



Report

Hanson Tweed Sands Environmental Compliance Audit

10 AUGUST 2009

Prepared for
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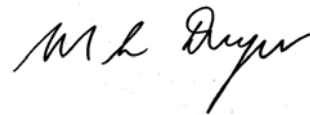
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Appendix A Environmental Permits and Licences

Abbreviations

Abbreviation	Description
AEMR	Annual Environmental Management Report
CCC	Community Consultative Committee
CMP	Cyanobacterial Management Plan
DoP	NSW Department of Planning
DA	Development Application
DC	Development Consent
DEC	NSW Department of Environment and Conservation
DNR	NSW Department of Natural Resources
DPI	NSW Department of Primary Industries
DWE	NSW Department of Water and Energy
EIS	Environmental Impact Statement
EMS	Environmental Management System
EP&A Act	Environmental Planning and Assessment Act 1979
EP&A Reg	Environmental Planning and Regulation Act 2000
EPA	NSW Environment Protection Authority
EPL	Environmental Protection Licence
g/m ² /month	Grams per square metre per month
GWMP	Ground Water Management Plan
IEMS	Integrated Environmental Management System
L	Litre
ML	Megalitre
NMP	Noise Management Plan
NHMRC	National Health and Medical Research Council
POEO Act	Protection of the Environment Operations Act 1997
m	Metre
m ²	Square metre
m ³	Cubic metre
NSW	New South Wales
TSC	Tweed Shire Council
RLMP	Rehabilitation and Landscape Management Plan
SWMP	Soil and Water Management Plan
SMP	Surface Water Management Plan
URS	URS Australia Pty Ltd

Introduction

1.1 General

URS Australia Pty Ltd (URS) was commissioned by Hanson Construction Materials Pty Ltd (Hanson) to undertake an environmental compliance audit of the Tweed Sand facility, located in Cudgen, New South Wales.

1.2 Objectives

The objectives of the audit were to:

- Assess the conformance of the facility with Development Consent DA152-6-2005 (DC);
- Assess the conformance of the facility with Environmental Protection Licence 11453 (EPL);
- Assess the conformance of the facility with the other environmental permits and licences listed in Section 2.3; and
- Provide recommendations, where applicable, for achieving compliance with the permits and licences listed above.

1.3 Scope

The scope of work undertaken by URS as part of the environmental compliance audit of the site included the following:

- Review of the DC, EPL and other permits and licences listed in Section 2.3;
- Site inspection to observe the conditions and current activities on the site;
- Interviews with key personnel with environmental management responsibilities;
- Review of selected documentation; and,
- Preparation of a report presenting the findings of the audit.

Background

2.1 Site Visit

On 01 July 2009, a site visit was conducted by Sarah Trevarthen of the URS Brisbane office, accompanied by Michael Azzopardi and Gordon Samuel of Hanson.

2.2 Site Description

The Hanson Tweed Sand site is located approximately 1km west of the village of Cudgen, at the southern end of the Gold Coast, in northern NSW. Surrounding land use is predominantly agricultural, with scattered residential properties. A municipal waste water treatment works is situated approximately 150 m north of the site.

Operations at the site comprise dredge extraction of sand and onsite processing, stockpiling and dispatch. Upon commencement of sand extraction within a new area/phase, an excavator or loader is used to strip vegetation and topsoil from the area in which material will be extracted. Typically, stripped topsoil is then used to construct containment bunds or is stockpiled onsite for future use. Clearing of expansion areas is conducted in a staged nature to minimise harm to the environment.

All extraction of materials from below the water table is conducted via dredge. Following extraction, materials are pumped to the processing plant which consists of a single deck wash screen with density tank and two cyclones for separation of fines. Following processing, finished products are stored in identifiable stockpiles in allocated areas within the Quarry. Ancillary operations include fuel and oil storage, equipment maintenance and operation of a small compressor. A ti-tree oil plantation operated by a tenant is located on an area of the site not used for quarrying purposes.

2.3 Environmental Permits

Conformance with the following environmental permits and licences held by the site was assessed during the audit.

- Development Consent DA152-6-2005 - issued by NSW Department of Planning July 2006
- Environmental Protection Licence 11453 - issued by NSW Environment Protection Authority July 2007, due for review July 2009
- Bore Licence 30BL179426 - issued by NSW Department of Natural Resources November 2006, valid until November 2011. This covers groundwater abstraction from the main pit during sand extraction
- Bore Licence 30BL179685 - issued by NSW Department of Natural Resources November 2001, no expiry. This covers groundwater monitoring wells on site
- Bore Licence 30BL143838 - issued by NSW Department of Natural Resources April 2007, valid until April 2012. This covers groundwater abstraction from a pond in the northern part of the site
- Bore Licence 30BL179583 - issued by NSW Department of Water and Energy May 2007, valid until May 2012. This covers groundwater abstraction from a pond in the northern part of the site

Note: *Conformance with conditions relating to the adequacy of design or construction standards or specifications was not assessed.*

Environmental Audit

The audit was structured around the conditions of the permits and licences listed in Section 2.3, of which each of the conditions was reviewed in turn. A summary of the assessment and findings for each condition is provided below. Abbreviations used in the sections below are explained in the table at the beginning of this report.

3.1 Development Consent

3.1.1 Schedule 2 – General Administrative Conditions

Condition	Comments
2-1	This general condition is covered in other sections of the audit.
2-2	This condition is not readily auditable.
2-3	This condition is not readily auditable.
2-4	The DoP inspected the site on 26 th March 2009 and documented the results of their inspection in a letter to Hanson dated 15 th April 2009. This letter details various items relating to environmental management and DC compliance at the site and sets out required improvements. A response from Hanson was submitted to the DoP on 15 th May 2009, describing proposed actions to address the issues identified and providing a timetable for these actions to be completed.
2-5	Correspondence from Hanson to the DoP indicates that the previous DCs were surrendered in May 2009.
2-6	This condition is not currently auditable.
2-7	Phase 3 of the quarry is currently being worked.
2-8	Using a DoP approved conversion methodology, 150,000 m ³ is equivalent to 285,000 tonnes. Production figures submitted on the annual return to the DPI indicate that production figures for 2006-07 were approximately 7,000m ³ (15,000 tonnes) above this limit. Production for 2007-08 was approximately 278,000 tonnes and site management reported that that the figures for 2008-09 are likely to be significantly lower.
2-9	A sample of records of daily truck movements were reviewed on the company "SAP" system. These indicated that truck movements average approximately 20 loads per day and all daily records reviewed were well within the permitted limits.
2-10	No construction has been undertaken since issue of the DC.
2-11	No demolition has been undertaken since issue of the DC.
2-12	This general condition is covered in other sections of the audit.
2-13	Conformance with this condition was not assessed.

3.1.2 Schedule 3 – Specific Environmental Conditions

General Extraction and Processing Provisions

Condition	Comments
3-1	A survey of the site was conducted by Chapman Surveys in April 2007.
3-2	No works, other than access routes, drainage and landscaping as permitted by the DC, were observed within 10m of the site boundary.
3-3	This condition is not currently auditable.

Noise

Condition	Comments
3-4	<p>A letter from the DoP, dated 15th April 2009, indicates that the DoP considers that the site Noise Management Plan (NMP) does not fully meet the requirements of the DC. The issues identified by the DoP largely relate to the NMP only requiring monitoring in response to complaints, rather than on a regular scheduled basis. The DoP has required the site to amend the plan, to include</p> <ul style="list-style-type: none"> • provision for 6 or 12 monthly attended monitoring over the first 3 years of the plan with subsequent review; • provision for unattended monitoring in response to complaints; • inclusion of notification of the DoP in the protocol for notification of complaints. <p>Noise monitoring was conducted in May 2009 by external consultants and identified exceedances of permitted noise limits. An action plan has been developed to reduce noise emissions, including enclosure of elements of the dredge and rubber mounting of the dredge engine. Most of these actions have been completed. Further noise monitoring will be conducted on completion of all mitigation measures to assess their effectiveness and identify any requirement for further mitigation measures.</p> <p>Site management reported that a revised NMP will be submitted to the DoP with provisions for 6 monthly attended monitoring in appropriate locations, with subsequent review, and inclusion of the other DoP requirements.</p>
3-5	See Condition 3-4.

Condition	Comments
3-6	<p>Site management reported that</p> <ul style="list-style-type: none"> • no extractive, processing or other quarrying activities are conducted before 7 am or after 5 pm (4 pm on Saturdays); • no vehicle movements are made offsite before 7 am or after 5 pm (12 pm on Saturdays); and • No extractive activities or vehicle movements offsite are conducted on Sundays or public holidays. <p>Records of daily truck movements reviewed on the company “SAP” system indicate that some loading of trucks occurs before 7 am, but site management reported that these are not permitted to leave site before 7 am.</p>
3-7	This condition is not readily auditable.
3-8	See Condition 3-4.

Air Quality

Condition	Comments
3-9	<p>Four dust deposition gauges are installed on the site boundary, and these are monitored monthly. Results from the dust deposition gauges indicate that there have been several exceedances of the dust deposition limit of 4 g/m²/month prescribed by the DC. However, this limit relates to average deposition per month over a 12 month period, and the averaged values for sampling periods reviewed are within the limit. Site management reported that no investigations have been conducted to date into the causes of the individual exceedances.</p> <p>Regular airborne dust monitoring is not conducted, and is specified only in response to dust related complaints.</p>
3-10	An Air Quality Monitoring Program has been developed, as required by the DC. This specifies a regime for air quality monitoring.

Soils, Surface Water and Groundwater Conditions

Condition	Comments
3-11	<p>The lake and extraction areas are partially bunded and site management reported that offsite flows do not normally occur. However, the site is situated in a flood storage zone and water levels in the lake rise and fall with those in surrounding areas, leading to some interflow during periods of high water. Site management reported that this is consistent with Tweed Shire flood management strategies, which require developments to be designed so as not to impede water flows during flood events.</p>
3-12	<p>A Site Water Management Plan (SWMP) has been developed for the site, which details monitoring procedures for surface water and groundwater. A summary of the monitoring conducted is given below:</p> <ul style="list-style-type: none"> • Surface waters within the extraction lake are monitored weekly by Hanson staff for pH, electrical conductivity, temperature, dissolved oxygen, salinity & REDOX potential. • Quarterly surface water monitoring within the extraction lake and at the lake's discharge point is conducted by an external consultant. Samples are analysed for the parameters listed above, as well as sodium, potassium, magnesium, chloride, sulphate bicarbonate, dissolved iron, dissolved aluminium, arsenic, chlorophyll-a, faecal coliforms, enterococci and ammonium. • Groundwater is monitored monthly by Hanson staff for pH, electrical conductivity, temperature, dissolved oxygen, salinity & REDOX potential. • Quarterly groundwater monitoring is conducted by an external consultant. Samples are analysed for the parameters listed above, as well as sodium, potassium, magnesium, chloride, sulphate bicarbonate, dissolved iron, dissolved aluminium, arsenic, chlorophyll-a, faecal coliforms, enterococci and ammonium. • Cyanobacterial monitoring is conducted monthly from April to August and fortnightly from September to March, and analysed for total nitrogen, total phosphorus, cyanobacterial cell densities and cyanobacterial biovolume. Additional visual inspections are conducted weekly by Hanson Tweed Sand staff. <p>Results of monitoring dating from 2004 were reviewed and some exceedences of the guidelines contained in the DC for most parameters have occurred in both surface and groundwater over this period. There appear to be no identifiable trends to the exceedences. Some exceedences of the permit guidelines may be representative of natural water conditions in the area. However, there is the possibility that some may be due to data errors from sampling procedures, laboratory procedures or well construction.</p>
3-13	<p>Site management reported that fines from the processing plant are emplaced into the lake at a depth of at least 3 metres below surface level by means of a pipe. A hydrographic survey of the lake conducted in January 2007 indicates that the lake was more than 8 m deep in the emplacement area at that time. No subsequent monitoring of lake depth has been conducted.</p>
3-14	<p>See Condition 3-13.</p>

Condition	Comments
3-15	<p>Site management reported that site policy is to cease extraction during flood events. In addition to meeting the requirements of the DC, this policy is also imposed for production reasons as, during flood periods, dredging becomes more difficult and demand for the product falls. Site management reported that there have been two flood related stoppages during 2009 to date.</p>
3-16	<p>Information on flood storage capacity was not available and is not reported in the AEMR.</p>
3-17	<p>A Soil and Water Management Plan (SWMP) has been prepared for the site. Site management reported that this plan has been submitted to the agencies listed in the DC. The individual elements referred to in this condition are described in more detail in Conditions 3-18 to 3-22, below.</p> <p>Other than the items discussed in Conditions 3-11 to 3-22, compliance with the procedures set out in the SWMP was not assessed during the audit.</p>
3-18	<p>The SWMP includes a water balance assessment, which describes the regional water balance and anticipated hydrological behaviour of the lake in response to extractive activities. However, the water balance does not include the following, as specified by the DC:</p> <ul style="list-style-type: none"> • Details of all water extracted, transferred, used and/or discharged by the quarry; • The source of all water collected or stored on the site, including rainfall, stormwater and groundwater; and, • Measures to minimise water use by the development.
3-19	<p>The SWMP describes the location, function and capacity of soil and water management and control structures, strategies for managing erosion and sedimentation, acid sulphate soils, water releases and maintenance of management structures, as required by the DC. However, the following observation relating to the SWMP were made:</p> <ul style="list-style-type: none"> • The specifications for bunding described in the SWMP do not appear to completely match the actual conditions present at the site; and • Construction and operational activities that could cause soil erosion, sedimentation or generation of acid sulphate soils are not identified.

Condition	Comments
3-20	<p>A Cyanobacterial Management Plan for the site has been developed by CSIRO, with reference to the NHMRC guidelines referenced in the DC. This CMP contains two strategies to achieve the cyanobacterial water quality objectives:</p> <ul style="list-style-type: none"> • Hazard Reduction Strategies – These are designed to reduce the severity and/or frequency of cyanobacterial blooms within the extraction lake by reducing the controllable environmental factors that contribute to cyanobacterial growth. • Exposure Reduction Strategies - These set out monitoring procedures for cyanobacteria and exposure reduction strategies which link the concentration of cyanobacteria identified to appropriate management procedures. <p>Procedures for notification of relevant agencies of algal blooms are not clear.</p> <p>Compliance with the standards and procedures set out in the CMP was not assessed during the audit.</p>
3-21	<p>The SWMP includes baseline data, monitoring procedures and non-conformance investigation procedures which appear to meet the requirements for a Surface Water Monitoring Program (SMP) specified by this condition. Site management reported that there are plans to reduce the frequency of sampling for some parameters due to historical and ongoing low concentrations of contaminants in samples taken. The SWMP will require revision and resubmission to the DoP for approval prior to implementation of these changes.</p> <p>Other than the items discussed in Conditions 3-11 to 3-22, compliance with the procedures set out in the SWMP was not assessed during the audit.</p>
3-22	<p>The SWMP includes baseline data, monitoring procedures and non-conformance investigation procedures which appear to meet the requirements for a Ground Water Monitoring Program (GWMP) specified by this condition. Site management reported that there are plans to reduce the frequency of sampling for some parameters due to historical and ongoing low concentrations of contaminants in samples taken. The SWMP will require revision and resubmission to the DoP for approval prior to implementation of these changes.</p> <p>Other than the items discussed in Conditions 3-11 to 3-22, compliance with the procedures set out in the SWMP was not assessed during the audit.</p>

Rehabilitation and Landscaping

Condition	Comments
3-23	Rehabilitation has been commenced in areas of the lake where extraction has ceased.
3-24	<p>A Rehabilitation and Landscape Management Plan (RLMP) has been prepared for the site. A letter from the DoP, dated 15th April 2009, indicates that the DoP is not satisfied that the RLMP meets the requirements of the DC. Site management reported that the plan is in the process of review, with input by appropriately qualified experts, and will be amended as appropriate and re-submitted to the DoP.</p>

Condition	Comments
3-24	See Conditions 3-23 & 3-25.
3-25	A letter from the DoP, dated 15 th April 2009, indicates that the DoP considers that the site RLMP does not appear to have been prepared in consultation with a specialist hydrologist and coastal engineer, as specified by the DC. Site management reported that the plan will be reviewed by appropriately qualified experts and amended as appropriate.
3-26	See Conditions 3-23 & 3-25.
3-27	The Weed Management Plan included in the RLMP appears to meet the requirements of this condition.
3-28	Site management reported that these sums have been lodged, but no documentation relating to this was available.
3-29	This audit represents the first independent environmental audit to be conducted since issue of the DC.

Long Term Management

Condition	Comments
3-30	A Long Term Management Strategy is incorporated into the RLMP. A letter from the DoP, dated 15 th April 2009, indicates that the DoP is not satisfied that strategy does not fully address the requirements of the DC. Site management reported that the plan is in the process of review, with input by appropriately qualified experts, and will be amended as appropriate and re-submitted to the DoP.

Traffic and Transport

Condition	Comments
3-31	All heavy vehicles to/from the site are routed away from Cudgen village. This requirement is detailed in the site "Drivers' Code", which all drivers, including contractors, are required to read and acknowledge.
3-32	Site procedures require that all loaded vehicles entering or leaving the site are covered. No uncovered vehicles were observed by the auditor during the site visit.
3-33	A shakedown grid is present on the site access road near the site entrance. All vehicles pass over this grid prior to leaving the site.
3-34	Parking facilities for site traffic and visitors is present in the area around the site office and workshop.
3-35	No recreational fishing facility is currently operated at the site.

Visual Impact

Condition	Comments
3-36	See Conditions 3-37 & 3-38.
3-37	A tree screen is present on the south-western boundary of the site, comprising mainly natural mature trees. Some tree planting has been undertaken along the south-eastern edge of the lake, but these trees are not yet mature. Natural mature trees are present along the south-eastern boundary of the site.
3-38	No significant external light sources are present as extractive and loading operations are conducted during daylight hours.

Waste Management

Condition	Comments
3-39	Waste generated by the facility comprises predominantly waste oil and general mixed waste, which are collected by external contractors for disposal. Collections are recorded using the site "SAP" system.
3-40	Sanitary effluent from the site discharges to a biocycle septic tank. This unit is serviced annually by an external contractor, with the most recent maintenance conducted in September 2008. Compliance of the system with the guidelines specified in this condition was not assessed.

Hazards Management

Condition	Comments
3-41	<p>The following chemical storage was observed at the site:</p> <ul style="list-style-type: none"> • Diesel is stored in above ground steel tanks, which are either integrally bunded, or situated in concrete bunding. An integrally bunded plastic diesel tank is also present on the dredge. • Oils are stored in drums on a concrete bund within the workshop. Waste oils are stored in drums on a bunded pallet in the same area. Small volumes of greases are stored in a storage container adjacent to the workshop. • Small containers of herbicide for weed control are stored in the southern part of the workshop. <p>Some minor staining of concrete floors was present in the workshop area, but no evidence of significant spillages was observed. Full compliance with the Australian Standards specified in this condition was not assessed.</p>
3-42	A boundary fence is present around the site and the access road is fitted with a gate, which is locked outside of operating hours. Signage relating to cyanobacterial hazards is present around the lake and general hazard warning signage is present around the site.

Production Data

Condition	Comments
3-43	Annual returns of production data to the DoP for 2006-07 and 2007-08 were sighted by the auditor. Further details are given in Condition 2-8. Production data is not currently included in the AEMR.

3.1.3 Schedule 4 – Additional Procedures

Notification of Landowners

Condition	Comments
4-1	As discussed in Condition 3-4, noise monitoring has identified that there have been exceedences of the permitted noise limits at the site. Site management reported that specified notifications have not yet been made, but that the results of noise monitoring will be submitted with the revised Noise Management Plan.

Independent Review

Condition	Comments
4-2	No concerns relating to the development which would give rise to an independent review have been raised by landowners.
4-3	See Condition 4-2.
4-4	See Condition 4-2.
4-5	See Condition 4-2.
4-6	See Condition 4-2.

3.1.4 Schedule 5 – Environmental Management, Monitoring Auditing and Reporting

Environmental Management Strategy

Condition	Comments
5-1	<p>The site operates an Integrated Environmental Management System (IEMS), which incorporates several of the items specified in this DC condition. However, the following observations relating to the IEMS were identified:</p> <ul style="list-style-type: none"> • The IEMS references only the requirements of the DC, but not other applicable permits or statutory requirements, as stipulated; • The IEMS details commitments for environmental management and performance standards required by the DC, but specific procedures describing how these will be achieved are limited. In particular, procedures for investigation of non-compliances and development of appropriate mitigation measures are not described. • The IEMS includes general responsibilities for environmental management at the site, but does not describe in detail responsibilities for specific aspects of the system. This includes responsibility for: <ul style="list-style-type: none"> ○ monitoring of various media ○ scheduled reporting to statutory bodies, including review and approval of externally produced reports prior to submission ○ investigation and reporting of non-compliances, including implementation and monitoring of improvements / mitigation measures ○ retention of records • Where management of particular aspects of site operations and permit compliance are covered by separate management plans and other procedures, these documents should be fully referenced in the IEMS. <p>An Environmental Management Strategy for the site has not yet been submitted to the DoP.</p>

Environmental Monitoring Program

Condition	Comments
5-2	<p>Although monitoring schedules for environmental media are detailed in various documents and management plans, no single document consolidating these programs has been developed as required by the DC.</p>
5-3	<p>This audit represents the first independent environmental audit to be conducted since issue of the DC.</p>

Incident Reporting

Condition	Comments
5-4	<p>Site management reported that that only one material incident has occurred since issue of the DC. This was an oil spill in May 2008, which was reported to the EPA, DPI and TSC, but not to the DoP as specified.</p> <p>The IEMS does not describe in detail which agencies should be notified of incidents and non-compliances.</p>

Annual Reporting

Condition	Comments
5-5	<p>An AEMR is prepared annually by external consultants and submitted to the DoP. The most recent submission was in August 2008. However, the AEMR only includes details of soil and groundwater monitoring. The DC requires reporting of <i>all</i> environmental monitoring conducted at the site. Additionally, the following information required by the DC are not currently included in the AEMR:</p> <ul style="list-style-type: none"> • complaints received; • non-compliances identified and actions taken to ensure ongoing compliance; • works carried out in the previous 12 months; • works proposed for the next 12 months; • identification of relevant standards and performance measures which apply to the site; • analysis of monitoring results against predictions in the site EIS

Independent Environmental Audit

Condition	Comments
5-6	This audit represents the first independent environmental audit to be conducted since issue of the DC.
5-7	See Condition 5-6.
5-8	See Condition 5-6.

Community Consultative Committee

Condition	Comments
5-9	A CCC has been established, including representatives from the site, TSC and local residents. The meetings are held in May and November each year at the Hanson Tweed site and include discussions of environmental performance of the facility and any concerns raised by stakeholders. A site tour is also conducted, if requested. The minutes of the 4 most recent meetings were sighted by the auditor. The minutes are submitted to the DoP following each meeting and are also available on site for review on request. The Site Manager attends the CCC meetings.
5-10	See Condition 5-10.

Access to Information

Condition	Comments
5-11	The information specified in this condition is available for review at the site if requested.
5-12	The information specified in this condition is available for review at the site if requested.

3.2 Environmental Protection Licence

Administrative Conditions

Condition	Comments
A1.1	No conditions are specified.
A1.2	The activities being conducted at the site appear to match those described in the EPL.
A1.3	No conditions are specified.
A2	The site details appear to match those described in the EPL.
A3	The activities being conducted at the site appear to match those described in the EPL.
A4	This condition is not readily auditable.

Discharges to Air and Water and Applications to Land

Condition	Comments
P1	No conditions are specified.

Limit Conditions

Condition	Comments
L1	This general condition is covered in other sections of the audit.
L2	No conditions are specified.
L3	No conditions are specified.
L4	No conditions are specified.
L5	No conditions are specified.
L6.1	This Condition reinforces DC Conditions 3-4, 3-5 & 3.8.
L6.2	This Condition reinforces DC Conditions 3-4, 3-5 & 3.8.
L6.3	This Condition reinforces DC Conditions 3-4, 3-5 & 3.8.

Operating Conditions

Condition	Comments
O1.1	This general condition is covered in other sections of the audit.
O1.2	This Condition reinforces DC Conditions 3-6 & 3.7.
O2.1	This general condition is covered in other sections of the audit.
O3	This Condition reinforces DC Condition 3-32.

Monitoring and Recording Conditions

Condition	Comments
M1.1	This Condition reinforces DC Condition 5-12.
M1.2	This Condition reinforces DC Condition 5-12.
M1.3	A sample of sampling records were reviewed and appeared to contain the relevant information.
M2	No conditions are specified.
M3	No conditions are specified.
M4.1	Records of complaints received by the site are retained in electronic format by the Site Manager.
M4.2	Examples of complaint records reviewed appear to contain the information specified by the EPL, where appropriate.
M4.3	The records described in Condition M4.1 date back to 2002.
M4.4	The information specified in this condition is available for review at the site if requested.
M5.1	The site does not have a dedicated complaints line due to the small scale of the operation. Complaints are directed to the main site telephone line.
M5.2	The site telephone number is displayed at the site entrance. The minutes of the CCC meetings, which are circulated to relevant parties after the meeting, contain contact details for the site.
M5.3	This condition is not readily auditable.
M6	No conditions are specified.

Reporting Conditions

Condition	Comments
R1.1	Annual returns to the EPA for 2006-07 and 2007-08 were sighted by the auditor.
R1.2	See Condition R1.1.
R1.3	See Condition R1.1.
R1.4	The condition does not currently apply.
R1.5	The returns reviewed were submitted by the relevant due dates.
R1.6	No conditions are specified.
R1.7	The information specified in this condition is available for review at the site if requested.
R1.8	The returns reviewed were authorised by the Site Manager.
R1.9	This condition is not readily auditable.
R2.1	See DC Condition 5-4.
R2.2	See DC Condition 5-4.
R3.1	No events are known to have occurred which would give rise to activation of this condition.
R3.2	See Condition R3.1.
R3.3	See Condition R3.1.
R3.4	See Condition R3.1.

General Conditions

Condition	Comments
G1.1	A copy of the EPL was available on site.
G1.2	The information specified in this condition is available for review at the site if requested.
G1.3	The information specified in this condition is available for review at the site if requested.

3.3 Bore Licence 30BL179426

This licence covers groundwater abstraction from the lake during sand extraction.

Condition	Comments
1	Access to the site for inspection of the bore is available on request.
2	The condition does not currently apply.
3	The condition does not currently apply.
4	The condition does not currently apply.
5	No discharges of the type described are known to have occurred.
6	The dimensions of the excavation were not reviewed during the audit.
7	Procedures for the management of acid sulphate soils are included in the SWMP.
8	No extraction of the clays underlying the coastal sand is known to have occurred.
9	Procedures for the management of acid sulphate soils are included in the SWMP.
10	This condition is not readily auditable.
11	This is in excess of the requirements of the DC. Site management reported that fines are emplaced to a depth of greater than 8 m as required by the DC.
12	This general condition is covered in other sections of the audit.
13	This Condition reinforces DC Condition 3-13.
14	The monitoring regime described in the SWMP appears to meet the requirements of this condition.
15	The monitoring regime described in the SWMP appears to meet the requirements of this condition.
16	The monitoring regime described in the SWMP appears to meet the requirements of this condition.
17	The AEMR submissions appear to meet the requirements of this condition.
18	Compliance with this condition was not assessed.
19	This condition is not readily auditable.

3.4 Bore Licence 30BL143838

This licence covers groundwater abstraction from a pond in the northern part of the site.

Condition	Comments
1	The condition does not currently apply.
2	Site management reported that no water meter has been installed, as all water abstracted since issue of the licence has been used in a closed loop system and returned to the water body after use.
3	The condition does not currently apply.
4	No annual return of water usage has been submitted to the DWE. However, as discussed in Condition 2, site management reported that there has been no net extraction of water since issue of the licence, as all water is returned to the pond via a closed loop system.
5	As discussed in Condition 2, site management reported that there has been no net extraction of water since issue of the licence, as all water is returned to the pond via a closed loop system.
6	No irrigation of rice is known to have been conducted.
7	No irrigation of grasses or pastures which are not sown grasses or pastures is known to have been conducted.
8	Access to the site for inspection of the bore is available on request.
9	The abstraction has not been abandoned, although abstraction occurs infrequently.
10	No discharges of the type described are known to have occurred.
11	No issues associated with this condition were identified.
12	No discharges of the type described are known to have occurred.
13	The site details appear to match those described in the EPL.
14	As discussed in Condition 2, site management reported that there has been no net extraction of water since issue of the licence, as all water is returned to the pond via a closed loop system.

3.5 Bore Licence 30BL179583

This licence covers groundwater abstraction from a pond in the northern part of the site.

Condition	Comments
1	Access to the site for inspection of the bore is available on request.
2	This condition does not seem to be applicable to the nature of the abstraction, which is licensed to be only 2m deep over a large surface area. Lining of a bore of these dimensions and fitting of closing gear is not practicable.
3	The abstraction has not been abandoned, although abstraction occurs infrequently.
4	No discharges of the type described are known to have occurred.
5	No issues associated with this condition were identified.
6	This condition is not readily auditable.
7	This condition is not readily auditable.
8	Site management reported that no water meter has been installed, as all water abstracted since issue of the licence has been used in a closed loop system and returned to the water body after use.
9	The condition does not currently apply.
10	No annual return of water usage has been submitted to the DWE. However, as discussed in Condition 8, site management reported that there has been no net extraction of water since issue of the licence, as all water is returned to the pond via a closed loop system.
11	As discussed in Condition 8, site management reported that there has been no net extraction of water since issue of the licence, as all water is returned to the pond via a closed loop system.
12	The site details appear to match those described in the EPL.
13	As discussed in Condition 8, site management reported that there has been no net extraction of water since issue of the licence, as all water is returned to the pond via a closed loop system.
14	The dimensions of the excavation were not reviewed during the audit.
15	No pH monitoring has been conducted in the water body. However, as discussed in Condition 2, site management reported that there has been no net extraction of water since issue of the licence, as all water is returned to the pond via a closed loop system. pH levels in the pond would be anticipated to reflect natural background levels.

3.6 Bore Licence 30BL179685

This licence covers the groundwater monitoring wells at the site.

Condition	Comments
1	Borehole records indicate that installation works were completed within 3 years of the issue of the licence.
2	Compliance with this condition was not assessed.
3	Access to the site for inspection of the bore is available on request.
4	Compliance with this condition was not assessed.
5	The condition does not currently apply.
6	No discharges of the type described are known to have occurred.
7	No issues associated with this condition were identified.
8	The diameter of the bores installed was not assessed.
9	No issues associated with this condition were identified.

Summary and Recommendations

4.1 Audit Summary and Recommendations

The following general observations were made relating environmental management at the site:

- Environmental issues at the site were observed to be generally well managed. However, reliance on external parties to fulfil site obligations for individual aspects of compliance may have resulted in uncoordinated reporting and management in some cases. Increased input from Hanson in review of the various outsourced aspects of environmental management at the site may help to more fully integrate the management system and communications with external stakeholders.
- Records were generally well maintained and, with a few isolated exceptions, were available for review on site.
- A high level of commitment to environmental management and maintenance of good relationships with stakeholders by site management was noted.

The following issues were identified during the audit:

- The site Noise Management Plan (NMP) does not fully meet the requirements of the DC and the DoP has required the site to amend and resubmit the plan. Noise monitoring was conducted in May 2009 by external consultants and identified exceedances of permitted noise limits. An action plan has been developed to reduce noise emissions, most of which have been completed. Site management reported that further monitoring will be conducted on completion of mitigation measures and a revised NMP will be prepared and submitted to the DoP.

URS recommendation: Continue to progress the current action plan. Amend the NMP to incorporate DoP requirements and re-submit to the DoP for approval. Update the IEMS and other procedures as appropriate to incorporate revisions to the NMP.

Relevant conditions: DC Schedule 3, Conditions 4, 5 & 8, EPL L6.

- Four dust deposition gauges are installed on the site boundary, and these are monitored monthly. Results from monitoring of dust deposition gauges indicate that there have been several exceedances of the dust deposition limit of 4 g/m²/month prescribed by the DC, although the 12 month averaged values for sampling periods reviewed are within the limit. Site management reported that no investigations have been conducted to date into the causes of the individual exceedances.

URS recommendation: Where exceedances of dust limits are identified, consider further investigation of these exceedances.

Relevant conditions: DC Schedule 3 Condition 9

- Results of surface water and groundwater sampling indicate that exceedances of the guidelines contained in the DC for most parameters have occurred in both surface and groundwater. There appear to be no identifiable trends to the exceedances. Some exceedances of the permit guidelines may be representative of natural water conditions in the area. However, there is the possibility that some may be due to data errors from sampling procedures, laboratory procedures or well construction.

URS recommendation: Ensure that sampling and analysis procedures are consistent with the relevant Australian standards.

Relevant conditions: DC Schedule 3 Condition 12

4 Summary and Recommendations

- A hydrographic survey of the lake conducted in January 2007 indicates that the lake was more than 8 m deep in the fines emplacement area at that time. No subsequent monitoring of lake depth has been conducted.

URS recommendation: Consider updated depth measurement of the emplacement area to ensure continued compliance with this condition.

Relevant conditions: DC Schedule 3 Condition 15

- The water balance contained in the SWMP does not include the following, as specified by the DC:
 - Details of all water extracted, transferred, used and/or discharged by the quarry;
 - The source of all water collected or stored on the site, including rainfall, stormwater and groundwater; and,
 - Measures to minimise water use by the development.

URS recommendation: Update the SWMP to incorporate all the elements specified by the relevant DC condition and re-submit to the DoP for approval.

Relevant conditions: DC Schedule 3 Condition 18

- The following observations relating to the SWMP were made:
 - The specifications for bunding described in the SWMP do not appear to match completely the actual conditions present at the site; and
 - Construction and operational activities that could cause soil erosion, sedimentation or generation of acid sulphate soils are not identified.

URS recommendation: Update the SWMP to incorporate all the elements specified by the relevant DC condition and re-submit to the DoP for approval.

Relevant conditions: DC Schedule 3 Condition 19

- Procedures for notification of relevant agencies of the presence of algal blooms are not clearly defined.

URS recommendation: Update the SWMP to incorporate notifications required and responsibilities for making these notifications and re-submit to the DoP for approval as required. Update the IEMS and other procedures as appropriate to incorporate revisions to the SWMP.

Relevant conditions: DC Schedule 3 Condition 20

- Site management reported that there are plans to reduce the frequency of sampling for some parameters due to historical and ongoing low concentrations of contaminants in samples taken. The SWMP will require revision and resubmission to the DoP for approval prior to implementation of these changes.

URS recommendation: Update the SWMP and re-submit to the DoP for approval as required. Update the IEMS and other procedures as appropriate to incorporate revisions to the SWMP.

Relevant conditions: DC Schedule 3 Conditions 21 & 22

4 Summary and Recommendations

- The DoP is not satisfied that the Rehabilitation and Landscape Management Plan (RLMP) meets the requirements of the DC. Site management reported that the plan is in the process of review, with input by appropriately qualified experts, and will be amended as appropriate and re-submitted to the DoP.

URS recommendation: Continue to progress the current action plan. Amend the RLMP to incorporate DoP requirements and re-submit to the DoP for approval. Update the IEMS and other procedures as appropriate to incorporate revisions to the RLMP.

Relevant conditions: DC Schedule 3 Conditions 24, 25, 26 & 27

- The DoP is not satisfied that the Long Term Management Strategy fully addresses the requirements of the DC. Site management reported that the plan is in the process of review, with input by appropriately qualified experts, and will be amended as appropriate and re-submitted to the DoP.

URS recommendation: Continue to progress the current action plan. Amend the strategy to incorporate DoP requirements and re-submit to the DoP for approval. Update the IEMS and other procedures as appropriate to incorporate revisions to the RLMP.

Relevant conditions: DC Schedule 3 Condition 30

- The Annual Environmental Monitoring Report (AEMR) submitted to the DoP does not currently include all data required by the DC. Specifically, the following items specified by the DC are not included:
 - annual production data;
 - all monitoring conducted at the site, not only surface water and groundwater;
 - summary of non-compliances identified and actions taken to ensure ongoing compliance;
 - summary of complaints received;
 - identification of relevant standards and performance measures which apply to the site;
 - analysis of monitoring results against predictions in the site EIS
 - works conducted during the preceding 12 months;
 - works planned for the following 12 months; and
 - flood storage capacity of the site.

URS recommendation: Ensure that all relevant data required by the DC is incorporated into the AEMR. Update the IEMS and other procedures as appropriate to incorporate these requirements.

Relevant conditions: DC Schedule 3 Conditions 16 & 43, DC Schedule 5 Condition 5

4 Summary and Recommendations

- The site operates an Integrated Environmental Management System, which incorporates several of the items specified in the DC for inclusion in an Environmental Management Strategy. However, the following observations relating to the IEMS were identified:
 - The IEMS references only the requirements of the DC, but not other applicable permits or statutory requirements, as stipulated;
 - The IEMS details commitments for environmental management and performance standards required by the DC, but specific procedures describing how these will be achieved are limited. In particular, procedures for investigation of non-compliances and development of appropriate mitigation measures are not described.
 - The IEMS includes general responsibilities for environmental management at the site, but does not describe in detail responsibilities for specific aspects of the system, including monitoring of various media, scheduled reporting to statutory bodies, investigation and reporting of non-compliances, and retention of records.
 - The IEMS does not describe in detail which agencies should be notified of incidents and non-compliances
 - Where management of particular aspects of site operations and permit compliance are covered by separate management plans and other procedures, these documents should be fully referenced in the IEMS.

Additionally, the Environmental Management Strategy for the site has not yet been submitted to the DoP for approval.

URS recommendation: Update the IEMS to ensure that all relevant information required by the DC is incorporated and submit the IEMS to the DoP for approval.

Relevant conditions: DC Schedule 5 Conditions 1 & 4

- Although monitoring schedules for environmental media are detailed in various documents and management plans, no single document consolidating these programs has been developed as required by the DC.

URS recommendation: Develop a consolidated Environmental Monitoring Program and submit to the DoP for approval. This document should incorporate the new noise monitoring program.

Relevant conditions: DC Schedule 5 Condition 2

- Only one Hanson representative attends the CCC meetings. The DC specifies that two Hanson representatives should attend.

URS recommendation: Confirm that the current situation is acceptable to the DoP.

Relevant conditions: DC Schedule 5 Conditions 9 & 10

4 Summary and Recommendations

- Monitoring has identified that there have been exceedences of the permitted noise limits at the site. The DC requires that specific notifications of these exceedences be made. Site management reported that there is a plan to make the required notifications on submission of the revised Noise Management Plan.

URS recommendation: Ensure that the relevant notifications are made as required by the DC.

Relevant conditions: DC Schedule 4 Condition 1

- Bore Licence 30BL179426 specifies that fines should be covered by at least 9 m of water. This is in excess of the requirements of the DC, which requires a water depth of 8 m below water level.

URS recommendation: Clarify the requirements for depth of emplacement of fines.

Relevant conditions: Bore Licence 30BL179426 Condition 11, DC Schedule 3 Condition 13

- Bore Licences 30BL143838 and 30BL179583 require twice yearly measurement of water levels and pH in the water body. The site has not conducted such monitoring as there has been no net extraction of water since issue of the licence.

URS recommendation: Clarify whether these measurements are required for years where no net extraction has occurred.

Relevant conditions: Bore Licence 30BL143838 Condition 5, Bore Licence 30BL179583 Conditions 11 & 15.

- Bore Licences 30BL143838 and 30BL179583 require submission of an annual report to the DWE detailing the quantity of water abstracted during the previous year and results of water level measurements. The site has not submitted such reports as there has been no net extraction of water since issue of the licence.

URS recommendation: Clarify whether submissions are required for years where no net extraction has occurred.

Relevant conditions: Bore Licence 30BL143838 Condition 4, Bore Licence 30BL179583 Condition 10

Limitations

URS Australia Pty Ltd (URS) has prepared this report in accordance with the usual care and thoroughness of the consulting profession for the use of Hanson Construction Materials Pty Ltd and only those third parties who have been authorised in writing by URS to rely on the report. It is based on generally accepted practices and standards at the time it was prepared. No other warranty, expressed or implied, is made as to the professional advice included in this report. It is prepared in accordance with the scope of work and for the purpose outlined in the Proposal dated 10th June 2009.

The methodology adopted and sources of information used by URS are outlined in this report. URS has made no independent verification of this information beyond the agreed scope of works and URS assumes no responsibility for any inaccuracies or omissions. No indications were found during our investigations that information contained in this report as provided to URS was false.

This report was prepared between 1st July and 7th August 2009 and is based on the conditions encountered and information reviewed at the time of preparation. URS disclaims responsibility for any changes that may have occurred after this time.

This report should be read in full. No responsibility is accepted for use of any part of this report in any other context or for any other purpose or by third parties. This report does not purport to give legal advice. Legal advice can only be given by qualified legal practitioners.

Appendix A Environmental Permits and Licences

Development Consent

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

I, the Minister for Planning, approve the Development Application referred to in schedule 1 conditions in schedules 2 to 5.

These conditions are required to:

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



Frank Sartor MP
Minister for Planning

Sydney

31st July

2006

File: 9035944

SCHEDULE 1

Development Application:	DA 152-6-2005
Applicant:	P Guinane Pty Ltd.
Consent Authority:	Minister for Planning
Land:	Lot 22 DP 1082435, Lot 23 DP 1077509 and Lot 494 DP 720450, Crescent Street, Cudgen
Proposed Development:	Expansion of an existing sand quarry, and operation of a recreational fishing facility

Notes:

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

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DEFINITIONS

<p>AEMR Applicant ARI BCA CCC Council DA Day DEC Department Director-General DNR DPI EIS EMS EP&A Act EP&A Regulation EPL Evening GTA Heavy vehicle Land Minister NHMRC Night Phase POEO Act Privately owned land RTA Site</p>	<p>Annual Environmental Management Report P Gulnane Pty Ltd, or its successors Average recurrence interval Building Code of Australia Community Consultative Committee Tweed Shire Council Development Application The period from 7am to 6pm on Monday to Saturday, and 8am to 6pm on Sundays and public holidays Department of Environment and Conservation Department of Planning Director-General of the Department of Planning, or delegate Department of Natural Resources Department of Primary Industries Environmental Impact Statement Environmental Management Strategy <i>Environmental Planning and Assessment Act 1979</i> <i>Environmental Planning and Assessment Regulation 2000</i> Environment Protection Licence issued under the <i>Protection of the Environment Operations Act 1997</i> The period from 6pm to 10pm General Term of Approval Any vehicle with a gross vehicle mass of 5 tonnes or more Land means the whole of a lot in a current plan registered at the Land Titles Office at the date of this development consent Minister for Planning, or delegate National Health and Medical Research Council The period from 10pm to 6am on Monday to Saturday, and 10pm to 8am on Sundays and Public Holidays The quarry development phases as described in the EIS for the development <i>Protection of the Environment Operations Act 1997</i> Land not owned by the Applicant or its related companies or where a private agreement does not exist between the Applicant and the land owner Roads and Traffic Authority Land to which the DA applies</p>
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**SCHEDULE 2
GENERAL ADMINISTRATIVE CONDITIONS**

Obligation to Minimise Harm to the Environment

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

Scope of Development

2. The Applicant shall carry out the development generally in accordance with:
 - a) DA No. 152-6-2005;
 - b) EIS titled *Proposed Expansion of Sand Quarry at Crescent Street Cudgen*, dated June 2005; and
 - c) conditions of this consent.
3. If there is any inconsistency between the above, the conditions of this consent shall prevail to the extent of the inconsistency.
4. The Applicant shall comply with any reasonable requirement/s of the Director-General arising from the Department's assessment of:
 - a) any reports, plans or correspondence that are submitted in accordance with this consent; and
 - b) the implementation of any actions or measures contained in these reports, plans or correspondence.

Surrender of Consents

5. Within 18 months of this consent, or as otherwise approved by the Director-General, the Applicant shall surrender all previous development consents for the quarry and recreational fishing facility, to the satisfaction of the Director-General.

Note: This consent will apply to all phases and components of the quarry and recreational fishing facility from the date of this approval.

Limits on Approval

6. This consent shall lapse on 1 July 2036.
Note: Conditions of this consent may require activities to be carried out by the Applicant beyond the period of approval for sand extraction, processing, and rehabilitation on the project site.
7. This consent is granted for Phases 3 and 4 of the quarry extension only, as described in the EIS, and shown conceptually on the plan in Appendix 1. ✓ nbs
8. The Applicant shall not produce or transport more than 150,000 cubic metres of sand products per year from the site.
9. The Applicant shall ensure that heavy vehicle movements (in and out) associated with the development do not exceed:
 - a) 20 per hour (peak);
 - b) 200 per day (peak); and
 - c) 80 per day (rolling quarterly average).

Structural Adequacy

10. The Applicant shall ensure that any new buildings and structures, and any alterations or additions to existing buildings and structures, are constructed in accordance with the relevant requirements of the BCA.

Notes:

- Under Part 4A of the EP&A Act, the Applicant is required to obtain construction and occupation certificates for any building works.
- Part 8 of the EP&A Regulation sets out the detailed requirements for the certification of development.

Demolition

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

Operation of Plant and Equipment

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

Section 94 Contributions

13. Prior to carrying out any development, or as otherwise agreed by Council, the Applicant shall pay Council \$5,046.30 in accordance with Council's *Tweed Road Contributions Plan*.

SCHEDULE 3 SPECIFIC ENVIRONMENTAL CONDITIONS

GENERAL EXTRACTION AND PROCESSING PROVISIONS

Identification of Boundaries

1. Within 1 month of the date of approval of the Rehabilitation and Landscape Management Plan (see condition 24 below), the Applicant 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 Director-General; and
 - c) ensure that these boundaries are clearly marked at all times in a permanent manner that allows operating staff and inspecting officers to clearly identify those limits.

Note: The limit of extraction includes the area described in the documents listed in condition 2 of schedule 2, and shown conceptually on the plan in Appendix 1, as amended by the conditions of this consent (including conditions 2 and 3 below).

Buffers and Lake Design

2. The Applicant shall maintain a minimum buffer of 10 metres to the boundaries of the site. No extraction shall occur within this buffer. The buffer may be used for minor drainage works, access, bunds and landscaping only.
3. The Applicant shall vary the buffer distance to the site boundary to achieve a stable, natural-looking final lake design with curved lake boundaries, to the satisfaction of the Director-General.

Notes:

- The final landform/lake design shall be shown on the plans accompanying the Rehabilitation and Landscape Management Plan (see condition 24 below).
- The final landform/lake design may encroach marginally into the Phase 5 area to achieve the required final lake design.

NOISE

Impact Assessment Criteria

4. ¹The Applicant shall ensure that noise generated by the development does not exceed the criteria specified in Table 1.

Table 1: Noise impact assessment criteria dB(A) L_{Aeq} (15 min)

Receiver Location	Day / Evening	Night
Residences on privately owned land	40	36

Notes:

- The noise criteria do not apply where the Applicant and the affected landowner have a valid agreement in regard to noise from the development, and a copy of the agreement has been forwarded to the Director-General and DEC. In this case the Applicant may exceed the noise limits in Table 1 in accordance with the noise agreement.
- Noise from the premises is to be measured at the most affected point within the residential boundary, or at the most affected point within 30 metres of the dwelling (rural situations) where the dwelling is more than 30 metres from the boundary, to determine compliance with the noise level limits in Table 1. Where it can be demonstrated that direct measurement of noise from the premises is impractical, the DEC may accept alternative means of determining compliance (see Chapter 11 of the NSW Industrial Noise Policy). The modification factors presented in Section 4 of the NSW Industrial Noise Policy shall also be applied to the measured noise level where applicable.
- The noise emission limits identified in Table 1 apply under meteorological conditions of wind speed up to 3m/s at 10 metres above ground level.

Cumulative Noise Criteria

5. The Applicant shall take all reasonable and feasible measures to ensure that the noise generated by the development 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 Director-General:
 - $L_{Aeq}(11 \text{ hour})$ 50 dB(A) – Day;
 - $L_{Aeq}(4 \text{ hour})$ 45 dB(A) – Evening; and
 - $L_{Aeq}(9 \text{ hour})$ 40 dB(A) – Night.

¹ Incorporates DEC GTA

Operating Hours

6. ²The Applicant shall comply with the operating hours in Table 2.

Table 2: Operating Hours

Activity	Day	Time
Sand extraction and processing, and other quarry related activities	Monday – Friday	7:00am to 5:00pm
	Saturday	7:00am to 4:00pm
	Sunday and Public Holidays	Nil
Sand product delivery and distribution, and other activities involving heavy vehicles movements off-site	Monday – Friday	7:00am to 5:00pm
	Saturday	7:00am to 12:00pm
	Sunday and Public Holidays	Nil
Recreational fishing facility	Any day	Any time
Maintenance (if inaudible at neighbouring residences)	Any day	Any time

7. ³The following activities may be carried out at the premises outside the hours specified in Table 2:
- the delivery of materials as requested by Police or other authorities for safety reasons; and
 - emergency work to avoid the loss of lives, property and/or to prevent environmental harm.
- In such circumstances the Applicant shall notify DEC and affected residents prior to undertaking the works, or within a reasonable period in the case of emergency.

Noise Monitoring Program

8. Within 3 months from the date of this consent, the Applicant shall prepare (and following approval implement) a Noise Monitoring Program for the development, in consultation with DEC, and to the satisfaction of the Director-General. This program must include a combination of attended and unattended noise monitoring, and a noise monitoring protocol for evaluating compliance with the noise impact assessment criteria in this consent.

AIR QUALITY

Impact Assessment Criteria

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

Table 3: Long term impact assessment criteria for particulate matter

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

Table 4: Short term impact assessment criteria for particulate matter

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

Table 5: Long term impact assessment criteria for deposited dust

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

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

² Incorporates DEC GTA

³ Incorporates DEC GTA

Air Quality Monitoring Program

10. Within 3 months from the date of this consent, the Applicant shall prepare (and following approval implement) an Air Quality Monitoring Program for the development, in consultation with DEC, and to the satisfaction of the Director-General. This program must include an air monitoring protocol for evaluating compliance with the air quality impact assessment criteria in this consent.

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

SOILS, SURFACE WATER & GROUNDWATER

Note: The Applicant is required to obtain licences and permits for the development under the Protection of the Environment Operations Act 1997, Water Act 1912 and Fisheries Management Act 1994.

Water Discharges

11. ⁴The Applicant shall not discharge any surface water from active dredge and fines return ponds. The Applicant must ensure that any pond subject to dredging, or containing turbid water due to recent dredging, is maintained and operated to prevent discharges of any surface water from these ponds.

Water Quality Objectives

12. The Applicant shall aim to meet the water quality objectives in Table 6 for water in the dredge ponds and in (shallow) groundwater surrounding the dredge ponds, unless otherwise approved or directed by the Director-General:

Table 6: Water Quality Objectives

Pollutant	Unit of Measure	Water Quality Objective
Turbidity	NTU	5-20
pH	pH	6.5 – 8.5
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.cells/mL (<i>M.aeruginosa</i>)	<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

Notes:

- The objectives for dissolved oxygen, turbidity and algae are relevant to surface water only.
- The Department acknowledges that short term exceedances of these objectives may occur during natural events such as flooding.
- The Department acknowledges that pre-existing water quality may not meet the objectives for some analytes, including blue-green algae, bacteria and turbidity. The Applicant shall strive to meet these water quality objectives through implementation of the Soil and Water Management Plan (see condition 17 below), as far as is reasonable and feasible and within the Applicant's control, to the satisfaction of the Director-General.
- The Department acknowledges that deep groundwater (ie. around 20 metres below surface) on the site is influenced by brackish water and as such may not meet applicable water quality objectives.

⁴ Incorporates DEC GTA

Fines Management

13. ⁵The Applicant shall ensure that all excavated potential acid sulfate soil fines material is returned back to below the watertable as soon as possible to prevent oxidation. No potential acid sulfate soil shall be removed from the site, unless adequately neutralised in accordance with methods approved under the Soil and Water Management Plan (see condition 17 below).

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

14. ⁶The Applicant shall ensure that all potential acid sulfate soil fines material 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 from the water surface, unless an alternative method(s) is approved by the DNR and the Director-General.

Flood Management

15. The Applicant shall cease dredging and processing activities not less than 24 hours prior to the commencement of overflow from any dredge pond. No dredging or processing shall occur when the dredge ponds are overflowing.
16. The Applicant shall ensure that the flood storage capacity of the site is no less than the pre-existing flood storage capacity at all stages of the development. Details of the available flood storage capacity shall be reported in the AEMR.

Monitoring and Management

17. ⁷Within 6 months of the date of this consent, the Applicant shall prepare (and following approval implement) a Soil and Water Management Plan for the development, in consultation with the DEC, DNR and Council, and to the satisfaction of the Director-General. This plan must be prepared by a qualified hydrologist/hydrogeologist and include:
- a Water Balance;
 - a Soil and Water Management Plan;
 - a Blue-Green Algae Management Plan;
 - a Surface Water Monitoring Program; and
 - a Ground Water Monitoring Program.
18. The Water Balance shall include:
- details of all water extracted, transferred, used and/or discharged by the quarry;
 - the source of all water collected or stored on the site, including rainfall, stormwater and groundwater; and
 - measures to minimise water use by the development.
19. The Soil and Water Management Plan shall:
- be consistent with the requirements of the Department of Housing's *Managing Urban Stormwater: Soils and Construction* manual, the NSW Acid Sulfate Soil Advisory Committee's *Acid Sulfate Soil Manual*, and Council's codes including its *Code of Practice for Soil and Water Management on Construction Sites*;
 - describe the location, function, and capacity of soil and water management and control structures during construction, stabilisation and operational stages;
 - identify construction and operational activities that could cause soil erosion, sedimentation or generation of acid sulfate soils;
 - describe measures to minimise soil erosion and the potential for the transport of sediment to downstream waters;
 - define procedures for managing the potential acid sulfate soils on the site;
 - define procedures for managing water releases from the site; and
 - define procedures for the maintenance of soil and water management structures over time.
20. The Blue-Green Algae Management Plan shall:
- be prepared by a suitably qualified blue-green algae expert, whose appointment has been approved by the Director-General;
 - be consistent with extant guidelines for blue-green algae management including the NHMRC's *Guidelines for Managing Risks in Recreational Water*;
 - include a detailed recovery plan that aims to reduce algae levels to meet the water quality objectives in Table 6 within a reasonable timeframe;
 - describe the measures that would be implemented to prevent and control the sources of algal blooms over the short, medium and long term;

⁵ Incorporates DNR GTA

⁶ Incorporates DNR GTA

⁷ Incorporates DNR and DEC GTA

- e) include reasonable and feasible measures to reduce nutrient levels in the pond/s over the short, medium and long term, and include interim water quality targets for nutrients based on continual improvement and established water quality objectives for the Tweed catchment; and
 - f) define procedures for the management and notification of identified algal blooms.
21. The Surface Water Monitoring Program shall include:
- a) detailed baseline data on surface water flows and quality in waterbodies that could potentially be impacted by the quarry;
 - b) surface water impact assessment criteria;
 - c) a program to monitor surface water flows and quality;
 - d) a program to manage water releases from the site;
 - e) a program to monitor bank and bed stability; and
 - f) a protocol for the investigation, notification and mitigation of identified exceedances of the surface water impact assessment criteria.
22. The Ground Water Monitoring Program shall include:
- a) detailed baseline data on ground water levels and quality, based on statistical analysis;
 - b) ground water impact assessment criteria;
 - c) a program to monitor ground water levels and quality;
 - d) a program to monitor ground water level effects on vegetation, and on ground water supply to adjoining properties; and
 - e) a protocol for the investigation, notification and mitigation of identified exceedances of the groundwater impact assessment criteria.

REHABILITATION AND LANDSCAPING

Rehabilitation

23. The Applicant shall progressively rehabilitate the site to the satisfaction of the Director-General.

Rehabilitation and Landscape Management Plan

24. Within 6 months of the date of this consent, the Applicant shall prepare (and following approval implement) a Rehabilitation and Landscape Management Plan for the development to the satisfaction of the Director-General. This plan must:
- a) include a detailed final landform concept plan;
 - b) describe in general the short, medium, and long-term measures that would be implemented to rehabilitate and stabilise the site;
 - c) describe in detail the measures that would be implemented over the next 5 years to rehabilitate and stabilise the site;
 - d) describe how the performance of these measures would be monitored over time;
 - e) set completion criteria for the rehabilitation and stabilisation of the site (including appropriate water quality criteria); and
 - f) include a Vegetation Clearing Protocol, Landscape Plan/s and a Pest and Weed Management Plan.

Notes:

- *The final landform concept plan described in (a) shall be based on the requirements of the relevant conditions of this consent, including conditions 2 and 3 of schedule 3.*
- *The measures for stabilising the final pond must ensure the long term stability of the banks from erosion and shall be generally consistent with the rock stabilisation methods described in the report titled Cudgen Lake Slope Stability Review, prepared by International Coastal Management, dated December 2005, unless otherwise approved by the Director-General.*
- *Within the context of ensuring long term stability, the pond design shall incorporate a variety of lake bank treatments (eg. beaches, wetlands) to achieve a natural looking final pond comprising a variety of habitats. Details of the treatments, along with appropriate modelling/analysis of the long term stability of the treatments, shall be provided with the Rehabilitation and Landscape Management Plan.*

25. The Rehabilitation and Landscape Management Plan must be prepared:
- a) in consultation with Council, DNR, DEC, DPI-Fisheries and the CCC;
 - b) by suitably qualified consultants, including a specialist hydrologist, coastal engineer, wetlands ecologist and landscape architect; and
 - c) in accordance with extant guidelines including the DNR's *Constructed Wetlands Manual, Volumes 1 & 2*, to the satisfaction of the Director-General.
26. The Landscape Plan/s shall include:
- a) concept design plans for the final landform; and
 - b) detailed design plans for the areas to be rehabilitated in the next 5 years.
27. The Pest and Weed Management Plan shall:
- a) identify potential terrestrial and aquatic pests and weeds that may be expected on the site;

- b) describe the measures that would be implemented to prevent and eradicate the occurrence of pests and weeds on the site; and
- c) describe how the performance of these measures would be monitored over time.

Rehabilitation Bond

28. Within 12 months of the date of this consent, the Applicant shall lodge a rehabilitation bond for the development with the Director-General. The sum of the bond shall be calculated at:
- a) \$2.50/m² for the total area to be disturbed in each 5 year review period (see condition 29 below); and
 - b) \$1.50/m² for the total area of land previously disturbed and/or rehabilitated by the development (including the Phase 1 and 2 area), to the satisfaction of the Director-General.

Notes:

- If the rehabilitation and stabilisation works are completed to the satisfaction of the Director-General, the Director-General will release the rehabilitation bond.
- If the rehabilitation and stabilisation works are not completed to the satisfaction of the Director-General, the Director-General will call in all or part of the rehabilitation bond, and arrange for the satisfactory completion of these works.

29. Within 6 months of each Independent Environmental Audit (see condition 6 of schedule 5) excluding the inaugural audit, unless the Director-General directs otherwise, the Applicant shall review, and if necessary revise, the sum of the rehabilitation bond to the satisfaction of the Director-General. This review must consider:
- a) the effects of inflation;
 - b) any changes to the total area of disturbance; and
 - c) the performance of the rehabilitation to date.

LONG TERM MANAGEMENT

Long Term Management Strategy

30. Within 12 months of the date of this consent the Applicant shall prepare a Long Term Management Strategy for the site, in consultation with Council, DPI-Fisheries and the CCC, and to the satisfaction of the Director-General. The strategy must:
- a) define the objectives and criteria for quarry closure and post-extraction management;
 - b) investigate options for the future use of the site, including the recreational fishing facility;
 - c) describe the measures that would be implemented to minimise or manage the ongoing environmental effects of the development; and
 - d) describe how the performance of these measures would be monitored over time.

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

TRAFFIC AND TRANSPORT

Site Access

31. The Applicant shall ensure that all heavy vehicle access to and from the site is via the Tweed Coast Road/Crescent Road/Altona Road route. No heavy vehicles shall travel via Crescent Street through Cudgen Village, except for local deliveries to Cudgen Village.

Road Haulage

32. The Applicant shall ensure that all loaded vehicles entering or leaving the site are covered.
33. The Applicant shall ensure all loaded vehicles leaving the site are cleaned of materials that may fall on the road before they are allowed to leave the site.

Parking

34. The Applicant shall provide sufficient parking on-site for all development related traffic and visitors, in accordance with Council's parking codes, and to the satisfaction of the Director-General. No on-street parking shall be undertaken.
35. The Applicant shall ensure that on-site parking and pedestrian facilities are adequately signposted and located so as to prevent conflict between quarry and recreational fishing facility operations.

VISUAL IMPACT

36. The Applicant shall minimise the visual impacts of the development to the satisfaction of the Director-General.

Tree Screens

37. Within 12 months from the date of this consent, the Applicant shall establish and subsequently maintain a tree screen along the southern boundary of the site.

Note: The tree screen shall be detailed on the Landscape Plan/s (see condition 24 above).

Lighting Emissions

38. Any external lighting associated with the development shall comply with *Australian Standard AS4282 (INT) 1995 – Control of Obtrusive Effects of Outdoor Lighting*.

WASTE MANGEMENT

Waste Minimisation

39. The Applicant shall:
- a) monitor the amount of waste generated by the development;
 - b) investigate ways to minimise waste generated by the development;
 - c) implement reasonable and feasible measures to minimise waste generated by the development; and
 - d) report on waste management and minimisation in the AEMR to the satisfaction of the Director-General.

Wastewater Treatment

40. The Applicant shall install and manage any on-site sewage treatment facility to the satisfaction of Council and DEC. The facility must comply with the requirements of the *Environment and Health Protection Guidelines – On-site Sewage Management for Single Households (1998)*.

HAZARDS MANAGEMENT

Dangerous Goods

41. The Applicant shall ensure that the storage, handling, and transport of dangerous goods is conducted in accordance with the relevant Australian Standards, particularly *AS1940* and *AS1596*, and the *Dangerous Goods Code*.

Safety

42. The Applicant shall secure the development to ensure public safety to the satisfaction of the Director-General.

PRODUCTION DATA

43. The Applicant 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 AEMR.

SCHEDULE 4 ADDITIONAL PROCEDURES

NOTIFICATION OF LANDOWNERS

1. If the results of monitoring required in schedule 3 identify that impacts generated by the development are greater than the relevant impact assessment criteria in schedule 3, then the Applicant shall notify the Director-General and the 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 development is complying with the criteria in schedule 3.

INDEPENDENT REVIEW

2. If a landowner considers that the operations of the development are exceeding the impact assessment criteria in schedule 3, then he/she may ask the Applicant in writing for an independent review of the impacts of the development on his/her land.

If the Director-General is satisfied that an independent review is warranted, the Applicant shall within 3 months of the Director-General advising that an independent review is warranted:

- a) consult with the landowner to determine his/her concerns;
 - b) commission a suitably qualified, experienced and independent person, whose appointment has been approved by the Director-General, to conduct monitoring on the land, to determine whether the development is complying with the relevant criteria in schedule 3, and identify the source/s and scale of any impact on the land, and the development's contribution to this impact; and
 - c) give the Director-General and landowner a copy of the independent review.
3. If the independent review determines that the operations are complying with the relevant criteria in schedule 3, then the Applicant may discontinue the independent review with the approval of the Director-General.
 4. If the independent review determines that the operations are not complying with the relevant criteria in schedule 3, and that the development is primarily responsible for this non-compliance, then the Applicant shall:
 - a) take all practicable measures, in consultation with the landowner, to ensure that the development complies with the relevant criteria; and
 - b) conduct further monitoring to determine whether these measures ensure compliance; or
 - c) secure a written agreement with the landowner to allow exceedances of the relevant criteria in schedule 3,to the satisfaction of the Director-General.

If the additional monitoring referred to above subsequently determines that the operations are complying with the relevant criteria in schedule 3, then the Applicant may discontinue the independent review with the approval of the Director-General.

If the Applicant is unable to finalise an agreement with the landowner, then the Applicant or landowner may refer the matter to the Director-General for resolution.

If the matter cannot be resolved within 21 days, the Director-General shall refer the matter to an Independent Dispute Resolution Process (see Appendix 2).

5. If the independent review determines that the operations are not complying with the relevant criteria in schedule 3, but that several developments are responsible for this non-compliance, then the Applicant shall, with the agreement of the landowner and other development/s, prepare and implement a Cumulative Impact Management Plan to the satisfaction of the Director-General. This plan must provide details of the joint approach to be adopted by the Applicant and other development/s to manage cumulative impacts at the landowner's dwelling.

If the Applicant is unable to finalise an agreement with the landowner and/or other development/s, and/or prepare a Cumulative Impact Management Plan, then the Applicant or landowner may refer the matter to the Director-General for resolution.

If the matter cannot be resolved within 21 days, the Director-General shall refer the matter to an Independent Dispute Resolution Process (see Appendix 2).

6. If the landowner disputes the results of the independent review, either the Applicant or the landowner may refer the matter to the Director-General for resolution.

If the matter cannot be resolved within 21 days, the Director-General shall refer the matter to an Independent Dispute Resolution Process (see Appendix 2).

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

ENVIRONMENTAL MANAGEMENT STRATEGY

1. Within 6 months of the date of this consent, the Applicant shall prepare, and subsequently implement, an Environmental Management Strategy for the development to the satisfaction of the Director-General. This strategy must:
 - a) provide the strategic context for environmental management of the development;
 - b) identify the statutory requirements that apply to the development;
 - c) describe in general how the environmental performance of the development would be monitored and managed during the development;
 - d) describe the procedures that would be implemented to:
 - keep the local community and relevant agencies informed about the operation and environmental performance of the development;
 - receive, handle, respond to, and record complaints;
 - resolve any disputes that may arise during the course of the development;
 - respond to any non-compliance;
 - manage cumulative impacts; and
 - respond to emergencies; and
 - e) describe the role, responsibility, authority, and accountability of all the key personnel involved in environmental management of the development; and
 - f) be updated within 3 months of the completion of each Independent Environmental Audit (see below).

ENVIRONMENTAL MONITORING PROGRAM

2. Within 3 months of the date of this consent, the Applicant shall prepare an Environmental Monitoring Program for the development, to the satisfaction of the Director-General. This program must consolidate the various monitoring requirements in schedule 3 of this consent into a single document.
3. Within 3 months of the completion of each Independent Environmental Audit (see below), the Applicant shall review, and if necessary update, the Environmental Monitoring Program to the satisfaction of the Director-General.

INCIDENT REPORTING

4. Within 7 days of detecting an exceedance of the limits/performance criteria in this consent or an incident causing, or threatening to cause, material harm to the environment; the Applicant shall report the exceedance/incident to the Department, and any relevant agency. The report must:
 - a) describe the date, time, and nature of the exceedance/incident;
 - b) identify the cause or likely cause of the exceedance/incident;
 - c) describe what action has been taken to date; and
 - d) describe the proposed measures to address the exceedance/incident.

ANNUAL REPORTING

5. Each year, following the date of this consent, the Applicant shall prepare and submit an AEMR to the Director-General and the relevant agencies. This report must:
 - a) identify the standards and performance measures that apply to the development;
 - b) describe the works carried out in the last 12 months;
 - c) describe the works that will be carried out in the next 12 months;
 - d) include a summary of the complaints received during the past year, and compare this to the complaints received in previous years;
 - e) include a summary of the monitoring results for the development during the past year;
 - f) include an analysis of these monitoring results against the relevant:
 - impact assessment criteria;
 - monitoring results from previous years; and
 - predictions in the EIS;
 - g) identify any trends in the monitoring results over the life of the development;
 - h) identify any non-compliance during the previous year; and
 - i) describe what actions were, or are being taken to ensure compliance.

INDEPENDENT ENVIRONMENTAL AUDIT

6. Within 2 years of the date of this consent, and every 4 years thereafter, unless the Director-General directs otherwise, the Applicant shall commission and pay the full cost of an Independent Environmental Audit of the development. This audit must:
 - a) be conducted by suitably qualified, experienced, and independent expert/s whose appointment has been endorsed by the Director-General;

- b) assess the environmental performance of the development, and its effects on the surrounding environment;
 - c) assess whether the development is complying with the relevant standards, performance measures, and statutory requirements;
 - d) review the adequacy of the Applicant's Environmental Management Strategy and environmental management strategies/plans/programs; and, if necessary,
 - e) recommend measures or actions to improve the environmental performance of the development, and/or the environmental management and monitoring systems.
7. Within 3 months of commissioning the Independent Environmental Audit, the Applicant shall submit a copy of the audit report to the Director-General, with a response to the recommendations contained in the audit report.
8. Within 6 months of each Independent Environmental Audit, the Applicant 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 Director-General.

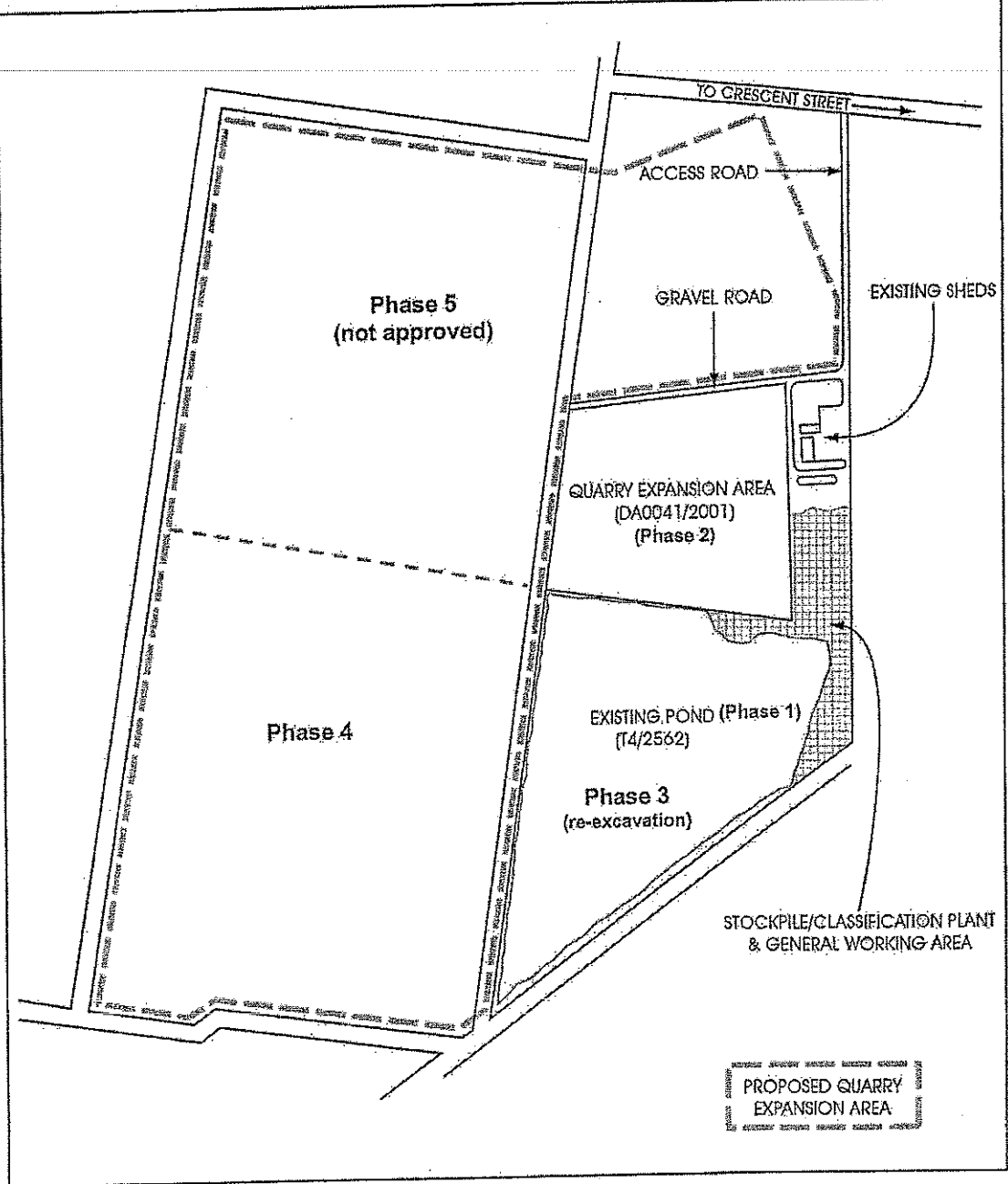
COMMUNITY CONSULTATIVE COMMITTEE

9. Within 6 months of the date of this consent, the Applicant shall establish a Community Consultative Committee to oversee the environmental performance of the development. The CCC shall:
- a) be comprised of at least:
 - 2 representatives from the Applicant, including the person responsible for environmental management at the quarry;
 - 1 representative from Council (if available); and
 - 2 representatives from the local community, whose appointment has been approved by the Director-General in consultation with the Council;
 - b) be chaired by an independent chairperson, whose appointment has been endorsed by the Director-General;
 - c) meet at least twice a year;
 - d) undertake regular inspections of the operations;
 - e) review and provide comment on the environmental performance of the development, including any construction or environmental management plans, monitoring results, audit reports, or complaints; and
 - f) be operated in accordance with any guidelines the Department may publish in regard to the operation of CCC for mining/quarrying projects.
10. The Applicant shall, at its own expense:
- a) ensure that 2 of its representatives attend the Committee's meetings;
 - b) provide the Committee with regular information on the environmental performance and management of the development;
 - c) provide meeting facilities for the Committee;
 - d) arrange site inspections for the Committee, if necessary;
 - e) take minutes of the Committee's meetings;
 - f) make these minutes available to the public;
 - g) respond to any advice or recommendations the Committee may have in relation to the environmental management or performance of the development; and
 - h) forward a copy of the minutes of each Committee meeting, and any responses to the Committee's recommendations, to the Director-General within a month of the Committee meeting.

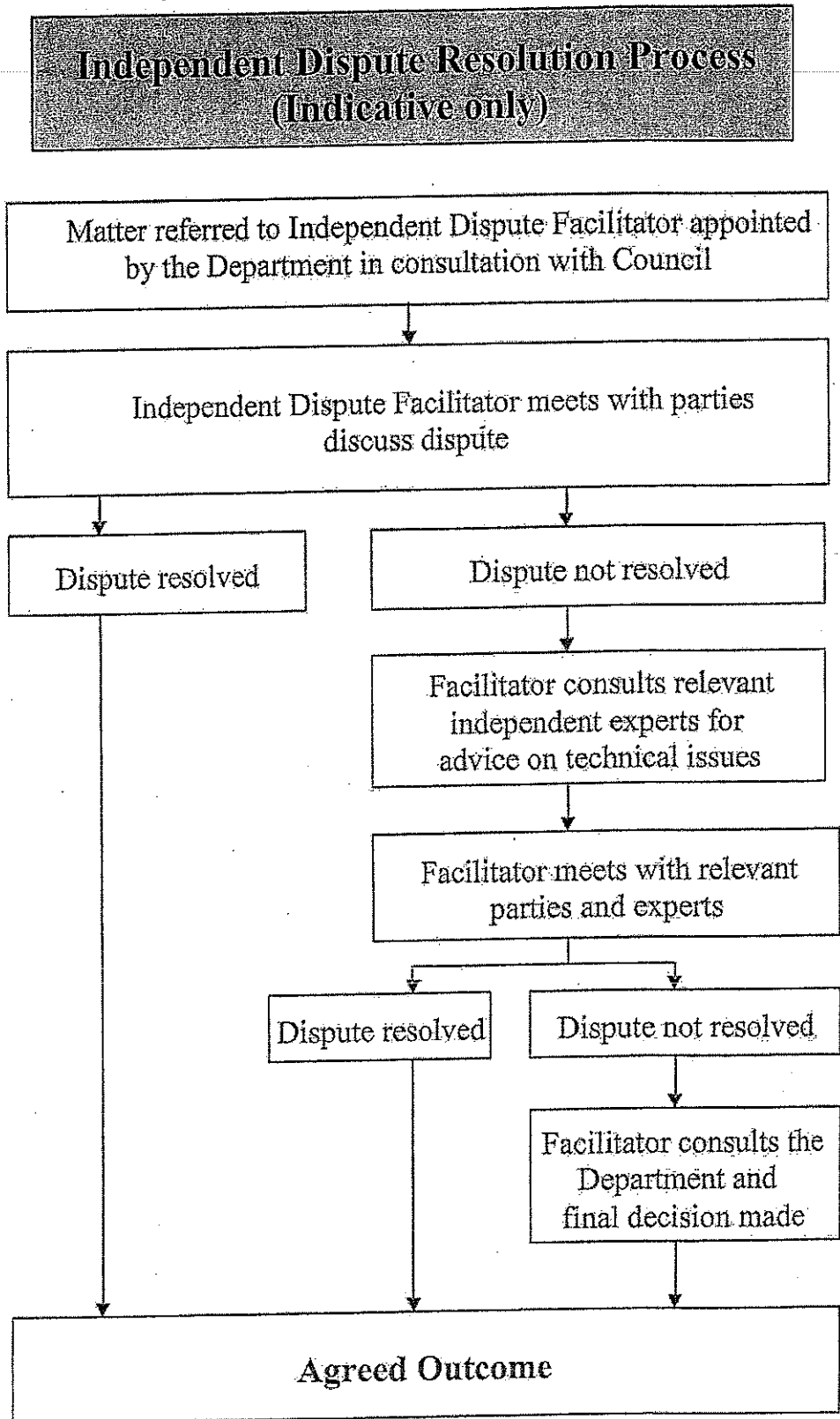
ACCESS TO INFORMATION

11. Within 1 month of the approval of any management plan/strategy or monitoring program required under this consent (or any subsequent revision of these management plans/strategies or monitoring programs), the completion of the independent audits required under this consent, or the completion of the AEMR, the Applicant shall:
- a) provide a copy of the relevant document/s to the Council, relevant agencies and the CCC;
 - b) ensure that a copy of the relevant documents is made publicly available at the site; to the satisfaction of the Director-General.
12. During the life of the development, the Applicant shall:
- a) make a summary of the results of all monitoring required under this consent publicly available at the site; and
 - b) update these results on a regular basis (at least every 3 months), to the satisfaction of the Director-General.

APPENDIX 1
CONCEPT DEVELOPMENT LAYOUT PLAN



APPENDIX 2
CONCEPT DEVELOPMENT LAYOUT PLAN



Environment Protection Licence

Licence - 11453

**Licence Details**

Number:	11453
Anniversary Date:	27-July
Review Due Date:	22-Jul-2009

Licensee

HANSON CONSTRUCTION MATERIALS PTY LTD
 LOCKED BAG 4000
 DONCASTER VIC 3108

Licence Type

Premises

Premises

HANSON CONSTRUCTION MATERIALS PTY LTD
 CRESENT STREET
 CUDGEN NSW 2487

Scheduled Activity

Dredging Works
 Extractive activities

Fee Based Activity

Water-based extractive activity

Scale

> 50000 - 100000 m3 obtained or moved

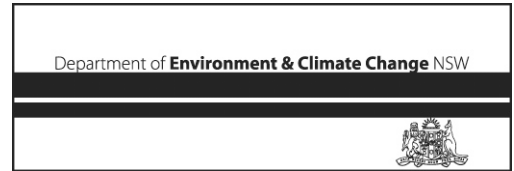
Region

North East - North Coast
 NSW Govt Offices, 49 Victoria Street
 GRAFTON NSW 2460
 Phone: 02 6640 2500
 Fax: 02 6642 7743

 PO Box 498 GRAFTON
 NSW 2460

Environment Protection Licence

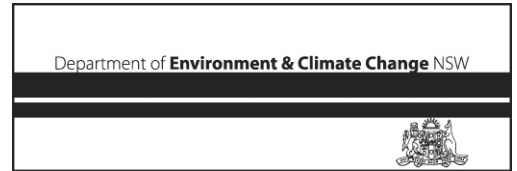
Licence - 11453



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Information about this licence

Dictionary

A definition of terms used in the licence can be found in the dictionary at the end of this licence.

Responsibilities of licensee

Separate to the requirements of this licence, general obligations of licensees are set out in the Protection of the Environment Operations Act 1997 ("the Act") and the Regulations made under the Act. These include obligations to:

- ensure persons associated with you comply with this licence, as set out in section 64 of the Act;
- control the pollution of waters and the pollution of air (see for example sections 120 - 132 of the Act); and
- report incidents causing or threatening material environmental harm to the environment, as set out in Part 5.7 of the Act.

Variation of licence conditions

The licence holder can apply to vary the conditions of this licence. An application form for this purpose is available from the EPA.

The EPA may also vary the conditions of the licence at any time by written notice without an application being made.

Where a licence has been granted in relation to development which was assessed under the Environmental Planning and Assessment Act 1979 in accordance with the procedures applying to integrated development, the EPA may not impose conditions which are inconsistent with the development consent conditions until the licence is first reviewed under Part 3.6 of the Act.

Duration of licence

This licence will remain in force until the licence is surrendered by the licence holder or until it is suspended or revoked by the EPA or the Minister. A licence may only be surrendered with the written approval of the EPA.

Licence review

The Act requires that the EPA review your licence at least every 5 years after the issue of the licence, as set out in Part 3.6 and Schedule 5 of the Act. You will receive advance notice of the licence review.

Fees and annual return to be sent to the EPA

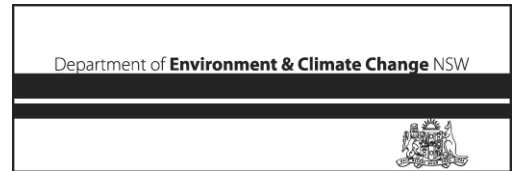
For each licence fee period you must pay:

- an administrative fee; and
- a load-based fee (if applicable).

The EPA publication "A Guide to Licensing" contains information about how to calculate your licence fees.

Environment Protection Licence

Licence - 11453



The licence requires that an Annual Return, comprising a Statement of Compliance and a summary of any monitoring required by the licence (including the recording of complaints), be submitted to the EPA. The Annual Return must be submitted within 60 days after the end of each reporting period. See condition R1 regarding the Annual Return reporting requirements.

Usually the licence fee period is the same as the reporting period.

Transfer of licence

The licence holder can apply to transfer the licence to another person. An application form for this purpose is available from the EPA.

Public register and access to monitoring data

Part 9.5 of the Act requires the EPA to keep a public register of details and decisions of the EPA in relation to, for example:

- licence applications;
- licence conditions and variations;
- statements of compliance;
- load based licensing information; and
- load reduction agreements.

Under s320 of the Act application can be made to the EPA for access to monitoring data which has been submitted to the EPA by licensees.

This licence is issued to:

HANSON CONSTRUCTION MATERIALS PTY LTD
LOCKED BAG 4000
DONCASTER VIC 3108

subject to the conditions which follow.

1 Administrative conditions

A1 What the licence authorises and regulates

A1.1 Not applicable.

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.

Environment Protection Licence

Licence - 11453



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.

Scheduled Activity
Dredging Works
Extractive activities

Fee Based Activity	Scale
Water-based extractive activity	> 50000 - 100000 m3 obtained or moved

A1.3 Not applicable.

A2 Premises to which this licence applies

A2.1 The licence applies to the following premises:

Premises Details
HANSON CONSTRUCTION MATERIALS PTY LTD
CRESENT STREET
CUDGEN
NSW
2487
LOT 2 DP777905

A3 Other activities

A3.1 This licence applies to all other activities carried on at the premises, including:

Environment Protection Licence

Licence - 11453



Extractive Industries

A4 Information supplied to the EPA

A4.1 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:

- (a) 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
- (b) the licence information form provided by the licensee to the EPA to assist the EPA in connection with the issuing of this licence.

2 Discharges to air and water and applications to land

P1 Location of monitoring/discharge points and areas

P1.1 Not applicable.

P1.2 Not applicable.

P1.3 Not applicable.

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.

L2 Load limits

L2.1 Not applicable.

L2.2 Not applicable.



L3 Concentration limits

L3.1 Not applicable.

L3.2 Not applicable.

L3.3 Not applicable.

L4 Volume and mass limits

L4.1 Not applicable.

L5 Waste

L5.1 Not applicable.

L6 Noise Limits

L6.1 Noise from the premises must not exceed an LA10 (15 minute) noise emission criterion of 40 dB(A), except as expressly provided by this licence.

L6.2 The noise emission limits identified in L6.1 apply for prevailing meteorological conditions (winds up to 3m/s), except under conditions of temperature inversions. Noise impacts that may be enhanced by temperature inversions must be addressed by:

- (a) Documenting noise complaints received to identify any higher level of impacts or patterns of temperature inversions.
- (b) Where levels of noise complaints indicate a higher level of impact then actions to quantify and ameliorate any enhanced impacts under temperature inversions conditions should be developed and implemented.

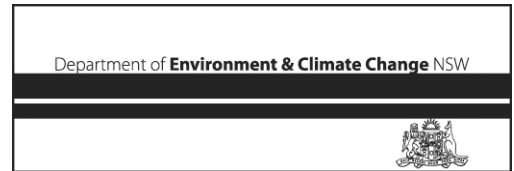
L6.3 Noise from the premises is to be measured at any effected residence to determine compliance with this condition.

4 Operating conditions

O1 Activities must be carried out in a competent manner

Environment Protection Licence

Licence - 11453



O1.1 Licensed activities must be carried out in a competent manner.

This includes:

- (a) the processing, handling, movement and storage of materials and substances used to carry out the activity; and
- (b) the treatment, storage, processing, reprocessing, transport and disposal of waste generated by the activity.

O1.2 Unless otherwise agreed to in writing by the EPA, works 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. For the purpose of this licence, the term "works" refers to all dredging operations, maintenance, deliveries, barge movements, fueling and associated heavy transport.

O2 Maintenance of plant and equipment

O2.1 All plant and equipment installed at the premises or used in connection with the licensed activity:

- (a) must be maintained in a proper and efficient condition; and
- (b) must be operated in a proper and efficient manner.

O3 Trucks transporting material from the premises must be covered immediately after loading to prevent wind blown emissions and spillage. The covering must be maintained until immediately before unloading the trucks.

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.

M1.2 All records required to be kept by this licence must be:

- (a) in a legible form, or in a form that can readily be reduced to a legible form;
- (b) kept for at least 4 years after the monitoring or event to which they relate took place; and
- (c) produced in a legible form to any authorised officer of the EPA who asks to see them.

M1.3 The following records must be kept in respect of any samples required to be collected for the purposes of this licence:

- (a) the date(s) on which the sample was taken;
- (b) the time(s) at which the sample was collected;
- (c) the point at which the sample was taken; and
- (d) the name of the person who collected the sample.



M2 Requirement to monitor concentration of pollutants discharged

M2.1 Not applicable.

M3 Testing methods - concentration limits

M3.1 Not applicable.

M3.2 Not applicable.

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.

M4.2 The record must include details of the following:

- (a) the date and time of the complaint;
- (b) the method by which the complaint was made;
- (c) any personal details of the complainant which were provided by the complainant or, if no such details were provided, a note to that effect;
- (d) the nature of the complaint;
- (e) the action taken by the licensee in relation to the complaint, including any follow-up contact with the complainant; and
- (f) if no action was taken by the licensee, the reasons why no action was taken.

M4.3 The record of a complaint must be kept for at least 4 years after the complaint was made.

M4.4 The record must be produced to any authorised officer of the EPA who asks to see them.

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.

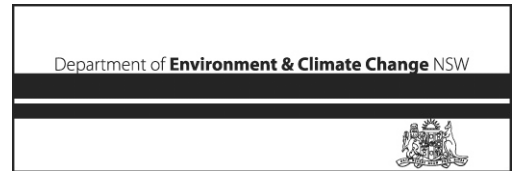
M5.2 The licensee must notify the public of the complaints line telephone number and the fact that it is a complaints line so that the impacted community knows how to make a complaint.

M5.3 Conditions M5.1 and M5.2 do not apply until 3 months after:

- (a) the date of the issue of this licence or

Environment Protection Licence

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- (b) 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.

M6 Requirement to monitor volume or mass

M6.1 Not applicable.

6 Reporting conditions

R1 Annual return documents

What documents must an Annual Return contain?

R1.1 The licensee must complete and supply to the EPA an Annual Return in the approved form comprising:

- (a) a Statement of Compliance; and
- (b) a Monitoring and Complaints Summary.

A copy of the form in which the Annual Return must be supplied to the EPA accompanies this licence. Before 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.

Period covered by Annual Return

R1.2 An Annual Return must be prepared in respect of each reporting period, except as provided below.

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.

R1.3 Where this licence is transferred from the licensee to a new licensee:

- (a) 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
- (b) 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.

Note: An application to transfer a licence must be made in the approved form for this purpose.

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:

- (a) in relation to the surrender of a licence - the date when notice in writing of approval of the surrender is given; or
- (b) in relation to the revocation of the licence - the date from which notice revoking the licence operates.



Deadline for Annual Return

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').

Notification where actual load can not be calculated

R1.6 Not applicable.

Licensee must retain copy of Annual Return

R1.7 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.

Certifying of Statement of Compliance and signing of Monitoring and Complaints Summary

R1.8 Within the Annual Return, the Statement of Compliance must be certified and the Monitoring and Complaints Summary must be signed by:

- (a) the licence holder; or
- (b) by a person approved in writing by the EPA to sign on behalf of the licence holder.

R1.9 A person who has been given written approval to certify a certificate of compliance under a licence issued under the Pollution Control Act 1970 is taken to be approved for the purpose of this condition until the date of first review of this licence.

R2 Notification of environmental harm

Note: The licensee or its employees must notify the EPA of incidents causing or threatening material harm to the environment as soon as practicable after the person becomes aware of the incident in accordance with the requirements of Part 5.7 of the Act.

R2.1 Notifications must be made by telephoning the EPA's Pollution Line service on 131 555.

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.

R3 Written report

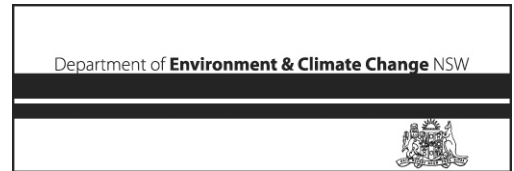
R3.1 Where an authorised officer of the EPA suspects on reasonable grounds that:

- (a) where this licence applies to premises, an event has occurred at the premises; or
- (b) 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.

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- 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.
- R3.3 The request may require a report which includes any or all of the following information:
- (a) the cause, time and duration of the event;
 - (b) the type, volume and concentration of every pollutant discharged as a result of the event;
 - (c) 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;
 - (d) 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;
 - (e) action taken by the licensee in relation to the event, including any follow-up contact with any complainants;
 - (f) details of any measure taken or proposed to be taken to prevent or mitigate against a recurrence of such an event; and
 - (g) any other relevant matters.
- 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.

General conditions

G1 Copy of licence kept at the premises

- G1.1 A copy of this licence must be kept at the premises to which the licence applies.
- G1.2 The licence must be produced to any authorised officer of the EPA who asks to see it.
- G1.3 The licence must be available for inspection by any employee or agent of the licensee working at the premises.

Pollution studies and reduction programs

Special conditions

Dictionary



General Dictionary

In this licence, unless the contrary is indicated, the terms below have the following meanings:

3DGM [in relation to a concentration limit]	Means the three day geometric mean, which is calculated by multiplying the results of the analysis of three samples collected on consecutive days and then taking the cubed root of that amount. Where one or more of the samples is zero or below the detection limit for the analysis, then 1 or the detection limit respectively should be used in place of those samples
Act	Means the Protection of the Environment Operations Act 1997
activity	Means a scheduled or non-scheduled activity within the meaning of the Protection of the Environment Operations Act 1997
actual load	Has the same meaning as in the Protection of the Environment Operations (General) Regulation 1998
AM	Together with a number, means an ambient air monitoring method of that number prescribed by the <i>Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales</i> .
AMG	Australian Map Grid
anniversary date	The anniversary date is the anniversary each year of the date of issue of the licence. In the case of a licence continued in force by the Protection of the Environment Operations Act 1997, the date of issue of the licence is the first anniversary of the date of issue or last renewal of the licence following the commencement of the Act.
annual return	Is defined in R1.1
Approved Methods Publication	Has the same meaning as in the Protection of the Environment Operations (General) Regulation 1998
assessable pollutants	Has the same meaning as in the Protection of the Environment Operations (General) Regulation 1998
BOD	Means biochemical oxygen demand
CEM	Together with a number, means a continuous emission monitoring method of that number prescribed by the <i>Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales</i> .
COD	Means chemical oxygen demand
composite sample	Unless otherwise specifically approved in writing by the EPA, a sample consisting of 24 individual samples collected at hourly intervals and each having an equivalent volume.
cond.	Means conductivity
environment	Has the same meaning as in the Protection of the Environment Operations Act 1997
environment protection legislation	Has the same meaning as in the Protection of the Environment Administration Act 1991
EPA	Means Environment Protection Authority of New South Wales.
fee-based activity classification	Means the numbered short descriptions in Schedule 1 of the Protection of the Environment Operations (General) Regulation 1998.
flow weighted composite sample	Means a sample whose composites are sized in proportion to the flow at each composites time of collection.
grab sample	Means a single sample taken at a point at a single time
hazardous waste	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997

Environment Protection Licence



Licence - 11453

	1997
industrial waste	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
inert waste	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
licensee	Means the licence holder described at the front of this licence
load calculation protocol	Has the same meaning as in the Protection of the Environment Operations (General) Regulation 1998
local authority	Has the same meaning as in the Protection of the Environment Operations Act 1997
material harm	Has the same meaning as in section 147 Protection of the Environment Operations Act 1997
MBAS	Means methylene blue active substances
Minister	Means the Minister administering the Protection of the Environment Operations Act 1997
mobile plant	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
motor vehicle	Has the same meaning as in the Protection of the Environment Operations Act 1997
O&G	Means oil and grease
percentile [in relation to a concentration limit of a sample]	Means that percentage [eg.50%] of the number of samples taken that must meet the concentration limit specified in the licence for that pollutant over a specified period of time. In this licence, the specified period of time is the Reporting Period unless otherwise stated in this licence.
plant	Includes all plant within the meaning of the Protection of the Environment Operations Act 1997 as well as motor vehicles.
pollution of waters [or water pollution]	Has the same meaning as in the Protection of the Environment Operations Act 1997
premises	Means the premises described in condition A2.1
public authority	Has the same meaning as in the Protection of the Environment Operations Act 1997
regional office	Means the relevant EPA office referred to in the Contacting the EPA document accompanying this licence
reporting period	For the purposes of this licence, the reporting period means the period of 12 months after the issue of the licence, and each subsequent period of 12 months. In the case of a licence continued in force by the Protection of the Environment Operations Act 1997, the date of issue of the licence is the first anniversary of the date of issue or last renewal of the licence following the commencement of the Act.
reprocessing of waste	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
scheduled activity	Means an activity listed in Schedule 1 of the Protection of the Environment Operations Act 1997
solid waste	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
TM	Together with a number, means a test method of that number prescribed by the <i>Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales</i> .
treatment of waste	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
TSP	Means total suspended particles

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TSS	Means total suspended solids
Type 1 substance	Means the elements antimony, arsenic, cadmium, lead or mercury or any compound containing one or more of those elements
Type 2 substance	Means the elements beryllium, chromium, cobalt, manganese, nickel, selenium, tin or vanadium or any compound containing one or more of those elements
utilisation area	Means any area shown as a utilisation area on a map submitted with the application for this licence
waste	Has the same meaning as in the Protection of the Environment Operations Act 1997
waste code	Means the waste codes listed in Appendix 5 of the EPA document A Guide to Licensing Part B.
waste type	Means Group A, Group B, Group C, inert, solid, industrial or hazardous waste

Mr Jon Keats

Environment Protection Authority

(By Delegation)

Date of this edition - 13-Mar-2007

End Notes

- 1 Licence transferred through application 144797, approved on 13-Mar-2007, which came into effect on 01-Feb-2007.

Department of Natural Resources

North Coast Region
 Locked Bag 10

BORE LICENSE RENEWAL CERTIFICATE UNDER SECTION 115 OF THE WATER ACT, 1912

30BL179426



Grafton NSW 2460
 Phone: (02) 66416500

Hanson Construction Materials Pty Limited
 C/- Angelo Cominos / Associates
 16/43 Long Parade
 Auchenflower QLD 4066

LICENSE NUMBER	
30BL179426	
DATE LICENSE VALID FROM	
14-Nov-2006	
DATE LICENSE VALID TO	
13-Nov-2011	
FEE	
\$151.00	Paid
ABN 55229066745 GST NIL	

LOCATION OF WORKS

Portions of Lot Section DP	PARISH	COUNTY
//1082435	Cudgen	Rous

TYPE OF WORKS	PURPOSES FOR WHICH WATER MAY BE USED
[X] Excavation - Groundwater	Industrial - Sand & Gravel

CONDITIONS APPLYING TO THIS LICENSE ARE SHOWN ON ATTACHED CONDITION STATEMENT.

COPY

Department of Natural Resources**CONDITIONS STATEMENT REFERRED TO ON
30BL179426
RENEWED UNDER PART V OF THE WATER ACT, 1912
ON 14-Nov-2006**

- (1) THE LICENSEE MUST ALLOW AUTHORISED OFFICERS OF THE DEPARTMENT OF NATURAL RESOURCES, AND ITS AUTHORISED AGENTS REASONABLE ACCESS TO THE LICENSED WORKS WITH VEHICLES AND EQUIPMENT AT ANY TIME FOR THE PURPOSES OF:
 - INSPECTING THE SAID WORK
 - TAKING SAMPLES OF ANY WATER OR MATERIAL IN THE WORK AND TESTING THE SAMPLES.
- (2) IF THE LICENSEE PROPOSES TO CEASE USING THE WORK, THEY MUST NOTIFY THE DEPARTMENT OF NATURAL RESOURCES OF THEIR INTENTION TO DO SO, IN WRITING AT LEAST THREE MONTHS IN ADVANCE.
- (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.
- (4) THE LICENSEE MUST CARRY OUT ANY WORKS DIRECTED TO BE CARRIED OUT BY THE DEPARTMENT OF NATURAL RESOURCES 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 OPERATIONS, MONITORING OF THE SITE IS REQUIRED FOR A PERIOD OF 3 YEARS OR A PERIOD AS MAYBE AGREED TO BY THE DEPARTMENT OF NATURAL RESOURCES.
- (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 PROTECTION OF THE ENVIRONMENT OPERATIONS ACT 1997. A COPY OF THE LICENCE TO DISCHARGE IS TO BE PROVIDED TO THE DEPARTMENT OF NATURAL RESOURCES.
- (6) THE LICENSEE MUST NOT ENLARGE THE WORK EXTENSION BEYOND THE DIMENSIONS AS SHOWN IN FIGURE 4 OF THE ENVIRONMENTAL IMPACT STATEMENT AS PREPARED BY JIM GLAZEBROOK & ASSOCIATES PTY LTD FOR QUARRY EXPANSION AND TOURIST FACILITY, CRESENT STREET CUDGEN, AS HELD AT THE DEPARTMENT'S GRAFTON OFFICE.
- (7) THE LICENSEE MUST MANAGE THE WORK IN SUCH A WAY THAT THE NATURAL WATER LEVELS ARE MAINTAINED IN THE ACID SULFATE SOILS OF THE SURROUNDING ENVIRONMENT.
- (8) MINING OF THE CLAY UNIT UNDERLYING THE COASTAL SAND MATERIAL IS NOT PERMITTED.
- (9) THE LICENSEE MUST MANAGE THE WORK IN SUCH A WAY THAT ANY ACID SULFATE SOILS PLACED IN THE WORK DO NOT ESCAPE INTO THE GROUNDWATER SYSTEMS SURROUNDING THE WORK.
- (10) THE LICENSED WORK MAY BE FILLED TO A LEVEL OF GREATER THAN 10 METRES BELOW 0 METRES AHD (AUSTRALIAN HEIGHT DATUM) WITH SILTS AND FINES FROM THE SAND MINING OPERATION.
- (11) AT ALL TIMES, THE SILTS AND FINES IN THE EXCAVATED WORK MUST BE COVERED BY AT LEAST 9 METRES OF WATER.
- (12) THE LICENSEE MUST MANAGE THE WORK IN SUCH A WAY THAT THE QUALITY OF THE SURROUNDING GROUNDWATER IS NOT DIMINISHED.
- (13) THE LICENSEE MUST ENSURE THAT ANY SILTS AND FINES ARE PUT INTO THE LICENSED WORK ENTER THE SAID WORK AT LEAST 3 METRES BELOW THE SURFACE OF ANY WATER IN THE SAID WORK.

(14) THE LICENSEE MUST TAKE MEASUREMENTS OF GROUNDWATER FIELD PARAMETERS AT TWO LOCATIONS, BEING 1) THE SOUTH EAST CORNER OF THE EXTENSION AND, 2) THE NORTH WEST CORNER OF THE EXTENSION AS FOLLOWS:

(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.

(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 ARE TO BE FORWARDED TO THE DEPARTMENT OF NATURAL RESOURCES WITH THE ANNUAL REPORT AS OUTLINED IN CONDITION 19.

(15) THE LICENSEE MUST TEST THE WATER ON A QUARTERLY BASIS FROM TEN (10) MONITORING BORES AS AGREED TO IN THE DEPARTMENT OF NATURAL RESOURCES CORRESPONDENCE TO GILBERT AND SUTHERLAND, IN FIGURE 1. THE LOCATIONS OF THESE BORES ARE AS FOLLOWS:

(a)

SHALLOW

- 1) NORTH EAST CORNER OF THE EXTENSION ON THE ADJACENT PROPERTY - EXISTING 6M DEPTH (MB7).
- 2) SOUTH WEST CORNER OF THE EXTENSION - EXISTING 5M DEPTH (MB2B).
- 3) MID WAY ALONG THE SOUTHERN BOUNDARY OF THE EXISTING EXTRACTION AREA - EXISTING - 7M DEPTH (MB4).
- 4) SOUTH WEST CORNER OF THE EXISTING EXTRACTION AREA - 7M DEPTH (MB3).
- 5) NORTH EAST CORNER OF THE EXISTING EXTRACTION AREA - EXISTING - 5M DEPTH (MB5B).

INTERMEDIATE

- 6) CENTRE OF THE PROPOSED EXTRACTION AREA - EXISTING - 12M DEPTH (REQUIREMENT TERMINATED ON THE DESTRUCTION OF THE BORE THROUGH MINING PRACTICE - REPORTED TO BE 3 YEARS FROM COMMENCEMENT OF MINING) (MB6).
- 7) NORTH WEST CORNER OF THE PROPOSED EXTRACTION AREA - EXISTING - 12M DEPTH (MB1B).

DEEP

- 8) MIDWAY ALONG THE NORTHERN BOUNDARY OF THE EXTENSION - 20M DEPTH (MB1A).
- 9) TWO THIRDS OF THE DISTANCE ALONG THE EASTERN EXTENSION BOUNDARY FROM NORTH TO SOUTH - 20M DEPTH (MB5A).
- 10) SOUTH WEST CORNER OF THE EXTENSION BOUNDARY - 20M DEPTH (MB2A).

THE FOLLOWING ANALYTES ARE TO BE TESTED FROM THESE BORES:

- (A) CATIONS (ANIONS) (CA, MG, NA, K, HCO₃, SO₄, CL)
- (B) DISSOLVED IRON (FE)
- (C) ARSENIC (AS) ONLY FOR SAMPLES WITH PH < 5
- (D) DISSOLVED ALUMINIUM (AL)

AS WELL AS FOLLOWING FIELD PARAMETERS:

- (A) PH
- (B) ELECTRICAL CONDUCTIVITY (EC)
- (C) REDOX POTENTIAL (EH)

THE LICENSEE MUST WITH THE ANNUAL REPORT FURNISH TO THE DEPARTMENT OF NATURAL RESOURCES ANALYSIS CERTIFICATES PREPARED BY A NATA REGISTERED LABORATORY.

16 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 17.

17 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 THE DEPARTMENT OF NATURAL RESOURCES 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.

18 A BUFFER OF 30 METRES SHALL BE MAINTAINED AS A MINIMUM FROM ANY CROWN LANDS.

19 SECURITY IS TO BE GIVEN AND PROVIDED FOR THE PURPOSE OF ENSURING THE DUE AND PROPER COMPLIANCE WITH THE CONDITIONS OF THE LICENCE. THE LICENSEE SHALL LODGE WITH THE DEPARTMENT PRIOR TO THE GRANT OF THIS LICENCE A SECURITY DEPOSIT 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.

End Of Conditions

Coast Region
d Bag 10

Department of Natural Resources

BORE LICENSE RENEWAL CERTIFICATE UNDER SECTION 115 OF THE WATER ACT, 1912

30BL143838



rafton NSW 2460
phone: (02) 66416500

P Guinane Pty Ltd
P O Box 20
Tweed Heads NSW 2485

LICENSE NUMBER
30BL143838
DATE LICENSE VALID FROM
30-Apr-2007
DATE LICENSE VALID TO
29-Apr-2012
FEE
\$151.00 Paid

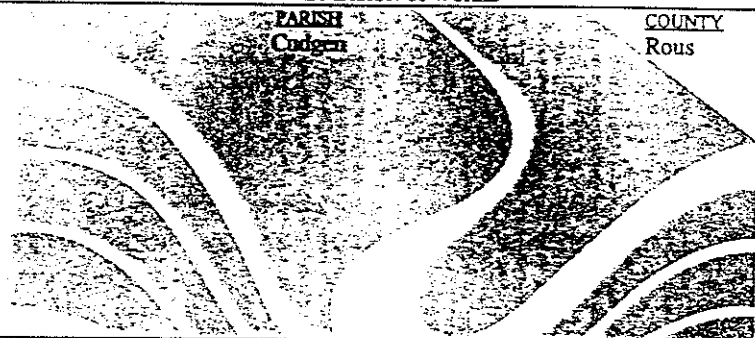
ABN 53229066745 GST NIL

LOCATION OF WORKS

Portion(s) or Lot/Section/DP
22/1082435

PARISH
Cudgen

COUNTY
Rous

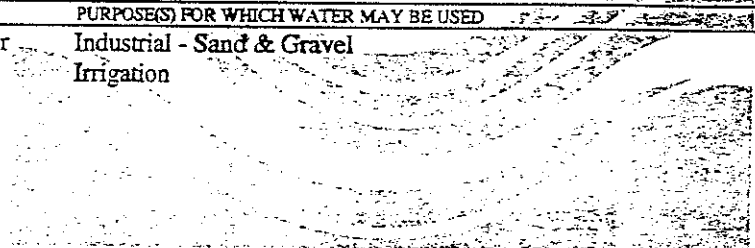


TYPE OF WORKS

1 X Excavation - Groundwater

PURPOSE(S) FOR WHICH WATER MAY BE USED

Industrial - Sand & Gravel
Irrigation



CONDITIONS APPLYING TO THIS LICENSE ARE SHOWN ON ATTACHED CONDITION STATEMENT.

LAND & WATER CONSERVATION

ORIGINAL

Department of Natural Resources**CONDITIONS STATEMENT REFERRED TO ON
30BL143838
RENEWED UNDER PART V OF THE WATER ACT, 1912
ON 30-Apr-2007**

- (1) THE DEPARTMENT OF NATURAL RESOURCES 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.
- (2) THE LICENSEE SHALL INSTALL TO THE SATISFACTION OF THE DEPARTMENT OF NATURAL RESOURCES IN RESPECT OF LOCATION, TYPE AND CONSTRUCTION AN APPLIANCE(S) TO MEASURE THE QUANTITY OF WATER EXTRACTED FROM THE WORKS. THE APPLIANCE(S) TO CONSIST OF EITHER A MEASURING WEIR OR WEIRS WITH AUTOMATIC RECORDER, OR METER OR METERS OF THE DETHRIDGE TYPE, OR SUCH OTHER CLASS OF METER OR MEANS OF MEASUREMENT AS MAY BE APPROVED BY THE DEPARTMENT OF NATURAL RESOURCES. THE APPLIANCE(S) SHALL BE MAINTAINED IN GOOD WORKING ORDER AND CONDITION. A RECORD OF ALL WATER EXTRACTED FROM THE WORKS SHALL BE KEPT AND SUPPLIED TO THE DEPARTMENT UPON REQUEST. THE LICENSEE WHEN REQUESTED MUST SUPPLY A TEST CERTIFICATE AS TO THE ACCURACY OF THE APPLIANCE(S) FURNISHED EITHER BY THE MANUFACTURER OR BY SOME PERSON DULY QUALIFIED.
- (3) THE ALLOCATION HAS BEEN DETERMINED FOR THE TOTAL AREA OF THE LAND DESCRIBED IN THE LICENSE. IN THE EVENT OF PART OF THE LAND BEING DISPOSED OF, THE ALLOCATION WILL BE SUBJECT TO REVIEW.
- (4) DURING THE MONTH OF JULY EACH YEAR THE LICENSEE SHALL FURNISH TO THE DEPARTMENT OF NATURAL RESOURCES ON A FORM WHICH WILL BE PROVIDED, A RETURN SHOWING THE METER READING OF THE HOURS PUMPED. THE EXTRACTION RATE FOR EACH MONTH DURING THE PREVIOUS TWELVE MONTHS, AND IF AN IRRIGATION LICENSE, THE AREA OF EACH CROP TYPE IRRIGATED AND THE METHOD OF APPLICATION OF THE WATER, REGARDLESS OF THE NUMBER OF TIMES SUCH AREAS WERE ACTUALLY WATERED.
- (5) THE LICENSEE SHALL MEASURE AND RECORD BOTH THE PUMPING AND NON-PUMPING WATER LEVELS IN THE BORE AT LEAST TWICE EACH YEAR, IN BOTH JANUARY AND JUNE (OR JULY), AND FORWARD A COPY OF THESE RECORDS WITH THE ANNUAL GROUNDWATER RETURN.
- (6) WATER EXTRACTED FROM THE BORE SHALL NOT BE USED FOR THE PURPOSE OF IRRIGATING RICE, UNLESS A SPECIAL RICE APPROVAL HAS BEEN GRANTED.
- (7) WATER EXTRACTED FROM THE BORE SHALL NOT BE USED FOR THE PURPOSE OF IRRIGATION OF GRASSES OR PASTURES WHICH ARE NOT SOWN GRASSES OR PASTURES.
- (8) THE LICENSEE SHALL ALLOW THE DEPARTMENT OF NATURAL RESOURCES OR ANY PERSON AUTHORISED BY IT, FULL AND FREE ACCESS TO THE WORKS, EITHER DURING OR AFTER CONSTRUCTION, FOR THE PURPOSE OF CARRYING OUT INSPECTION OR TEST OF THE WORKS AND ITS FITTINGS AND SHALL CARRY OUT ANY WORK OR ALTERATIONS DEEMED NECESSARY BY THE DEPARTMENT FOR THE PROTECTION OR PROPER MAINTENANCE OF THE WORKS, OR THE CONTROL OF THE WATER EXTRACTED AND FOR THE PROTECTION OF THE QUALITY AND THE PREVENTION FROM POLLUTION OR CONTAMINATION OF SUB-SURFACE WATER.
- (9) IF A WORK IS ABANDONED AT ANY TIME, THE LICENSEE SHALL NOTIFY THE DEPARTMENT OF NATURAL RESOURCES THAT THE WORK HAS BEEN ABANDONED AND SEAL OFF THE AQUIFER BY:-
 - (A) BACKFILLING THE WORK WITH CLAY OR CEMENT TO GROUND LEVEL AFTER WITHDRAWING THE CASING (LINING); OR
 - (B) SUCH METHODS AS AGREED TO OR DIRECTED BY THE DEPARTMENT OF NATURAL RESOURCES.
- (10) THE LICENSEE SHALL NOT ALLOW ANY TAILWATER/DRAINAGE TO DISCHARGE FROM THE

LICENSEE'S PROPERTY INTO OR ONTO:-

- ANY ADJOINING PUBLIC OR CROWN ROAD;
- ANY OTHER PERSONS LAND;
- ANY CROWN LAND;
- ANY RIVER, CREEK OR WATERCOURSE;
- ANY GROUNDWATER AQUIFER;
- ANY NATIVE VEGETATION AS DESCRIBED UNDER THE NATIVE VEGETATION CONSERVATION ACT 1997;
- ANY WETLANDS OF ENVIRONMENTAL SIGNIFICANCE.

(11) WORKS USED FOR THE PURPOSE OF CONVEYING, DISTRIBUTING OR STORING WATER FROM THE WORKS 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.

(12) (A) WATER, AFTER HAVING BEEN USED, SHALL NOT BE ALLOWED TO BE DISCHARGED INTO ANY WATERCOURSE OR SOURCE OF GROUNDWATER UNTIL FIRST CLEARED OF SILT OR ANY FORM OF EARTHY MATTER TO THE SATISFACTION OF THE DEPARTMENT OF NATURAL RESOURCES, BY PROVISION OF SUITABLE SETTLING PONDS, OUTSIDE THE WATERCOURSE, OR OTHER MEANS TO BE APPROVED BY THE DEPARTMENT OF NATURAL RESOURCES.

(B) SUBJECT TO CONDITION (12C) THE PONDS REFERRED TO IN CONDITION (12A) SHALL BE OF SUFFICIENT CAPACITY TO EFFECT REMOVAL OF FINE MATERIALS THROUGH SETTLING BEFORE WATER IS DISCHARGED INTO ANY WATERCOURSE OR SOURCE OF GROUNDWATER.

(C) NOTWITHSTANDING CONDITION (12B) NO WATER WILL BE ALLOWED TO RETURN TO ANY WATERCOURSE OR SOURCE OF GROUNDWATER UNLESS THE LICENSEE HAS OBTAINED THE WRITTEN CONSENT OF THE SAID DEPARTMENT AND IN THE LATTER CASE A LICENSE UNDER PART V OF THE WATER ACT, 1912, AS AMENDED.

(D) THE LICENSEE WILL MAKE SUITABLE PROVISION TO THE SATISFACTION OF THE DEPARTMENT OF NATURAL RESOURCES TO PREVENT TAILINGS OR OTHER MATERIALS FROM BEING WASHED INTO ANY WATERCOURSE BY FLOODS.

(13) LOCATION OF LAND ON WHICH WATER MAY BE USED:-

LOT/DP: LOT 22 DP 1082435
PARISH : CUDGEN
COUNTY : ROUS

(14) THE VOLUME OF GROUNDWATER EXTRACTED FROM THE WORKS AUTHORISED BY THIS LICENSE AND BY LICENSE(S) N/S SHALL NOT EXCEED 108 MEGALITRES IN ANY 12 MONTH PERIOD COMMENCING 1ST JULY.

End Of Conditions

Department of Water and Energy

North Coast Region
 Locked Bag 10

BORE LICENSE CERTIFICATE
 UNDER SECTION 115 OF THE WATER ACT, 1912

30BL179583



New South Wales
 Government

Grafton NSW 2460
 Phone: (02) 66416500

Hanson Constructions Materials Pty Limit
 C/- Angelo Cominos & Associates
 16/43 Long Parade
 Auchenflower QLD 4066

LICENSE NUMBER
30BL179583
DATE LICENSE VALID FROM
07-May-2007
DATE LICENSE VALID TO
06-May-2012
FEE
\$0.00

ABN 55229066745 GST NIL

LOCATION OF WORKS

<u>Portion(s) or Lot/Section/DP</u>	<u>PARISH</u>	<u>COUNTY</u>
22//1082435	Cudgen	Rous

<u>TYPE OF WORKS</u>	<u>PURPOSE(S) FOR WHICH WATER MAY BE USED</u>
Excavation - Groundwater	Irrigation

CONDITIONS APPLYING TO THIS LICENSE ARE

As shown on the attached Condition Statement

ORIGINAL

Department of Water and Energy

CONDITIONS STATEMENT REFERRED TO ON 30BL179583 ISSUED UNDER PART V OF THE WATER ACT, 1912 ON 07-May-2007

(1) THE LICENSEE SHALL ALLOW THE DEPARTMENT OF WATER AND ENERGY OR ANY PERSON AUTHORISED BY IT, FULL AND FREE ACCESS TO THE WORKS, EITHER DURING OR AFTER CONSTRUCTION, FOR THE PURPOSE OF CARRYING OUT INSPECTION OR TEST OF THE WORKS AND ITS FITTINGS AND SHALL CARRY OUT ANY WORK OR ALTERATIONS DEEMED NECESSARY BY THE DEPARTMENT FOR THE PROTECTION AND PROPER MAINTENANCE OF THE WORKS, OR THE CONTROL OF THE WATER EXTRACTED AND FOR THE PROTECTION OF THE QUALITY AND THE PREVENTION FROM POLLUTION OR CONTAMINATION OF SUB-SURFACE WATER.

(2) (A) THE LICENSEE SHALL NOTIFY THE DEPARTMENT OF WATER AND ENERGY IF A FLOWING SUPPLY OF WATER IS OBTAINED. THE BORE SHALL THEN BE LINED WITH CASING AND CEMENTED AND A SUITABLE CLOSING GEAR SHALL BE ATTACHED TO THE BOREHEAD AS SPECIFIED BY THE DEPARTMENT OF WATER AND ENERGY.

(B) IF A FLOWING SUPPLY OF WATER IS OBTAINED FROM THE WORK, THE LICENSEE SHALL ONLY DISTRIBUTE WATER FROM THE BORE HEAD BY A SYSTEM OF PIPE LINES AND SHALL NOT DISTRIBUTE IT IN DRAINS, NATURAL OR ARTIFICIAL CHANNELS OR DEPRESSIONS.

(3) IF A WORK IS ABANDONED AT ANY TIME THE LICENSEE SHALL NOTIFY THE DEPARTMENT OF WATER AND ENERGY THAT THE WORK HAS BEEN ABANDONED AND SEAL OFF THE AQUIFER BY:-

(A) BACKFILLING THE WORK TO GROUND LEVEL WITH CLAY OR CEMENT AFTER WITHDRAWING THE CASING (LINING); OR

(B) SUCH METHODS AS AGREED TO OR DIRECTED BY THE DEPARTMENT OF WATER AND ENERGY.

(4) THE LICENSEE SHALL NOT ALLOW ANY TAILWATER/DRAINAGE TO DISCHARGE INTO OR ONTO:-

- 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 NATIVE VEGETATION CONSERVATION ACT 1997;

- ANY WETLANDS OF ENVIRONMENTAL SIGNIFICANCE.

(5) WORKS USED FOR THE PURPOSE OF CONVEYING, DISTRIBUTING OR STORING WATER TAKEN BY MEANS OF THE LICENSED WORK SHALL NOT BE CONSTRUCTED OR INSTALLED SO AS TO OBSTRUCT THE REASONABLE PASSAGE OF FLOOD WATERS FLOWING INTO OR FROM A RIVER.

(6) 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.

(7) THE DEPARTMENT OF WATER AND ENERGY 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.

(8) THE LICENSEE SHALL INSTALL TO THE SATISFACTION OF THE DEPARTMENT OF WATER AND ENERGY IN RESPECT OF LOCATION, TYPE AND CONSTRUCTION AN APPLIANCE(S) TO MEASURE THE QUANTITY OF WATER EXTRACTED FROM THE WORKS. THE APPLIANCE(S) TO CONSIST OF EITHER A MEASURING WEIR OR WEIRS WITH AUTOMATIC RECORDER, OR METER OR METERS OF THE DETHRIDGE TYPE, OR SUCH OTHER CLASS OF METER OR MEANS OF MEASUREMENT AS MAY BE APPROVED BY THE DEPARTMENT OF WATER AND ENERGY. THE APPLIANCE(S) SHALL BE MAINTAINED IN GOOD

WORKING ORDER AND CONDITION. A RECORD OF ALL WATER EXTRACTED FROM THE WORKS SHALL BE KEPT AND SUPPLIED TO THE DEPARTMENT UPON REQUEST. THE LICENSEE WHEN REQUESTED MUST SUPPLY A TEST CERTIFICATE AS TO THE ACCURACY OF THE APPLIANCE(S) FURNISHED EITHER BY THE MANUFACTURER OR BY SOME PERSON DULY QUALIFIED.

9. THE ALLOCATION HAS BEEN DETERMINED FOR THE TOTAL AREA OF THE LAND DESCRIBED IN THE LICENSE. IN THE EVENT OF PART OF THE LAND BEING DISPOSED OF, THE ALLOCATION WILL BE SUBJECT TO REVIEW.

10. DURING THE MONTH OF JULY EACH YEAR THE LICENSEE SHALL FURNISH TO THE DEPARTMENT OF WATER AND ENERGY ON A FORM WHICH WILL BE PROVIDED, A RETURN SHOWING THE METER READING OF THE HOURS PUMPED, THE EXTRACTION RATE FOR EACH MONTH DURING THE PREVIOUS TWELVE MONTHS, AND IF AN IRRIGATION LICENSE, THE AREA OF EACH CROP TYPE IRRIGATED AND THE METHOD OF APPLICATION OF THE WATER, REGARDLESS OF THE NUMBER OF TIMES SUCH AREAS WERE ACTUALLY WATERED.

11. THE LICENSEE SHALL MEASURE AND RECORD BOTH THE PUMPING AND NON-PUMPING WATER LEVELS IN THE BORE AT LEAST TWICE EACH YEAR, IN BOTH JANUARY AND JUNE (OR JULY), AND FORWARD A COPY OF THESE RECORDS WITH THE ANNUAL GROUNDWATER RETURN.

12. LOCATION OF LAND ON WHICH WATER MAY BE USED:-

LOT/DP: LOT 2 DP 777905
PARISH : CUDGEN
COUNTY : ROUS

13. THE VOLUME OF GROUNDWATER EXTRACTED FROM THE WORKS AUTHORISED BY THIS LICENSE AND BY LICENSE'S 143838 SHALL NOT EXCEED 108 MEGALITRES IN ANY 12 MONTH PERIOD COMMENCING 1ST JULY.

14. THE DIMENSIONS OF THE EXCAVATION SHALL NOT EXCEED 120 METRES LONG, 30 METRES WIDE AND 2 METRES DEEP.

15. THE LICENSEE SHALL MEASURE AND RECORD THE PH OF THE WATER IN THE EXCAVATION PRIOR TO THE COMMENCEMENT OF EACH IRRIGATION OR WHEN THE WORK IS NOT BEING USED, AT LEAST TWICE PER ANNUM, AND UPON REQUEST FURNISH THE DEPARTMENT OF WATER AND ENERGY A COPY OF THESE RECORDS.

End Of Conditions

Department of Natural Resources

North Coast Region
 Locked Bag 16

BORE LICENSE CERTIFICATE
 UNDER SECTION 115 OF THE WATER ACT, 1912

30BL179685



Grafton NSW 2460
 Phone: (02) 66416500

Hanson Construction Materials Pty Limited
 C/- Angelo Cominos Associates
 16/43 Long Parade
 Auchterflower QLD 4066

LICENSE NUMBER
30BL179685
DATE LICENSE VALID FROM
15-Nov-2001
DATE LICENSE VALID TO
PERPETUITY
FEE
\$0.00
ABN 53229066745 GST NIL

LOCATION OF WORKS

Division/Log/Section/DP	PARISH	COUNTY
22/1082435	Cudgen	Rous

TYPE OF WORKS	PURPOSES FOR WHICH WATER MAY BE USED
Bore	Monitoring Bore

CONDITIONS APPLYING TO THIS LICENSE ARE

As shown on the attached Condition Statement

COPY

Department of Natural Resources

**CONDITIONS STATEMENT REFERRED TO ON
30BL179685
ISSUED UNDER PART V OF THE WATER ACT, 1912
ON 15-Nov-2001**

- (1) THE LICENCE SHALL LAPSE IF THE WORK IS NOT COMMENCED AND COMPLETED WITHIN THREE YEARS OF THE DATE OF THE ISSUE OF THE LICENCE.
- (2) THE LICENSEE SHALL WITHIN TWO (2) MONTHS OF COMPLETION OR AFTER THE ISSUE OF THE LICENCE IF THE WORK IS EXISTING, FURNISH TO THE DEPARTMENT OF NATURAL RESOURCES:-
- (A) DETAILS OF THE WORK AS SET OUT IN THE FORM "A" (MUST BE COMPLETED BY A DRILLER, DULY LICENSED IN NEW SOUTH WALES).
- (B) A PLAN SHOWING ACCURATELY THE LOCATION OF THE WORK IN RELATION TO PORTION AND PROPERTY BOUNDARIES.
- (C) DETAILS OF ANY PUMPING TESTS CARRIED OUT.
- (D) DETAILS OF ANY WATER ANALYSIS.
- (3) THE LICENSEE SHALL ALLOW THE DEPARTMENT OF NATURAL RESOURCES OR ANY PERSON AUTHORISED BY IT, FULL AND FREE ACCESS TO THE WORKS, EITHER DURING OR AFTER CONSTRUCTION, FOR THE PURPOSE OF CARRYING OUT INSPECTION OR TEST OF THE WORKS AND ITS FITTINGS AND SHALL CARRY OUT ANY WORK OR ALTERATIONS DEEMED NECESSARY BY THE DEPARTMENT FOR THE PROTECTION AND PROPER MAINTENANCE OF THE WORKS, OR THE CONTROL OF THE WATER EXTRACTED AND FOR THE PROTECTION OF THE QUALITY AND THE PREVENTION FROM POLLUTION OR CONTAMINATION OF SUB-SURFACE WATER.
- (4) IF DURING THE CONSTRUCTION OF THE WORK, SALINE OR POLLUTED WATER IS ENCOUNTERED ABOVE THE PRODUCING AQUIFER, SUCH WATER SHALL BE SEALED OFF BY:-
- (A) INSERTING THE APPROPRIATE LENGTH(S) OF CASING TO A DEPTH SUFFICIENT TO EXCLUDE THE SALINE OR POLLUTED WATER FROM THE WORK.
- (B) CEMENTING BETWEEN THE CASING(S) AND THE WALLS OF THE BORE HOLE FROM THE BOTTOM OF THE CASING TO GROUND LEVEL.
- ANY DEPARTURE FROM THESE PROCEDURES MUST BE APPROVED BY THE DEPARTMENT BEFORE UNDERTAKING THE WORK.
- (5) IF A WORK IS ABANDONED AT ANY TIME THE LICENSEE SHALL NOTIFY THE DEPARTMENT OF NATURAL RESOURCES THAT THE WORK HAS BEEN ABANDONED AND SEAL OFF THE AQUIFER BY:-
- (A) BACKFILLING THE WORK TO GROUND LEVEL WITH CLAY OR CEMENT AFTER WITHDRAWING THE CASING LINING; OR
- (B) SUCH METHODS AS AGREED TO OR DIRECTED BY THE DEPARTMENT OF NATURAL RESOURCES.
- (6) THE LICENSEE SHALL NOT ALLOW ANY TAILWATER/DRAINAGE TO DISCHARGE INTO OR ONTO:-
- 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 NATIVE VEGETATION CONSERVATION ACT 1997;

- ANY WETLANDS OF ENVIRONMENTAL SIGNIFICANCE.

(7) 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.

(8) IF THE BORE AUTHORISED BY THIS LICENSE IS LINED WITH STEEL OR PLASTIC CASING THE INSIDE DIAMETER OF THAT CASING SHALL NOT EXCEED 220 MM.

(9) WATER SHALL NOT BE PUMPED FROM THE BORE AUTHORISED BY THIS LICENSE FOR ANY PURPOSE OTHER THAN GROUNDWATER INVESTIGATION.

End Of Conditions



URS Australia Pty Ltd
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Brisbane, QLD 4000
GPO Box 302, QLD 4001
Australia

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