 18 December 2015. This processing of this variation was not completed during the reporting period.

New Water Licences, 30BL207142 and 30BL207145 were also issued on 29 February 2016 for the operations as approved under Project Approval 05_0103, replacing Water Licence 30BL179511 issued for operations under DA 96/518. These new licences have been reflected in the compliance review (**Appendix 1**).

Table 3.1
Cudgen Lakes Sand Quarry – Consents, Leases and Licences

Consent/Lease/Licence	Issue Date	Expiry Date	Details / Comments
Project Approval 05_0103B	16/06/2009 MOD1 - 19/02/2016	01/07/2029	Issued by the (then) Department of Planning.
Environment Protection Licence 12385	18/11/2005	Not Applicable	Issued by NSW Environment Protection Authority. Renewed annually. Variation pending.
Water Licences 30BL207142 and 30BL207145	29/02/2016	28/02/2021	Issued by DPI Water for operations as approved under Project Approval 05_0103.

4. OPERATIONS SUMMARY

4.1 EXTRACTION OPERATIONS

No extraction operations were undertaken during the reporting period. **Table 4.1** provides the production summary.

Table 4.1
Production Summary

Material	Approved limit (specify source)	Previous reporting period (actual)	This reporting period (actual)	Next reporting period (forecast)
Waste Rock / Overburden	NA	0	0	0
ROM Coal / Ore	NA	0	0	0
Coarse Reject	NA	0	0	0
Fine Reject (Tailings)	NA ¹	0	0	0
Saleable Product (transported by road)	300,000t [PA 05_0103 Condition 2(7)]	0	0	0
Total Extraction	650,000m ³ [PA 05_0103 Condition 2(6)]	0	0	0
Imported VENM	45,000t [PA 05_0103 Condition 2(8)]	0	0	0
Notes: 1. Whilst fines will be generated through sand washing and returned to the extraction ponds, there are no approval limits applicable to this material.				

4.2 OTHER OPERATIONS DURING THE REPORTING PERIOD

No other operational activities were undertaken during the reporting period.

Non-operational activities during the reporting period included quarterly water quality monitoring of the initial dredge pond and completion of additional baseline water quality monitoring in surrounding surface water drains in accordance with the commitments in the approved Soil and Water Management Plan (see Section 7). The draft Landscape Management Plan was also updated to reflect the approved operations under the modified Project Approval 05_0103B but was not finalised during the reporting period.

4.3 NEXT REPORTING PERIOD

Land Preparation and Construction

The bunding and spillways surrounding the Stage 1 extraction area within the Southern Extraction Site is planned to be constructed during September 2016 to physically commence Project Approval 05_0103B. Topsoil material will be stripped only as required to form the bunding.

Other construction activities may include installation of the pipeline section to the Cudgen Heights Estate (Fill Site 2 on **Figure 2.2**) during the first half of 2017. Additional construction activities may include formation of the initial processing area and upgrade works to the required intersections to allow commencement of sand processing and transportation. The timing for these works will be subject to customer demand and suitable arrangements with the operating contractor.

Extraction

Dredging from the Stage 1 extraction area is expected to commence within the first half of 2017. Sand will be pumped to the Cudgen Heights Estate (Fill Site 2 on **Figure 2.2**). In the order of 300,000m³ is expected to be dredged for this filling campaign. Filling will be completed in accordance with separate approvals for the Cudgen Heights Estate.

Sand processing and transportation may commence during the next reporting period subject to customer demand and suitable arrangements with the operating contractor.

Rehabilitation

No areas will become available for final rehabilitation during the next reporting period. However, general property maintenance, including weed control and slashing, will be undertaken as required. Additionally, maintenance and supplementary planting, if required, will be undertaken by Bushland Restoration Services within the vegetation screen north of Altona Drive.

Given it is planned to place topsoil material with the existing grass cover over the bunding to be constructed around the Stage 1 extraction area, it is not expected any temporary rehabilitation / stabilisation will be required. However, if the grass material does not adequately establish, supplementary seeding with pasture species will be undertaken.

Monitoring

Quarterly water quality monitoring of the initial dredge pond will continue in accordance with EPL 12385 and additional operational monitoring as required by Project Approval 05_0103B and the approved management plans will commence as applicable when extraction operations commence.

Community Consultation and Liaison

The community consultative committee will be established during the next reporting period. It is expected that the inaugural meeting will be held during late 2016 or early 2017, prior to the commencement of extraction operation. Consultation will also be held with surrounding landholders in relation to completion of environmental monitoring.

Other Activities

The Landscape Management Plan will be finalised and submitted for approval during the next reporting period and the Soil and Water Management Plan updated to include the additional baseline water quality monitoring and any changes to the agreed water quality objectives. A range of other documentation will also be prepared in preparation of physical commencement including the Traffic Management Plan and Flood Evacuation Plan. The variation to EPL 12585 will also be finalised with the EPA to cover the approved operations under Project Approval 05_0103B.

5. ACTIONS REQUIRED FROM PREVIOUS ANNUAL REVIEW

The 2015/2016 Annual Review was submitted concurrently with the 2014/2015 Annual Review. Therefore, no actions from the 2014/2015 Annual Review have been raised to date.

6. ENVIRONMENTAL PERFORMANCE

A summary of environmental performance for the principal environmental aspects is provided in **Table 6.1**. Given there were no operational activities, no complaints and no related monitoring of these aspects, no specific management measures were deemed necessary and no trends have been identified.

Table 6.1
Environmental performance

Aspect	Approval criteria / EIS prediction	Performance during the reporting period	Trend/key management implications	Implemented/proposed management actions
Noise	47dB(A) day & evening. 44dB(A) shoulder.	No operational activities were undertaken and no complaints were received.	No trends identifiable. Currently no management implications.	No specific management measures implemented or currently proposed.
Blasting	Blasting is not an approved activity.	No blasting undertaken.	Nil.	Nil.
Air Quality	PM ₁₀ 24hr = 50ug/m ³ PM ₁₀ Annual = 30ug/m ³ TSP Annual = 90ug/m ³ Dep Dust Annual = 4g/m ² /month	No operational activities were undertaken and no complaints were received.	No trends identifiable. Currently no management implications.	No specific management measures implemented or currently proposed.
Biodiversity	Establish rehabilitation bond. No significant impacts predicted.	No operational activities or activities relating to biodiversity aspects occurred.	No trends identifiable. Currently no management implications.	No specific management measures implemented or currently proposed.
Heritage	Prepare Aboriginal Cultural Heritage Management Plan. No items of heritage have been located.	No operational activities occurred and no heritage items were identified or disturbed.	No trends identifiable. Currently no management implications.	No specific management measures implemented or currently proposed.

7. WATER MANAGEMENT

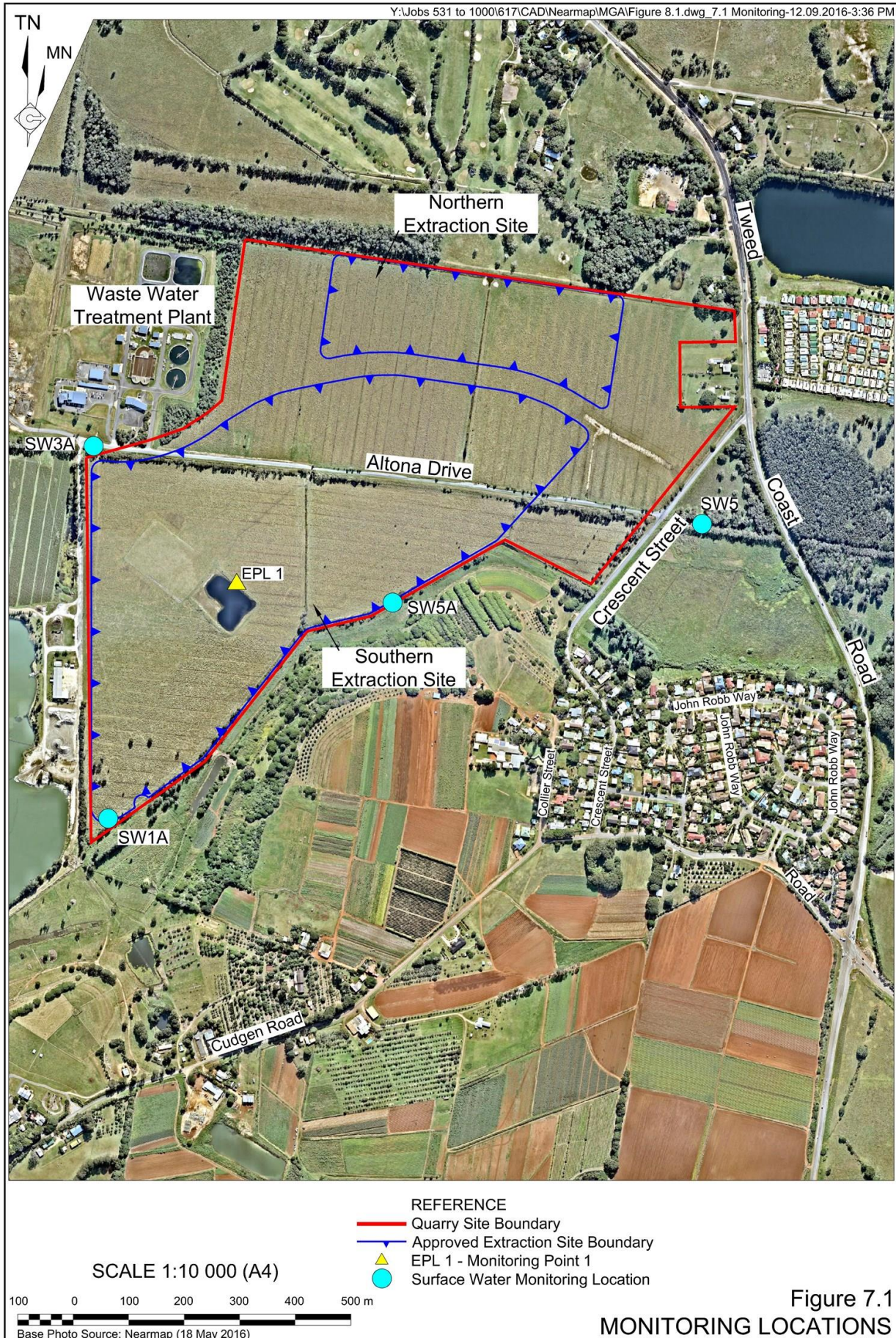
Water Licences 30BL207142 and 30BL207145 were issued under the *Water Act 1912* for operations approved under Project Approval 05_0103B and specify a maximum combined water take / entitlement of 700ML. Given that no operational activities occurred during the reporting period and no water was actively removed from the initial dredge pond, no water take has occurred. It is noted that consultation with DPI Water as part of the licence application process confirms that evaporation is not required to be accounted for in the calculated water loss / entitlement for this operation.

The *Water Sharing Plan for the North Coast Coastal Sands Groundwater Sources 2016* commenced on 01 July 2016, i.e. immediately after this reporting period. Consultation with DPI Water confirms that the water licences issued under the *Water Act 1912* will automatically be converted to the appropriate licences under the *Water Management Act 2000* in due course. Further details on the converted licences will be provided in future Annual Reviews.

Water quality monitoring within the initial dredge pond (EPL Point 1 – see **Figure 7.1**) continued during the reporting period in accordance with the requirements of EPL 12385. A summary of the monitoring results is provided in **Table 7.1** and displayed graphically in **Figure 7.2**.

Table 7.1
Water Quality Monitoring Results 2010 – 2016

(Date sampled)*	Dissolved Oxygen	pH	Redox Potential	Salinity	Temperature
Units	mg/L	-	millivolts	uS/cm	°C
EPL 12385 Limits	None Specified				
PA 05_0103 Objectives	>6	6.5-8.5	Not Specified	<3,000	Not Specified
21-Jan-10	8.71	8.13	61	471	25.7
06-Apr-10	7.01	7.71	-31	425	21.3
13-Aug-10	5.92	7.07	-73	392	18.3
22-Oct-10	6.13	7.83	-56	412	23.9
04-Feb-11	8.41	8.57	62	492	27.1
17-May-11	7.41	8.19	31	426	23.1
07-Jul-11	7.35	7.95	-10	397	19.7
17-Oct-11	6.05	7.8	18	310	24.7
16-Feb-12	7.17	8.91	77	336	28.7
01-May-12	6.53	7.91	62	371	22.8
23-Aug-12	7.21	8.37	83	420	21.7
30-Oct-12	7.36	8.46	71	322	26.2
23-Jan-13	8.90	8.00	81	379	29.2
02-Apr-13	6.20	7.60	68	356	23.7
21-Jun-13	6.18	7.90	57	389	21.7
25-Sep-13	5.30	7.21	48	480	24.6
21-Jan-14	7.2	8.43	97	451	28.3
07-Apr-14	5.7	7.21	37	372	25.7
14-Jul-14	5.8	7.19	^	418	20.1
20-Oct-14	8.3	8.57	93	492	27.6
05-Feb-15	6.38	8.08	67	456	28.7
20-May-15	7.14	7.92	87	508	24.8
06-Jul-15	7.02	7.55	59	495	21.5
29-Sep-15	6.19	8.36	63	584	26.4
26-Jan-16	5.87	8.61	192	663	27.3
17-Mar-16	5.97	7.82	70	593	26.8
Average	6.82	7.98	53	439	24.6
Minimum	5.30	7.07	-73	310	18.3
Maximum	8.90	8.91	192	663	29.2
Red values indicate exceedance of applicable limits.			*All samples are measured using field instrumentation		
Grey shaded results relevant to this reporting period			^No sample – equipment failure.		



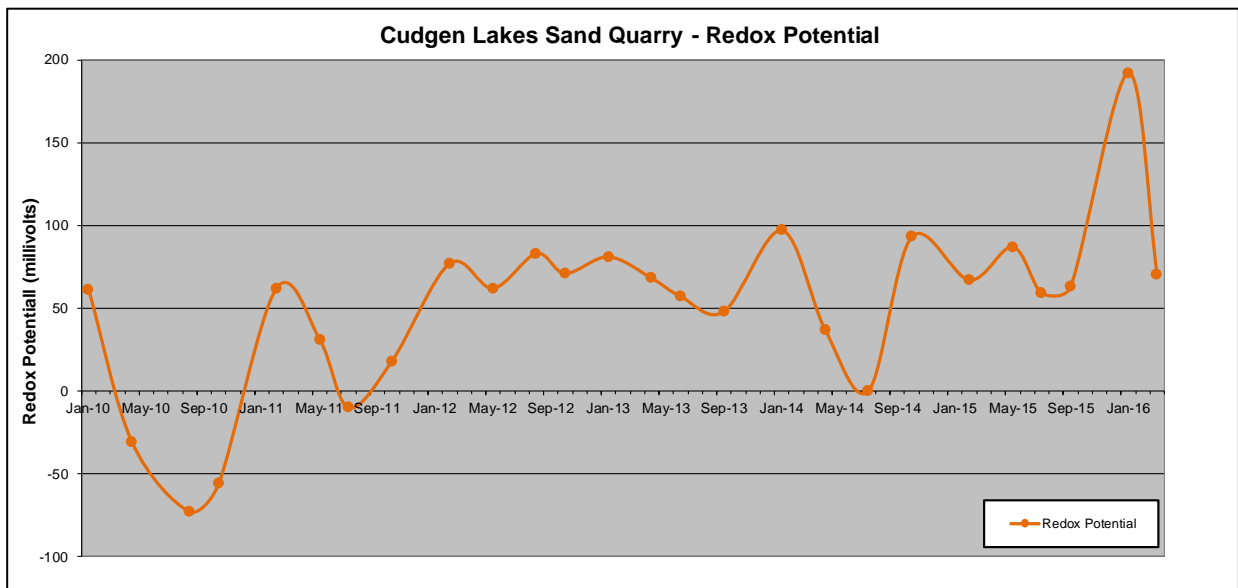
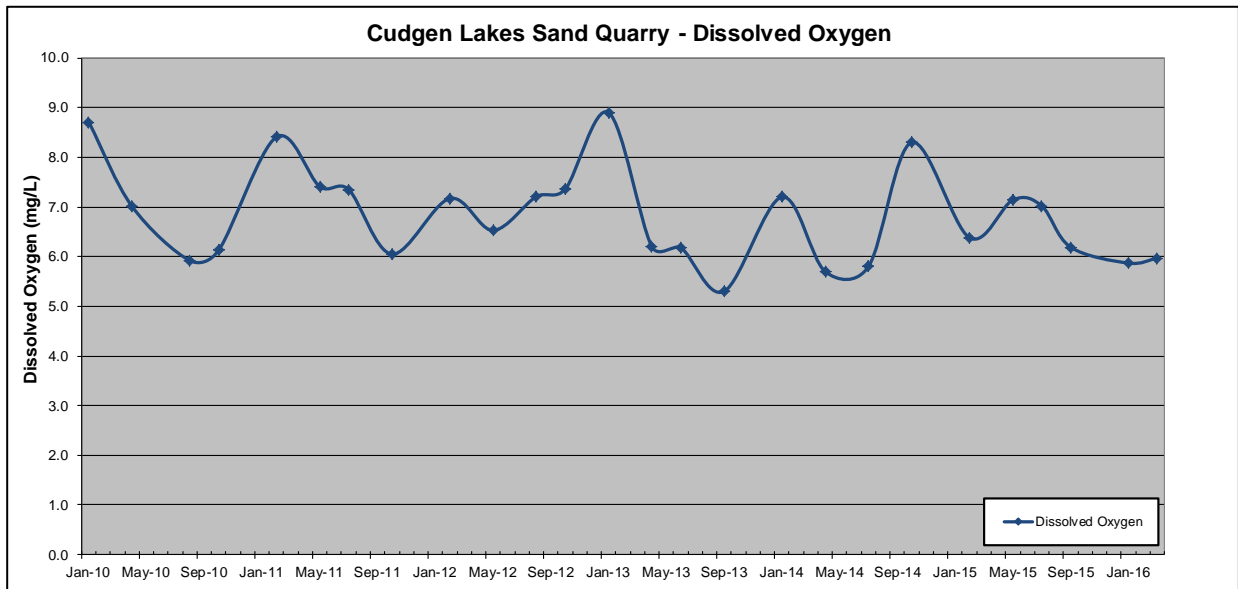
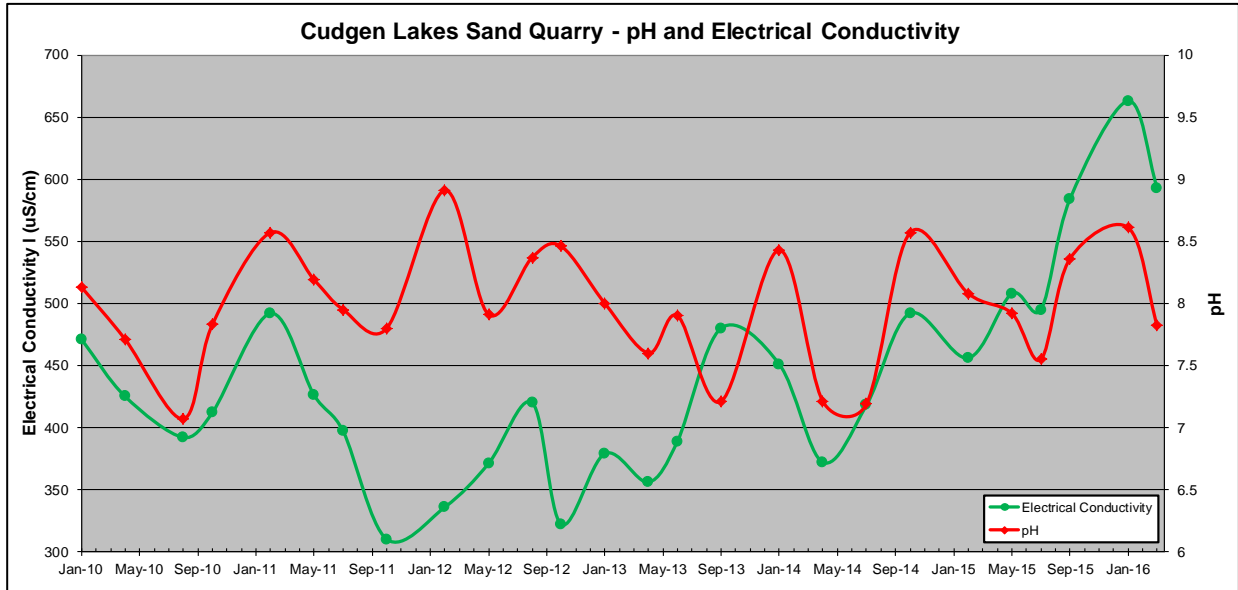


Figure 7.2 Water Quality Monitoring 2010 - 2016



During the reporting period all values remained within the objective ranges except for a slight (0.11) exceedance of the upper pH objective and dissolved oxygen values slightly (0.03mg/L and 0.13mg/L) below the dissolved oxygen objective. These slight exceedances are not considered likely to have resulted in any adverse environmental effects and are within the ranges for pH (5.98 to 9.3) and dissolved oxygen (0.36mg/L to 13.3mg/L) previously recorded in surrounding surface water drains. Given that the intent is to aim to meet these objectives and no operational activities have occurred, no action other than continued monitoring is currently considered necessary.

There appears to be an approximately seasonal trend for all measured parameters, however, as no operations were undertaken, there is no influence on the parameters from quarry activities.

Additional baseline water quality monitoring was also undertaken on four occasions at four locations within surrounding surface water drains and within the initial dredge pond (see **Figure 7.1**). A summary of the key parameters is provided in **Table 7.2** whilst a copy of the full analysis is provided as **Appendix 2**.

Table 7.2
Additional Baseline Water Quality Monitoring Results

Date sampled	Dissolved Oxygen	pH	Redox Potential	Salinity	Temperature
Units	mg/L	-	millivolts	µS/cm	°C
EPL 12385 Limits			None Specified		
PA 05_0103 Objectives	>6	6.5-8.5	Not Specified	<3,000	Not Specified
Site SW1A					
30/11/2015	5.22	7.2	163	407	26.8
26/01/2016	0.45	6.71	196	439	23
25/02/2016	2.13	6.52	129	652	25.2
17/03/2016	0.24	6.89	25.6	234	23.5
Site SW3A					
30/11/2015	3.61	7.3	180	1,540	26.1
26/01/2016	7.19	8.02	198	2,983	29.5
25/02/2016	9	6	-2	5,470	27.1
17/03/2016	1.47	6.7	62.7	552	23.4
Site SW5A					
30/11/2015	4.21	7.02	164	330	26.6
26/01/2016	0.48	6.71	199	369	22.7
25/02/2016	1.3	6.71	144	341	24.6
17/03/2016	0.39	6.5	19	129	23.3
Site SW5					
30/11/2015	3.12	7.12	174	1,042	24.3
26/01/2016	0.33	6.83	197	1,158	28.1
25/02/2016	1.15	7.3	-196	1,808	23.8
17/03/2016	0.15	6.33	-87	267	23.5
Dredge Pond – EPL Point 1 At Surface					
30/11/2015	6.12	8.47	148	591	24.5
26/01/2016	5.87	8.61	192	663	27.3
25/02/2016	6.04	9.07	104	601	25.8
17/03/2016	5.97	7.82	70	593	26.8
Dredge Pond – EPL Point 1 At Depth					
26/01/2016	5.87	8.61	194	663	27.3
25/02/2016	3.75	8.26	124	613	23.7
17/03/2016	3.43	7.79	82	615	26.6

Red values indicate exceedance of applicable limits.

The monitoring confirms previous background water quality monitoring results with generally low dissolved oxygen levels and, at times, elevated salinity levels indicating tidal influences. These levels are consistent with previous background water quality monitoring. The pH within the surface water drains is generally lower than the initial dredge pond with values as low as pH 6 recorded, which is again consistent with previous background water quality monitoring.

This baseline information will be incorporated and reviewed in further detail as part of the update to the Soil and Water Management Plan to be prepared prior to the commencement of dredging operations. The applicable water quality objectives will also be reviewed in consultation with DPI Water and DPE in accordance with the commitment within the Soil and Water Management Plan.

Additional baseline monitoring was also undertaken within dams on an adjoining residential property and those results provided directly to the landholder. A copy of these results is not included within this Annual Review but is available to relevant government agencies upon request.

8. REHABILITATION

8.1 REHABILITATION PERFORMANCE DURING THE REPORTING PERIOD

Figure 8.1 shows the status of disturbance and rehabilitation at the end of the reporting period whilst Table 8.1 provides a summary of the disturbance and rehabilitation areas.

Table 8.1
Rehabilitation Summary

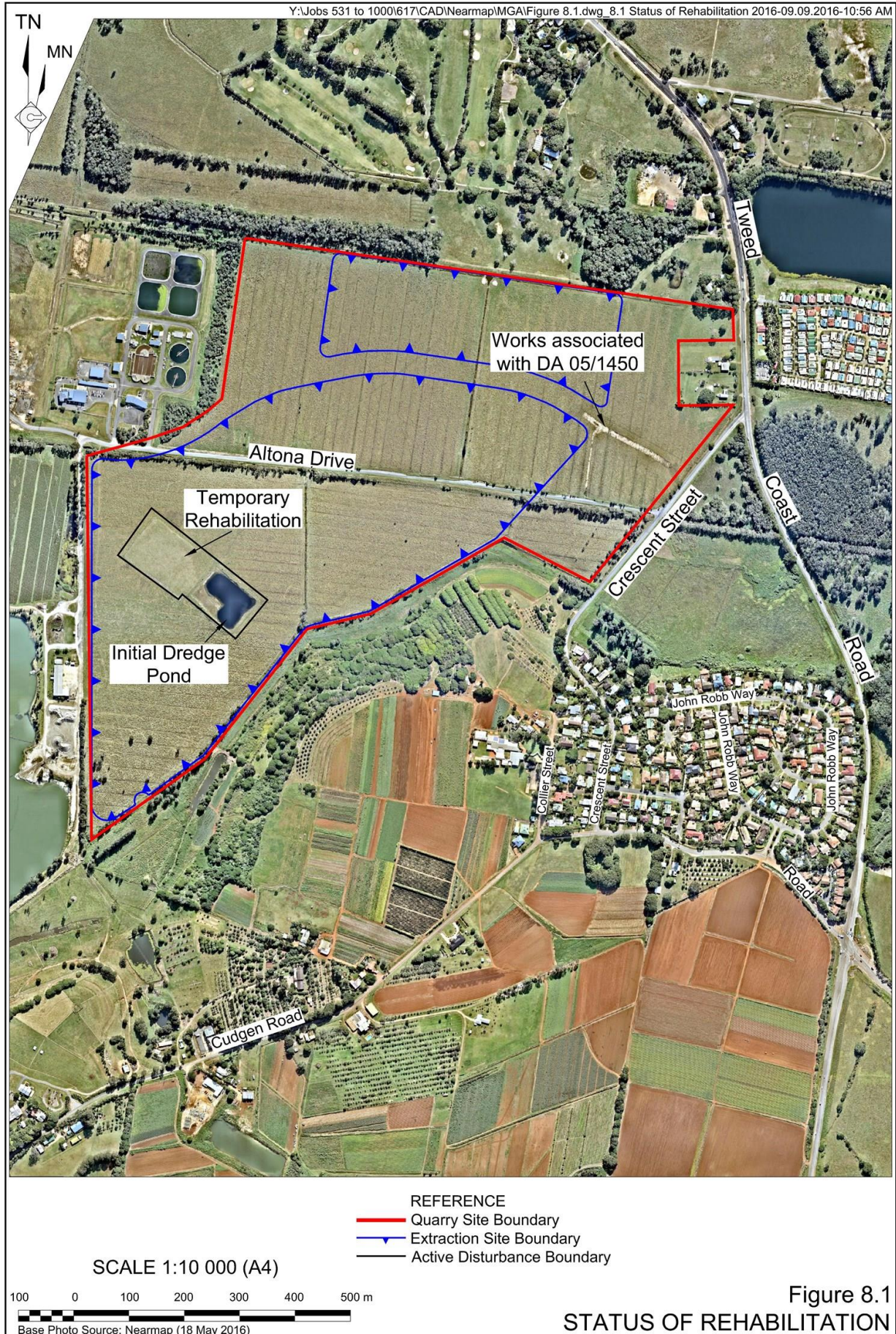
Quarry Area Type	Previous Reporting Period (Actual)	This Reporting Period (Actual)	Next Reporting Period (Forecast)
	Year 6 (ha)	Year 7 (ha)	Year 8 (ha)
Total Quarry footprint	2.5 ¹	2.5 ¹	6.0 ²
Total active disturbance	2.5 ¹	2.5 ¹	6.0 ²
Land being prepared for rehabilitation	0	0	0
Land under active rehabilitation	0	0	0
Completed rehabilitation	0	0	0

Notes:
1. Relates to initial dredge pond and grassed sand stockpile completed during 2006 under DA 96/518 (now surrendered).
2. Estimate pending commencement and extent of operation dredging during next reporting period.

Disturbance on site currently consists of the initial dredge pond and grassed (temporarily rehabilitated) sand stockpile completed under DA 96/518. No temporary or permanent rehabilitation activities were undertaken during the reporting period. A small area of disturbance is also present in relation to the physical commencement of DA 05/1450 for the realignment of Altona Drive. As these works are managed under separate approval, they are not further discussed in this report.

8.2 ACTIONS FOR THE NEXT REPORTING PERIOD

No specific rehabilitation actions or trials are planned for the next reporting period and no areas will become available for final rehabilitation. As discussed in Section 4.3, given it is planned to place topsoil material with the existing grass cover over the bunding to be constructed around the Stage 1 extraction area, it is not expected any temporary rehabilitation / stabilisation will be required. However, if the grass material does not adequately establish, supplementary seeding with pasture species will be undertaken.



9. COMMUNITY

No complaints were received during the reporting period and no complaints have been received in previous reporting periods.

No specific community engagement activities or actions occurred during the reporting period in relation to the Quarry.

10. INDEPENDENT AUDIT

No independent audit was undertaken during the reporting period. The first independent audit is required within 2 years of the commencement of quarrying operations. Quarry operations did not commence during the reporting period but are planned to commence during the next reporting period.



11. INCIDENTS AND NON-COMPLIANCES DURING THE REPORTING PERIOD

During the reporting period there were no:

- reportable incidents or exceedances; or
- official cautions, warning letters, penalty notices or prosecution proceedings.

A total of two non-compliances were recorded against Project Approval 05_0103 (see **Table 1.2**). Further detail relating to these non-compliances is provided as follows.

Condition 2(3) – Surrender Existing Approvals

The Company surrendered DA 96/518 to the (then) NSW Department of Planning & Infrastructure on 14/12/10 (i.e. within the required 18 months). However, the Department requested that the development consent be surrendered to Tweed Shire Council. Correspondence from Council dated 07/09/16 confirms that Council holds no record of the development consent being surrendered and the Company held no record. Therefore the Company also formally surrendered DA 96/518 to Council on 12/09/16.

Condition 5(10) – Circulation / Website Publishing of Approved Plans / Reports

The approved 2009/2010 AEMR was not circulated and placed on the Company website within 1 month of approval. The report has now been placed on the Company website and a copy provided to Council. Copies of approved management plans have now also been provided to relevant government agencies.

12. ACTIVITIES TO BE COMPLETED IN THE NEXT REPORTING PERIOD

As discussed in Section 4.3, limited land preparation and construction activities will occur during the next reporting period and quarry operations are expected to commence. No final rehabilitation activities will be able to be completed.

Community engagement activities will include the establishment of the community consultative committee with the inaugural meeting expected to be held during late 2016 or early 2017, prior to the commencement of extraction operation. Consultation will also be held with surrounding landholders in relation to completion of environmental monitoring.

Quarterly water quality monitoring of the initial dredge pond will continue in accordance with EPL 12385 and additional operational monitoring as required by Project Approval 05_0103B and the approved management plans will commence as applicable when extraction operations commence.

Review and update of the Soil and Water Management Plan will also be undertaken prior to the commencement of dredging to incorporate the additional baseline monitoring and any changes to the agreed water quality objectives. A range of other documentation will also be prepared in preparation of physical commencement including the Traffic Management Plan and Flood Evacuation Plan.

Other than preparation of the documentation and completion of monitoring as specified under the applicable approvals and licences for the Quarry, no specific measures are currently deemed necessary to improve environmental or community performance.

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Appendices

(No. of pages including blank pages = 64)

Appendix 1: Compliance Review

Appendix 2: Baseline Water Monitoring



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Appendix 1

Compliance Review

Table A: Project Approval 05_0103B

Table B: Statement of Commitments

Table C: Environment Protection Licence 12385

Table D: Water Licence 30BL207142

Table E: Water Licence 30BL207145

(No. of pages including blank pages = 56)

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Table A
Compliance Review – Project Approval 05_0103B

Page 1 of 26

Cond. No.	Conditional Requirement	Compliance	Comments	Basis*
SCHEDULE 2 ADMINISTRATIVE CONDITIONS				
Obligation to Minimise Harm to the Environment				
1.	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.	Not Yet Applicable	Operations have not yet commenced.	A, D
Surrender of Consents				
2.	Within 18 months of the date of this approval, or as otherwise approved by the Secretary , the Proponent shall surrender all previous development consents for sand extraction on Lot 2 DP 216705 and Lot 21 DP 1082482, to the satisfaction of the Secretary .	Administrative Non-Compliance	PA 05_0103 issued 16/06/09. Correspondence dated 14/12/10 to the, then, NSW Department of Planning & Infrastructure surrendering DA 96/518 (within 18 months). DP&I requested DA to be surrendered to Council. Further correspondence to Council dated 12/09/16 also surrendering DA 96/518 to Council.	D
Terms of Approval				
3.	The Proponent shall: a) carry out the project generally in accordance with the EA, MOD 1 EA and the Project Layout Plans; and b) comply with the conditions of this approval and the Statement of Commitments. Notes • The Project Layout Plans are shown in Appendix 1. • The Statement of Commitments is reproduced in Appendix 2.	Not Yet Applicable	Operations have not yet commenced.	A, D
3A	If there is any inconsistency between the documents in condition 3, the most recent documents shall prevail to the extent of any inconsistency. The conditions of this approval shall prevail over documents in condition 3(a) to the extent of any inconsistency	Noted	-	-
4.	The Proponent shall comply with any reasonable requirement/s of the Secretary arising from the Department's assessment of: a) any reports, plans, programs or correspondence that are submitted in accordance with this approval; and b) the implementation of any actions or measures contained in these reports, plans, programs or correspondence.	Compliant	Comments provided by the Department on draft management plans required by this approval were incorporated into the final approved management plans to the Department's satisfaction.	D
Red text reflects Modification 'MOD1' approved February 2011				
* D = Documentation sighted		A = Advised by Company		O = On-site Observation

Table A (Cont'd)
Compliance Review – Project Approval 05_0103B

Page 2 of 26

Cond. No.	Conditional Requirement	Compliance	Comments	Basis*
SCHEDULE 2 ADMINISTRATIVE CONDITIONS (Cont'd)				
Limits on Approval				
5.	Sand extraction operations may take place until 1 July 2029. <i>Note: Under this Approval, the Proponent is required to rehabilitate and revegetate the site 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 site has been rehabilitated and revegetated to a satisfactory standard</i>	Noted	-	-
6.	The Proponent shall not remove from the extraction area, by any means, more than 650,000 cubic metres of material a year.	Compliant	Extraction operations have not yet commenced.	A,D
7.	The Proponent shall not transport from the extraction area by road more than 300,000 tonnes of material per year.	Compliant	Extraction operations have not yet commenced.	A, D
8.	The Proponent shall not import to the extraction area more than 45,000 tonnes per year of VENM. The Proponent shall ensure that material imported in compliance with this condition does not contain waste.	Compliant	Importation of VENM has not yet commenced.	A
Management Plans/Monitoring Programs				
9.	With the prior approval of the Secretary, the Proponent may submit any management plan or monitoring program required by this approval on a progressive basis.	Compliant	Approval to defer the submission of the management plans to 14 February 2011.	D
Protection of Public Infrastructure				
10.	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. <i>Note: This condition does not apply where such costs have already been provided by the Proponent through applicable road contribution or S94 plans (see Condition 14 below).</i>	Not Applicable	No repairs or relocations of infrastructure have been required to date.	A
Compliance with Relevant Legislation and Other Approvals				
11.	The Proponent shall comply with all relevant Australian Standards and Codes (including Building Code of Australia) and obtain all necessary approvals required by State and Commonwealth legislation in undertaking the project. <i>Notes:</i> • <i>Under Part 4A of the EP&A Act, the Proponent is required to obtain construction and occupation certificates for any proposed building works.</i> • <i>Part 8 of the EP&A Regulation sets out the requirements for the certification of the project.</i>	Not Yet Applicable	Operations have not yet commenced. Therefore, no additional approvals were required during the reporting period.	A, D
<p style="text-align: center;"><i>Red text reflects Modification 'MOD1' approved February 2016</i></p> <p>* D = Documentation sighted A = Advised by Company O = On-site Observation</p>				

Table A (Cont'd)
Compliance Review – Project Approval 05_0103B

Page 3 of 26

Cond. No.	Conditional Requirement	Compliance	Comments	Basis*
SCHEDULE 2 ADMINISTRATIVE CONDITIONS (Cont'd)				
Demolition				
12.	The Proponent shall ensure that all demolition work is carried out in accordance with AS 2601-2001: <i>The Demolition of Structures</i> , or its latest version.	Not Yet Applicable	No demolition work has been required to date.	A
Operation of Plant and Equipment				
13	The Proponent shall ensure that all 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.	Not Yet Applicable	No plant or equipment currently utilised on site.	A, D
Section 94 Contributions				
14.	Prior to carrying out any development, or as otherwise agreed by Council, the Proponent shall pay Council \$91,761.00 in accordance with Section 7.1 of Council's <i>Tweed Road Contribution Plan No.4 Version 5.1</i> and \$399.40 in accordance with Council's <i>Section 94 Plan No. 18</i> .	Not Yet Applicable	Development has not yet commenced.	A, D
15.	After submission of each Annual Report and on receipt of an invoice from Council, the Proponent shall pay to Council an amount calculated by Council to be the Proponent's contribution under Section 7.2 of Council's <i>Tweed Road Contribution Plan No.4 Version 5.1</i> in respect of the heavy haulage of VENM to the site.	Not Yet Applicable	No VENM received to date.	A
SCHEDULE 3 ENVIRONMENTAL PERFORMANCE CONDITIONS				
GENERAL EXTRACTION AND PROCESSING PROVISIONS				
Identification of Boundaries				
1.	Within 1 month of the date of approval of the Landscape Management Plan (see condition 28 below), the Proponent shall: a) engage a registered surveyor to mark out the boundaries of the approved limits of extraction; b) submit a survey plan of these boundaries to the Secretary ; and c) ensure that these boundaries are clearly marked at all times in a permanent manner that allows operating staff and inspecting officers to clearly identify those limits. <i>Note: The limit of extraction includes the areas described in the EA and shown conceptually on the plans in Appendix 1.</i>	Not Yet Applicable	A draft of the Landscape Management Plan was previously submitted; however, approval has not yet been issued.	D
<p>Red text reflects Modification 'MOD1' approved February 2011</p> <p>* D = Documentation sighted A = Advised by Company O = On-site Observation</p>				

Table A (Cont'd)
Compliance Review – Project Approval 05_0103B

Cond. No.	Conditional Requirement	Compliance	Comments	Basis*						
SCHEDULE 3 ENVIRONMENTAL PERFORMANCE CONDITIONS (Cont'd)										
Pipeline Corridor										
2.	<p>Prior to commencing work to install pipelines in the pipeline corridors (shown conceptually in Appendix 1), the Proponent shall submit for the approval of the Secretary:</p> <ul style="list-style-type: none"> 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: <ul style="list-style-type: none"> (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 DECC, to provide opportunities for the Wallum Froglet to cross the eastern pipeline. 	Not Yet Applicable	Work to install pipelines has not yet commenced.	A, D						
NOISE										
Impact Assessment Criteria										
3.	<p>The Proponent shall ensure that the noise generated by the project during the operating hours specified in Condition 5, does not exceed the noise impact assessment criteria in <i>Table 1</i>.</p> <table border="1" style="margin-left: 20px;"> <thead> <tr> <th style="text-align: center;">Receiver Location</th> <th style="text-align: center;">Day & Evening LA_{eq}(15 min) dB(A)</th> <th style="text-align: center;">Shoulder LA_{eq}(15 min) dB(A)</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">Residences on privately owned land</td> <td style="text-align: center;">47</td> <td style="text-align: center;">44</td> </tr> </tbody> </table> <p><i>Table 1: Noise Impact Assessment Criteria</i></p> <p>Notes:</p> <ul style="list-style-type: none"> • Noise generated by the project is to be measured in accordance with the relevant requirements of the NSW Industrial Noise Policy. • The noise limits do not apply if the Proponent has an agreement with the relevant owner/s of the residence/land to generate higher noise levels, and the Proponent has advised the department in writing of the terms of the agreement. 	Receiver Location	Day & Evening LA _{eq} (15 min) dB(A)	Shoulder LA _{eq} (15 min) dB(A)	Residences on privately owned land	47	44	Not Yet Applicable	Operations have not yet commenced.	A, D
Receiver Location	Day & Evening LA _{eq} (15 min) dB(A)	Shoulder LA _{eq} (15 min) dB(A)								
Residences on privately owned land	47	44								
<p>Red text reflects Modification 'MOD1' approved February 2011</p> <p>* D = Documentation sighted A = Advised by Company O = On-site Observation</p>										

Table A (Cont'd)
Compliance Review – Project Approval 05_0103B

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Cond. No.	Conditional Requirement	Compliance	Comments	Basis*																																		
SCHEDULE 3 ENVIRONMENTAL PERFORMANCE CONDITIONS (Cont'd)																																						
Cumulative Noise Criteria																																						
4.	<p>The Proponent shall 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:</p> <ul style="list-style-type: none"> • L_{Aeq} (11 hour) 50 dB(A) – Day; • L_{Aeq} (4 hour) 45 dB(A) – Evening; and • L_{Aeq}(9 hour) 40 dB(A) – Night. 	Not Yet Applicable	Operations have not yet commenced.	A, D																																		
Hours of Operation																																						
5.	<p>The Proponent shall comply with the operating hours in <i>Table 2</i>.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">Activity</th> <th style="text-align: center;">Day</th> <th style="text-align: center;">Time</th> </tr> </thead> <tbody> <tr> <td rowspan="3">Site establishment, sand or soil extraction by excavator, dry processing, product transport by road, VENM receipts, other quarry related activities, maintenance (if audible at neighbouring residences)</td> <td>Monday – Friday</td> <td>7:00am to 6:00pm</td> </tr> <tr> <td>Saturday</td> <td>7:00am to 1:00pm</td> </tr> <tr> <td>Sunday and Public Holidays</td> <td>Nil</td> </tr> <tr> <td rowspan="3">Sand extraction by dredging and pumping to the processing plant, wet processing.</td> <td>Monday – Friday</td> <td>7:00am to 10:00pm</td> </tr> <tr> <td>Saturday</td> <td>7:00am to 4:00pm</td> </tr> <tr> <td>Sunday and Public Holidays</td> <td>Nil</td> </tr> <tr> <td rowspan="3">Sand extraction by dredging and pumping to fill sites.</td> <td>Monday – Friday</td> <td>7:00am to 6:30pm</td> </tr> <tr> <td>Saturday</td> <td>7:00am to 1:00pm</td> </tr> <tr> <td>Sunday and Public Holidays</td> <td>Nil</td> </tr> <tr> <td rowspan="3">Operation of dredge to fill pipeline with water or pipeline flushing</td> <td>Monday – Friday</td> <td>6.30am to 7.00pm</td> </tr> <tr> <td>Saturday</td> <td>6.30am to 1.30pm</td> </tr> <tr> <td>Sunday and Public Holidays</td> <td>Nil</td> </tr> <tr> <td>Maintenance (if inaudible at neighbouring residences)</td> <td>Any day</td> <td>Any time</td> </tr> </tbody> </table> <p><i>Table 2: Operating Hours</i></p>	Activity	Day	Time	Site establishment, sand or soil extraction by excavator, dry processing, product transport by road, VENM receipts, other quarry related activities, maintenance (if audible at neighbouring residences)	Monday – Friday	7:00am to 6:00pm	Saturday	7:00am to 1:00pm	Sunday and Public Holidays	Nil	Sand extraction by dredging and pumping to the processing plant, wet processing.	Monday – Friday	7:00am to 10:00pm	Saturday	7:00am to 4:00pm	Sunday and Public Holidays	Nil	Sand extraction by dredging and pumping to fill sites.	Monday – Friday	7:00am to 6:30pm	Saturday	7:00am to 1:00pm	Sunday and Public Holidays	Nil	Operation of dredge to fill pipeline with water or pipeline flushing	Monday – Friday	6.30am to 7.00pm	Saturday	6.30am to 1.30pm	Sunday and Public Holidays	Nil	Maintenance (if inaudible at neighbouring residences)	Any day	Any time	Not Yet Applicable	Operations have not yet commenced.	A, D
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Maintenance (if inaudible at neighbouring residences)	Any day	Any time																																				
Continuous Improvement																																						
6.	<p>The Proponent shall:</p> <ol style="list-style-type: none"> a) implement all reasonable and feasible best practice noise mitigation measures; b) investigate ways to reduce the noise generated by the project; and c) report on these investigations and the implementation and effectiveness of these measures in the Annual Report, to the satisfaction of the Secretary. 	Not Yet Applicable	Operations have not yet commenced.	A, D																																		
<p>Red text reflects Modification 'MOD1' approved February 2011</p> <p>* D = Documentation sighted A = Advised by Company O = On-site Observation</p>																																						



Table A (Cont'd)
Compliance Review – Project Approval 05_0103B

Cond. No.	Conditional Requirement	Compliance	Comments	Basis*																							
SCHEDULE 3 ENVIRONMENTAL PERFORMANCE CONDITIONS (Cont'd)																											
Noise Monitoring Program																											
7.	<p>The Proponent shall prepare and implement a Noise Monitoring Program for the project to the satisfaction of the Secretary. This program must:</p> <p>a) be submitted to the Secretary for approval prior to carrying out any development on the site;</p> <p>b) provide details of how the noise performance of the project would be monitored, including monitoring at the following locations:</p> <ul style="list-style-type: none"> • Residence G; • Residence DD; • Residence F; • Residence B; and • Residence O, and <p>The Proponent shall implement the approved monitoring program as approved from time to time by the Secretary.</p> <p><i>Note: For more information on the monitoring locations see Appendix 3.</i></p>	Not Yet Applicable	<p>Operations have not yet commenced and therefore plan has not yet been implemented.</p> <p>The Noise Monitoring Program was approved by the Department 14/05/14.</p> <p>Section 4 of the Noise Monitoring Program.</p> <p>Section 5 of the Noise Monitoring Program.</p>	A, D																							
AIR QUALITY																											
Impact Assessment Criteria																											
8.	<p>The Proponent shall ensure that dust generated by the project does not cause exceedances of the criteria listed in <i>Tables 3 to 5</i> at any privately owned land.</p> <table border="1" style="width: 100%;"> <thead> <tr> <th>Pollutant</th> <th>Averaging Period</th> <th>Criterion</th> </tr> </thead> <tbody> <tr> <td>Particulate matter <10µm (PM₁₀)</td> <td>24 hour</td> <td>50µg/m³</td> </tr> </tbody> </table> <p><i>Table 3: Short Term Impact Assessment Criteria for Particulate Matter</i></p> <table border="1" style="width: 100%;"> <thead> <tr> <th>Pollutant</th> <th>Averaging period</th> <th>Criterion</th> </tr> </thead> <tbody> <tr> <td>Total suspended particulate (TSP) matter</td> <td>Annual</td> <td>90 µg/m³</td> </tr> <tr> <td>Particulate matter < 10 µm (PM₁₀)</td> <td>Annual</td> <td>30 µg/m³</td> </tr> </tbody> </table> <p><i>Table 4: Long Term Impact Assessment Criteria for Particulate Matter</i></p> <table border="1" style="width: 100%;"> <thead> <tr> <th>Pollutant</th> <th>Averaging period</th> <th>Maximum increase in deposited dust level</th> <th>Maximum total deposited dust level</th> </tr> </thead> <tbody> <tr> <td>Deposited dust</td> <td>Annual</td> <td>2 g/m²/month</td> <td>4 g/m²/month</td> </tr> </tbody> </table> <p><i>Table 5: Long Term Impact Assessment Criteria for Deposited Dust</i></p>	Pollutant	Averaging Period	Criterion	Particulate matter <10µm (PM ₁₀)	24 hour	50µg/m ³	Pollutant	Averaging period	Criterion	Total suspended particulate (TSP) matter	Annual	90 µg/m ³	Particulate matter < 10 µm (PM ₁₀)	Annual	30 µg/m ³	Pollutant	Averaging period	Maximum increase in deposited dust level	Maximum total deposited dust level	Deposited dust	Annual	2 g/m ² /month	4 g/m ² /month	Not Yet Applicable	Operations have not yet commenced.	A, D
Pollutant	Averaging Period	Criterion																									
Particulate matter <10µm (PM ₁₀)	24 hour	50µg/m ³																									
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Table A (Cont'd)
Compliance Review – Project Approval 05_0103B

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Cond. No.	Conditional Requirement	Compliance	Comments	Basis*
SCHEDULE 3 ENVIRONMENTAL PERFORMANCE CONDITIONS (Cont'd)				
AIR QUALITY				
Impact Assessment Criteria (Cont'd)				
	<i>Note: Deposited dust is 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 Particulates - Deposited Matter - Gravimetric Method.</i>			
Dust Monitoring Program				
9.	<p>The Proponent shall prepare and implement a Dust Monitoring Program for the project to the satisfaction of the Secretary. This program must:</p> <p>a) be submitted to the Secretary for approval prior to carrying out any development on the site; and</p> <p>b) include details of how the air quality performance of the project would be monitored, and include a protocol for evaluating compliance with the relevant air quality criteria in this approval.</p> <p>The Proponent shall implement the approved monitoring program as approved from time to time by the Secretary.</p>	Not Yet Applicable	<p>Operations have not yet commenced and therefore plan has not yet been implemented.</p> <p>The Air Quality Monitoring Program was approved by the Department 14/05/14.</p> <p>Sections 3, 5 and 6 of the Air Quality Monitoring Program.</p>	A, D
SOIL AND WATER				
Discharges				
10.	<p>Except as may be expressly provided for by an EPL, the Proponent shall not discharge any water from the project or ancillary operational areas. The Proponent shall ensure that the extraction pits subject to sand excavation are maintained and operated to prevent discharges of any surface water.</p>	Compliant	<p>No discharges have occurred from the initial dredge pond created under former DA 96/518. No further extraction operations have occurred to date.</p>	A
<p>Red text reflects Modification 'MOD1' approved February 2011</p> <p>* D = Documentation sighted A = Advised by Company O = On-site Observation</p>				

Table A (Cont'd)
Compliance Review – Project Approval 05_0103B

Cond. No.	Conditional Requirement	Compliance	Comments	Basis*																																																											
SCHEDULE 3 ENVIRONMENTAL PERFORMANCE CONDITIONS (Cont'd)																																																															
Water Quality Objectives (Cont'd)																																																															
11.	The Proponent shall aim to meet the water quality objectives in <i>Table 6</i> for water in the dredge pond and in groundwater adjacent the dredge pond, unless otherwise approved by the Secretary .	Compliant	Whilst slight exceedance of one sample pH was recorded within the existing initial dredge pond, it is considered that the intent of the condition, 'aiming' to meet the objectives, has been met.	D																																																											
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 35%;">Pollutant</th> <th style="width: 30%;">Unit of Measure</th> <th style="width: 35%;">Water Quality Objectives</th> </tr> </thead> <tbody> <tr><td>Turbidity</td><td>NTU</td><td>5 - 20</td></tr> <tr><td>pH</td><td>pH</td><td>6.5 – 8.5</td></tr> <tr><td>Oil and Grease</td><td>mg/L</td><td>10</td></tr> <tr><td>Salinity</td><td>µS/cm</td><td><3,000</td></tr> <tr><td>Dissolved oxygen</td><td>mg/L</td><td>>6</td></tr> <tr><td>Chlorophyll-a</td><td>µg/L</td><td>2-10</td></tr> <tr><td>Faecal coliforms</td><td>Median No./100mL</td><td><1000</td></tr> <tr><td>Enterococci</td><td>Median No./100mL</td><td><230</td></tr> <tr><td rowspan="2">Algae and blue-green algae</td><td>No. of cells/mL (M.aeruginosa)</td><td><50,000</td></tr> <tr><td>mm³/L (total biovolume)</td><td><4</td></tr> <tr><td>Sodium</td><td>mg/L</td><td><500</td></tr> <tr><td>Potassium ion</td><td>mg/L</td><td><40</td></tr> <tr><td>Magnesium ion</td><td>mg/L</td><td><100</td></tr> <tr><td>Chloride ion</td><td>mg/L</td><td><1000</td></tr> <tr><td>Sulphate ion</td><td>mg/L</td><td><800</td></tr> <tr><td>Bicarbonate ion</td><td>mg/L</td><td><400</td></tr> <tr><td>Soluble Iron ion</td><td>mg/L</td><td><20</td></tr> <tr><td>Soluble aluminium ion</td><td>mg/L</td><td><0.5</td></tr> <tr><td>Ammonium ion</td><td>mg/L</td><td><20</td></tr> </tbody> </table>					Pollutant	Unit of Measure	Water Quality Objectives	Turbidity	NTU	5 - 20	pH	pH	6.5 – 8.5	Oil and Grease	mg/L	10	Salinity	µS/cm	<3,000	Dissolved oxygen	mg/L	>6	Chlorophyll-a	µg/L	2-10	Faecal coliforms	Median No./100mL	<1000	Enterococci	Median No./100mL	<230	Algae and blue-green algae	No. of cells/mL (M.aeruginosa)	<50,000	mm ³ /L (total biovolume)	<4	Sodium	mg/L	<500	Potassium ion	mg/L	<40	Magnesium ion	mg/L	<100	Chloride ion	mg/L	<1000	Sulphate ion	mg/L	<800	Bicarbonate ion	mg/L	<400	Soluble Iron ion	mg/L	<20	Soluble aluminium ion	mg/L	<0.5	Ammonium ion	mg/L	<20
Pollutant	Unit of Measure	Water Quality Objectives																																																													
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Sodium	mg/L	<500																																																													
Potassium ion	mg/L	<40																																																													
Magnesium ion	mg/L	<100																																																													
Chloride ion	mg/L	<1000																																																													
Sulphate ion	mg/L	<800																																																													
Bicarbonate ion	mg/L	<400																																																													
Soluble Iron ion	mg/L	<20																																																													
Soluble aluminium ion	mg/L	<0.5																																																													
Ammonium ion	mg/L	<20																																																													
<p><i>Table 6: Water Quality Objectives</i></p> <p>Notes:</p> <ul style="list-style-type: none"> The objectives for dissolved oxygen, turbidity and algae are relevant to surface water only. The Department acknowledges that short term exceedances of these objectives may occur during natural events such as heavy rainfall or flooding. The Department acknowledges that pre-existing water quality may not meet the objectives for some analytes, including salinity. The Proponent shall strive to meet the water quality objectives through implementation of the Soil and Water Management Plan (see condition 0 below), as far as is reasonable and feasible and within the Proponent's control, to the satisfaction of the Secretary. 																																																															
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Cond. No.	Conditional Requirement	Compliance	Comments	Basis*
SCHEDULE 3 ENVIRONMENTAL PERFORMANCE CONDITIONS (Cont'd)				
PASS Fines Management				
12.	The Proponent shall ensure that all excavated PASS fines material is returned to below the watertable as soon as possible to prevent oxidation, unless adequately neutralised in accordance with methods approved under the Soil and Water Management Plan (see condition 0 below).	Not Yet Applicable	Extraction and processing operations have not yet commenced.	A, D
13.	The Proponent must not remove material from the site that: a) has a Chromium reducible Sulfur level exceeding 0.03% Sulfur; or b) contains a pH less than 5.5 in 1:5 water suspension.	Not Yet Applicable	Extraction operations have not yet commenced.	A, D
14.	The Proponent shall ensure that PASS material to be interred in the excavation is discharged into the pond at a depth of no less than 3 metres from the water surface, and that all fines are deposited to a final depth of at least 8 metres below the water surface, unless an alternative method is approved by DPI-Water and the Secretary . <i>Note: Material that would settle to a depth of at least 8 metres may be placed in the pond at a depth of less than 3 metres by excavator or similar equipment.</i>	Not Yet Applicable	Extraction and internment operations have not yet commenced.	A, D
Flood Management				
15.	All earthworks, including drainage and bunding works, shall be contained wholly within the site.	Compliant	The existing initial dredge pond and associated bunding is contained wholly within the site.	O, D
16.	The Proponent shall cease sand extraction and processing activities not less than 24 hours prior to the commencement of overflow from any extraction pond or as soon as notification is received of an impending flood, if notification is provided less than 24 hours prior. No sand extraction or processing shall occur while an extraction pond is overflowing.	Not Yet Applicable	No dredging occurred during the reporting period.	A, D
17.	The Proponent shall ensure that the flood storage capacity of the site is not less than the pre-existing flood storage capacity at all stages of the project. Details of the available flood storage capacity shall be reported in each Annual Report .	Not Yet Applicable	Operations under this approval have not yet commenced.	A, D
18.	The top of the earth bunding around the northern and southern extraction ponds shall not exceed 1.8 m AHD. Spillways shall be provided at the eastern and western extents of each bund and shall be a minimum of 50 m wide and not exceed 1.3 m AHD. Bunds and spillways shall be suitably surfaced (for example grassed or rock lined) to avoid scour and erosion during storm and flood events.	Not Yet Applicable	The bunding has not yet been constructed.	A, D
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Cond. No.	Conditional Requirement	Compliance	Comments	Basis*
SCHEDULE 3 ENVIRONMENTAL PERFORMANCE CONDITIONS (Cont'd)				
Flood Management (Cont'd)				
18A	The Proponent shall ensure the pad of the temporary processing area does not exceed a height of 1.8 m AHD.	Not Yet Applicable	The initial processing area has not yet been constructed	A, D
Management and Monitoring				
19.	<p>The Proponent shall prepare and implement a Soil and Water Management Plan for the project to the satisfaction of the Secretary. This plan must:</p> <p>a) be prepared in consultation with DPI-Water and EPA;</p> <p>b) include a:</p> <ul style="list-style-type: none"> • Water Balance; • Erosion and Sediment Control Plan; • Acid Sulfate Soil Management Plan; • Blue-Green Algae Management Plan; • Surface Water Monitoring Program; and • Groundwater Monitoring Program; and <p>c) be submitted to the Secretary prior to starting quarrying operations, and prior to carrying out any development on the site in the case of the Erosion and Sediment Control Plan.</p> <p>The Proponent shall implement the approved management plan as approved from time to time by the Secretary.</p>	Not Yet Applicable	<p>Operations have not yet commenced and therefore plan has not yet been implemented.</p> <p>The Soil and Water Management Plan (SWMP) was prepared in consultation with DWE and DECC and approved by the Department 14/05/14.</p> <p>Section 2.4 of the SWMP</p> <p>Section 3 of the SWMP</p> <p>Section 4 of the SWMP</p> <p>Section 5 of the SWMP</p> <p>Section 6 of the SWMP</p> <p>Section 7 of the SWMP</p> <p>Operations have not yet commenced.</p>	A, D
20.	<p>The Water Balance shall include:</p> <p>a) details of all water extracted, transferred, used and/or discharged by the quarry;</p> <p>b) the source of all water collected or stored on the site, including rainfall, stormwater and groundwater; and</p> <p>c) measures to minimise water use or water loss by the project.</p>	Compliant	<p>Section 2.3 of SWMP.</p> <p>Section 2.2 of SWMP.</p> <p>Section 2.5 of SWMP.</p>	D
<p style="text-align: center;">Red text reflects Modification 'MOD1' approved February 2011</p> <p>* D = Documentation sighted A = Advised by Company O = On-site Observation</p>				

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Cond. No.	Conditional Requirement	Compliance	Comments	Basis*
SCHEDULE 3 ENVIRONMENTAL PERFORMANCE CONDITIONS (Cont'd)				
Management and Monitoring (Cont'd)				
21.	The Erosion and Sediment Control Plan shall: a) be consistent with the relevant requirements of Managing Urban Stormwater: Soils and Construction, Volume 1, 4 th Edition, 2004 (Landcom), and Council's codes including its Code of Practice for Soil and Water Management on Construction Sites, Development Design Specification D7 – Stormwater Quality and Tweed Urban Stormwater Quality Management Plan, except that should an inconsistency occur between these documents, the higher standard shall apply; b) identify activities that could cause soil erosion and generate sediment; c) describe measures to minimise soil erosion and the potential for the transport of sediment to downstream waters; d) describe the location, function, and capacity of erosion and sediment control structures; and e) describe what measures would be implemented to maintain these structures over time.	Compliant	Section 3.3 of SWMP. Section 3.3 of SWMP. Section 3.3 of SWMP. Section 3.3 of SWMP. Section 3.4 of SWMP.	D
22.	The Acid Sulfate Soil Management Plan shall: a) be consistent with the NSW Acid Sulphate Soil Advisory Committee's Acid Sulfate Soil Manual; and b) define procedures for managing the potential acid sulfate soils on the site, including sample testing and procedures.	Compliant	Section 4.1 of SWMP. Sections 4.3 and 4.4 of SWMP.	D
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Cond. No.	Conditional Requirement	Compliance	Comments	Basis*
SCHEDULE 3 ENVIRONMENTAL PERFORMANCE CONDITIONS (Cont'd)				
Management and Monitoring (Cont'd)				
23.	<p>The Blue-Green Algae Management Plan shall:</p> <p>a) be prepared by a suitably qualified blue-green algae expert, whose appointment has been approved by the Director-General;</p> <p>b) be consistent with extant guidelines for blue-green algae management including the NHMRC's <i>Guidelines for Managing Risks in Recreational Water</i>;</p> <p>c) describe the measures that would be implemented to prevent and control the sources of algal blooms over the short, medium and long term; and</p> <p>d) define procedures for the management and notification of identified algal blooms.</p>	Compliant	<p>The Blue-Green Algae Management Plan was prepared in conjunction with Dr John Runcie, who was approved by DP&I on 03/02/11.</p> <p>Section 5.3 of the SWMP.</p> <p>Section 5.8 of the SWMP.</p> <p>Sections 5.5, 5.6, 5.7, 5.8 and 5.10 of the SWMP.</p>	D
24.	<p>The Surface Water Monitoring Program shall include:</p> <p>a) detailed baseline data on surface water quality;</p> <p>b) surface water impact assessment criteria;</p> <p>c) a program to monitor surface water levels and quality;</p> <p>d) a program to manage any water releases from the site;</p> <p>e) a program to monitor bank and bed stability; and</p> <p>f) a protocol for the investigation, notification and mitigation of identified exceedances of the surface water impact assessment criteria.</p>	Compliant	<p>Section 6.3 of the SWMP.</p> <p>Section 6.4 of the SWMP.</p> <p>Sections 6.5 and 6.6 of the SWMP.</p> <p>Section 6.8 of the SWMP.</p> <p>Section 3.4 of the SWMP.</p> <p>Sections 6.7 and 6.9 of the SWMP.</p>	D
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Cond. No.	Conditional Requirement	Compliance	Comments	Basis*
SCHEDULE 3 ENVIRONMENTAL PERFORMANCE CONDITIONS (Cont'd)				
Management and Monitoring (Cont'd)				
25.	The Groundwater Monitoring Program shall include: a) detailed baseline data on groundwater levels and quality, based on statistical analysis; b) groundwater impact assessment criteria; c) a program to monitor groundwater levels and quality; d) a program to monitor groundwater level effects on groundwater dependent vegetation, and on groundwater supply to adjoining properties; e) a protocol for the investigation, notification and mitigation of identified exceedances of the groundwater impact assessment criteria; and f) a protocol for making good any adverse effect of changes to groundwater levels or quality associated with the project on water use on surrounding properties.	Compliant	Section 7.3 of the SWMP. Section 7.4 of the SWMP. Section 7.5 of the SWMP. Section 7.5 of the SWMP. Section 7.6 of the SWMP. Section 7.6 of the SWMP.	D
Pipeline Management				
26.	For the life of the pipelines, the Proponent shall maintain the pipelines, ensuring that any leaks or maintenance issues are detected and repaired to the satisfaction of the Secretary .	Not Yet Applicable	Pipelines not yet installed.	A, D
REHABILITATION AND LANDSCAPING				
Rehabilitation				
27.	The Proponent shall progressively rehabilitate the site to the satisfaction of the Secretary .	Not Yet Applicable	Operations have not yet commenced.	A, D
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Cond. No.	Conditional Requirement	Compliance	Comments	Basis*
SCHEDULE 3 ENVIRONMENTAL PERFORMANCE CONDITIONS (Cont'd)				
Landscape Management Plan				
28.	<p>The Proponent shall prepare and implement a Landscape Management Plan for the project to the satisfaction of the Secretary. This plan must:</p> <p>a) be prepared:</p> <ul style="list-style-type: none"> • by suitably qualified consultants, including a specialist hydrologist, coastal engineer, wetlands ecologist and landscape architect; • in consultation with Council, DPI-Water and DPI-Fisheries; and • in accordance with extant guidelines including the DPI-Water's Constructed Wetlands Manual, Volumes 1 and 2 and the DPI's Policy and Guidelines: Aquatic Habitat Management, 1999; <p>b) be submitted to the Director-General prior to starting quarrying operations on the site; and</p> <p>c) include a:</p> <ul style="list-style-type: none"> • Rehabilitation Management Plan; and • Long Term Management Strategy. <p>The Proponent shall implement the approved management plan as approved from time to time by the Secretary.</p> <p><i>Note: The Department accepts that the initial Landscape Management Plan may not include the detailed Long Term Management Strategy. However, a conceptual strategy must be included in the initial plan, along with a timetable for augmentation of the strategy with each subsequent review of the plan.</i></p>	Not Yet Applicable	<p>Operations have not yet commenced.</p> <p>Plan prepared in conjunction with Knobel Consulting and Wetland Care Australia. The Strategic Development Plan was developed in conjunction with Allen Jack and Cottier</p> <p>The draft plan was submitted to Council, DWE and DPI Fisheries for review and comment on 09/02/11 and a revised version on 10/08/11.</p> <p>The Landscape Management Plan was prepared generally in accordance with the relevant guidelines (Section 1).</p> <p>Operations have not yet commenced.</p> <p>Sections 2 and 3 of the Landscape Management Plan.</p>	A, D
29.	<p>The Rehabilitation Management Plan must include:</p> <p>a) the rehabilitation objectives for the site and pipeline corridors;</p> <p>b) a description of the short, medium, and long term measures that would be implemented to:</p> <ul style="list-style-type: none"> • rehabilitate and stabilise the site and pipeline corridors; and • manage the restored vegetation and wetland habitat established on the site; 	Compliant	<p>Section 2.2 of the Landscape Management Plan.</p> <p>Section 2.3 of the Landscape Management Plan.</p>	D
<p style="text-align: center;">Red text reflects Modification 'MOD1' approved February 2011</p> <p>* D = Documentation sighted A = Advised by Company O = On-site Observation</p>				

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Cond. No.	Conditional Requirement	Compliance	Comments	Basis*
SCHEDULE 3 ENVIRONMENTAL PERFORMANCE CONDITIONS (Cont'd)				
Landscape Management Plan				
	<p>a) detailed performance and completion criteria for the rehabilitation and stabilisation of the site;</p> <p>b) consideration of outcomes if VENM material received for backfilling is less than optimum;</p> <p>c) a detailed description of how the performance of the rehabilitation of the site would be monitored over time to achieve the stated objectives;</p> <p>d) a detailed description of what measures would be implemented over the next 5 years to rehabilitate and manage the landscape of the site and revegetation areas including the procedures to be implemented for:</p> <ul style="list-style-type: none"> • progressively rehabilitating and stabilising areas disturbed by quarrying; • implementing revegetation and regeneration within the disturbance areas; • protecting areas outside the disturbance areas, including vegetation adjoining pipelines; • managing impacts on fauna, including measures to enable Wallum Froglet to cross the eastern pipeline; • controlling terrestrial and aquatic weeds and pests; • controlling access; and • reducing the visual impacts of the project; <p>e) a description of the potential risks to successful rehabilitation and/or revegetation, and a description of the contingency measures that would be implemented to mitigate these risks; and</p> <p>f) details of who is responsible for monitoring, reviewing, and implementing the plan.</p>		<p>Section 2.5 of the Landscape Management Plan.</p> <p>Section 2.4.6 of the Landscape Management Plan.</p> <p>Section 2.6 of the Landscape Management Plan.</p> <p>Sections 2.3 & 2.4 of the Landscape Management Plan.</p> <p>Section 2.7 of the Landscape Management Plan.</p> <p>Section 2.8 of the Landscape Management Plan.</p>	
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Cond. No.	Conditional Requirement	Compliance	Comments	Basis*
SCHEDULE 3 ENVIRONMENTAL PERFORMANCE CONDITIONS (Cont'd)				
Landscape Management Plan				
30.	<p>The Long Term Management Strategy must:</p> <p>a) define the objectives and criteria for quarry closure and post-extraction management;</p> <p>b) investigate options for the future use of the site;</p> <p>c) describe the measures that would be implemented to minimise or manage the ongoing environmental effects of the project; and</p> <p>d) describe how the performance of these measures would be monitored over time.</p>	Compliant	<p>Section 3.2 of the Landscape Management Plan.</p> <p>Section 3.3 of the Landscape Management Plan.</p> <p>Section 3.4 of the Landscape Management Plan.</p> <p>Section 3.5 of the Landscape Management Plan.</p>	D
Rehabilitation Bond				
31.	<p>Prior to starting quarrying operations on the site, the Proponent shall lodge a rehabilitation bond for the project with the Secretary. The sum of the bond shall be calculated at:</p> <p>a) \$2.50/m² for the total area to be disturbed and/or revegetated in each 5 year review period (see condition 28 below); and</p> <p>b) \$1.50/m² for the total area of land previously disturbed and/or rehabilitated by the project, to the satisfaction of the Secretary.</p> <p><i>Notes:</i></p> <ul style="list-style-type: none"> If the rehabilitation and revegetation works are completed to the satisfaction of the Secretary, the Secretary will release the rehabilitation bond. If the rehabilitation and revegetation works are not completed to the satisfaction of the Secretary, the Secretary will call in all or part of the rehabilitation bond, and arrange for the satisfactory completion of the relevant works. 	Not Yet Applicable	Quarry operations have not yet commenced.	A, D
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Cond. No.	Conditional Requirement	Compliance	Comments	Basis*
SCHEDULE 3 ENVIRONMENTAL PERFORMANCE CONDITIONS (Cont'd)				
Rehabilitation Bond (Cont'd)				
32.	<p>Within 6 months of each Independent Environmental Audit (see condition 6 of schedule 5) excluding the inaugural audit, unless the Secretary directs otherwise, the Proponent shall review, and if necessary revise, the sum of the rehabilitation bond to the satisfaction of the Secretary. This review must consider:</p> <p>a) the effects of inflation;</p> <p>b) any changes to the total area of disturbance; and</p> <p>c) the performance of the rehabilitation and revegetation to date.</p>	Not Yet Applicable	No independent audits have been completed to date.	A
ABORIGINAL CULTURAL HERITAGE				
Aboriginal Cultural Heritage Management Plan				
33.	<p>The Proponent shall prepare and implement an Aboriginal Cultural Heritage Management Plan to the satisfaction of the Secretary. This plan must:</p> <p>a) be prepared in consultation with the relevant Aboriginal communities;</p> <p>b) be submitted to the Secretary for approval prior to carrying out any development; and</p> <p>c) include a:</p> <ul style="list-style-type: none"> • description of the Aboriginal cultural heritage induction protocol for employees; • description of the process for Aboriginal inspection of excavations for the northern pipeline corridor; • description of the 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 • description of the process for identifying a long-term storage location should Aboriginal relics be discovered within the project site requiring salvage. <p>The Proponent shall implement the approved management plan as approved from time to time by the Secretary.</p>	Not yet Applicable	<p>Operations have not yet commenced and therefore plan has not yet been implemented.</p> <p>Prepared in consultation with Tweed-Byron LALC (correspondence dated 01/03/11) and approved by the Department 14/05/14.</p> <p>Aboriginal Cultural Heritage Management Plan (ACHMP) submitted to DoP 09/02/11.</p> <p>Section 7 of the ACHMP.</p> <p>Section 8 of the ACHMP.</p> <p>Section 10 and Appendix 1 of the ACHMP.</p> <p>Section 12 of the ACHMP.</p>	A, D
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Cond. No.	Conditional Requirement	Compliance	Comments	Basis*
SCHEDULE 3 ENVIRONMENTAL PERFORMANCE CONDITIONS (Cont'd)				
TRAFFIC AND TRANSPORTATION				
Road Works				
34.	<p>Prior to despatch of sand by road, the Proponent shall:</p> <p>a) upgrade the intersection of Tweed Coast Road and Crescent Street for right turning vehicles to AUSTRROADS CHR treatment; and</p> <p>b) upgrade the intersection of Tweed Coast Road and Crescent Street for left turning vehicles to AUSTRROADS Figure 6.24 left turn treatment,</p> <p>to the satisfaction of Council.</p> <p><i>Note: In the event that the Tweed Coast Road is upgraded prior to the commencement of the despatch of sand by road, the Proponent shall pay \$105,000 (indexed annually by CPI) to Tweed Shire Council as a contribution to intersection works on Tweed Coast Road and Crescent Street for trucks entering onto Tweed Coast Road from Crescent Street.</i></p>	Not Yet Applicable	Product despatch has not yet commenced.	A
Road Haulage				
35.	<p>Trucks are not permitted to enter the site prior to 7.00am on any day.</p> <p><i>Note: This condition does not apply to delivery of material if that delivery is required by police or other authorities for safety reasons, and/or the operation or personnel or equipment are endangered. In such circumstances, notification is to be provided to DECC and the affected residents as soon as possible, or within a reasonable period in the case of emergency.</i></p>	Not Yet Applicable	Road haulage has not yet commenced.	A
36.	<p>The Proponent shall prepare and implement a Traffic Safety Plan for the project to the satisfaction of the Secretary. This plan must:</p> <p>a) be prepared in consultation with the RMS and Tweed Shire Council;</p> <p>b) include measures to minimise the risk to other road users from project-related vehicles on public roads during construction and operation, including vehicles proceeding across Altona Drive between the southern and northern parts of the site;</p> <p>c) prohibit trucks departing the site from turning right from Crescent Street to Tweed Coast Road; and</p> <p>d) be submitted to the Secretary prior to commencing construction work.</p> <p>The Proponent shall implement the approved safety plan as approved from time to time by the Secretary.</p>	Not Yet Applicable	Construction works have not yet commenced.	A
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Cond. No.	Conditional Requirement	Compliance	Comments	Basis*
SCHEDULE 3 ENVIRONMENTAL PERFORMANCE CONDITIONS (Cont'd)				
Road Haulage (Cont'd)				
37.	Product and VENM trucks are not to utilise Altona Drive west of the site or Crescent Street south of Altona Drive, except for the purpose of delivery or collection local to those streets.	Not Yet Applicable	Product and VENM transportation has not yet commenced.	A
38.	The Proponent shall ensure that all loaded vehicles: a) entering or leaving the site have their loads covered; and b) leaving the site are cleaned of materials that may fall on the road before they are allowed to leave the site.	Not Yet Applicable	Product and VENM transportation has not yet commenced.	A
Parking				
39.	The Proponent shall provide sufficient parking on-site for all project-related traffic and visitors, in accordance with Council's parking codes and to the satisfaction of the Secretary . No on street parking shall be undertaken.	Not Yet Applicable	Operations have not yet commenced.	A, D
VISUAL IMPACT				
Visual Amenity				
40.	The Proponent shall minimise the visual impacts of the project to the satisfaction of the Secretary .	Not Yet Applicable	Operations have not yet commenced.	A, D
41.	The Proponent shall establish and subsequently maintain the vegetation screen around the extraction area within 12 months of the date of this approval. <i>Note: The vegetation screen shall be detailed in the Landscape Management Plan required under condition 28.</i>	Compliant	Vegetation screening was previously planted adjacent to Tweed Coast Road and Crescent Street, fencing installed to exclude cattle and slashing of grass undertaken within the fenced off area to assist tree growth. As growth north of Altona Drive has not met expectations, Bushland Restoration Services have commenced additional maintenance. Replacement planting will be undertaken if necessary.	A
Lighting Emissions				
42.	The Proponent shall: a) take all practicable measures to mitigate off-site lighting impacts from the project; and b) ensure that all external lighting associated with the project complies with <i>Australian Standard AS4282 (INT) 1995 – Control of Obtrusive Effects of Outdoor Lighting</i> , to the satisfaction of the Secretary .	Not Yet Applicable	Operations have not yet commenced.	A
Advertising				
43.	The Proponent shall not erect or display any advertising structure(s) or signs on the site without the written approval of the Secretary . <i>Note: This does not include business identification, traffic management & safety or environmental signs.</i>	Compliant	No advertising or signs have been erected within the Quarry Site.	A
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Cond. No.	Conditional Requirement	Compliance	Comments	Basis*
SCHEDULE 3 ENVIRONMENTAL PERFORMANCE CONDITIONS (Cont'd)				
WASTE MANAGEMENT				
44.	The Proponent shall minimise the amount of waste generated by the project to the satisfaction of the Secretary .	Not Yet Applicable	Operations have not yet commenced.	A, D
EMERGENCY AND HAZARDS MANAGEMENT				
Dangerous Goods				
45.	The Proponent shall ensure that the storage, handling, and transport of dangerous goods are conducted in accordance with the relevant <i>Australian Standards</i> , particularly AS1940 and AS1596, and the <i>Dangerous Goods Code</i> .	Not Yet Applicable	No dangerous goods are currently stored or transported to the Quarry Site.	A
Safety				
46.	The Proponent shall secure the project to ensure public safety to the satisfaction of the Secretary .	Compliant	The boundary of the Quarry Site is currently fenced with agricultural fencing.	A
Bushfire Management				
47.	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 on-site.	Not Yet Applicable	Operations have not yet commenced and no quarry infrastructure is present on-site.	A, D
PRODUCTION DATA				
48.	The Proponent shall: a) provide annual production data to the DPI using the standard form for that purpose; and b) include a copy of this data in the Annual Report .	Not Yet Applicable	Extraction operations have not yet commenced.	A, D
SCHEDULE 4 ADDITIONAL PROCEDURES				
Notification of Landowners				
1.	If the results of monitoring required in Schedule 3 identify that impacts generated by the project are greater than the relevant impact assessment criteria, then the Proponent shall notify the Secretary , affected landowners, and/or existing or future tenants accordingly, and provide quarterly monitoring results to each of these parties until the results show that the project is complying with the relevant criteria.	Not Yet Applicable	Whilst slight exceedances of the dissolved oxygen and pH objectives were recorded within the existing initial dredge pond, it is considered that the intent of the condition, 'aiming' to meet the objectives, has been met. No other monitoring or exceedance.	A, D
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Cond. No.	Conditional Requirement	Compliance	Comments	Basis*
SCHEDULE 4 ADDITIONAL PROCEDURES (Cont'd)				
Independent Review				
2.	<p>If a landowner considers that the project is exceeding the impact assessment criteria in Director-General in writing for an independent review of the impacts of the project on his/her land.</p> <p>If the Secretary is satisfied that an independent review is warranted, the Proponent shall within 3 months of the Director-General advising that an independent review is warranted:</p> <p>a) consult with the landowner to determine his/her concerns;</p> <p>b) commission a suitably qualified, experienced and independent person, whose appointment has been approved by the Secretary to conduct monitoring on the land, to determine whether the project is complying with the relevant criteria in schedule 3, and identify the source(s) and scale of any impact on the land, and the project's contribution to this impact; and</p> <p>c) give the Secretary and landowner a copy of the independent review.</p>	Not Yet Applicable	Request for independent review has not been received to date.	A
3.	<p>If the independent review determines that the project is complying with the relevant criteria in schedule 3, then the Proponent may discontinue the independent review with the approval of the Secretary.</p>	Not Yet Applicable	Request for independent review has not been received to date.	A
4.	<p>If the independent review determines that the project is not complying with the relevant criteria in schedule 3, and that the project is primarily responsible for this non-compliance, then the Proponent shall:</p> <p>a) implement all reasonable and feasible measures, in consultation with the landowner, to ensure that the project complies with the relevant criteria; and</p> <p>b) conduct further monitoring to determine whether these measures ensure compliance; or</p> <p>c) secure a written agreement with the landowner to allow exceedances of the relevant criteria in schedule 3, to the satisfaction of the Secretary.</p>	Not Yet Applicable	Request for independent review has not been received to date.	A
<p>Red text reflects Modification 'MOD1' approved February 2011</p>				
* D = Documentation sighted		A = Advised by Company		O = On-site Observation

Table A (Cont'd)
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Cond. No.	Conditional Requirement	Compliance	Comments	Basis*
SCHEDULE 4 ADDITIONAL PROCEDURES (Cont'd)				
Independent Review (Cont'd)				
	If the additional monitoring referred to above subsequently determines that the project is complying with the relevant criteria in schedule 3, or the Proponent and landowner enter into a negotiated agreement to allow these exceedances, then the Proponent may discontinue the independent review with the approval of the Secretary .			
5.	If the landowner disputes the results of the independent review, either the Proponent or the landowner may refer the matter to the Secretary for resolution. If the matter cannot be resolved within 21 days, the Secretary shall refer the matter to an Independent Dispute Resolution Process (see Appendix 4).	Not Yet Applicable	Request for independent review has not been received to date.	A
SCHEDULE 5 ENVIRONMENTAL MANAGEMENT AND MONITORING CONDITIONS				
Environmental Management Strategy				
1.	The Proponent shall prepare and implement an Environmental Management Strategy for the project to the satisfaction of the Director-General. This strategy must: a) be submitted to the Director-General prior to starting quarrying operations on the site; b) provide the strategic context for environmental management of the project; c) identify the statutory requirements that apply to the project; d) describe in general how the environmental performance of the project would be monitored and managed; e) describe the procedures that would be implemented to: <ul style="list-style-type: none"> • keep the local community and relevant agencies informed about the construction, operation and environmental performance of the project; • receive, handle, respond to, and record complaints; • resolve any disputes that may arise during the life of the project; • respond to any non-compliance; 	Not Yet Applicable	Quarrying operations have not yet commenced . The revised Environmental Management Strategy (EMS) was approved 14/05/14. Section 1.2 of the EMS. Section 3.0 of the EMS. Section 5.0 of the EMS. Section 6.1 of the EMS. Section 6.2 of the EMS. Section 6.3 of the EMS. Section 7.0 of the EMS.	A, D
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Table A (Cont'd)
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Cond. No.	Conditional Requirement	Compliance	Comments	Basis*
SCHEDULE 5 ENVIRONMENTAL MANAGEMENT AND MONITORING CONDITIONS (Cont'd)				
Environmental Management Strategy (Cont'd)				
	<ul style="list-style-type: none"> • manage cumulative impacts; and • respond to emergencies; and f) describe the role, responsibility, authority, and accountability of the key personnel involved in the environmental management of the project. The Proponent shall implement the approved strategy as approved from time to time by the Secretary.		Section 8.0 of the EMS. Section 9.0 of the EMS. Section 4.0 and Appendix 2 of the EMS.	
Environmental Monitoring Program				
2.	The Proponent shall prepare an Environmental Monitoring Program for the project to the satisfaction of the Secretary . This program must be submitted to the Secretary prior to starting quarrying operations on the site, and consolidate the various monitoring requirements in Schedule 3 of this approval into a single document.	Not Yet Applicable	Operations have not yet commenced.	A, D
Incident Reporting				
3.	Within 24 hours of detecting an exceedance of the limits/performance criteria in this approval or the occurrence of an incident that causes (or may cause) material harm to the environment, the Proponent shall notify the Department and other relevant agencies of the exceedance/incident.	Not Yet Applicable	No exceedances or incidents have been recorded to date.	A, D
4.	a) Within 6 days of notifying the Department and other relevant agencies of an exceedance/incident, the Proponent shall provide the Department and these agencies with a written report that: b) describes the date, time, and nature of the exceedance/incident; c) identifies the cause (or likely cause) of the exceedance/incident; d) describes what action has been taken to date; and e) describes the proposed measures to address the exceedance/incident.	Not Yet Applicable	No exceedances or incidents have been recorded to date.	A, D
Red text reflects Modification 'MOD1' approved February 2011 * D = Documentation sighted A = Advised by Company O = On-site Observation				

Table A (Cont'd)
Compliance Review – Project Approval 05_0103B

Cond. No.	Conditional Requirement	Compliance	Comments	Basis*
SCHEDULE 5 ENVIRONMENTAL MANAGEMENT AND MONITORING CONDITIONS (Cont'd)				
Annual Reporting				
5.	<p>Within 12 months of the date of this approval, and annually thereafter, the Proponent shall submit an Annual Report to the Secretary and relevant agencies including Council. This report must:</p> <p>a) identify the standards and performance measures that apply to the project;</p> <p>b) describe the works carried out in the last 12 months;</p> <p>c) describe the works that will be carried out in the next 12 months;</p> <p>d) include a summary of the complaints received during the past year, and compare this to the complaints received in previous years;</p> <p>e) include a summary of the monitoring results for the project during the past year;</p> <p>f) include an analysis of these monitoring results against the relevant:</p> <ul style="list-style-type: none"> • impact assessment criteria/limits; • monitoring results from previous years; and • predictions in the EA; <p>g) identify any trends in the monitoring results over the life of the project;</p> <p>h) identify any non-compliance during the previous year;</p> <p>i) describe what actions were, or are being, taken to ensure compliance; and</p> <p>j) list the sources of VENM material received at the site and the tonnage of materials received from each source during the period to which the Annual Report refers.</p>	Compliant	<p>The first AEMR was submitted 15/06/10 (i.e. within 12 months of this approval 16/06/09). This AEMR was accepted by DP&I on 28/06/10.</p> <p>The 2015/2016 Annual Review was submitted 13/09/16, slightly beyond the 60 days, but in agreeance with DPE.</p>	D
<p align="center">Red text reflects Modification 'MOD1' approved February 2011</p> <p>* D = Documentation sighted A = Advised by Company O = On-site Observation</p>				



Table A (Cont'd)
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Cond. No.	Conditional Requirement	Compliance	Comments	Basis*
SCHEDULE 5 ENVIRONMENTAL MANAGEMENT AND MONITORING CONDITIONS (Cont'd)				
Independent Environmental Audit				
6.	<p>Within 2 years of the start of quarrying operations on site, and every 5 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:</p> <ul style="list-style-type: none"> a) be conducted by a suitably qualified, experienced, and independent person(s) whose appointment has been approved by the Secretary; b) include consultation with the relevant agencies; c) assess the environmental performance of the project, and its effects on the surrounding environment; d) assess whether the project is complying with the relevant standards, performance measures and statutory requirements; e) review the adequacy of any strategy/plan/program required under this approval; and, if necessary, f) recommend measures or actions to improve the environmental performance of the project, and/or any strategy/plan/program required under this approval. 	Not Yet Applicable	Quarrying operations have not yet commenced.	A, D
7.	<p>Within 1 month of completion of each Independent Environmental Audit, the Proponent shall submit a copy of the audit report to the Secretary and relevant agencies, with a response to all of the recommendations in the audit report.</p>	Not Yet Applicable	Quarrying operations have not yet commenced.	A, D
8.	<p>Following each Independent Environmental Audit, the Proponent shall review and if necessary revise each of the environmental management and monitoring strategies/plans/programs in schedules 3 and 5, to the satisfaction of the Secretary. The revised strategies/plans/programs shall be submitted to the Secretary within 6 months of completing the audit.</p>	Not Yet Applicable	Quarrying operations have not yet commenced.	A, D
<p>Red text reflects Modification 'MOD1' approved February 2011</p> <p>* D = Documentation sighted A = Advised by Company O = On-site Observation</p>				



Table A (Cont'd)
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Cond. No.	Conditional Requirement	Compliance	Comments	Basis*
SCHEDULE 5 ENVIRONMENTAL MANAGEMENT AND MONITORING CONDITIONS (Cont'd)				
Community Consultative Committee				
9.	<p>Prior to starting quarrying operations on the site, the Proponent shall establish a CCC for the project. This CCC must be established and operated in accordance with the <i>Guideline for Establishing and Operating Community Consultative Committees for Mining Developments</i>, and to the satisfaction of the Secretary.</p> <p><i>Note: With the approval of the Secretary, the Proponent may combine the CCC with the CCC for the Hanson Tweed sand extraction operation.</i></p>	Not Yet Applicable	Quarrying operations have not yet commenced. The CCC will be established during the next reporting period.	A, D
Access to Information				
10.	<p>Within 1 month of the approval of any plan/strategy/program required under this approval (or any subsequent revision of these plans/strategies/programs), or the completion of any independent environmental audit or Annual Report the Proponent shall:</p> <p>a) provide a copy of the relevant document/s to Council and relevant agencies; and</p> <p>b) ensure that a copy of the relevant document/s is made publicly available on site and/or at the Proponent's regional office and on the Proponent's website, to the satisfaction of the Secretary.</p>	Administrative Non-Compliance	<p>The approved 2009/2010 AEMR was not made available on the Company website within 1 month of approval.</p> <p>A copy was subsequently uploaded.</p> <p>Copies of the approved management plans have been placed on the Company website. Copies of the approved plans have also been provided to relevant government agencies, however, not within the 1 month timeframe.</p>	D
11.	<p>During the project, the Proponent shall:</p> <p>a) make a summary of monitoring results required under this approval publicly available at the Proponent's regional office and on the Proponent's website; and</p> <p>b) update these results regularly (at least every 3 months), to the satisfaction of the Secretary.</p>	Not Yet Applicable	<p>Monitoring as outlined within Schedule 3 has not yet commenced.</p> <p>It is noted that quarterly water quality monitoring undertaken in accordance with EPL 12385 is updated annually on the Company website.</p>	A
<p style="text-align: center;">Red text reflects Modification 'MOD1' approved February 2011</p> <p>* D = Documentation sighted A = Advised by Company O = On-site Observation</p>				

Table B
Compliance Review – Statement of Commitments (SoC)

SoC No.	Commitment	Compliance	Comments	Basis*
Area of Activities				
1.1	Survey and mark the boundaries of the areas of disturbance.	See Table A Schedule 3 Condition 1		
Sand Extraction and Processing				
2.1	Ensure extraction batters for all long-term boundaries are formed no steeper than 1:5 (V:H).	Not Yet Applicable	Extraction has not yet commenced	A, D
2.2	Ensure the extraction rate is contained to limit initial drawdown levels (see Commitments 7.1 and 7.3).	Not Yet Applicable	Extraction has not yet commenced	A, D
2.3	Ensure total extraction rates do not exceed 650 000m ³ per year.	See Table A Schedule 2 Condition 6		
2.4	Ensure no more than 200 000m ³ (300,000 tonnes) of sand is processed per year.	See Table A Schedule 2 Condition 7		
Operating Hours				
3.1	Undertake all site establishment activities between 7:00am and 6:00pm Monday to Friday and 7:00am to 1:00pm Saturdays.	See Table A Schedule 3 Condition 5		
3.2	Undertake all sand extraction (dredging to processing area) and processing between 7:00am and 10:00pm Monday to Friday and 7:00am to 4:00pm Saturdays.	See Table A Schedule 3 Condition 5		
3.3	Undertake all sand extraction (dredging to fill sites) between 7:00am to 6:30pm Monday to Friday and 7:00am to 1:00pm Saturdays.	See Table A Schedule 3 Condition 5		
3.4	Undertake all soil removal and sand extraction (excavation) between 7:00am and 6:00pm Monday to Friday and 7:00am to 1:00pm Saturdays.	See Table A Schedule 3 Condition 5		
3.5	Undertake all product distribution and VENM receipt between 7:00am and 6:00pm Monday to Friday and 7:00am to 1:00pm Saturdays.	See Table A Schedule 3 Condition 5		
3.6	Undertake audible site maintenance between 7:00am to 6:00pm Monday to Friday and 7:00am to 1:00pm Saturdays.	See Table A Schedule 3 Condition 5		
3.7	Undertake inaudible site maintenance at any time.	See Table A Schedule 3 Condition 5		
Waste Management				
4.1	Dispose all recyclables and general waste in appropriate waste receptacles.	Not Yet Applicable	Operations have not yet commenced and no wastes have been generated.	A, D
4.2	Place all oversize materials within the VENM(a) receival area.	Not Yet Applicable	Operations have not yet commenced.	A, D
4.3	Intern any oversize materials suspected of being acid generating to settle beneath at least 8m of water.	Not Yet Applicable	Operations have not yet commenced.	A, D
* D = Documentation sighted A = Advised by Company O = On-site Observation				

Table B (Cont'd)
Compliance Review – Statement of Commitments

SoC No.	Commitment	Compliance	Comments	Basis*
Rehabilitation				
5.1	Progressively backfill the northern extraction pond to the natural ground level.	Not Yet Applicable	Operations have not yet commenced.	A, D
5.2	Progressively backfill selected finalised sections of the southern extraction pond to create wetland areas.	Not Yet Applicable	Operations have not yet commenced.	A, D
5.3	Stabilise all earthworks and disturbed areas no longer required for Project-related activities in order to minimise erosion and sedimentation, dust lift-off and to reduce visual intrusion.	Not Yet Applicable	Operations have not yet commenced.	A, D
5.4	Conduct ongoing annual rehabilitation monitoring and maintenance.	Not Yet Applicable	Operations have not yet commenced.	A, D
5.5	Cross-rip all unsealed roads and remove all buildings and structures not required for the final land use.	Not Yet Applicable	Operations have not yet commenced.	A, D
5.6	Prepare a Rehabilitation Management Plan.	See Table A Schedule 3 Condition 29.		
Flooding and Drainage				
6.1	Construct and maintain shallow spillways (approximate elevation 1.3m AHD) within the bunds surrounding the extraction ponds at the eastern and western extent of the bunding adjacent the deepest part of the extraction pond.	Not Yet Applicable	Operations have not yet commenced.	A, D
6.2	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.	Not Yet Applicable	Operations have not yet commenced.	A, D
6.3	Fill the processing area approximately 0.75m to 1.0m above natural ground level (1.55m AHD to 1.8m AHD) to prevent inundation of the processing area during local catchment floods.	Not Yet Applicable	Operations have not yet commenced.	A, D
6.4	Block the entrance to the processing area with sand relocated from on-site stockpiles prior to a forecast Tweed River overbank flood to reduce the level of inundation within the processing area.	Not Yet Applicable	Operations have not yet commenced	A, D
6.5	Maintain drainage paths outside of the bunded and filled areas to allow floodwaters to drain freely.	Not Yet Applicable	Operations have not yet commenced.	A, D
6.6	Prepare a flood evacuation plan to ensure that personnel respond appropriately to a warning of an imminent Tweed River overbank flood.	Not Yet Applicable	Operations have not yet commenced.	A, D
6.7	Realign the western drainage channel parallel to and south of Altona Drive to provide a more efficient drain and allow faster drainage of floodwaters towards the Tweed River.	Not Yet Applicable	Altona Drive has not yet been realigned.	A, D
* D = Documentation sighted		A = Advised by Company		O = On-site Observation



Table B (Cont'd)
Compliance Review – Statement of Commitments

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SoC No.	Commitment	Compliance	Comments	Basis*
Groundwater (Cont'd)				
7.14	Negotiate an agreement with each affected landholder in the event water quality or quantity is adversely affected 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. 	Not Yet Applicable	Operations have not yet commenced.	A, D
7.15	Investigate and secure a suitable alternative water supply (or other form of compensation) for R.W. Julius commensurate with the agreed legal water usage from groundwater supplies from Lot 1 DP598073.	Not Yet Applicable	Operations have not yet commenced.	A, D
7.16	Monitor, using data loggers, water levels and water usage rates within the dams on the R. Julius property that would potentially be affected.	Not Yet Applicable	Operations have not yet commenced.	A, D
7.17	Implement the provision of an alternative water supply or other agreed compensation.	Not Yet Applicable	Operations have not yet commenced.	A, D
7.18	Provide copies of any negotiated agreements to the Department of Planning and Department of Water and Energy for their records.	Not Yet Applicable	Operations have not yet commenced.	A, D
Surface Water				
8.1	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.	Not Yet Applicable	Operations have not yet commenced.	A, D
8.2	Regularly monitor surface water to provide an accurate assessment of the adequacy of practices implemented as part of the operation.	Not Yet Applicable	Operations have not yet commenced.	A, D
Acid Sulfate Soils and Sediments, Soil Contamination and Agricultural Suitability				
9.1	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. 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.	Not Yet Applicable	Operations have not yet commenced.	A, D
9.2	Return all separated fines to the extraction ponds for final placement with the return outlet located at a minimum 3m below the water surface within the extraction ponds.	Not Yet Applicable	Operations have not yet commenced.	A, D
9.3	Settle silts/fines arising from processing a minimum depth (typically 8m) below the surface of the southern extraction pond.	Not Yet Applicable	Operations have not yet commenced.	A, D
* D = Documentation sighted A = Advised by Company O = On-site Observation				

Table B (Cont'd)
Compliance Review – Statement of Commitments

SoC No.	Commitment	Compliance	Comments	Basis*
Acid Sulfate Soils and Sediments, Soil Contamination and Agricultural Suitability (Cont'd)				
9.4	Do not extract residual clay material from the base of the sand resource.	Not Yet Applicable	Operations have not yet commenced.	A, D
9.5	Ensure a suitably qualified or trained person assesses imported material (VENM) in accordance with the ASSMAC guidelines and confirms its classification as VENM prior to acceptance at the Project Site.	Not Yet Applicable	Operations have not yet commenced.	A, D
9.6	Place VENM(b), received at the premises which is intended to be: <ul style="list-style-type: none"> dredged or interned within the southern extraction pond to settle at a minimum of 8m below the surface water; or placed within the northern extraction area a minimum depth of -2.0m AHD; within a nominated period.	Not Yet Applicable	Operations have not yet commenced.	A, D
9.7	Compile a site specific Acid Sulfate Soil and Sediment Management Plan for the Project in accordance with relevant legislation and in consultation with government agencies, in particular DPI - Water and DECC. Ensure the management plan covers both the management of acid generation during extraction operations and the management of potentially acid generating VENM(b).	See Table A Schedule 3 Condition 22		
9.8	Retain records of monitoring on site together with the application rates of the alkaline amendment used as neutralising agents. Provide these records to statutory authorities upon request.	Not Yet Applicable	Operations have not yet commenced.	A, D
9.9	Obtain documentation for each truck load of VENM(b) received at the Project Site that demonstrates that the excavation of VENM(b) and its transport and handling has been conducted in accordance with the NSW ASS Manual to prevent the generation of acid.	Not Yet Applicable	Operations have not yet commenced.	A, D
9.10	Submit to the DECC(EPA) an annual return (in accordance with the issued Environment Protection Licence) which outlines the results of all required monitoring.	Not Yet Applicable	Operations have not yet commenced.	A, D
9.11	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). 	Not Yet Applicable	Operations have not yet commenced.	A, D

* D = Documentation sighted

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O = On-site Observation



Table B (Cont'd)
Compliance Review – Statement of Commitments

SoC No.	Commitment	Compliance	Comments	Basis*
Traffic and Transport				
12.1	No vehicles permitted to turn right from Crescent Street to Tweed Coast Road. (Note: Light vehicles travelling south from the Project Site would be directed to travel on Crescent Street/Cudgen Road.)	Not Yet Applicable	Operations have not yet commenced.	A, D
12.2	No heavy vehicles to turn right from Altona Drive to Crescent Street.	Not Yet Applicable	Operations have not yet commenced.	A, D
12.3	Weigh all product trucks using the on-site weighbridge and ensure all RMS weight restrictions are adhered to.	Not Yet Applicable	Transport operations have not yet commenced.	A
12.4	Inform all truck drivers and staff of road rules, speed restrictions and considerate driving practices.	Not Yet Applicable	Transport operations have not yet commenced.	A
12.5	Ensure all drivers are aware of all relevant operational hours (See also Commitment No. 3.5).	Not Yet Applicable	Transport operations have not yet commenced.	A
12.6	Undertake mechanical road sweeping of Altona Drive and site access roads.	Not Yet Applicable	Operations have not yet commenced.	A
12.7	Cover all product loads to reduce dust lift off.	Not Yet Applicable	Transport operations have not yet commenced.	A
12.8	Realign Altona Drive in accordance with DA 05/1450.	Not Yet Applicable	Operations have not yet commenced.	A, D
12.9	Construct the upgraded intersection of Altona Drive and Crescent Street together with a short section of road to link with the existing Altona Drive and an additional two passing bays along the existing alignment of Altona Drive.	Not Yet Applicable	Operations have not yet commenced.	A, D
12.10	Construct the four entrances to the Project Site from Altona Drive with the sealed carriageway of Altona Drive flared out to 9m wide for approximately 15m in advance of each access (from the right hand turn perspective) using a 25m transitional length. Ensure the access road is 10m wide at its intersection with Altona Drive providing a 15m inside radius for the left hand turn out.	Not Yet Applicable	Operations have not yet commenced.	A, D
12.11	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.	Not Yet Applicable	The pipelines have not yet been installed.	A, D
12.12	Establish a telephone complaints line, advertised in the local telephone directory, to enable any traffic-related incidents, unsafe operation or general concern to be reported. Investigate all complaints and act decisively on substantiated incidents.	Not Yet Applicable	Operations have not yet commenced.	A, D
12.13	Implement a truck driver's code of conduct required to be signed by all Company employed or contracted truck drivers. The code will outline each truck driver's responsibility and the process to be undertaken in the event of a complaint.	Not Yet Applicable	Operations have not yet commenced.	A, D
* D = Documentation sighted A = Advised by Company O = On-site Observation				



Table B (Cont'd)
Compliance Review – Statement of Commitments

SoC No.	Commitment	Compliance	Comments	Basis*
Noise				
13.1	Acoustically treat the dredge including the enclosure of the engine with acoustic louvres and install a high performance muffler.	Not Yet Applicable	Extraction operations have not yet commenced.	A, D
13.2	Undertake a series of tests prior to commissioning the sand processing plant to ensure compliance with the noise limits at all locations and confirm that the equipment to be used on the Project Site have sound power levels comparable to those used within the noise modelling assessment.	Not Yet Applicable	Processing operations have not yet commenced.	A, D
13.3	Install an acoustic fence on the processing area bund (see Figure 2.6) to increase the height of the noise barrier on the southern side of the processing area.	Not Yet Applicable	Operations have not yet commenced.	A, D
13.4	Enclose the noisier components of the equipment to promote noise reduction of the plant.	Not Yet Applicable	Operations have not yet commenced.	A, D
13.5	Fit all mobile vehicles on the site with broadband type reversing beepers or alternative safety devices such as strobe lights and / or cameras.	Not Yet Applicable	Operations have not yet commenced.	A, D
13.6	Regularly service all equipment on site to ensure sound power levels of each item remains at or below that nominated for noise modelling purposes.	Not Yet Applicable	Operations have not yet commenced.	A, D
13.7	Maintain the internal road network to an acceptable standard to limit body noise from empty trucks.	Not Yet Applicable	Operations have not yet commenced.	A, D
13.8	Strictly adhere to all approved hours of operation.	Not Yet Applicable	Operations have not yet commenced.	A, D
13.9	Undertake a program of noise monitoring to confirm that noise emission levels from the site establishment and construction period are within acceptable limits at the surrounding assessment locations.	Not Yet Applicable	Operations have not yet commenced.	A, D
13.10	Undertake an ongoing monitoring program to demonstrate that noise emissions from the Project Site are within the Project specific noise limits at the surrounding assessment locations.	Not Yet Applicable	Operations have not yet commenced.	A, D
13.11	Regularly review the extent of noise monitoring throughout the life of the Project to ensure meaningful data is being collected.	Not Yet Applicable	Operations have not yet commenced.	A, D
Air Quality				
14.1	Install water sprays to control dusts generated during screening and dry processing.	Not Yet Applicable	Processing operations have not yet commenced.	A, D
14.2	Undertake progressive rehabilitation / stabilisation of available areas of disturbance (e.g. finalised sections or backfilled areas of the extraction ponds).	Not Yet Applicable	Extraction operations have not yet commenced.	A, D
14.3	Clean accumulated tracked road mud, dry dusts, sand or spillages on Altona Drive using a street sweeper.	Not Yet Applicable	Transport operations have not yet commenced.	A
14.4	Cover product trucks loads to prevent wind-borne losses and spillages.	Not Yet Applicable	Transport operations have not yet commenced.	A

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**Table B (Cont'd)
Compliance Review – Statement of Commitments**

SoC No.	Commitment	Compliance	Comments	Basis*
Air Quality (Cont'd)				
14.5	Prepare an air monitoring program to ensure that DECC air quality goals for dust (TSP, PM ₁₀ and deposited dust) are met.	See Table A Schedule 3 Condition 9		
14.6	Undertake monitoring in accordance to the DECC document "Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales" (DECC, 2005), and more specifically, in accordance with AS 2922-1987 "Ambient Air – Guide for the Siting of Sampling Units" (NSW DECC Method AM-1) and AS 3580.9.6-2003 "Particulate Matter – PM ₁₀ – high volume sampler with size-selective inlet".	Not Yet Applicable	Operations have not yet commenced.	A, D
14.7	Annually review the dust monitoring program to ensure that the data being collected is meaningful.	Not Yet Applicable	The program has not yet been approved and operations have not yet commenced.	A, D
14.8	Ensure the screening and blending plant does not exceed a daily <u>average</u> processing rate greater than 100tph.	Not Yet Applicable	Processing operations have not yet commenced.	A, D
Aboriginal Heritage				
15.1	Invite any Aboriginal stakeholders to observe during the burying of the pipelines within the northern pipeline corridor.	Not Yet Applicable	The pipelines have not yet been installed.	A, D
15.2	Stop works at and adjacent to any Aboriginal sites or relics, if found.	Not Applicable	No Aboriginal sites have been identified.	A
15.3	Contact the regional archaeologist of the Coffs Harbour DECC and relevant Aboriginal Stakeholders if any Aboriginal sites or relics, if found.	Not Applicable	No Aboriginal sites have been identified.	A
15.4	Receive authorisation from the DECC and Tweed Byron LALC prior to proceeding with any works in the vicinity of any identified Aboriginal sites or relics, if found.	Not Applicable	No Aboriginal sites have been identified.	A
15.5	Prepare a simple Cultural Heritage Information booklet for use in induction of employees and contractors.	Compliant	The Aboriginal Cultural Heritage Management Plan will act as the induction manual.	D
15.6	Undertake agency consultation with Aboriginal representatives in relation to the ongoing management of identified items of Aboriginal heritage.	Not Applicable	No Aboriginal sites have been identified.	A
Visibility				
16.1	Surround the processing area by a 3m high bund planted with native shrub species.	Not Yet Applicable	Construction operations have not yet commenced.	A, D
16.2	Plant a visual screen between the eastern extent of the extraction sites and Tweed Coast Road providing visual screening from motorists on Tweed Coast Road.	See Table A Schedule 3 Condition 41.		
16.3	Progressively rehabilitate the Project Site such that non-vegetated areas would be minimised.	Not Yet Applicable	Extraction operations have not yet commenced.	A, D
* D = Documentation sighted A = Advised by Company O = On-site Observation				

Table B (Cont'd)
Compliance Review – Statement of Commitments

Page 12 of 12

SoC No.	Commitment	Compliance	Comments	Basis*
Visibility (Cont'd)				
16.4	Maintain the Project Site in a clean and tidy condition at all times.	Compliant	Quarry Site, although not operational, is maintained in a clean and tidy condition.	A
16.5	Implement air quality controls (see Commitment No. 14).	See Table B Commitment No. 14		
16.6	Position and direct floodlights or other lighting to minimise light emissions, with lighting not required at any given time not used.	Not Yet Applicable	Operations have not yet commenced.	A, D
* D = Documentation sighted A = Advised by Company O = On-site Observation				

Table C
Compliance Review – Environmental Protection Licence 12385

Page 1 of 8

Cond. No.	Commitment	Compliance	Comments	Basis*						
1. Administrative Controls										
A1 What the licence authorises and regulates										
A1.1	This licence authorises the carrying out of the scheduled development work listed below at the premises listed in A2: Consent to remove 400 000 cubic metres of sand over a 7ha area and hydraulic transportation to a fill site used for development.	Compliant	No other scheduled development works undertaken during the reporting period.	A						
A1.2	This licence authorises the carrying out of the scheduled activities listed below at the premises specified in A2. The activities are listed according to their scheduled activity classification, fee-based activity classification and the scale of the operation. Unless otherwise further restricted by a condition of this licence, the scale at which the activity is carried out must not exceed the maximum scale specified in this condition.	Compliant	No extraction occurred during the reporting period (i.e. extraction did not exceed the licenced scale).	A, D						
	<table border="1" data-bbox="306 913 895 1048"> <thead> <tr> <th>Scheduled Activity</th> <th>Fee Based Activity</th> <th>Scale</th> </tr> </thead> <tbody> <tr> <td>Extractive Activities</td> <td>Water-based extractive activity</td> <td>0 - 30000 m³ extracted</td> </tr> </tbody> </table>	Scheduled Activity	Fee Based Activity	Scale	Extractive Activities	Water-based extractive activity	0 - 30000 m ³ extracted			
Scheduled Activity	Fee Based Activity	Scale								
Extractive Activities	Water-based extractive activity	0 - 30000 m ³ extracted								
A1.3	The licensee must not carry on any scheduled activities until the scheduled development works are completed, except as elsewhere provided in this licence.	Compliant	No scheduled activities were undertaken during the reporting period.	A						
A2 Premises or plant to which this licence applies										
A2.1	The licence applies to the following premises: Premises Details CUDGEN LAKES CRESCENT STREET CUDGEN NSW 2487 LOT 2 DP 216705, LOT 1 DP 828298, LOT 2 DP 828298	Noted	-	-						
A3 Information supplied to the EPA										
A3.1	Works and activities must be carried out in accordance with the proposal contained in the licence application, except as expressly provided by a condition of this licence. In this condition the reference to "the licence application" includes a reference to: c) the applications for any licences (including former pollution control approvals) which this licence replaces under the Protection of the Environment Operations (Savings and Transitional) Regulation 1998; and d) the licence information form provided by the licensee to the EPA to assist the EPA in connection with the issuing of this licence.	Compliant	No operations were undertaken during the reporting period (and therefore no inconsistencies have arisen).	A, D						
* D = Documentation sighted A = Advised by Company O = On-site Observation										



Table C (Cont'd)
Compliance Review – Environmental Protection Licence 12385

Page 2 of 8

Cond. No.	Commitment	Compliance	Comments	Basis*								
2 Discharges to Air and Water and Applications to Land												
P1 Location of monitoring/discharge points and areas												
P1.1	The following points referred to in the table are identified in this licence for the purposes of the monitoring and/or the setting of limits for discharges of pollutants to water from the point.	Noted	-	-								
P1.2	The following utilisation areas referred to in the table below are identified in this licence for the purposes of the monitoring and/or the setting of limits for any application of solids or liquids to the utilisation area. Water and Land	Noted	Monitoring undertaken at this point.	D								
	<table border="1"> <thead> <tr> <th>EPA Id. No.</th> <th>Type of Monitoring Point</th> <th>Type of Discharge Point</th> <th>Location Description</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Water Quality Monitoring</td> <td></td> <td>Dredge Pond</td> </tr> </tbody> </table>	EPA Id. No.	Type of Monitoring Point	Type of Discharge Point	Location Description	1	Water Quality Monitoring		Dredge Pond			
EPA Id. No.	Type of Monitoring Point	Type of Discharge Point	Location Description									
1	Water Quality Monitoring		Dredge Pond									
3 Limit Conditions												
L1 Pollution of waters												
L1.1	Except as may be expressly provided in any other condition of this licence, the licensee must comply with section 120 of the Protection of the Environment Operations Act 1997.	Compliant	No pollution of waters is deemed to have occurred during the reporting period.	A, D								
L2 Noise limits												
L2.1	Noise from the dredge pond must not exceed an LA _{eq(15 minute)} noise emission criterion of 46 dB(A) during 7am to 5pm Monday to Friday and 7am to 1pm on Saturdays. Where LA _{eq} means the equivalent continuous noise level – the level of noise equivalent to the energy-average of noise levels occurring over a measurement period, except as expressly provided by this licence.	Compliant	As no operational activities occurred during the reporting period, no exceedance of noise criterion will have occurred.	A, D								
L2.2	Noise from the premises is to be measured at the nearest noise sensitive receiver to determine compliance with this condition. Note: Noise generated from the fill site must be managed according to the licensee's Construction Noise Management Plan (Ron Rumble Pty Ltd, October 2005).	Not Applicable	As no operational activities occurred during the reporting period, no noise monitoring was required.	A, D								
L3 Hours of operation												
L3.1	Activities covered by this licence must only be carried out between the hours of 0700 and 1800 Monday to Friday, and 0700 and 1300 Saturday, and at no time on Sundays and Public Holidays.	Compliant	No licenced activities occurred (within or outside of the approved hours).	A								
* D = Documentation sighted A = Advised by Company O = On-site Observation												

Table C (Cont'd)
Compliance Review – Environmental Protection Licence 12385

Page 3 of 8

Cond. No.	Commitment	Compliance	Comments	Basis*
4 Operating Conditions				
O1 Activities must be carried out in a competent manner				
O1.1	Licensed activities must be carried out in a competent manner. This includes: e) the processing, handling, movement and storage of materials and substances used to carry out the activity; and f) the treatment, storage, processing, reprocessing, transport and disposal of waste generated by the activity.	Compliant	No operational activities occurred. Water monitoring undertaken by HMC Environmental Consultants in a competent manner.	A, D
O2 Maintenance of plant and equipment				
O2.1	All plant and equipment installed at the premises or used in connection with the licensed activity: g) must be maintained in a proper and efficient condition; and h) must be operated in a proper and efficient manner.	Not Applicable	No plant or equipment was in place at the premises during the reporting period.	A, D
O3 Dust				
O3.1	The premises must be maintained in a condition which minimises or prevents the emission of dust from the premises.	Compliant	The sand stockpile created by the initial dredge pond has been grassed over. No complaints or issues have arisen.	A, D
O4 Processes and management				
O4.1	This licence prohibits any discharge from active dredge ponds. Any pond subject to dredging, or containing turbid water due to recent dredging must be maintained and operated to prevent discharges of any water from these ponds. A vegetated barrier must be used at all times to ensure that the active dredge and fines placement area / pond are isolated from stormwater drainage channels.	Not Applicable	No dredging has been undertaken since 2006 and therefore no active dredge pond present during the reporting period.	A, D
O4.2	The fill site must be adequately bunded to ensure that all tail water is retained within the tail water pond and that all fill material is retained within the site.	Not Applicable	No fill material was pumped to the fill site.	A, D
O5 Other operating conditions				
O5.1	The licensee must assess and manage any acid sulfate soil (ASS) and potential acid sulfate soil (PASS) in accordance with the 1998 <i>Acid Sulfate Soils Manual</i> published by the NSW Acid Sulfate Soil Management Advisory Committee (ASSMAC).	Compliant	As no operational activities occurred during the reporting period no specific ASS / PASS management measures were necessary.	A, D

* D = Documentation sighted

A = Advised by Company

O = On-site Observation

Table C (Cont'd)
Compliance Review – Environmental Protection Licence 12385

Cond. No.	Commitment	Compliance	Comments	Basis*																								
5. Monitoring and Recording Conditions																												
M1 Monitoring records																												
M1.1	The results of any monitoring required to be conducted by this licence or a load calculation protocol must be recorded and retained as set out in this condition.	Compliant	The monitoring records have been retained as required.	D																								
M1.2	All records required to be kept by this licence must be: i) in a legible form, or in a form that can readily be reduced to a legible form; j) kept for at least 4 years after the monitoring or event to which they relate took place; and k) produced in a legible form to any authorised officer of the EPA who asks to see them.	Compliant	Monitoring has been retained in a legible form for more than 4 years. No requests from an EPA officer were received.	A, D																								
M1.3	The following records must be kept in respect of any samples required to be collected for the purposes of this licence: l) the date(s) on which the sample was taken; m) the time(s) at which the sample was collected; n) the point at which the sample was taken; and o) the name of the person who collected the sample.	Compliant	Monitoring records contain all required information.	D																								
M2 Requirement to monitor concentration of pollutants discharged																												
M2.1	For each monitoring/discharge point or utilisation area specified below (by a point number), the licensee must monitor (by sampling and obtaining results by analysis) the concentration of each pollutant specified in Column 1. The licensee must use the sampling method, units of measure, and sample at the frequency, specified opposite in the other columns:	Compliant	Monitoring undertaken in accordance with these requirements.	D																								
M2.2	Water and/ or Land Monitoring Requirements. <table border="1" style="margin-left: 20px; margin-right: 20px;"> <thead> <tr> <th>Pollutant</th> <th>Units of measure</th> <th>Frequency</th> <th>Sampling Method</th> </tr> </thead> <tbody> <tr> <td>Dissolved Oxygen</td> <td>milligrams per litre</td> <td>Quarterly</td> <td>In situ</td> </tr> <tr> <td>pH</td> <td>pH</td> <td>Quarterly</td> <td>In situ</td> </tr> <tr> <td>Redox potential</td> <td>millivolts</td> <td>Quarterly</td> <td>In situ</td> </tr> <tr> <td>Salinity</td> <td>millisiemens per centimetre</td> <td>Quarterly</td> <td>In situ</td> </tr> <tr> <td>Temperature</td> <td>degrees Celsius</td> <td>Quarterly</td> <td>In situ</td> </tr> </tbody> </table>	Pollutant	Units of measure	Frequency	Sampling Method	Dissolved Oxygen	milligrams per litre	Quarterly	In situ	pH	pH	Quarterly	In situ	Redox potential	millivolts	Quarterly	In situ	Salinity	millisiemens per centimetre	Quarterly	In situ	Temperature	degrees Celsius	Quarterly	In situ	Compliant	All required analytes were sampled at the frequency required using in situ methods.	D
Pollutant	Units of measure	Frequency	Sampling Method																									
Dissolved Oxygen	milligrams per litre	Quarterly	In situ																									
pH	pH	Quarterly	In situ																									
Redox potential	millivolts	Quarterly	In situ																									
Salinity	millisiemens per centimetre	Quarterly	In situ																									
Temperature	degrees Celsius	Quarterly	In situ																									
M3 Testing methods - concentration limits																												
M3.1	Subject to any express provision to the contrary in this licence, monitoring for the concentration of a pollutant discharged to waters or applied to a utilisation area must be done in accordance with the Approved Methods Publication unless another method has been approved by the EPA in writing before any tests are conducted.	Not Applicable	No discharges or application of water occurred during the reporting period.	A																								
* D = Documentation sighted A = Advised by Company O = On-site Observation																												

Table C (Cont'd)
Compliance Review – Environmental Protection Licence 12385

Page 5 of 8

Cond. No.	Commitment	Compliance	Comments	Basis*
5 Monitoring and Recording Conditions (Cont'd)				
M4 Recording of pollution complaints				
M4.1	The licensee must keep a legible record of all complaints made to the licensee or any employee or agent of the licensee in relation to pollution arising from any activity to which this licence applies.	Not Applicable	No complaints received during the reporting period.	A, D
M4.2	The record must include details of the following: p) the date and time of the complaint; q) the method by which the complaint was made; r) any personal details of the complainant which were provided by the complainant or, if no such details were provided, a note to that effect; s) the nature of the complaint; t) the action taken by the licensee in relation to the complaint, including any follow-up contact with the complainant; and u) if no action was taken by the licensee, the reasons why no action was taken.	Not Applicable	No complaints received during the reporting period.	A, D
M4.3	The record of a complaint must be kept for at least 4 years after the complaint was made.	Not Applicable	No complaints received during the previous 4 years.	A, D
M4.4	The record must be produced to any authorised officer of the EPA who asks to see them.	Not Applicable	No requests received during the reporting period.	A
M5 Telephone complaints line				
M5.1	The licensee must operate during its operating hours a telephone complaints line for the purpose of receiving any complaints from members of the public in relation to activities conducted at the premises or by the vehicle or mobile plant, unless otherwise specified in the licence.	Compliant	The mobile phone contact for the Managing Director, 0414 322 455, was the relevant complaints contact during the reporting period.	A, D
M5.2	The licensee must notify the public of the complaints line telephone number and the fact that it is a complaints line so that the impacted community knows how to make a complaint.	Compliant	The complaints number is included on the Company website.	A, D
M5.3	The preceding two conditions do not apply until 3 months after: v) the date of the issue of this licence or w) if this licence is a replacement licence within the meaning of the Protection of the Environment Operations (Savings and Transitional) Regulation 1998, the date on which a copy of the licence was served on the licensee under clause 10 of that regulation.	No Longer Applicable	The licence was issued 18/11/2005 (i.e. more than 3 months prior).	D
* D = Documentation sighted A = Advised by Company O = On-site Observation				

Table C (Cont'd)
Compliance Review – Environmental Protection Licence 12385

Page 6 of 8

Cond. No.	Commitment	Compliance	Comments	Basis*
6 Reporting Conditions				
R1 Annual return documents				
R1.1	The licensee must complete and supply to the EPA an Annual Return in the approved form comprising: x) a Statement of Compliance; and y) a Monitoring and Complaints Summary. At the end of each reporting period, the EPA will provide to the licensee a copy of the form that must be completed and returned to the EPA.	Compliant	The completed annual return for the period 18 November 2014 to 17 November 2015 was received by the EPA on 14 January 2016.	D
R1.2	An Annual Return must be prepared in respect of each reporting period, except as provided below.	Compliant	The completed annual return for the period 18 November 2014 to 17 November 2015 was received by the EPA on 14 January 2016.	D
R1.3	Where this licence is transferred from the licensee to a new licensee: z) the transferring licensee must prepare an Annual Return for the period commencing on the first day of the reporting period and ending on the date the application for the transfer of the licence to the new licensee is granted; and aa) the new licensee must prepare an Annual Return for the period commencing on the date the application for the transfer of the licence is granted and ending on the last day of the reporting period.	Not Applicable	The licence has not been transferred.	D
R1.4	Where this licence is surrendered by the licensee or revoked by the EPA or Minister, the licensee must prepare an Annual Return in respect of the period commencing on the first day of the reporting period and ending on: bb) in relation to the surrender of a licence - the date when notice in writing of approval of the surrender is given; or cc) in relation to the revocation of the licence - the date from which notice revoking the licence operates.	Not Applicable	The licence has not been surrendered.	D
R1.5	The Annual Return for the reporting period must be supplied to the EPA by registered post not later than 60 days after the end of each reporting period or in the case of a transferring licence not later than 60 days after the date the transfer was granted (the 'due date').	Compliant	The completed annual return for the period 18 November 2014 to 17 November 2015 was received by the EPA on 14 January 2016.	D
R1.6	The licensee must retain a copy of the Annual Return supplied to the EPA for a period of at least 4 years after the Annual Return was due to be supplied to the EPA.	Compliant	Copies of annual returns retained for more than 4 years.	A
* D = Documentation sighted A = Advised by Company O = On-site Observation				

Table C (Cont'd)
Compliance Review – Environmental Protection Licence 12385

Cond. No.	Commitment	Compliance	Comments	Basis*
6 Reporting Conditions (Cont'd)				
R1 Annual return documents (Cont'd)				
R1.7	Within the Annual Return, the Statement of Compliance must be certified and the Monitoring and Complaints Summary must be signed by: dd) the licence holder; or ee) by a person approved in writing by the EPA to sign on behalf of the licence holder.	Compliant	The Annual Return was signed by the licenced holder.	A
R1.8	A person who has been given written approval to certify a certificate of compliance under a licence issued under the <i>Pollution Control Act 1970</i> is taken to be approved for the purpose of this condition until the date of first review of this licence. Note: The term "reporting period" is defined in the dictionary at the end of this licence. Do not complete the Annual Return until after the end of the reporting period. Note: An application to transfer a licence must be made in the approved form for this purpose.	Noted	-	-
R2 Notification of environmental harm				
R2.1	Notifications must be made by telephoning the Environment Line service on 131 555.	Noted	-	-
R2.2	The licensee must provide written details of the notification to the EPA within 7 days of the date on which the incident occurred. Note: The licensee or its employees must notify all relevant authorities of incidents causing or threatening material harm to the environment immediately after the person becomes aware of the incident in accordance with the requirements of Part 5.7 of the Act.	Not Applicable	No reportable incidents occurred during the reporting period.	A, D
R3 Written report				
R3.1	Where an authorised officer of the EPA suspects on reasonable grounds that: ff) where this licence applies to premises, an event has occurred at the premises; or gg) where this licence applies to vehicles or mobile plant, an event has occurred in connection with the carrying out of the activities authorised by this licence, and the event has caused, is causing or is likely to cause material harm to the environment (whether the harm occurs on or off premises to which the licence applies), the authorised officer may request a written report of the event.	Not Applicable	No requests received.	A
* D = Documentation sighted A = Advised by Company O = On-site Observation				

Table C (Cont'd)
Compliance Review – Environmental Protection Licence 12385

Page 8 of 8

Cond. No.	Commitment	Compliance	Comments	Basis*
6 Reporting Conditions (Cont'd)				
R3 Written report (Cont'd)				
R3.2	The licensee must make all reasonable inquiries in relation to the event and supply the report to the EPA within such time as may be specified in the request.	Not Applicable	No requests received.	A
R3.3	The request may require a report which includes any or all of the following information: hh) the cause, time and duration of the event; ii) the type, volume and concentration of every pollutant discharged as a result of the event; jj) the name, address and business hours telephone number of employees or agents of the licensee, or a specified class of them, who witnessed the event; kk) the name, address and business hours telephone number of every other person (of whom the licensee is aware) who witnessed the event, unless the licensee has been unable to obtain that information after making reasonable effort; ll) action taken by the licensee in relation to the event, including any follow-up contact with any complainants; mm) details of any measure taken or proposed to be taken to prevent or mitigate against a recurrence of such an event; and nn) any other relevant matters.	Not Applicable	No requests received.	A
R3.4	The EPA may make a written request for further details in relation to any of the above matters if it is not satisfied with the report provided by the licensee. The licensee must provide such further details to the EPA within the time specified in the request.	Not Applicable	No requests received.	A
7 General Conditions				
G1 Copy of licence kept at the premises or plant				
G1.1	A copy of this licence must be kept at the premises to which the licence applies.	Yes	A copy is retained by the site caretaker.	A
G1.2	The licence must be produced to any authorised officer of the EPA who asks to see it.	Not Applicable	No requests received.	A
G1.3	The licence must be available for inspection by any employee or agent of the licensee working at the premises.	Yes	A copy is retained by the site caretaker and is available upon request.	A
* D = Documentation sighted A = Advised by Company O = On-site Observation				

Table D (Cont'd)
Compliance Review – Water Licence 30BL207142

Page 2 of 4

Cond. No.	Commitment	Compliance	Comments	Basis*
9.	The licensed work must not be filled with silts and fines from the sand mining operation to a final depth level that is higher than 8.0 metres below 0.0 AHD (Australian Height Datum).	Compliant	No silts or fines have been placed within the initial dredge pond.	A
10.	At all times during the life of the quarry, the silts and fines in the excavated work must be covered by at least 4.0 metres of water.	Not Applicable	No silts or fines have been placed within the initial dredge pond.	A
11.	The licensee must manage the work in such a way that the quality of the surrounding groundwater is not diminished.	Compliant	Given no operational activities were undertaken and the sand stockpile has been grassed, it is considered that compliance will have been achieved.	A
12.	The licensee must ensure that any silts and fines that are put into the licensed work enter the said work at least 3 metres below the surface of any water in the said work.	Not Applicable	No silts or fines have been placed within the initial dredge pond.	A
13.	The licensee must undertake measurements of surface water & groundwater field parameters and water quality testing in accordance with sections 6 & 7 of the Soil & Water Management Plan for the Cudgen Lakes Sand Quarry (April 2014).	Not Applicable	Operational dredging has not yet commenced.	A, D
14.	a) Every week groundwater parameters are to be measured at 0.5 metres below the surface water level for pH, EC (electrical conductivity), do (dissolved oxygen), eh (redox potential) once. should the pH fall below 5.0 then lime should be immediately added to the water in the excavation until the pH is restored to approximately 7 ph. b) Every three months groundwater parameters are to be recorded at 1 metre vertical intervals measured from the water surface to the base of the licensed work (excavation) for pH, EC (Electrical Conductivity), do (dissolved oxygen), eh (redox potential) once. c) Provide copies of the instrument calibration at the time the readings were undertaken to DPI Water with the annual report as outlined in Condition 16.	Not Applicable	Operational dredging has not yet commenced.	A, D
15.	The licensee shall record the groundwater levels in the sand excavation and the monitoring bores at monthly intervals and determined groundwater flow contours (relative to AHD) to show the groundwater flow directions on the site. This information is to be included in the annual report as outlined in Condition 16.	Not Applicable	Operational dredging has not yet commenced.	A, D

* D = Documentation sighted A = Advised by Company O = On-site Observation



Table D (Cont'd)
Compliance Review – Water Licence 30BL207142

Page 3 of 4

Cond. No.	Commitment	Compliance	Comments	Basis*
16.	The licensee shall engage a qualified consultant to prepare a groundwater management report based on the data collected on a yearly basis and both a hard copy and digital copy forwarded to DPI Water hydrogeology section in Grafton. In the event that a groundwater mound is found to be forming beneath the work or groundwater around the work has been contaminated, the licensee must inform this department within 14 days of the event being ascertained.	Not Applicable	Operational dredging has not yet commenced.	A, D
17.	Security is to be given and provided for the purpose of ensuring the due and proper compliance with the conditions of this Licence and Licence 30BL207145. The licensee shall lodge with the department prior to the grant of this licence a security deposit of \$250,000 in the form of the document attached as form SG1. The department may at the request of the licensee make or allow a reduction of the amount of the security by an amount which in its opinion is just and reasonable. Any reduction shall not operate so as to waive prejudice release or discharge any of the conditions of this licence or any of the obligations imposed on the licensee by this licence.	Not Yet Applicable	Request lodged with DPI Water 04/07/16 (following provision of licence conditions by DPI Water on 03/06/16) to defer payment of additional security deposit until prior to any extraction operations. DPI Water is still processing the request.	D
18.	The licensee shall not allow any tail water/drainage to discharge into or onto: <ul style="list-style-type: none"> • Any adjoining public or crown road; • Any other persons land; • Any crown land; • Any river, creek or watercourse; • Any native vegetation as described under the <i>Native Vegetation Conservation Act 1997</i>; • Any wetlands of environmental significance. 	Not Yet Applicable	Operational dredging has not yet commenced.	A, D
19.	Works used for the purpose of conveying, distributing or storing water from the work authorised by this licence shall not be constructed or installed so as to obstruct the free passage of floodwaters flowing in, to or from a river or lake.	Yes	The existing initial dredge pond does not unduly obstruct flood waters.	O, D
20.	During the first year of issue of this license the volumetric allocation is directly proportional from the date of issue of the license to the end of the irrigation year.	Noted	-	-

* D = Documentation sighted

A = Advised by Company

O = On-site Observation



Table D (Cont'd)
Compliance Review – Water Licence 30BL207142

Page 4 of 4

Cond. No.	Commitment	Compliance	Comments	Basis*
21.	DPI Water shall have the right during the currency of this license to vary at any time the volumetric allocation, or the rate at which this allocation is taken.	Noted	The volumetric allocation has not been varied.	A
22.	The volume of groundwater extracted from the works authorised by this license and by license(s) 30BL207145 shall not exceed 700 megalitres in any 12 month period commencing 1st July.	Yes	No operations have occurred and therefore water take is currently nil.	A, D
23.	The work authorised by this license shall not exceed a depth of 20 metres.	Yes	The initial dredge pond remains within this depth restriction.	A, D
24.	The works shall be managed in accordance with the acid sulfate soil management plan for the Cudgen Lakes Sand Quarry approved by DPI Water.	Not Yet Applicable	Operations have not yet commenced.	A, D

* D = Documentation sighted A = Advised by Company O = On-site Observation

Table E
Compliance Review – Water Licence 30BL207145

Page 1 of 4

Cond. No.	Commitment	Compliance	Comments	Basis*
1.	The licensee must allow authorised officers of DPI Water, and its authorised agents reasonable access to the licensed works with vehicles and equipment at any time for the purposes of: <ul style="list-style-type: none"> Inspecting the said work Taking samples of any water or material in the work and testing the samples. 	Compliant	No access known to have occurred during reporting period.	A
2.	If the licensee proposes to cease using the work, they must notify DPI Water of their intention to do so, in writing at least three months in advance.	Not Applicable	The Company did not propose to cease using the work during the reporting period.	A
3.	In the event that any notice is given pursuant to Condition 2, the licensee must submit a proposal to the department indicating how the licensed work is to be sealed and rendered safe.	Not Applicable	As above	A
4.	The licensee must carry out any works directed to be carried out by DPI Water for remediation of the site caused by contamination of soil/groundwater, or changes to the works structure, including: capping, slope, bank stabilisation and revegetation upon completion of filling operations. Monitoring of the site is required for a period of 3 years or a period as may be agreed to by DPI Water.	Not Applicable	No directions received during the reporting period.	A
5.	The authorised work shall not be used for the discharge of polluted water into a river or lake otherwise than in accordance with the conditions of a licence granted under the <i>Protection of the Environment Operations Act 1997</i> . A copy of the licence to discharge is to be provided to DPI Water.	Not Yet Applicable	No excavation has occurred within the Northern Extraction Site.	A
6.	The licensee must not alter the location of the southern dredge pond excavation or enlarge the excavation beyond the dimensions shown on Figure 2.4 of the Project Approval of project 05-0103 (dated 16/6/2009) held at the Department's Grafton office.	Not Yet Applicable	No excavation has occurred within the Northern Extraction Site.	D
7.	The licensee must manage the work in such a way that the drawdown of the natural water levels from operation of the quarry does not result in impacts due to acidification of the acid sulfate soils surrounding the Cudgen Lakes Sand Quarry.	Not Yet Applicable	No dredging or other No excavation has occurred within the Northern Extraction Site.	A
8.	The licensee must manage the work in such a way that by-products from any acid sulfate soils placed in the work do not escape into the groundwater systems surrounding the work.	Not Yet Applicable	No excavation has occurred within the Northern Extraction Site.	A

* D = Documentation sighted

A = Advised by Company

O = On-site Observation

Table E (Cont'd)
Compliance Review – Water Licence 30BL207145

Cond. No.	Commitment	Compliance	Comments	Basis*
9.	The licensed work must not be filled with silts and fines from the sand mining operation.	Not Yet Applicable	No excavation has occurred within the Northern Extraction Site.	A
10.	The licensee must manage the work in such a way that the quality of the surrounding groundwater is not diminished.	Compliant	Given no operational activities were undertaken and the sand stockpile has been grassed, it is considered that compliance will have been achieved.	A
11.	The licensee must undertake measurements of surface water & groundwater field parameters and water quality testing in accordance with sections 6 & 7 of the Soil & Water Management Plan for the Cudgen Lakes Sand Quarry (April 2014).	Not Yet Applicable	No excavation has occurred within the Northern Extraction Site.	A, D
12.	a) Every week groundwater parameters are to be measured at 0.5 metres below the surface water level for pH, EC (electrical conductivity), do (dissolved oxygen), eh (redox potential) once. should the pH fall below 5.0 then lime should be immediately added to the water in the excavation until the pH is restored to approximately 7 ph. b) Every three months groundwater parameters are to be recorded at 1 metre vertical intervals measured from the water surface to the base of the licensed work (excavation) for pH, EC (Electrical Conductivity), do (dissolved oxygen), eh (redox potential) once. c) Provide copies of the instrument calibration at the time the readings were undertaken to DPI Water with the annual report as outlined in Condition 14.	Not Yet Applicable	No excavation has occurred within the Northern Extraction Site.	A, D
13.	The licensee shall record the groundwater levels in the sand excavation and the monitoring bores at monthly intervals and determined groundwater flow contours (relative to AHD) to show the groundwater flow directions on the site. This information is to be included in the annual report as outlined in Condition 14.	Not Yet Applicable	No excavation has occurred within the Northern Extraction Site.	A, D

* D = Documentation sighted A = Advised by Company O = On-site Observation

Table E (Cont'd)
Compliance Review – Water Licence 30BL207145

Page 3 of 4

Cond. No.	Commitment	Compliance	Comments	Basis*
14.	The licensee shall engage a qualified consultant to prepare a groundwater management report based on the data collected on a yearly basis and both a hard copy and digital copy forwarded to DPI Water hydrogeology section in Grafton. In the event that a groundwater mound is found to be forming beneath the work or groundwater around the work has been contaminated, the licensee must inform this department within 14 days of the event being ascertained.	Not Yet Applicable	No excavation has occurred within the Northern Extraction Site.	A, D
15.	Security is to be given and provided for the purpose of ensuring the due and proper compliance with the conditions of this Licence and Licence 30BL207142. The licensee shall lodge with the department prior to the grant of this licence a security deposit of \$250,000 in the form of the document attached as form SG1. The department may at the request of the licensee make or allow a reduction of the amount of the security by an amount which in its opinion is just and reasonable. Any reduction shall not operate so as to waive prejudice release or discharge any of the conditions of this licence or any of the obligations imposed on the licensee by this licence.	Not Yet Applicable	Request lodged with DPI Water 04/07/16 (following provision of licence conditions by DPI Water on 03/06/16) to defer payment of additional security deposit until prior to any extraction operations. DPI Water is still processing the request.	D
16.	The licensee shall not allow any tail water/drainage to discharge into or onto: <ul style="list-style-type: none"> • Any adjoining public or crown road; • Any other persons land; • Any crown land; • Any river, creek or watercourse; • Any native vegetation as described under the <i>Native Vegetation Conservation Act 1997</i>; • Any wetlands of environmental significance. 	Not Yet Applicable	No excavation has occurred within the Northern Extraction Site.	A, D
17.	Works used for the purpose of conveying, distributing or storing water from the work authorised by this license shall not be constructed or installed so as to obstruct the free passage of floodwaters flowing in, to or from a river or lake.	Not Yet Applicable	No excavation has occurred within the Northern Extraction Site.	O, D
18.	During the first year of issue of this license the volumetric allocation is directly proportional from the date of issue of the license to the end of the irrigation year.	Noted	-	-

* D = Documentation sighted

A = Advised by Company

O = On-site Observation



Table E (Cont'd)
Compliance Review – Water Licence 30BL207145

Page 4 of 4

Cond. No.	Commitment	Compliance	Comments	Basis*
19.	DPI Water shall have the right during the currency of this license to vary at any time the volumetric allocation, or the rate at which this allocation is taken.	Noted	The volumetric allocation has not been varied.	A
20.	The volume of groundwater extracted from the works authorised by this license and by license(s) 30BL207142 shall not exceed 700 megalitres in any 12 month period commencing 1st July.	Yes	No operations have occurred and therefore water take is currently nil.	A, D
21.	The works shall be managed in accordance with the acid sulfate soil management plan for the Cudgen Lakes Sand Quarry approved by DPI Water.	Not Yet Applicable	Operations have not yet commenced.	A, D
22.	The works authorised by this licence shall not exceed a depth of 5 metres.	Not Yet Applicable	No excavation has occurred within the Northern Extraction Site.	A, D
* D = Documentation sighted A = Advised by Company O = On-site Observation				

Appendix 2

Baseline Water Monitoring

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Sample Date	Criteria	SW1A	Comments/ Flow	Physical										Major Cations & Anions										Metals					Nutrients				
				Water level m AHD	Temp °C	pH	EC µS/cm	DO mol/L	Redox mV	TSS mg/L	Turbidity NTU	Oil & Grease mg/L	Sodium mg/L	Calcium mg/L	Magnesium mg/L	Potassium mg/L	Chloride mg/L	Sulfate mg/L	Bicarbonate mg/L	Aluminium mg/L	Arsenic mg/L	Iron (filterable) mg/L	Total P mg/L	Ortho Phosphate P mg/L	Total N mg/L	TKN mg/L	Ammonia mg/L	NOx mg/L	Faecal coliforms cells/ml	Enterococci cells/ml			
30/11/2015			Fine sunny, drain overgrown with rushes etc. Approx 30mm rain in week previous	0.27	26.8	7.2	407	5.22	163	23	14	<2	38	20	9.4	<5	74	4.3	86	0.02	0.001	0.67	<0.02	1.1	1.1	<0.02	<0.01	470	1160				
26/01/2016			Fine overcast, Approx. 1mm rain in week previous	0.07		6.71	439	0.45	196	57	19	<2	41	22	11	<5	75	3.4	94	0.03	0.001	1.02	<0.02	1.95	1.95	<0.02	<0.01	180	2560				
25/02/2016			Low flow, rushes	0.05	25.2	6.52	652	2.13	129(1)	29	32	<4	51	26	11	7	120	6.2	94	0.17	1.62	0.47	<0.02	4.27	4.25	<0.02	<0.01	290	270				
17/03/2016			High water level, slight turbidity. No Algae. Channel overgrown, 80mm rain in 2 previous weeks	0.77	23.5	6.89	234	0.24	25.6(1)	31	17	<4	17	14	4.9	9	29	14	45	0.45	0.002	1.88	0.12	2.07	2.07	<0.02	<0.01	2040	4160				
Average				0.290	24.625	6.83	433	2.01	179.5	35	20.5	3	37	20.5	9.075	8	74.5	6.975	79.75	0.17	0.001	1.30	<0.02	2.3475	2.3425	<0.02	<0.02	745	2037.5				
Maximum				0.77	26.8	7.2	652	5.22	196	57	32	0	51	26	11	9	120	14	94	0.45	0.002	1.88	0.12	4.27	4.25	<0.02	<0.02	2040	4160				
Minimum				0.05	23	6.52	234	0.24	163	23	14	0	17	14	4.9	7	29	3.4	45	0.02	0.001	0.67	0.15	1.1	1.1	<0.02	<0.02	180	270				
			(1) Field meter																														
			(2) Coolangubra Airport BOM 40717																														

Sample Date	Criteria	SW3A	Comments/ Flow	Physical										Major Cations & Anions										Metals					Nutrients				
				Water level m AHD	Temp °C	pH	EC µS/cm	DO mol/L	Redox mV	TSS mg/L	Turbidity NTU	Oil & Grease mg/L	Sodium mg/L	Calcium mg/L	Magnesium mg/L	Potassium mg/L	Chloride mg/L	Sulfate mg/L	Bicarbonate mg/L	Aluminium mg/L	Arsenic mg/L	Iron (filterable) mg/L	Total P mg/L	Ortho Phosphate P mg/L	Total N mg/L	TKN mg/L	Ammonia mg/L	NOx mg/L	Faecal coliforms cells/ml	Enterococci cells/ml			
30/11/2015			Fine Sunny Approx 30mm rain week previous Gambusia, Rushes	0.198	26.1	7.3	1540	3.61	180	21	11	<2	166	67	35	12	320	37	250	0.03	0.004	0.75	0.19	2.1	2.1	<0.02	<0.01	360	250				
26/01/2016			No flow west due to sediment blockage at drain, no salvinia present, small floating macrophytes	0.048	29.5	8.02	2983	7.19	198	18	15	<2	336	87	52	18	650	19	350	0.04	0.005	0.28	0.21	2.5	2.5	<0.02	<0.02	2440	720				
25/02/2016			Water level much higher than previous, slight oily appearance of water surface, tadpoles, high turbidity. Approx 80mm rain in previous week	0.113	27.1	6	5470	9	-2(1)	130	13	<4	808	161	108	31	1700	148	260	0.01	0.003	0.36	0.08	2.73	2.73	<0.02	<0.02	270	360				
17/03/2016				0.613	23.4	6.7	552	1.47	62.7(1)	18	17	<4	76	13	9.3	5	110	15	51	0.75	0.001	0.86	0.07	1.6	1.6	0.02	<0.02	880	3680				
Average				0.242	26.525	7.01	2656.25	5.3175	189	46.75	14	3	347	82	51.075	16.5	695	54.75	227.75	0.21	0.003	0.56	<0.02	2.2325	2.2325	<0.02	<0.02	980	1302.5				
Maximum				0.613	29.5	8.02	5470	9	-198	130	17	0	808	161	108	31	1700	148	350	0.75	0.005	0.86	0.21	2.73	2.73	<0.02	<0.02	2440	3680				
Minimum				0.048	23.4	6	552	1.47	180	18	11	0	76	13	9.3	5	110	15	51	0.01	0.001	0.28	0.23	1.6	1.6	<0.02	<0.02	270	250				
			(1) Field meter																														
			(2) Coolangubra Airport BOM 40717																														



Site:	SW5	Comments/Flow	Physical										Major Cations & Anions						Metals				Nutrients						
			Water Level m AHD	Temp °C	pH	EC uS/cm	DO mo/L	Redox mV	TSS mg/L	Turbidity NTU	Oil & Grease mg/L	Sodium mg/L	Calcium mg/L	Magnesium mg/L	Potassium mg/L	Chloride mg/L	Sulfate mg/L	Bicarbonate mg/L	Aluminium mg/L	Arsenic mg/L	Iron (filterable) mg/L	Total P mg/L	Ortho Phosphate P mg/L	Total N mg/L	TKN mg/L	Ammonia mg/L	NOx mg/L	Faecal coliforms cells/ml	Enterococci cells/ml
Sample Date																													
Criteria			6.5-8.5	<3000	>6		5-20	10	<500	<100	<40	<1000	<800	<400	<0.5	<20	0.01	0.35	<20	<0.02	<0.02	<0.02	<0.02	<20	<0.02	<0.02	<1000/100	<230/100	
30/11/2015		Five Sunny Approx 30mm rain (s) previous week	7.12	1042	3.12	174	28	<2	137	26	7	220	28	150	0.02	0.59	0.45	3.35	<0.02	<0.02	<0.02	<0.02	3.35	3.35	<0.02	<0.02	140	510	
26/01/2016		Fine level very low, extensive salt water level, Turbid. Approx 80mm Sulfide odour	6.83	1158	0.33	197	50	<2	168	36	8	260	15	220	0.08	0.25	0.22	2.44	<0.02	<0.02	<0.02	2.44	2.44	<0.02	<0.02	10	80		
25/02/2016		Extensive salvinia (95% coverage, 8% of salvinia brown/dead), high water level, Turbid. Approx 80mm rain (s) previous week	7.3	1808	1.15	-196 (1)	58	<4	255	42	14	410	25	250	0.38	0.46	0.16	2.47	0.05	0.33	0.05	2.42	2.42	<0.02	<0.02	230	130		
17/03/2016			6.33	267	0.15	-87 (1)	14	<4	29	13	5.5	44	24	32	0.38	1.38	0.2	1.44	0.04	<0.02	<0.02	1.44	1.44	<0.02	<0.02	430	1760		
Average			6.90	1068.75	1.1875	185.5	37.5	3	147	29.25	20.375	233.5	23	163	0.22	0.67	0.258	2.425	<0.02	<0.02	<0.02	2.425	2.425	<0.02	<0.02	202.5	620		
Maximum			7.3	1808	3.12	197	58	0	255	42	31	410	28	250	0.38	1.38	0.45	3.35	<0.02	<0.02	<0.02	3.35	3.35	<0.02	<0.02	430	1760		
Minimum			6.33	267	0.15	174	14	0	29	13	5.5	44	15	32	0.02	0.25	0.16	1.44	0.04	<0.02	<0.02	1.44	1.44	<0.02	<0.02	10	80		
		(1) Field meter																											
		(2) Coolangubla Airport BOM 40717																											

Site:	SW5A	Comments/Flow	Physical										Major Cations & Anions						Metals				Nutrients					
			Water Level m AHD	Temp °C	pH	EC uS/cm	DO mo/L	Redox mV	TSS mg/L	Turbidity NTU	Oil & Grease mg/L	Sodium mg/L	Calcium mg/L	Magnesium mg/L	Potassium mg/L	Chloride mg/L	Sulfate mg/L	Bicarbonate mg/L	Aluminium mg/L	Arsenic mg/L	Iron (filterable) mg/L	Total P mg/L	Ortho Phosphate P mg/L	Total N mg/L	TKN mg/L	Ammonia mg/L	NOx mg/L	Faecal coliforms cells/ml
Sample Date																												
Criteria			6.5-8.5	<3000	>6		5-20	10	<500	<100	<40	<1000	<800	<400	<.5	<20	0.01	0.35	<20	<0.02	<0.02	<0.02	<0.02	<20	<0.02	<0.02	<1000/100	<230/100
30/11/2015		Fine Channel overgrown, rushes	7.02	330	4.21	164	9.5	<2	32	15	8.3	57	9.6	72	0.02	0.64	0.11	0.87	0.02	<0.02	<0.02	0.87	0.87	<0.02	<0.02	100	970	
26/01/2016		Channel very overgrown, organic matter	6.71	369	0.48	199	8.8	<2	37	16	8.7	73	6.8	70	0.01	0.187	0.11	1.12	<0.02	<0.02	<0.02	1.12	1.12	<0.02	<0.02	360	3120	
25/02/2016		Algae, reeds noted	6.71	341	1.3	144 (1)	16	<4	33	19	9	49	5.8	94	0.03	0.55	0.36	1.99	0.02	<0.02	<0.02	1.91	1.91	<0.02	<0.02	860	1950	
17/03/2016		Goniosira, high water level, slight turbidity. Approx 80mm rain (s) previous week	6.5	129	0.39	19 (1)	17	<4	13	5.9	3	16	11	20	1.18	1.12	0.21	1.46	0.04	<0.02	<0.02	1.46	1.46	<0.02	<0.02	960	2910	
Average			6.71	292.25	1.595	181.5	12.825	10.885	29	13.975	7.25	60 (1) (1)	8.3	64	0.31	0.62	0.173	1.345	<0.02	<0.02	<0.02	1.34	1.34	<0.02	<0.02	575	2297.5	
Maximum			7.02	369	4.21	199	17	0	37	19	9	73	11	94	1.18	1.12	0.26	1.99	0.04	<0.02	<0.02	1.99	1.99	<0.02	<0.02	960	3120	
Minimum			6.5	129	0.39	164	8.8	4.5	13	5.9	3	16	5.8	20	0.01	0.187	0.11	1.46	0.02	<0.02	<0.02	1.46	1.46	<0.02	<0.02	100	970	
		(1) Field meter																										
		(2) Coolangubla Airport BOM 40717																										



Sample Date	DP.L - Dredge Pond Depth Comments/ Flow	Physical										Major Cations & Anions					Metals					Nutrients						
		Water level m/AHD	Temp °C	pH	EC uS/cm	DO mg/L	Redox mV	TSS mg/L	Turbidity NTU	Oil & Grease mg/L	Sodium mg/L	Calcium mg/L	Magnesium mg/L	Potassium mg/L	Chloride mg/L	Sulfate mg/L	Bicarbonate mg/L	Aluminium mg/L	Arsenic mg/L	Iron (filterable) mg/L	Total P mg/L	Ortho Phosphate P mg/L	Total N mg/L	TKN mg/L	Ammonia mg/L	NOx mg/L	Faecal coliforms cells/ml	Enterococci cells/ml
30/11/2015	No sample collected due to equipment failure. Fine Sunny Approx 30mm rain (p) previous week	-	-	6.5-8.5	<3000	~6		5-20	10	<500		<100	<40	<1000	<800	<400	<5		<20	0.01		0.35		<20	0.01			
26/01/2016	Fine, clear, some algae, cattle & ducks		27.3	8.61	663	5.87	4.3	<2	64	25	12	7	120	16	94	0.07	0.001	0.07	0.05	<0.02	0.94	<0.02	<0.02	0.94	<0.02	<0.02	128	174
25/02/2016	Fine, clear, some algae, ducks		23.7	8.26	613	3.75	9	5.1	67	27	12	8	120	15	96	0.1	0.002	<0.01	0.04	<0.02	0.91	<0.02	<0.02	0.91	<0.02	<0.02	140	50
17/03/2016	Overcast, some algae, water birds, cattle		26.6	7.79	615	3.43	4.3	<4	65	27	12	8	110	14	94	0.05	0.002	0.01	0.04	<0.02	0.82	<0.02	<0.02	0.82	<0.02	<0.02	150	340
Average			25.9	8.22	650.3	4.35	5.9	4.4	65.3	26.3	12	7.7	116.7	15	94.7	0.073	0.002	0.04	0.043	<0.02	0.89	<0.02	<0.02	0.89	<0.02	<0.02	135.3	188
Maximum			27.3	8.61	663	5.87	9	5.1	67	27	12	8	120	16	96	0.1	0.002	0.07	0.05	<0.02	0.94	<0.02	<0.02	0.94	<0.02	<0.02	150	340
Minimum			23.7	7.79	613	3.43	4.3	<4	64	25	12	7	110	14	94	0.05	0.001	0.01	0.04	<0.02	0.82	<0.02	<0.02	0.82	<0.02	<0.02	128	50
	(1) Field meter																											
	(2) Coolinggate. At port BOM 40717																											

Sample Date	DP.L - Dredge Pond Surface Comments/ Flow	Physical										Major Cations & Anions					Metals					Nutrients							
		Water level m/AHD	Temp °C	pH	EC uS/cm	DO mg/L	Redox mV	TSS mg/L	Turbidity NTU	Oil & Grease mg/L	Sodium mg/L	Calcium mg/L	Magnesium mg/L	Potassium mg/L	Chloride mg/L	Sulfate mg/L	Bicarbonate mg/L	Aluminium mg/L	Arsenic mg/L	Iron (filterable) mg/L	Total P mg/L	Ortho Phosphate P mg/L	Total N mg/L	TKN mg/L	Ammonia mg/L	NOx mg/L	Faecal coliforms cells/ml	Enterococci cells/ml	
30/11/2015	Fine Sunny	0.281	24.5	8.47	591	6.12	148	4	<2	24	11	7	120	20	57	0.19	0.002	0.01	0.04	<0.02	0.81	<0.02	<0.02	0.81	<0.02	<0.02	860	860	
26/01/2016	Fine, Clear, some algae, cattle & ducks	0.111	27.3	8.61	663	5.87	192	3.8	<2	64	25	12	7	120	16	76	0.08	0.001	<0.01	0.03	<0.02	0.84	<0.02	<0.02	0.84	<0.02	<0.02	128	174
25/02/2016	Algae, ducks, low turbidity	0.111	25.8	8.07	601	6.04	104(1)	2.1	4	69	26	12	8	120	15	58	0.04		0.01	0.03	<0.02	0.83	<0.02	<0.02	0.83	<0.02	<0.02	4800	360
17/03/2016	Sample taken in 20cm of clear water. Surface chop, caused by Wind. Cattle surrounding dam. Water birds. Approx 80mm rain (2) previous week	0.631	26.8	7.82	593	5.97	70(1)	5.9	<4	64	26	12	8	110	14	92	0.16	0.001	0.02	0.05	<0.02	0.86	<0.02	<0.02	0.86	<0.02	<0.02	270	820
Average		0.284	26.1	8.49	612	6	170	3.95	4	66	25.25	11.75	7.5	117.5	16.25	70.75	0.12	0.001	0.01	0.038	<0.02	0.835	<0.02	<0.02	0.835	<0.02	<0.02	1514.5	553.5
Maximum		0.631	27.3	9.07	663	6.12	192	3.8	4	69	26	12	8	120	20	92	0.19	0.002	0.02	0.05	0	0.86	<0.02	<0.02	0.86	<0.02	<0.02	4800	860
Minimum		0.111	24.5	7.82	591	5.87	148	2.1	4	64	24	11	7	110	14	57	0.04	0.001	0.01	0.03	0	0.81	<0.02	<0.02	0.81	<0.02	<0.02	128	174
	(1) Field meter																												
	(2) Coolinggate. At port BOM 40717																												



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