

INDEPENDENT ENVIRONMENTAL AUDIT OF HITCHCOCK ROAD SAND PROJECT

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1. Background to Independent Environmental Audit

Conditions 6, 7 and 8 of Schedule 5 of the Department of Planning's¹ Hitchcock Road Sand Project approval (06_0104) dated 3 February 2009 and provided in Appendix 1² state as follows.

Condition 6. Within 12 months of the date of this approval, and every 3 years thereafter, unless the Director-General directs otherwise, the Proponent shall commission and pay the full cost of an Independent Environmental Audit of the project. This audit shall:

- (a) be conducted by a suitably qualified, experienced, and independent person(s) whose appointment has been approved by the Director-General;
- (b) include consultation with the relevant agencies;
- (c) assess the environmental performance of the project, and its effects on the surrounding environment;
- (d) assess whether the project is complying with the relevant standards, performance measures and statutory requirements; and
- (e) review the adequacy of any strategy/plan/program required under this approval, and, if necessary, recommend measures or actions to improve the environmental performance of the project, and/or any strategy/plan/program required under this approval.

Note: The person(s) conducting the audit should have expertise in flora and fauna assessment, hydrogeology and quarry rehabilitation.

Condition 7. Within 6 weeks of completion of each Independent Environmental Audit, the Proponent shall submit a copy of the audit report to the Director-General, with a response to any of the recommendations in the audit report.

Condition 8. Within 3 months of submitting a copy of the audit report to the Director-General, the Proponent shall review and if necessary revise:

- (a) each of the environmental management and monitoring strategies/plans/programs in Schedules 3 and 5; and
- (b) the sum of the Vegetation Offset Bond (see Schedule 3). This review shall consider:
 - the effects of inflation;
 - any changes to the total area of disturbance; and
 - the performance of the vegetation offsets against the completion criteria of the Rehabilitation and Vegetation Offset Management Plan, to the satisfaction of the Director-General.

On 13 July 2010 the Department of Planning approved Mr Bruce Adcock BA, Dip T&RP, CPP, CEnvP of Environmental Planning Pty Ltd to complete the independent environmental audit (see Appendix 2). In summary, Mr Adcock has completed numerous environmental audits, is familiar with the sand extraction industry via environmental and planning assessments, is a Certified Environmental Practitioner (Registration No. 49) and a Certified Practising Planner (Registration No. 1591). The independent environmental audit acknowledges the use of AS/NZS ISO 19011:2003 *Guidelines for quality and/or environmental management systems auditing*.

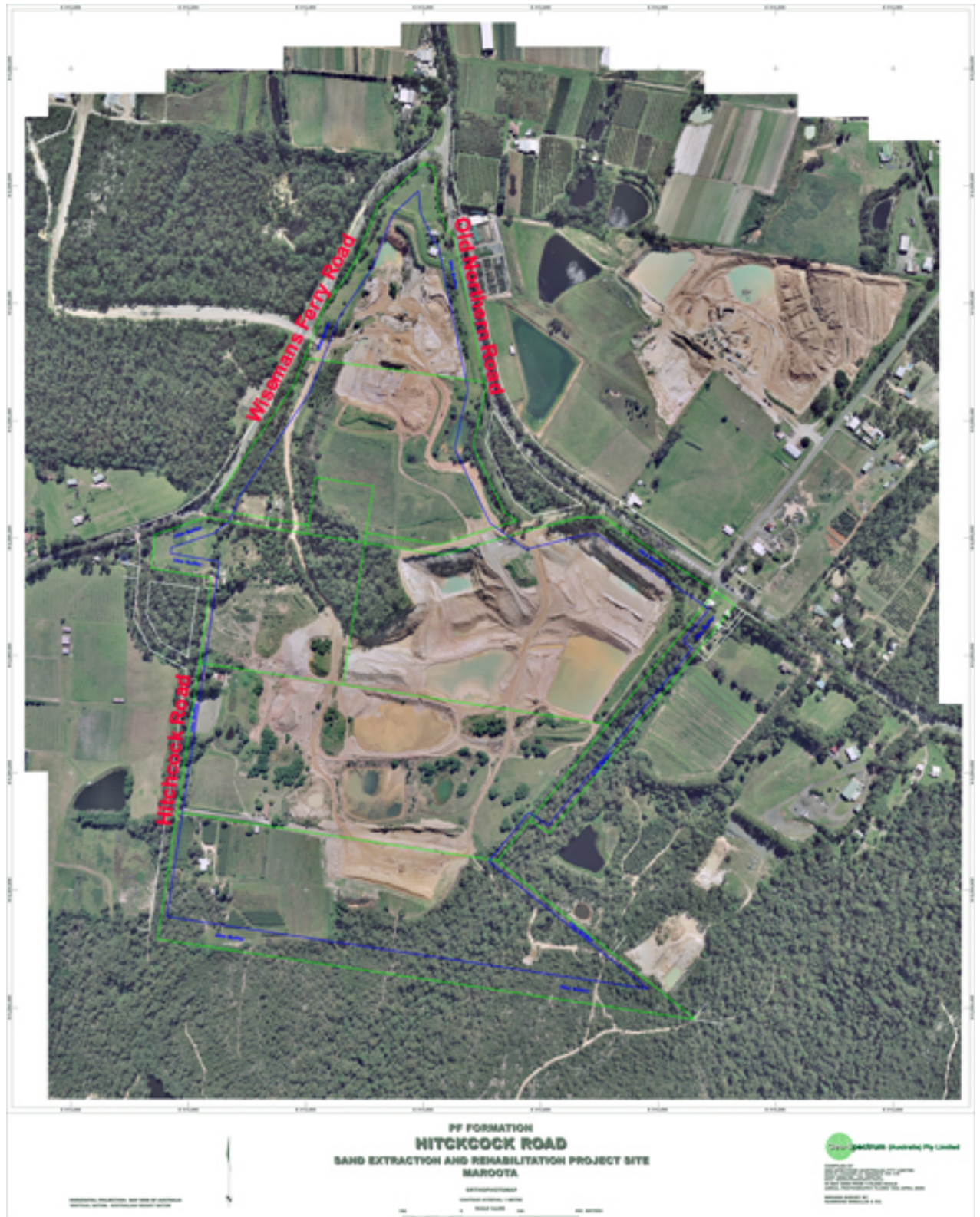
¹ Renamed the Department of Planning and Infrastructure in April 2011.

² Many of the appendices and in particular figures in the project approval issued by the Department of Planning on 3 February 2009 were indistinct and/or illegible. On 7 March 2011 the Department of Planning reissued a clear and legible project approval that is included in Appendix 1.

2. Site Operations

Figure 1 provides an aerial view taken in April 2009 of the Hitchcock Road Sand Project (the site) showing approximate cadastral boundaries (in light green) and the approximate location of non-extractive buffer areas (in blue). Large portions of the site are undergoing extraction with substantial areas particularly to the west and south yet to be extracted. Total extraction area is approximately 75 hectares. Extraction areas are required to be progressively rehabilitated.

Figure 1 Aerial View of Hitchcock Road Sand Project Site



The Hitchcock Road Sand Project majority site owner, operator and proponent is Etra Pty Ltd as trustee for PF Formation. PF Formation has operated sand and clay extraction quarries in the Maroota area in Baulkham Hills and Hornsby Shires since 1983. PF Formation refers to the sand quarries within the Hitchcock Road Sand Project site as Pit 6, Pit 7 and Pit 12 and sometimes as the Trig site in reference to the on-site Maroota survey landmark at 241 metres Australian Height Datum located near the centre of the site. This survey landmark portion of the site is leased from the Crown. A number of rural residential detached dwellings owned by PF Formation also occupy the site.

Bulldozers strip topsoil and overburden from various pits within the project site and excavators then put raw material into dump trucks for transport to the on-site fixed processing or slurry plant. The coarse sand is initially screened and washed then pumped via a slurry pipeline under Wisemans Ferry Road and along a haul road to PF Formation's main processing plant (Lot 198 DP 752025) located approximately 750 metres to the north-west. The main processing plant together with offices, workshops, concrete batch plant, fuel storage, weigh bridge, loading and processed sand storage areas form PF Formation's main operational area off Patricia Fay Drive at 1774 Wisemans Ferry Road, Maroota. The processed sand is stockpiled then transported to markets by heavy vehicles for use in metropolitan Sydney's construction industry.

3. Audit Aim, Criteria and Tasks

The aim of the independent environmental audit is to ensure that Condition 6 of the Hitchcock Road Sand Project approval is met to the satisfaction of the Department of Planning. Condition 6 also specifies the criteria for the audit. To complete the environmental audit and met the Condition 6 criteria the following tasks were undertaken.

- Overview of the Environmental Assessment and associated technical papers for the project, Preferred Project Report and Department of Planning's Hitchcock Road Sand Project approval (06_0104) dated 3 February 2009.
- Review of Environmental Strategy and associated Noise Management Plan, Air Quality Monitoring Program, Water Management Plan and Landscape Management Plan for the project. All of these documents have been accepted by the Department of Planning in partial fulfilment of the project approval conditions and are the principal environmental reference documents for the site.
- Review of Annual Environmental Management Reports (AEMR) for 2008-2009 and 2009-2010 for the project.
- Review of Environment Protection Licence No. 3407 and associated 2008-2009 and 2009-2010 annual returns for the site. Appendix 3 provides a copy of Environment Protection Licence Number 3407 covering the Hitchcock Road Sand Project.
- Site inspections, observation of activities and environmental audit of the project site in fine weather on 19 and 25 November 2010. On-site interviews were held with PF Formation's Director Mr John Graham, General Manager Mr Peter Cummins, Environmental Manager Mr Joshua Graham and the weighbridge operator Ms Melina Tavan. Requests were made for relevant documentation, records, information and correspondence. The locations of three dust monitoring deposition gauges were checked. Production, safety, environmental and monitoring records were checked. Rehabilitation areas were checked.
- Subsequent email and telephone enquiries with the General Manager Mr Peter Cummins on some issues of concern and requests for further information.
- Issue of consultation letters on 26 November 2010 to three government agencies (Department of Environment, Climate Change and Water, Department of Primary Industries and Baulkham Hills Shire Council [now The Hills Shire Council]) requesting a response within 21 days including any comments or issues on the project.

The independent environmental audit covers the period from the project approval in February 2009 to late November 2010 being the date of the site inspections.

4. Audit Evidence and Environmental Monitoring

In addition to the formal documentation produced for the project site and referred to in Section 3 the following site documents (in no particular order) were requested from PF Formation and reviewed together with on-site observations.

The Department of Planning's Hitchcock Road Sand Project approval definitions on page 3 referred to the proponent's Preferred Project Report dated September 2008 as modified in the proponent's email to the Department of 18 November 2008. The email was not attached to the project approval or any other public document. Enquires by PF Formation established that the 18 November 2008 email to the Department referred to amended Table 3-1 *Criteria to monitor success of revegetation* within the document *Methodology to assess success of revegetation within Hitchcock Road site*, September 2008, Parsons Brinckerhoff Australia Pty Limited. This amended Table 3-1 *Criteria to monitor success of revegetation* is included as pages 27 and 28 in Appendix 6 within the project approval 06_0104 (see Appendix 1).

A review of the 2008-2009 and 2009-2010 annual returns to the NSW Department of Industry & Investment which outline the type of product (clay and fill, pea gravel, construction sand), quantity and value of material sold.³ The 2008-2009 annual return showed annual production was between 300,000 tonnes/annum and 400,000 tonnes/annum from the Hornsby and Baulkham Hills quarries. In 2009-2010 annual production was between 400,000 tonnes/annum and 500,000 tonnes/annum from the Hornsby and Baulkham Hills quarries. The annual returns do not show the levels of production split between the Hornsby and Baulkham Hills quarries although the monthly records of Section 94 Contributions do so. The Environment Protection Licence covering the site allows up to 500,000 tonnes/annum and the project approval provides for 400,000 tonnes/annum.

A review of the monthly production and Section 94 contribution records confirmed that annual production is less than 400,000 tonnes/annum from the Baulkham Hills quarries including the project. Actual production has not been disclosed in this audit document because of the commercial sensitivity of the release of such information but it is available at PF Formation's offices. The Hills Shire Council also receives Section 94 contributions based on monthly production records which in turn are based on weighbridge records.

Weighbridge records detailing the type of material and mass to be transported off-site were reviewed and were satisfactory. The weighbridge records also demonstrated that laden truck movements were less than 200 per day. The certificate of verification dated 28 October 2010 in accordance with the *National Measurement Act 1960* for the on-site 60 tonne weighbridge was viewed.

A review of randomly selected timesheets for the workforce which show start and finish times for each employee generally confirmed that operating hours were between 6am and 3pm. Some employee's timesheet records had a few earlier start times at 5.30am and 5.45am in relation to opening up the weighbridge so that the site could commence operations at 6am.

³ *The actual quantities of each type of material produced have not been documented in this audit because of their confidentiality and commercial sensitivity.*

A rehabilitation and offset bond (project approval schedule 3 condition 27) for \$500,000 in the form of an ANZ bank guarantee for \$500,000 in favour of the Director General of the Department of Planning and letter was forwarded to the Department of Planning on 22 November 2010. The bond was calculated based on a maximum of 127,600 square metres being disturbed in the next three years and 120,000 square metres of previously disturbed area.

Automatic weather station records held at the weighbridge were reviewed. The automatic weather station located at the weighbridge was offline between 29 October 2010 and 9 November 2010 due to a lightning strike. Adequate weather monitoring records were kept by hand during this period and viewed.

Minutes of the last Community Consultative Committee held on 11 November 2010 were viewed.

Two complaints were received and recorded in the Complaints Register during the audit period. The first complaint at 7am on 10 June 2010 was made about a PF Transport heavy vehicle travelling too fast through South Maroota. PF Formation's response was that PF Transport (not owned and operated by PF Formation) also worked for other companies and they could not be sure the vehicle was working for them. No corrective action was taken or recorded in the Complaints Register. The second complaint was made on 14 September 2010 about mud across Wisemans Ferry Road. No corrective action was taken or recorded in the Complaints Register although the complaint and cleaning of the road was recorded in the minutes of the Community Consultative Committee held on 11 November 2010.

No dangerous goods are stored on-site. In March 2006 WorkCover NSW advised that PF Formation no longer stores or handles notifiable quantities of dangerous goods on the premises.

There is no physical or documentary evidence of any Virgin Excavated Natural Material being imported into the site.

The Hazardous Substance Register and material safety data sheets were viewed.

The Visitor/Contractor Induction form was viewed.

The safety rules document for truck drivers was viewed.

The Environment Protection Licence lists completed pollution reduction programs including No. 4 "Prevent mud tracking from premises". On 1 May 2008 controls were upgraded and completed to help prevent mud tracking from the premises onto Wisemans Ferry Road. PF Formation subsequently advised they completed the following.

1. Swept back the driveway on the southern side of Wisemans Ferry Road to remove sediment build-up.
2. Re-contoured the driveway and built speed mounds to control and divert the water into sediment traps.
3. Re-cycled bitumen was purchased and placed over the road surface to minimize tracking.
4. Used a road sweeper to clean the road when required.

The 2008-2009 and 2009-2010 annual returns for Environment Protection Licence No. 3407 for the site showed compliance with all conditions of the licence including dust and noise monitoring and compliance requirements. However, the 2009-2010 annual return should have recorded the pollution complaint on water across the road received during the period as required by Condition M4 of the licence.

5. Consultation With Agencies

On 26 November 2010 consultation letters were sent to three government agencies (Department of Environment, Climate Change and Water, Department of Primary Industries and The Hills Shire Council) requesting a response within 21 days including any comments or issues on the project. A copy of the consultation letters and the response from The Hills Shire Council are provided in Appendix 4. In summary The Hills Shire Council advised that Council staff have no concerns regarding Hitchcock Road.

No responses were received from the Department of Environment, Climate Change and Water and the Department of Primary Industries.

6. Audit Findings

6.1 Assess the Environmental Performance of the Project and its Effects on the Surrounding Environment

A sand extraction project generally has the potential to affect the surrounding environment through adverse impacts on inter alia, flora and fauna, groundwater, water quality, noise, air quality, visual quality, waste generation and traffic generation. Project approval and Environment Protection Licence conditions have been imposed to minimise any potential adverse impacts.

On-site inspections of the site and checking of relevant documentation revealed the following areas of environmental performance and concern (in no particular order or priority) in relation to effects on the surrounding environment and compliance with project approval conditions, project approval commitments, Environment Protection Licence conditions and AEMP requirements.

In accordance with project approval condition 32 there is a need to improve screen planting on Lot 1 DP 570966 along Old Northern Road between Wisemans Ferry Road and 200 metres south and also near the site access point on Wisemans Ferry Road. Increased planting of native species would help reduce the visual impact of parts of the site excavation works visible from Old Northern Road and Wisemans Ferry Road. Old tyres also need to be removed from near the site access point on Wisemans Ferry Road to reduce any incentive for illegal dumping by the public.

The survey plan provided to the Department of Planning in May 2009 in the form of an orthophoto-map (see Appendix 5) shows a 30 metre buffer area along Old Northern Road near Lot 2 DP 570966 and Lot 2 DP 1063296 which is incorrect as it should be 10 metres as provided for in the project approval (see Appendix 2 page 18).

There appears to be an encroachment of the extraction area within Lot 2 DP 570966 and the 10 metre buffer area near the intersection of the disused access way/Crown Road and Old Northern Road. The encroachment is visible from Old Northern Road due to the lack of visual screening that is recommended for improvement.

Areas of vegetation to be conserved including Sydney Hinterland Transition Woodland need to be shown on the survey plan (as shown on the plan in Appendix 5 of the project approval).

An area of at least 12 hectares to be rehabilitated and revegetated needs to be shown on the survey plan and access controlled as per the statement of commitments.

Buffer setback areas need to be clearly delineated on the ground with use of a peg out survey and permanent markers such as star posts and high visibility tape, coloured stakes, fences or similar as per project approval schedule 3 condition 1.

Annual reports on the effectiveness of the retention basins were not available and need to be produced as per the project approval statement of commitments.

PF Formation has been proactive and has installed an irrigation line along parts of the internal haul roads near the revegetation (other woodland) area. However, the irrigation system was not functioning and needs to be fixed for regular use in addition to the water truck during dry windy periods.

A number of concrete pipes and a large disused oil tank are present within the site. They need to be removed off-site to reduce any risk of the items being buried within the areas of site excavation.

The depth of mining contours plan dated 08/05/2009 (see Appendix 6) and supplied to the Department of Planning should be updated to cover the whole extraction area of the site as per project approval schedule 3 condition 3.

The water table contours plan dated 08/05/2009 (see Appendix 7) and supplied to the Department of Planning should be updated to cover the whole extraction area of the site.

Annual calibration certificates for the weighbridge should be included in the AEMRs.

Production data was not included in AEMRs as per project approval schedule 3 condition 39. This data should be provided in 100,000 tonne bands to avoid disclosure of commercially sensitive information to the public and competitors.

The Complaints Register needs to be recorded properly in full in response to any complaints on the project, any corrective actions undertaken or if no action was taken.

Within the workshop area in PF Formations main processing area an impervious bund under a shelter should be provided as a storage area for disused and empty fuel, lubricant and chemical drums and containers. The bund should be designed to contain at least 110% of the volume of materials stored within the area.

The AEMRs do not make any direct reference to the Quarry Manager. PF Formation advised the Quarry Manager, Mr Peter Watts, is also the Site Manager. The Environmental Manager and Environmental Officer are also the same person, Mr Joshua Graham, and this needs to be acknowledged in the AEMRs.

In the interests of ecologically sustainable development the volume or quantity of fuels/lubricants, electricity and water/groundwater consumed by PF Formation's operations should be recorded monthly and an efficiency programme implemented to reduce annual consumption.

The PF Formation website needs regular updating for progress on Department of Planning and Infrastructure approvals and the audit.

6.2 Assess Whether the Project Is Complying with the Relevant Standards, Performance Measures and Statutory Requirements

This section assesses the project for compliance with the relevant standards, performance measures and statutory requirements being the project approval conditions, project approval statement of commitments and Environment Protection Licence conditions.

6.2.1 Compliance With Project Approval Conditions

Tables 1, 2, 3 and 4 below summarise whether the project is complying with the project approval Schedules 2, 3, 4 and 5 conditions for administrative, environmental performance, additional procedures, environmental management, monitoring, reporting and auditing respectively.

Table 1 Compliance With Project Approval Administrative Conditions

Project Approval Schedule 2 Administrative Conditions	Compliance
Obligation to Minimise Harm to the Environment	
1. The Proponent shall implement all reasonable and feasible measures to prevent and/or minimise any harm to the environment that may result from the construction, operation, or rehabilitation of the project.	Yes
Terms of Approval	
2. The Proponent shall carry out the project generally in accordance with the: (a) EA; (b) preferred project report; (c) statement of commitments; and (d) conditions of this approval. <i>Notes:</i> · The layout of the project is shown in the figure in Appendix 2; and · The statement of commitments is included in Appendix 3.	Yes, generally with some non-conformances.
3. If there is any inconsistency between the above: (a) the preferred project report shall prevail over the EA; (b) the conditions of this approval shall prevail generally, to the extent of the inconsistency.	Noted
4. The Proponent shall comply with any reasonable requirement/s of the Director-General arising from the Department's assessment of: (a) any reports, plans, programs or correspondence that are submitted in accordance with the conditions of this approval; and (b) the implementation of any actions or measures contained in these reports, plans, programs or correspondence.	Noted, no requirements to date.
Existing Sand Mining Consent	
5. Subject to an agreement in accordance with condition 7 below, the Proponent may accept material extracted from Lot 2 DP 555184 and Lot 1 DP 34599 in accordance with the development consent issued by the Land and Environment Court on 14 July 1998 to be transported across the site and to the slurry plant on Lot 1 DP 570966 via the slurry pipeline and processed on Lot 198 DP 752025.	Noted
Limits on Approval	
6. Extraction and processing operations may take place until 30 November 2028. <i>Note: Under this approval, the Proponent is required to rehabilitate the site and provide offsets to the satisfaction of the Director-General. Consequently this approval will continue to apply in all other respects other than the right to conduct extraction and processing operations until the site has been rehabilitated and the offset provided to a satisfactory standard.</i>	Yes

Project Approval Schedule 2 Administrative Conditions	Compliance
<p>7. The quantity of processed material produced at the site, together with material produced on Lot 2 DP 555184 and Lot 1 DP 34599 in accordance with the development consent issued by the Land and Environment Court on 14 July 1998, shall not exceed 400,000 tonnes a year.</p> <p>Prior to the commencement of any processing of extractive material (under the above consent) from activities on Lot 2 DP 555184 or Lot 1 DP 34599, the Proponent shall demonstrate, to the satisfaction of the Director-General, that it has reached an agreement with the owners of those Lots regarding the proportion of the extraction limit as it applies to each Lot.</p>	<p>Yes, no material accepted from Lot 2 DP 555184 and Lot 1 DP 34599 to date.</p>
<p>8. The Proponent shall restrict total laden truck movements associated with the project to:</p> <p>(a) 200 per day, for the Proponent's combined operations at Maroota;</p> <p>(b) 20 per day, for trucks importing VENM to the site; and</p> <p>(c) 10 per day, for trucks entering/exiting the site between 6.00am and 7.00am.</p> <p><i>Note: For the avoidance of doubt, 200 is the maximum laden truck movement volume allowed on any one day, including the VENM and early morning truck movements.</i></p>	<p>Yes</p> <p>Yes</p> <p>Yes</p>
<p>9. The Proponent shall not undertake any extraction within 2 metres of the established wet weather groundwater level.</p> <p><i>Note: The wet weather groundwater level shall be established in accordance with condition 3 of Schedule 3.</i></p>	<p>Yes</p>
<p>10. The Proponent shall not disturb any SHTW vegetation (as shown on the plan in Appendix 5) on site without the prior written approval of the Director-General. In seeking this approval the Proponent shall demonstrate, to the satisfaction of the Director-General, that it has established at least 3.7 hectares of SHTW on the site, to a standard that meets the criteria in Appendix 6.</p> <p><i>Note: This demonstration must include an assessment by a suitably qualified and independent ecologist.</i></p>	<p>Yes, no disturbance of SHTW vegetation to date.</p>
Management Plans / Monitoring Programs	
<p>11. With the approval of the Director-General, the Proponent may submit any management plan or monitoring program required by this approval on a progressive basis.</p>	<p>Yes</p>
Demolition	
<p>12. The Proponent shall ensure that all demolition work is carried out in accordance with AS 2601-2001: <i>The Demolition of Structures</i>, or its latest version.</p>	<p>Yes, no demolition to date.</p>
Protection of Public Infrastructure	
<p>13. The Proponent shall:</p> <p>(a) repair, or pay all reasonable costs associated with repairing, any public infrastructure that is damaged by the project; and</p> <p>(b) relocate, or pay all reasonable costs associated with relocating, any public infrastructure that needs to be relocated as a result of the project.</p>	<p>Yes, no public infrastructure affected to date.</p>
Operation of Plant and Equipment	
<p>14. The Proponent shall ensure that all plant and equipment used at the site is:</p> <p>(a) maintained in a proper and efficient condition; and</p> <p>(b) operated in a proper and efficient condition.</p>	<p>Yes</p>
Crown Land	
<p>15. The Proponent shall not commence any development authorised by this approval on Crown land without the prior approval of the Department of Lands.</p>	<p>Yes, no development on leased Crown land</p>

Project Approval Schedule 2 Administrative Conditions	Compliance
	(Lot 1 DP 1013943) to date.
Section 94 Contributions	
16. The Proponent shall pay a monthly contribution to the Council for the upgrade and maintenance of roads in accordance with Baulkham Hills Shire Council's section 94 plan in force at the date of this approval.	Yes

Table 2 Compliance With Project Approval Environmental Performance Conditions

Project Approval Schedule 3 Environmental Performance Conditions	Compliance
GENERAL EXTRACTION AND PROCESSING PROVISIONS	
Identification of Boundaries	
<p>1. Within 3 months of the date of this approval, or as otherwise agreed by the Director-General, the Proponent shall:</p> <p>(a) engage an independent registered surveyor to survey the boundaries of the approved limit of extraction and the approved ancillary work areas;</p> <p>(b) submit a survey plan of these boundaries to the Director-General; and</p> <p>(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.</p> <p><i>Note: The limit of extraction and ancillary areas is shown conceptually on the layout plans in Appendix 2, as amended/clarified by the conditions below.</i></p>	<p>Partial, survey plan in form of orthophoto-map submitted in May 2009 but development setbacks on plan need adjustment to 10m along part of Old Northern Road (Lot 2 DP 570966 and Lot 2 DP 1063296) frontage. All boundaries need permanent markers.</p>
General Limits of Extraction	
<p>2. Notwithstanding the layout plans in Appendix 2, the Proponent shall not undertake extraction within:</p> <p>(a) 30 metres of Hitchcock Road; and</p> <p>(b) 10 metres of the property boundary of Lot 2 DP 555184, unless sand extraction has commenced on that lot, and extraction in this buffer has been agreed by the Director-General.</p>	<p>Yes</p> <p>Yes</p>
Maximum Extraction Depth Map	
<p>3. The Proponent shall:</p> <p>(a) establish the wet weather groundwater level for the site based on all available (and at least 12 months) site specific groundwater monitoring data;</p> <p>(b) engage a suitably qualified and experienced expert to establish the maximum extraction depths to which extraction can be undertaken on site, to comply with condition 9 of Schedule 2;</p> <p>(c) submit a Maximum Extraction Depth Map (contour map or similar) for the project to the Director-General within 3 months of the date of this approval; and</p>	<p>Partial, groundwater levels established but Depth of Mining Contours and Water Table Contours</p>

Project Approval Schedule 3 Environmental Performance Conditions				Compliance																																							
(d) comply with the extraction depths specified in the map, to the satisfaction of the Director-General.				plans submitted in May 2009 (Appendices 6 and 7) do not cover the full extent of extraction areas within the site.																																							
4. Within 3 months of the completion of the Independent Environmental Audit (see condition 6 of Schedule 5), the Proponent shall review and update the Maximum Extraction Depth Map for the project to the satisfaction of the Director-General.				Yes, update required after audit.																																							
NOISE																																											
Operational Noise Assessment Criteria																																											
5. The Proponent shall ensure that the noise generated by the project does not exceed the noise impact assessment criteria in Table 1 at any residence or on more than 25 per cent of any privately-owned land.				Yes, compliance with noise criteria for three closest monitoring sites to project R3 Jurd, R5 Pignataro, R9 Young plus R7 Maroota Public School in June and July 2010 (see AEMR 2009-2010).																																							
<table><tr><th rowspan="2">Noise Assessment Location</th><th>Day</th><th colspan="2">Night</th></tr><tr><th>L_{Aeq} (15 minute)</th><th>L_{Aeq} (15 minute)</th><th>L_{A1} (1 minute)</th></tr><tr><td>R1 - Hammond</td><td>41</td><td>35</td><td>45</td></tr><tr><td>R2 – Hitchcock</td><td>40</td><td>35</td><td>45</td></tr><tr><td>R5 – Pignataro</td><td>42</td><td>35</td><td>45</td></tr><tr><td>R6 – Camilleri</td><td>40</td><td>35</td><td>45</td></tr><tr><td>R7 – Maroota Public School</td><td>36_{(L_{Aeq}(1 Hour))}</td><td>N/A</td><td>N/A</td></tr><tr><td>R8 – Portelli</td><td>39</td><td>35</td><td>45</td></tr><tr><td>R9 – Young</td><td>39</td><td>35</td><td>45</td></tr><tr><td>R10 - Tomatola</td><td>39</td><td>35</td><td>45</td></tr></table>					Noise Assessment Location	Day	Night		L _{Aeq} (15 minute)	L _{Aeq} (15 minute)	L _{A1} (1 minute)	R1 - Hammond	41	35	45	R2 – Hitchcock	40	35	45	R5 – Pignataro	42	35	45	R6 – Camilleri	40	35	45	R7 – Maroota Public School	36 _{(L_{Aeq}(1 Hour))}	N/A	N/A	R8 – Portelli	39	35	45	R9 – Young	39	35	45	R10 - Tomatola	39	35	45
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Table 1: Noise Impact Assessment Criteria																																											
Notes:																																											
· To determine compliance with the L _{Aeq} (15 minute) noise limits, noise from the project 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 where the dwelling is more than 30 metres from the boundary. Where it can be demonstrated that direct measurement of noise from the project is impractical, alternative means of determining compliance may be accepted (see Chapter 11 of the NSW Industrial Noise Policy). The modification factors in Section 4 of the NSW Industrial Noise Policy shall also be applied to the measured noise level where applicable.																																											
· To determine compliance with the L _{A1} (1 minute) limit, noise from the project is to be measured at 1 metre from the dwelling façade.																																											
· The noise limits apply under meteorological conditions of:																																											
- wind speed up to 3m/s at 10m above ground level;																																											
- temperature inversion conditions of up to 3 degrees C/100m and wind speed up to 2m/s at 10m above the ground;																																											
where the wind velocity and temperature gradients are determined to be relevant to the project site in accordance with the NSW Industrial Noise Policy.																																											
· The Director-General may relax the noise limits in Table 1 for any property where the Proponent has an agreement with the relevant owner/s to generate higher noise levels, and the Proponent has advised the Department in writing of the terms of this agreement.																																											
· For more information on the noise assessment locations see Appendix 4.																																											

Project Approval Schedule 3 Environmental Performance Conditions		Compliance																									
Cumulative Noise Criteria																											
<p>6. The Proponent shall take all reasonable and feasible measures to ensure that the noise generated by the project combined with the noise generated by other extractive industries does not exceed the following amenity criteria on any privately owned land, to the satisfaction of the Director-General:</p> <ul style="list-style-type: none"> · $L_{Aeq(11 \text{ hour})}$ 50 dB(A) – Day; · $L_{Aeq(4 \text{ hour})}$ 45 dB(A) – Evening; and · $L_{Aeq(9 \text{ hour})}$ 40 dB(A) – Night. 		Yes, see AEMR 2009-2010.																									
Operating Hours																											
<p>7. The Proponent shall comply with the operating hours in Table 2.</p> <table border="1"> <thead> <tr> <th>Activity</th><th>Day</th><th>Time</th></tr> </thead> <tbody> <tr> <td rowspan="3">Construction work</td><td>Monday - Friday</td><td>7.00am to 6.00pm</td></tr> <tr> <td>Saturday</td><td>8.00am to 1.00pm</td></tr> <tr> <td>Sunday and Public Holidays</td><td>None</td></tr> <tr> <td rowspan="2">Quarrying and Processing, (inc. overburden removal)</td><td>Monday – Saturday</td><td>7.00am to 6.00pm</td></tr> <tr> <td>Sunday and Public Holidays</td><td>None</td></tr> <tr> <td rowspan="2">Product Transportation</td><td>Monday – Saturday</td><td>6.00am to 6.00pm</td></tr> <tr> <td>Sunday and Public Holidays</td><td>None</td></tr> <tr> <td rowspan="2">Maintenance</td><td>Monday – Saturday</td><td>7.00am to 6.00pm</td></tr> <tr> <td>Sunday and Public Holidays</td><td>None</td></tr> </tbody> </table> <p><i>Table 2: Operating Hours</i></p> <p><i>Notes:</i></p> <ul style="list-style-type: none"> · Product transportation prior to 7.00am is restricted as per condition 8 of Schedule 2. · Maintenance activities may be conducted outside the hours in Table 2 provided that the activities are not audible at any residence beyond the boundary of the site. · This condition does not apply to delivery of material if that delivery is required by police or other authorities for safety reasons, and/or the operation or personnel or equipment are endangered. In such circumstances, notification is to be provided to DECC and the affected residents as soon as possible, or within a reasonable period in the case of emergency. 		Activity	Day	Time	Construction work	Monday - Friday	7.00am to 6.00pm	Saturday	8.00am to 1.00pm	Sunday and Public Holidays	None	Quarrying and Processing, (inc. overburden removal)	Monday – Saturday	7.00am to 6.00pm	Sunday and Public Holidays	None	Product Transportation	Monday – Saturday	6.00am to 6.00pm	Sunday and Public Holidays	None	Maintenance	Monday – Saturday	7.00am to 6.00pm	Sunday and Public Holidays	None	Yes generally, although some employee's timesheet records had a few earlier start times at 5.30am and 5.45am to enable opening up the weighbridge so that the site could commence operations at 6am.
Activity	Day	Time																									
Construction work	Monday - Friday	7.00am to 6.00pm																									
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	Sunday and Public Holidays	None																									
Noise Management Plan																											
<p>8. The Proponent shall prepare and implement a Noise Management Plan for the project to the satisfaction of the Director-General. This plan shall:</p> <p>(a) be submitted to the Director-General within 3 months of the date of this approval;</p> <p>(b) be prepared in consultation with DECC;</p> <p>(c) include details of how the noise performance of the project would be monitored, and include a noise monitoring protocol for evaluating compliance with the relevant noise limits in this approval; and</p> <p>(d) include an investigation and assessment (including modelling) of additional reasonable and feasible noise mitigation measures that would be implemented to ensure that noise emissions at all stages of the project comply with the noise impact assessment criteria in Table 1.</p> <p><i>Note: The EA predicted that receiver locations R5, R6, R9 and R10 would exceed the applicable noise criteria by between 2 and 5 decibels, during worst case operations.</i></p>		Yes, Noise Management Plan approved 8 July 2009.																									

Project Approval Schedule 3 Environmental Performance Conditions			Compliance									
<p>9. If the additional noise mitigation measures identified in condition 8(d) are not able to reduce noise levels to within 2 decibels of the impact assessment criteria in Table 1 then, upon receiving a written request from the applicable landowner, the Proponent shall implement additional noise mitigation consultation with the landowner.</p> <p>These additional mitigation measures must be reasonable and feasible.</p> <p>If within 3 months of receiving this request from the landowner, the Proponent and the landowner cannot agree on the measures to be implemented, or there is a dispute about the implementation of these measures, then either party may refer the matter to the Director-General for resolution.</p>			Yes, not required as noise compliance achieved.									
AIR QUALITY												
Impact Assessment Criteria												
<p>10. The Proponent shall ensure that dust generated by the project does not cause exceedances of the criteria listed in Tables 3, 4 and 5 at any residence or on more than 25 per cent of any privately owned land.</p>			Yes, see AEMPs.									
<table><tr><th>Pollutant</th><th>Averaging period</th><th>Criterion</th></tr><tr><td>Total suspended particulate (TSP) matter</td><td>Annual</td><td>90 µg/m³</td></tr><tr><td>Particulate matter < 10 µm (PM₁₀)</td><td>Annual</td><td>30 µg/m³</td></tr></table>				Pollutant	Averaging period	Criterion	Total suspended particulate (TSP) matter	Annual	90 µg/m ³	Particulate matter < 10 µm (PM ₁₀)	Annual	30 µg/m ³
Pollutant	Averaging period	Criterion										
Total suspended particulate (TSP) matter	Annual	90 µg/m ³										
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<p><i>Table 3: Long Term Impact Assessment Criteria for Particulate Matter</i></p>												
<table><tr><th>Pollutant</th><th>Averaging period</th><th>Criterion</th></tr><tr><td>Particulate matter < 10 µm (PM₁₀)</td><td>24 hour</td><td>50 µg/m³</td></tr></table>				Pollutant	Averaging period	Criterion	Particulate matter < 10 µm (PM ₁₀)	24 hour	50 µg/m ³			
Pollutant	Averaging period	Criterion										
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<p><i>Table 4: Short Term Impact Assessment Criteria for Particulate Matter</i></p>												
<table><tr><th>Pollutant</th><th>Averaging period</th><th>Maximum increase in deposited dust level</th><th>Maximum total deposited dust level</th></tr><tr><td>Deposited dust</td><td>Annual</td><td>2 g/m²/month</td><td>4 g/m²/month</td></tr></table>			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		
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									
<p><i>Table 5: Long Term Impact Assessment Criteria for Deposited Dust</i></p> <p><i>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.</i></p>												
Operating Conditions												
<p>11. The Proponent shall ensure any visible air pollution generated by the project is assessed regularly, and that quarrying operations are relocated, modified, and/or stopped as required to minimise air quality impacts on privately owned land.</p>			Yes									
Air Quality Monitoring												
<p>12. The Proponent shall prepare and implement an Air Quality Monitoring Program for the project to the satisfaction of the Director-General. This program shall:</p> <p>(a) be submitted to the Director-General for approval within 3 months of the date of this approval;</p> <p>(b) be prepared in consultation with DECC;</p> <p>(c) include details of how the air quality performance of the project would be monitored, providing for additional dust deposition monitoring in the vicinity of clusters of residences to the north and west of the site; and</p> <p>(d) include a protocol for evaluating compliance with the relevant air quality criteria in this approval.</p>			Yes, Air Quality Monitoring Program approved 8 July 2009.									

Project Approval Schedule 3 Environmental Performance Conditions	Compliance
METEOROLOGICAL MONITORING	
13. The Proponent shall ensure the project has a suitable meteorological station on the site or in the immediate vicinity that complies with the requirements in the <i>Approved Methods for Sampling of Air Pollutants in New South Wales</i> publication.	Yes
WATER	
Water Supply	
14. The Proponent shall ensure that it has sufficient water for all stages of the project, and if necessary, adjust the scale of operations to match its water supply. <i>Note: The Proponent is required to obtain necessary water licences for the project under the Water Act 1912 and/or Water Management Act 2000.</i>	Yes to date.
Discharges	
15. The Proponent shall not discharge any water from the quarry or its associated operations except in accordance with an EPL.	Yes
Water Management and Monitoring	
16. The Proponent shall prepare and implement a Water Management Plan for the project to the satisfaction of the Director-General. This plan shall: (a) be submitted to the Director-General within 3 months of the date of this approval; (b) be prepared in consultation with DWE and DECC; and (c) include a: · Site Water Balance; · Erosion and Sediment Control Plan; · Surface Water Monitoring Program; and · Groundwater Monitoring Program.	Yes, Water Management Plan approved 8 July 2009.
17. The Site Water Balance shall: (a) include details of: · sources and security of water supply; · water use on site; · water management on site, including the location and capacity of water storages on site and the means of access; · off-site water transfers; and · reporting procedures; and (b) investigate and describe measures to minimise water use by the project.	Yes
18. The Erosion and Sediment Control Plan shall: (a) be consistent with the requirements of <i>Managing Urban Stormwater: Soils and Construction, Volume 1, 4th Edition, 2004</i> (Landcom); (b) identify activities that could cause soil erosion and generate sediment; (c) describe measures to minimise soil erosion and the potential for the transport of sediment to downstream waters; (d) describe the location, function, and capacity of erosion and sediment control structures; (e) demonstrate that the design capacity of basins intended to collect storm runoff will not be compromised by storage of operational water; and (f) describe what measures would be implemented to maintain (and if necessary decommission) the structures over time.	Yes

Project Approval Schedule 3 Environmental Performance Conditions	Compliance								
<p>19. The Surface Water Monitoring Program shall include:</p> <p>(a) detailed baseline data on surface water flows and quality in downstream watercourses that could be affected by the project;</p> <p>(b) surface water quality and stream health assessment criteria, including trigger levels for investigating any potentially adverse surface water impacts; and</p> <p>(c) a program to monitor:</p> <ul style="list-style-type: none"> · surface water flows, quality, and impacts on water users; · stream health; and · channel stability. 	Yes								
<p>20. The Groundwater Monitoring Program shall include:</p> <p>(a) provision of additional monitoring bores around the periphery of the site;</p> <p>(b) detailed baseline data on groundwater levels, flows and quality in the region, and particularly any groundwater bores, springs and seeps (including spring and seep fed dams) that may be affected by operations on site;</p> <p>(c) groundwater assessment criteria, including trigger levels for investigating any potentially adverse groundwater impacts;</p> <p>(d) a program to monitor:</p> <ul style="list-style-type: none"> · groundwater levels and quality in new and existing monitoring bores; · the impacts of the project on: <ul style="list-style-type: none"> - any groundwater bores, springs and seeps (including spring and seep fed farm dams) on privately-owned land; and - any groundwater dependent ecosystems; and <p>(e) a protocol for further groundwater modelling to confirm the limits to excavation depth across the site permitted in accordance with condition 9 of Schedule 2.</p>	Yes								
LANDSCAPE MANAGEMENT									
Rehabilitation									
<p>21. The Proponent shall progressively rehabilitate the site to the satisfaction of the Director-General, in a manner that is generally consistent with the concept final landform (Strategy A or Strategy B) in the preferred project report (as reproduced in Appendix 7).</p>	No, not required to date.								
Offset Strategy									
<p>22. The Proponent shall implement the Offset Strategy described in the preferred project report, and summarised in Table 6 (shown conceptually on the plan in Appendix 5), to the satisfaction of the Director-General.</p> <table border="1" data-bbox="240 1509 1201 1720"> <thead> <tr> <th>Area</th><th>Minimum Size (hectares)</th></tr> </thead> <tbody> <tr> <td>On-Site Revegetation Area (SHTW)</td><td>7.9</td></tr> <tr> <td>On-Site Revegetation Area (Other Woodland)</td><td>4.1</td></tr> <tr> <td>Total</td><td>12</td></tr> </tbody> </table> <p><i>Table 6: Offset Strategy</i></p>	Area	Minimum Size (hectares)	On-Site Revegetation Area (SHTW)	7.9	On-Site Revegetation Area (Other Woodland)	4.1	Total	12	Yes, revegetation (other woodland) areas in progress. SHTW revegetation areas yet to commence.
Area	Minimum Size (hectares)								
On-Site Revegetation Area (SHTW)	7.9								
On-Site Revegetation Area (Other Woodland)	4.1								
Total	12								
<p>23. Within 3 years of the date of this approval, the Proponent shall make suitable arrangements to provide appropriate long term security for the offset areas to the satisfaction of the Director-General.</p> <p><i>Note: The Department acknowledges that the arrangements may provide for staged or delayed implementation, in accordance with the extraction in these areas.</i></p>	No, not required to date.								

Project Approval Schedule 3 Environmental Performance Conditions	Compliance
Landscape Management Plan	
<p>24. The Proponent shall prepare and implement a Landscape Management Plan for the project to the satisfaction of the Director-General. This plan must:</p> <ul style="list-style-type: none"> (a) be prepared in consultation with DECC by suitably qualified expert/s whose appointment/s have been approved by the Director-General; (b) be submitted to the Director-General for approval within 6 months of the date of this approval; and (c) include a: <ul style="list-style-type: none"> · Rehabilitation and Offset Management Plan; and · Quarry Closure Plan. 	<p>Yes, Landscape Management Plan approved 26 August 2010.</p>
Rehabilitation and Offset Management Plan	
<p>25. The Rehabilitation and Offset Management Plan must include:</p> <ul style="list-style-type: none"> (a) the rehabilitation objectives for the site, vegetation offsets and landscaping; (b) a description of the short, medium, and long term measures that would be implemented to: <ul style="list-style-type: none"> · rehabilitate the site; · implement the Offset Strategy; and · maintain and enhance existing site vegetation outside the disturbance area; (c) detailed performance and completion criteria for the site rehabilitation and implementation of the Offset Strategy; (d) a detailed description of the measures that would be implemented over the next 3 years, including the procedures to be implemented for: <ul style="list-style-type: none"> · progressively rehabilitating disturbed areas; · implementing vegetation offsets; · protecting vegetation and soil outside the disturbance areas; · rehabilitating creeks and drainage lines on the site to ensure no net loss of stream length and aquatic habitat; · undertaking pre-clearance surveys; · managing impacts on fauna; · landscaping the site to minimise visual impacts; · conserving and reusing topsoil; · collecting and propagating seed for rehabilitation works; · salvaging and reusing material from the site for habitat enhancement; · controlling weeds and feral pests; · controlling access; and · bushfire management; (e) a program to monitor the effectiveness of these measures, and progress against the performance and completion criteria; (f) a description of the potential risks to successful rehabilitation and/or revegetation, and a description of the contingency measures that would be implemented to mitigate these risks; and (g) details of who would be responsible for monitoring, reviewing, and implementing the plan. 	<p>Yes</p>

Project Approval Schedule 3 Environmental Performance Conditions	Compliance
Quarry Closure Plan	
<p>26. The Quarry Closure Plan must:</p> <p>(a) include provision for certification from a qualified geotechnical engineer that the final proposed landform is stable;</p> <p>(b) define the objectives and criteria for closure of the quarry;</p> <p>(c) investigate options for the future use of the site, including any final void;</p> <p>(d) describe the measures that would be implemented to minimise or manage the ongoing (post closure) environmental effects of the project; and</p> <p>(e) describe how the performance of these measures would be monitored over time.</p>	Yes
Rehabilitation and Offset Bond	
<p>27. Within 3 months of the approval of the Landscape Management Plan, the Proponent shall lodge a rehabilitation and offset bond for the project with the Director-General. The sum of the bond shall be calculated at:</p> <p>(a) \$2.50/m² for the area of disturbance in each 3 year review period, including the offset areas; and</p> <p>(b) \$1.00/m² for the total area of land previously disturbed by the quarry, or as otherwise directed by the Director-General.</p> <p><i>Notes:</i></p> <ul style="list-style-type: none"> · If the rehabilitation and offsets are completed to the satisfaction of the Director-General, the Director-General will release the bond. · If the rehabilitation and/or offsets are not completed to the satisfaction of the Director-General, the Director-General will call in all or part of the bond, and arrange for the satisfactory completion of the relevant works. 	Yes, bond lodged November 2010.
ABORIGINAL HERITAGE	
<p>28. Should the Proponent discover material suspected of being Aboriginal relics or skeletal remains, work in that area shall cease and the Proponent shall advise DECC and proceed in accordance with DECC instructions.</p>	Yes, no Aboriginal relics or skeletal remains found to date.
TRAFFIC AND TRANSPORT	
Materials Transport	
<p>29. The Proponent shall transport all excavated material between the extraction site and processing plant site, including processing residues, via slurry pipelines.</p> <p><i>Note: When the slurry system is unusable by reason of breakdown or essential maintenance, extractive material may be transported by truck during the period of such breakdown or maintenance. The Proponent shall ensure that such periods are as brief as possible and shall advise the Council each day that truck transport is to be used.</i></p>	Yes
Haulage Records	
<p>30. The Proponent shall record and maintain a log of the extraction quantities and traffic movement in and out of the site, available for inspection at the request of the Director-General or the Council.</p>	Yes
Road Haulage	
<p>31. The Proponent shall ensure that:</p> <p>(a) all loaded vehicles entering or leaving the site are covered; and</p> <p>(b) all loaded vehicles leaving the site are cleaned of materials that may fall on</p>	Yes

Project Approval Schedule 3 Environmental Performance Conditions	Compliance
the road, before they leave the site.	
VISUAL	
Visual Amenity	
32. The Proponent shall minimise the visual impacts of the project to the satisfaction of the Director- General.	Yes
Lighting Emissions	
33. The Proponent shall: (a) take all practicable measures to mitigate off-site lighting impacts from the project; and (b) ensure that all external lighting associated with the project complies with <i>Australian Standard AS4282 (INT) 1995 – Control of Obtrusive Effects of Outdoor Lighting</i> , to the satisfaction of the Director-General.	Yes
Advertising	
34. The Proponent shall not erect or display any advertising structure(s) or signs on the site without the written approval of the Director-General. <i>Note: This does not include traffic management and safety or environmental signs.</i>	Yes, no new signs.
WASTE MANAGEMENT	
Waste Minimisation	
35. The Proponent shall: (a) only import VENM to the site; and (b) minimise the amount of waste generated by the project to the satisfaction of the Director-General.	Yes
EMERGENCY AND HAZARDS MANAGEMENT	
Dangerous Goods	
36. The Proponent shall ensure that the storage, handling, and transport of dangerous goods are conducted in accordance with the relevant Australian Standards, particularly AS1940 and AS1596, and the <i>Dangerous Goods Code</i> .	Yes, no dangerous goods on site.
Safety	
37. The Proponent shall secure the project to ensure public safety to the satisfaction of the Director- General.	Yes
Bushfire Management	
38. The Proponent shall: (a) ensure that the project is suitably equipped to respond to any fires on-site; and (b) assist the Rural Fire Service and emergency services as much as possible if there is a fire on site.	Yes, site has a water truck and fire extinguishers in vehicles and workshop.
PRODUCTION DATA	
39. The Proponent shall: (a) provide annual production data to the DPI using the standard form for that purpose; and (b) include a copy of this data in the AEMR.	Yes No

Table 3 Compliance With Project Approval Additional Procedures Conditions

Project Approval Schedule 4 Additional Procedures Conditions	Compliance
NOTIFICATION OF LANDOWNERS	
<p>1. If the results of monitoring required in Schedule 3 identify that impacts generated by the project are greater than the relevant impact assessment criteria, then the Proponent shall notify the 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 project is complying with the relevant criteria.</p>	<p>Yes, no notifications required to date.</p>
INDEPENDENT REVIEW	
<p>2. If a landowner of privately owned land considers that the operations of the quarry are exceeding the impact assessment criteria in Schedule 3, then he/she may ask the Proponent in writing for an independent review of the impacts of the project on his/her land.</p> <p>If the Director-General is satisfied that an independent review is warranted, the Proponent shall within 3 months of the Director-General advising that an independent review is warranted:</p> <p>(a) consult with the landowner to determine his/her concerns;</p> <p>(b) commission a suitably qualified, experienced and independent person, whose appointment has been approved by the Director-General, to conduct monitoring on the land, to determine whether the project is complying with the relevant criteria in Schedule 3, and identify the source(s) and scale of any impact on the land, and the project's contribution to this impact; and</p> <p>(c) give the Director-General and landowner a copy of the independent review.</p>	<p>Yes, as no independent reviews required to date.</p>
<p>3. If the independent review determines that the quarrying operations are complying with the relevant criteria in Schedule 3, then the Proponent may discontinue the independent review with the approval of the Director-General.</p>	<p>Noted</p>
<p>4. If the independent review determines that the quarrying operations are not complying with the relevant criteria in Schedule 3, and that the quarry is primarily responsible for this non-compliance, then the Proponent shall:</p> <p>(a) implement all reasonable and feasible measures, in consultation with the landowner, to ensure that the project complies with the relevant criteria; and</p> <p>(b) conduct further monitoring to determine whether these measures ensure compliance; or</p> <p>(c) secure a written agreement with the landowner to allow exceedances of the relevant criteria in Schedule 3, to the satisfaction of the Director-General.</p> <p>If the additional monitoring referred to above subsequently determines that the quarrying operations are complying with the relevant criteria in Schedule 3, then the Proponent may discontinue the independent review with the approval of the Director-General.</p> <p>If the Proponent is unable to finalise an agreement with the landowner, then the Proponent or landowner may refer the matter to the Director-General for resolution.</p> <p>If the matter cannot be resolved within 21 days, the Director-General shall refer the matter to an Independent Dispute Resolution Process (see Appendix 8).</p>	<p>Noted</p>
<p>5. If the landowner disputes the results of the independent review, either the Proponent or the landowner may refer the matter to the Director-General for resolution.</p> <p>If the matter cannot be resolved within 21 days, the Director-General shall refer the matter to an Independent Dispute Resolution Process (see Appendix 8).</p>	<p>Noted</p>

Table 4 Compliance With Project Approval Environmental Management, Monitoring, Reporting and Auditing Conditions

Project Approval Schedule 5 Environmental Management, Monitoring, Reporting and Auditing Conditions	Compliance
ENVIRONMENTAL MANAGEMENT STRATEGY	
<p>1. The Proponent shall prepare and implement an Environmental Management Strategy for the project to the satisfaction of the Director-General. This strategy shall be submitted to the Director-General within 3 months of the date of this approval, and;</p> <p>(a) provide the strategic context for environmental management of the project;</p> <p>(b) identify the statutory requirements that apply to the project;</p> <p>(c) describe in general how the environmental performance of the project would be monitored and managed;</p> <p>(d) describe the procedures that would be implemented to:</p> <ul style="list-style-type: none"> · keep the local community and relevant agencies informed about the construction, operation and environmental performance of the project; · receive, handle, respond to, and record complaints; · resolve any disputes that may arise during the life of the project; · respond to any non-compliance; · manage cumulative impacts; and · respond to emergencies; and <p>(e) describe the role, responsibility, authority, and accountability of the key personnel involved in the environmental management of the project.</p>	Yes, Environmental Management Strategy approved 8 July 2009.
ENVIRONMENTAL MONITORING PROGRAM	
<p>2. The Proponent shall prepare an Environmental Monitoring Program for the project to the satisfaction of the Director-General. This program shall be submitted to the Director-General concurrently with the submission of the various monitoring programs and consolidate the various monitoring requirements in Schedule 3 of this approval into a single document.</p>	Yes, Environmental Monitoring Program approved 8 July 2009.
REPORTING	
Incident Reporting	
<p>3. Within 24 hours of detecting an exceedance of the limits/performance criteria in this approval or the occurrence of an incident that causes (or may cause) harm to the environment, the Proponent shall notify the Department and other relevant agencies of the exceedance/incident.</p>	Yes, no exceedances or incidents reported to date.
<p>4. Within 6 days of notifying the Department and other relevant agencies of an exceedance/incident, the Proponent shall provide the Department and these agencies with a written report that:</p> <p>(a) describes the date, time, and nature of the exceedance/incident;</p> <p>(b) identifies the cause (or likely cause) of the exceedance/incident;</p> <p>(c) describes what action has been taken to date; and</p> <p>(d) describes the proposed measures to address the exceedance/incident.</p>	Yes, no exceedances or incidents reported to date.
Annual Reporting	
<p>5. Within 12 months of the date of this approval, and annually thereafter, the Proponent shall submit an AEMR to the Director-General, relevant agencies and CCC. This report shall:</p> <p>(a) identify the standards and performance measures that apply to the project;</p> <p>(b) describe the works that will be carried out in the next 12 months;</p> <p>(c) include a summary of the complaints received during the past year, and</p>	Yes, 2008-2009 and 2009-2010 AEMRs submitted to date.

Project Approval Schedule 5 Environmental Management, Monitoring, Reporting and Auditing Conditions	Compliance
<p>compare this to the complaints received in previous years;</p> <p>(d) include a summary of the monitoring results for the project during the past year;</p> <p>(e) include an analysis of these monitoring results against the relevant:</p> <ul style="list-style-type: none"> · impact assessment criteria/limits; · monitoring results from previous years; and · predictions in the EA; <p>(f) identify any trends in the monitoring results over the life of the project;</p> <p>(g) identify any non-compliance during the previous year; and</p> <p>(h) describe what actions were, or are being, taken to ensure compliance.</p>	
INDEPENDENT ENVIRONMENTAL AUDIT	
<p>6. Within 12 months of the date of this approval, and every 3 years thereafter, unless the Director-General directs otherwise, the Proponent shall commission and pay the full cost of an Independent Environmental Audit of the project. This audit shall:</p> <p>(a) be conducted by a suitably qualified, experienced, and independent person(s) whose appointment has been approved by the Director-General;</p> <p>(b) include consultation with the relevant agencies;</p> <p>(c) assess the environmental performance of the project, and its effects on the surrounding environment;</p> <p>(d) assess whether the project is complying with the relevant standards, performance measures and statutory requirements; and</p> <p>(e) review the adequacy of any strategy/plan/program required under this approval, and, if necessary, recommend measures or actions to improve the environmental performance of the project, and/or any strategy/plan/program required under this approval.</p> <p><i>Note: The person(s) conducting the audit should have expertise in flora and fauna assessment, hydrogeology and quarry rehabilitation.</i></p>	<p>Yes, but delayed approval of auditor in July 2010 (see Appendix 2).</p>
<p>7. Within 6 weeks of completion of each Independent Environmental Audit, the Proponent shall submit a copy of the audit report to the Director-General, with a response to any of the recommendations in the audit report.</p>	<p>No, not required until after completion of audit.</p>
<p>8. Within 3 months of submitting a copy of the audit report to the Director-General, the Proponent shall review and if necessary revise:</p> <p>(a) each of the environmental management and monitoring strategies/plans/programs in Schedules 3 and 5; and</p> <p>(b) the sum of the Vegetation Offset Bond (see Schedule 3). This review shall consider:</p> <ul style="list-style-type: none"> · the effects of inflation; · any changes to the total area of disturbance; and · the performance of the vegetation offsets against the completion criteria of the Rehabilitation and Vegetation Offset Management Plan, to the satisfaction of the Director-General 	<p>No, not required until after completion of audit.</p>

Project Approval Schedule 5 Environmental Management, Monitoring, Reporting and Auditing Conditions	Compliance
COMMUNITY CONSULTATIVE COMMITTEE	
<p>9. The Proponent shall establish a Community Consultative Committee (CCC) for the project to the satisfaction of the Director-General, in general accordance with the Department's <i>Guideline for Establishing and Operating Community Consultative Committees for Mining Projects</i>.</p> <p><i>Note: The Proponent may continue the operation of the Liaison and Review Committee established under condition 6.7 of the development consent issued by the Land and Environment Court on 14 July 1998 to fulfil this condition.</i></p>	Yes
ACCESS TO INFORMATION	
<p>10. Within 1 month of the approval of any plan/strategy/program required under this approval (or any subsequent revision of these plans/strategies/programs), or the completion of the audits or AEMR required under this approval, the Proponent shall:</p> <p>(a) provide a copy of the relevant document/s to the relevant agencies and to members of the general public upon request; and</p> <p>(b) ensure that a copy of the relevant document/s is made publicly available on its website and at the Proponent's office.</p>	Yes
<p>11. During the project, the Proponent shall:</p> <p>(a) make a summary of monitoring results required under this approval publicly available on its website and at the site office; and</p> <p>(b) update these results on a regular basis.</p>	Yes generally, but website needs updating for progress on approvals and audit.

6.2.2 Compliance With Project Approval Statement of Commitments

Table 5 summarises whether the statement of commitments listed in the project approval are being complied with. Most of the "Yes" compliances relied on observations during the audit site inspections and the review of the environmental reference documents rather than extensive and time consuming checking of all the background paperwork.

Table 5 Compliance With Project Approval Statement of Commitments

Project Approval Statement of Commitments	Compliance
Noise and Vibration	
· Site activities will be managed so that any necessary high noise and vibration levels occur at times of least impact.	Yes
· All site activities will be undertaken incorporating noise attenuation measures such as restricting working hours for certain works required in the proximity of sensitive receptors.	Yes
· All equipment used on site will be certified in relation to noise performance.	Yes
· Panels and covers of silenced plant will be kept shut and plant and equipment switched off when not in use.	Yes
· All mechanical equipment will be silenced by the best practical means using current technology, prior to use. Noise suppression devices will be fitted according to manufacturer's instructions. Noise control kits will be fitted to noisy mobile equipment and shrouds provided around stationary equipment where necessary.	Yes

Project Approval Statement of Commitments	Compliance
· All plant and equipment will be inspected regularly to ensure that it is well maintained to minimise noise emissions.	Yes
· The L10 noise level at the boundary of adjacent receivers where baseline data has been obtained will not normally exceed the background level by more than 5 dB(A).	Yes
· Compliance monitoring of noise levels will be undertaken and appropriate records of measurements kept.	Yes
· The local community will be informed of the level and duration of noise to be expected during specific activities and phases of development when necessary. Communication of concerns to the Environmental Manager will be invited.	Yes
Air Quality and Greenhouse Gas Emissions	
· Ambient air quality monitoring will be conducted at identified sites.	Yes
· Dust suppression equipment will be fitted to all processing plant on the site. This will be regularly inspected and maintained in good working order at all times.	Yes
· Trafficable areas will be defined to prevent unnecessary vehicle movement into other parts of the site.	Yes
· All unsealed trafficable areas and working areas will be kept damp by spraying regularly with a water cart, water sprays or sprinklers to minimise dust emissions. Frequency of spraying to be determined based on weather conditions, soil erodibility and the observation of any visible dust.	Yes, but irrigation system needs fixing to enable operations.
· Speed controls will be applied to all unsealed areas (maximum speed of 20 km/h) and signposted accordingly.	Yes
· All semi-permanent stockpiles will be vegetated with suitable groundcover and regularly watered until the vegetation is well established.	Yes, not required to date.
· Work on any extraction activity producing dust will cease due to high winds if control cannot be achieved by watering or other means. Work will not resume until the wind velocity decreases and any dust generation can be controlled by normal means.	Yes, not required to date.
· All loaded trucks leaving the central processing plant on Lot 198 DP 752025 will have their payloads fully covered by a suitable material to prevent spillage.	Yes
· No fires will be permitted on-site without a permit.	Yes
· A mechanical road sweeping unit and water cart will be maintained for use as required to keep all roads including the intersection of the haul road and Wisemans Ferry Road free from deposited material.	Yes, but one complaint.
· Exhausts from all vehicles and plant/equipment will be inspected to ensure that they are maintained at an acceptable level.	Yes
· All vehicles will be regularly serviced to ensure that exhaust emissions comply with the regulations. Appropriate service records will be maintained.	Yes
· Any opportunities to minimise machinery use and ensure that all equipment used on the site is energy efficient will be identified.	Yes
Access and Traffic	
· If the sand slurry plant and transport system is unusable due to breakdown or during maintenance periods, trucks will be used for the transport of extractive material on a temporary basis. This will cease once the system is operating satisfactorily.	Yes, not required to date.

Project Approval Statement of Commitments	Compliance
· The number of laden vehicle movements will not exceed a combined total of two hundred per day via the intersection of the haulage road and Wisemans Ferry Road. This is the total of laden vehicle movements allowed for PF Formation's combined extractive industry operations in Baulkham Hills Shire.	Yes
· Operations involving the transportation of material on the site will only be undertaken between 07.00 and 18.00 hours, Monday to Saturday, except a maximum of 10 laden vehicles will be allowed to enter and leave the site between 06.00 and 07.00 hours, Monday to Saturday only. Vehicles will not be allowed to arrive at the site prior to 05.45 hours on any day.	Yes
Erosion and Sediment Control	
· Soil and Water Management Plan will be reviewed and revised, if required.	Noted
· Temporary erosion and sedimentation control structures such as detention basins and catch drains will be constructed as appropriate to collect runoff from cleared land including extraction areas and access roads.	Yes
· Silt traps and erosion control fencing will be erected as appropriate along extraction area boundaries and drainage lines.	Yes
· Sediment basins with a minimum storage capacity of 400 m ³ per hectare of catchment will be constructed. Spillway capacity and stability will be designed as follows: - life of less than 5 years, adopt the 20 year time of concentration event; - life between 5 and 10 years, adopt the 50 year time of concentration event; and - life greater than 10 years, adopt the 100 year time of concentration event.	Noted
· Stormwater control measures will be assessed and routine inspections conducted to ensure that compliance with best practice guidelines and relevant legislation is achieved.	Yes
· Locations for topsoil and material stockpiles will be selected on level ground and away from drainage lines. Diversion drains and sediment filter fences will be installed up slope as appropriate.	Yes
· Training will be provided to operational personnel on the importance of erosion control measures and drivers informed of the damage that can be caused to the environment by heavy vehicles.	Yes
· Areas of exposed land will be kept to a minimum compatible with operational requirements.	Yes
· Exposed areas not in use will be stabilized with an appropriate cover crop and watered until well established.	Noted, not required to date.
· Erosion and sediment controls will be monitored regularly and immediately following a rainfall event. Monitoring will take place initially on a weekly basis, then monthly once operating correctly. Sediment will be cleared when the traps have collected 60% of the capacity of the basin or where sediment build-up is less than 300 mm below the spillway crest. Sediment will be removed to a location where further pollution to downslope lands and waterways will not occur.	Yes
· Maintenance of erosion and sediment controls will be undertaken when any deterioration is identified or when replacement is necessary.	Yes
· Stored stormwater will be reused for dust control and the watering of site vegetation.	Yes
· Soil stockpiles will be seeded where these are to remain unused for a period in excess of four weeks. The area will be watered until the vegetation is well established.	Noted, not required to date.

Project Approval Statement of Commitments	Compliance
Water Management	
· Maximum depth of extraction will be restricted to not less than two metres above the wet weather high groundwater level. (nominally 181 m AHD).	Yes
· The groundwater will not be breached or contaminated. In the event that either should occur, operations will cease in the affected area and the Department of Environment and Climate Change consulted to determine the basis on which extraction may recommence.	Yes, no breaches or contamination to date.
· Retention basins will be designed to accommodate the 100-year time of concentration event. The minimum basin capacities are: - Northern catchment 10,000 m ³ - Southern catchment 38,000 m ³ The volume of these basins can be varied depending on the extent of the area exposed for extraction within each catchment.	Noted, although endorsed Environmental Strategy nominates 7,800 m ³ northern catchment and 19,400 m ³ southern catchment.
· All retention basins will be regularly inspected and an annual report prepared on their effectiveness.	No, annual reports not prepared to date.
· A minimum of two groundwater monitoring bores will be installed. One will be located within or near the extraction area and another at some location within the site beyond the area of any direct extraction influence. The location of these bores will meet the requirements of the Department of Environment and Conservation and Baulkham Hills Shire Council.	Yes
Flora and Fauna	
· All areas which are not to be disturbed will be clearly marked.	No, buffer areas need to be clearly marked.
· Topsoil will be separated and stored or use in rehabilitation works.	Yes
· An area of not less than 12 hectares will be identified, and indicated on the site survey. This will be identified as a revegetation area and access controlled.	No, site survey needs amendment.
· Seed will be collected from the existing woodland communities (Sydney Hinterland Transition Woodland), stored under controlled conditions, made available for future broadcasting and a suitable proportion propagated to provide tube stock for revegetation.	Yes, not required to date.
· Stored topsoil and that derived from suitable areas adjacent to the woodland communities will be spread over the defined revegetation area and seed broadcast over the site to augment the soil-borne native seed bank. Tube stock suitably protected against animal predation will also be used in appropriate locations.	Noted, not required to date.
· Access to bushland will be restricted to minimise the potential for damage. These areas will be marked and signs erected to ensure that this prohibition is made clear. The boundary of the site will be fenced to prevent external access.	Yes
Rehabilitation	
· The Rehabilitation Plan will be reviewed and amended as necessary to reflect	Noted, not

Project Approval Statement of Commitments	Compliance
changing operational conditions. This will include a revised phasing plan and implementation programme.	required to date.
· Setbacks to all roads and adjacent properties will be defined taking account of existing trees and other features. Programmes of mound construction and screen planting will be undertaken as required in the Rehabilitation Plan. All plant material used will reflect the species mix existing in the area.	Noted, not required to date.
· A staged seeding and planting programme will be undertaken as areas become available following completion of extraction and capping of sediment basins. This will be aimed at producing a dense plantation on the steeper slopes derived from the flora resources already established. The aim is to replicate as far as possible the mix and density of planting which is currently present.	Noted, not required to date.
· All suitable plant material will be used on the site as a seed and planting medium. Topsoil will be stored in appropriately marked low stockpiles for reuse in locations as close as possible to their source. Care will be taken to ensure that this does not become contaminated with the seeds of exotic species and weeds.	Yes
· The site will be rehabilitated in stages leaving areas exposed for as short a time as possible. This will be undertaken in conformity with the approved Rehabilitation Plan with maximum final batter grades of 4(H):1(V) on north and west facing slopes and 3(H):1(V) on those facing south and east. Final slopes will be as gentle as possible depending on the availability of fill material.	Noted, not required to date.
· All soil stockpiles and exposed areas will be seeded with an appropriate vegetation cover where no activity is to take place for more than four weeks.	Noted, not required to date.
· Revegetation of the site will be undertaken on the following basis: - as far as possible re-establish the Sydney Hinterland Transitional Woodland using seed and mulch collected from the area; - rehabilitate other areas to native species with a light sowing of cereal and allowing natural regeneration; - rehabilitate the soil to achieve a full profile; - lime, fertilise and sow areas where improved grass cover is required; and - suitably turf surfaces expected to experience high surface flows leaving the site.	Noted, not required to date except for one rehabilitation area.
· A maintenance programme aimed at promoting and protecting the growth of the rehabilitated areas will be established.	Yes.
Social Impact Management	
· Material concerning activities at the site will be prepared and published on the company's website which will allow the community and others to be informed about current news on the site.	No, website needs updating.
· Regular bi-annual meetings of community representatives will be established to discuss issues in relation to sand extraction on the site.	Yes
· A Complaints Register will be established incorporating date and time, type of communication, contact details of the complainant, nature of the complaint and response taken.	Yes
Heritage	
· All work will cease in the area if an archaeological or heritage item is identified during extraction operations and the National Parks and Wildlife Service, the Deerubbin Aboriginal Land Council or the Heritage Office consulted to determine any appropriate course of action prior to recommencement of the work.	Yes, no items identified to date.

Project Approval Statement of Commitments	Compliance
<ul style="list-style-type: none"> Any additional survey work required for submittal of application to destroy artefact scatters located in the later stages of the development will be undertaken. Reasonable requirements of the National Parks and Wildlife Service (DECC), the Deerubbin Aboriginal Land Council and the Heritage Office arising out of any additional studies will be implemented. 	Yes, not required to date.
Visual Amenity	
<ul style="list-style-type: none"> Peripheral bunds will be constructed within the established setbacks where necessary to screen extraction activities. These will be a minimum of three metres high with slopes ranging from 3(H):1(V) to 6(H):1(V) depending on the location using overburden stripped from the site. 	Yes
<ul style="list-style-type: none"> Screen planting works will be undertaken in the peripheral areas to an agreed specification using mulch to allow for native plant regeneration. This species mix will be reinforced using appropriate plantings at specified intervals. 	Yes, except for portion of The Northern Road frontage.
<ul style="list-style-type: none"> A tree planting programme will be undertaken within the ten metre buffer zones and in other defined parts of the site to establish a dense plantation using an appropriate mix of species reflecting that of the existing community. 	No, not required to date except for portion of The Northern Road frontage.
<ul style="list-style-type: none"> The final rehabilitated landform will be established in conformity with the Rehabilitation Plan. 	Noted, not required to date.
<ul style="list-style-type: none"> All temporary fencing will be removed when no longer required. 	Noted, not required to date.
<ul style="list-style-type: none"> Vegetation in areas suitable for agricultural/horticultural uses will be re-established. 	Noted, not required to date.
<ul style="list-style-type: none"> All site infrastructure including the slurry plant and its associated pipelines will be removed. Those areas affected by the plant will be restored and rehabilitated. 	Noted, not required to date.
<ul style="list-style-type: none"> All waste materials will be removed and disposed of in an appropriate manner. 	Noted, not required to date.
<ul style="list-style-type: none"> The final Rehabilitation Plan will be reviewed and proposals for future use of the site prepared. 	Noted, not required to date.
Waste Management	
<ul style="list-style-type: none"> Waste handling areas will be clearly delineated. 	Yes
<ul style="list-style-type: none"> Specific areas for the collection of materials for reuse and recycling will be defined and clearly labelled. 	Yes
<ul style="list-style-type: none"> Cleared vegetation will be used within the landscape programme. 	Yes
<ul style="list-style-type: none"> All topsoil will be stored in stockpiles for later use in site rehabilitation. 	Yes
<ul style="list-style-type: none"> Bins or skips will be provided for the collection and storage of recyclable material and waste. General construction waste will be stored in a skip located at the workshop on Lot 198 DP752025. Waste food will be removed and stored in a vermin proof bin for collection by a waste contractor. Paper waste generated from site offices, plastics and glass will be collected separately for recycling. 	Yes

Project Approval Statement of Commitments	Compliance
· Hazardous wastes (including empty drums, rags, soil contaminated with oil) will be separated from nonhazardous wastes and manage in accordance with the relevant legislation.	Yes
· Liquid wastes (chemicals, oils and greases) will be temporarily stored in an appropriately bunded area and disposed of via a licensed contractor. Wash down water will be directed to an appropriate settlement basin if quality is acceptable.	Yes
· Copies of current licences of all waste removal contractors on site will be retained.	Yes
· All documentation relating to waste removal and disposal will be retained on file at the site. This documentation will include dockets for the removal and disposal of waste at a licensed facility.	Yes
· Waste material will be progressively separated and stockpiled in designated areas for collection. Adequately secure waste disposal areas to prevent access by wildlife.	Yes
· All waste licences will be reviewed and terms and conditions for compliance monitored.	Yes
· Any materials and waste remaining on the site following completion of extraction operations will be recycled or sent of disposal. This will be either recycled or disposed of in an appropriate manner.	Noted, not required to date.
Emergency Response	
· All personnel on site during operations will be trained in appropriate procedures including site induction, materials handling and response procedures.	Yes
· Emergency response procedures will be developed and put in place. Appropriate individuals will be appointed as emergency services liaison officers.	Yes
· An emergency response table listing contact details of all relevant parties required in an environmental emergency will be prepared.	Yes
· A Register of Environmentally Hazardous Materials to be stored and used on site will be established.	Yes
· Appropriate safety and spill response equipment will be made available on site.	Yes
· All materials to be used and stored on site will be clearly labelled.	Yes
· Emergency response procedures will be reviewed and updated bi-annually.	Yes
· Appropriate safety and response equipment will be available at all times.	Yes
Hazard, Risk and Safety	
· A licence to keep dangerous goods will be obtained from WorkCover NSW for all materials stored on site which require licensing.	Noted, not required.
· A Register of Hazardous Materials setting out details of quantities, storage and specific handling requirements for all relevant materials stored on site will be established.	Yes
· Material Safety Data Sheets for all hazardous materials stored on site will be obtained.	Yes
· Appropriate storage and secondary containment facilities for all hazardous materials stored on site will be provided. All bunded areas will be designed to contain at least 110% of the volume of materials stored within the area.	Yes, except disused oils, lubricants, paints etc need to be under cover

Project Approval Statement of Commitments	Compliance
	within a bund.
· A Safety Officer will be appointed for the development.	Yes
· All flammable material storage areas will be located at least ten metres from possible ignition sources.	Yes
· Contents of all above ground storage areas will be clearly labelled.	Yes
· All hazardous and dangerous goods storage areas will be secured and appropriate signage displayed. All incompatible material will be segregated.	Yes
· All personnel will be trained in the handling and safety procedures required for the hazardous materials stored and used on site.	Yes
· An Emergency Response Plan will be developed and put in place.	Yes
· A mobile spill control kit containing appropriate absorbent materials, neutralising chemicals and other spill containment equipment will be provided.	Yes
· Personal protective equipment will be provided and personnel instructed in its use.	Yes
· Any spills beyond the bunded area will be cleaned up immediately and the contaminated material disposed of in an appropriate manner.	Yes
· The relevant authorities will be contacted in the event of a leak or spill and any instructions followed. Any contamination will be remediated to the satisfaction of the regulatory authorities.	Noted, not required to date.
· Any spills or hazardous wastes that cannot be recycled will be collected and disposal by a licensed waste contractor arranged. All records of waste removal on site will be retained.	Yes

6.2.3 Compliance With Environment Protection Licence Conditions

Table 6 summarises whether the Environment Protection Licence number 3407 conditions are being complied with. The licence covers all PF Formation operations within Baulkham Hills Shire and includes lands in addition to the Hitchcock Road Sand Project. The licence will be reviewed on 5 May 2011.

Table 6 Compliance With Environment Protection Licence Conditions

Compliance With Environment Protection Licence Conditions	Compliance
Administrative conditions	
This licence authorises the carrying out of the scheduled activities listed below at the premises specified (Etra Pty Ltd, Wisemans Ferry Road, Maroota). The activities are listed according to their scheduled activity classification (extractive activities including concrete works), fee-based activity classification (land-based extractive activity) and the scale of the operation (100,000 – 500,000 tonnes).	Yes
Discharges to air and water and applications to land	

Compliance With Environment Protection Licence Conditions				Compliance
The following points referred to in the table below are identified in this licence for the purposes of monitoring and/or the setting of limits for the emission of pollutants to the air from the point.				Yes
Air				
EPA Identification no.	Type of Monitoring Point	Type of Discharge Point	Description of Location	
1	Dust monitoring		Dust gauge labelled "1- School" on the Map faxed to the EPA on 5 August 2002	
2	Dust monitoring		Dust gauge labelled 2 - intersection of Hitchcock and Wisemans Ferry Road	
3	Dust monitoring		Dust gauge labelled as "Jurds Paddock - 3 Por168" on the map faxed to the EPA on 5 August 2002	
Limit conditions - Pollution of Waters				
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.				Noted
Limit conditions - Waste				
The licensee must not cause, permit or allow any waste generated outside the premises to be received at the premises for storage, treatment, processing, reprocessing or disposal or any waste generated at the premises to be disposed of at the premises, except as expressly permitted by the licence.				Yes, no waste accepted to date.
This condition only applies to the storage, treatment, processing, reprocessing or disposal of waste at the premises if those activities require an environment protection licence.				Noted
Limit conditions - Noise Limits				
Noise generated at the premises must not exceed the noise limits presented in the table below. Note that the noise limits represent the noise contribution from the activity on the premise.				Yes
Noise Limits (dB(A))				
Location	Day	Night		
	L _{Aeq} (15 minute)	L _{Aeq} (15 minute)	L _{A1} (1 minute)	
Maroota Public School	40	NA	NA	
Pignataro	40	37	52	
Tornatola	39	38	52	
For the purposes of the above condition:				Noted
• Day is defined as the period from 7am to 6pm Monday to Saturday and 8am to 6pm Sundays and Public holidays.				
• Evening is defined as the period 6pm to 10pm,				
• Night is defined as the period from 10pm to 7am Monday to Saturday and 10pm to 8am Sundays and Public Holidays.				

Compliance With Environment Protection Licence Conditions	Compliance
<p>Noise from the premises is to be measured at the most affected point or within the residential boundary or at the most affected point within 30m of the dwelling (rural situations) where the dwelling is more than 30m from the boundary to determine compliance with the noise LAeq,(15min) limits in the above condition.</p> <p>Noise from the premises is to be measured at 1m from the dwelling façade to determine compliance with the LA1(1 minute) noise limits in the above condition.</p> <p>Where it can be demonstrated that direct measurement of noise from the premises is impractical, the EPA may accept alternative means of determining compliance. See Chapter 11 of the NSW Industrial Noise Policy.</p> <p>The modification factors presented in Section 4 of the NSW Industrial Noise Policy shall also be applied to the measured noise levels where applicable.</p>	Noted
<p>The noise emission limits identified above apply for prevailing meteorological conditions (winds up to 3m/s at 10 metres above ground level), temperature inversion conditions of up to 3oC/100m and wind speed up to 2m/s at 10 metres above the ground. Noise impacts that may be enhanced by temperature inversions must be addressed by:</p> <ul style="list-style-type: none"> • documenting noise complaints received to identify any higher level of impacts or patterns of temperature inversions; • where levels of noise complaints indicate a higher level of impact then actions to quantify and ameliorate any enhanced impacts under temperature inversion conditions should be developed and implemented. 	Noted
<p>The proponent shall prepare and implement a Noise Management Plan (NMP). The NMP must include but need not be limited to:</p> <p>a) The primary objective of minimising noise emissions from the premises</p> <p>b) A system that allows for periodic assessment of Best Management Practice (BMP) and Best Available Technology Economically Achievable (BATEA) to minimise noise emissions at all times and to seek to achieve noise contributions not exceeding the Project Specific Noise Levels at all receiver locations.</p> <p>c) Measures to monitor noise performance and respond to complaints.</p>	Yes
<p>The proponent shall develop and implement a Traffic Noise Management Strategy (TNMS). The TNMS shall include all feasible and reasonable noise management strategies for vehicle movements associated with the facility, that should include but are not necessarily be limited to;</p> <ul style="list-style-type: none"> • driver training to ensure that noisy practices such as the use of compression engine brakes are avoided or minimized near sensitive receivers, • best noise practice in the selection and maintenance of vehicle fleets, • movement scheduling where practicable to minimize noise impacts during sensitive times of the day, • a system of audited management practices that identifies non conformances, initiates and monitors corrective and preventative action (including disciplinary action for breaches of noise minimization procedures) and assesses the implementation and improvement of the TNMS, • clauses in conditions of employment, or in contracts, of drivers that require adherence to the noise minimization procedures and facilitate effective implementation of the disciplinary actions for breaches of the procedures. 	Yes, but the TNMS needs to refer to the Maroota local traffic management policy agreed with Maroota's major quarry operators.
Limit conditions – Hours of Operation	
<p>Activities covered by this licence must only be carried out between the hours of 0600 and 1800 Monday to Friday, and 0600 and 1800 Saturday, and at no time on Sundays and Public Holidays.</p>	Yes, generally.
Operating conditions	

Compliance With Environment Protection Licence Conditions	Compliance
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.	Yes
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.	Yes
The premises must be maintained in a condition which minimises or prevents the emission of dust from the premises.	Yes
All loaded trucks entering and leaving the premises must have their loads covered.	Yes
The licensee must not cause or permit the emission of offensive odour beyond the boundary of the premises.	Yes
Monitoring and recording conditions	
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.	Yes
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.	Yes
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.	Yes

Compliance With Environment Protection Licence Conditions				Compliance
For each monitoring/discharge point or utilisation area specified below (by a point number), the licensee must monitor (by sampling and obtaining results by analysis) the concentration of each pollutant specified in Column 1. The licensee must use the sampling method, units of measure, and sample at the frequency, specified opposite in the other columns:				Yes
Air				
POINT 1				
Pollutant	Units of measure	Frequency	Sampling Method	
Particulates - Deposited Matter	grams per square metre per month	Monthly	AM-19	
POINT 2				
Pollutant	Units of measure	Frequency	Sampling Method	
Particulates - Deposited Matter	grams per square metre per month	Monthly	AM-19	
POINT 3				
Pollutant	Units of measure	Frequency	Sampling Method	
Particulates - Deposited Matter	grams per square metre per month	Monthly	AM-19	
Monitoring for the concentration of a pollutant emitted to the air required to be conducted by this licence must be done in accordance with: (a) any methodology which is required by or under the Act to be used for the testing of the concentration of the pollutant; or (b) if no such requirement is imposed by or under the Act, any methodology which a condition of this licence requires to be used for that testing; or (c) if no such requirement is imposed by or under the Act or by a condition of this licence, any methodology approved in writing by the EPA for the purposes of that testing prior to the testing taking place.				Yes
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.				Yes
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.				No, one complaint did not include any follow-up contact.
The record of a complaint must be kept for at least 4 years after the complaint was made.				Yes
The record must be produced to any authorised officer of the EPA who asks to see them.				Noted
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.				Yes

Compliance With Environment Protection Licence Conditions	Compliance
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.	Yes
The conditions above do not apply until 3 months after: (a) the date of the issue of this licence or (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.	Noted
Reporting conditions	
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.	Yes
An Annual Return must be prepared in respect of each reporting period, except as provided below.	Yes
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.	Noted
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.	Noted
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').	Yes
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.	Yes
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.	Yes
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.	Noted
Notifications must be made by telephoning the Environment Line service on 131 555.	Noted
The licensee must provide written details of the notification to the EPA within 7 days of the date on which the incident occurred.	Noted

Compliance With Environment Protection Licence Conditions				Compliance
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.				Noted
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.				Noted
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.				Noted
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.				Noted
General conditions				
A copy of this licence must be kept at the premises to which the licence applies.				Yes
The licence must be produced to any authorised officer of the EPA who asks to see it.				Noted
The licence must be available for inspection by any employee or agent of the licensee working at the premises.				Yes
Pollution studies and reduction programs				
Completed Pollution Reduction Programs (PRP)				Noted
PRP No	PRP	Description	Completed Date	
1	Impervious bunded area to fuel storage	The bunded area serving the above ground fuel storage tank located outside the main workshop made impervious	1 May 2008	
2	tank Roofed bunded area to fuel storage tank	The bunded area serving the above ground fuel storage tank located outside the main workshop fitted with roof to exclude rainwater	1 May 2008	
3	Upgrade overflow point of sediment dam	The overflow point to the sediment dam upgraded	1 May 2008	
4	Prevent mud tracking from premises	Upgraded controls to help prevent mud tracking from the premises onto Wiseman's Ferry Road	1 May 2008	
5	PM10 dust monitoring	PM10 dust monitoring conducted from 1 March 2008 to 1 March 2009	1 March 2009	

6.3 Review the Adequacy of Any Strategy/Plan/Program Required Under This Approval, and, if Necessary, Recommend Measures or Actions to Improve the Environmental Performance of the Project, and/or Any Strategy/Plan/Program Required Under This Approval.

6.3.1 Environmental Strategy

The Environmental Strategy approved by the Department of Planning on 8 July 2009 is adequate, appropriate and satisfactory to date. However, it is noted that some of the terminology in the Environmental Strategy needs updating such as the new names of NSW government departments, new legislation, revised Australian Standards and new references.

In accordance with PF Formation's environmental policy listed in the Environmental Strategy, the volume or quantity of fuels/lubricants, electricity and water/groundwater consumed by PF Formation's operations including the on-site and off-site processing plants should be monitored quarterly and an efficiency programme implemented to reduce annual consumption.

In addition, the Environmental Strategy requires an internal audit to be completed by the Site Manager to provide the basis for the management of potential non-conformance and for annual reporting of environmental performance. The internal audits appear to have been completed in part although not fully documented and they should be undertaken by the Environmental Manager and the Site Manager.

6.3.2 Noise Management Plan

The Noise Management Plan approved by the Department of Planning on 8 July 2009 is adequate, appropriate and satisfactory to date subject to the following two corrective actions.

A Traffic Noise Management Strategy is required by the Environment Protection Licence but it is not included in the Noise Management Plan. The Noise Management Plan needs to refer to the Maroota local traffic management policy agreed with Maroota's major quarry operators as follows.

"As company policy all trucks entering and leaving quarry sites will be required to:

1. Comply with speed limits as observed. Speed limits at Maroota Public School are 40 km/hour between the hours of 8.00 to 9.30 am and 2.30 to 4.00 pm otherwise 70 km/hour.
2. Cover all loads leaving the quarry sites.
3. Not use engine/exhaust brakes in the vicinity of quarry sites."

With the consent of the Department of Planning and Infrastructure and as in the endorsed Noise Management Plan only the three closest noise assessment locations to the project being R3 Jurd, R5 Pignataro, R10 Tornatola plus R7 Maroota Public School need to be monitored. These four noise assessment locations have been monitored for over 10 years by PF Formation. R5 Pignataro, R10 Tornatola and R7 Maroota Public School are premises that have noise emission limits specified in the Environment Protection Licence. Additional monitoring points described in project approval schedule 3 condition 5 are located further away from the project, are subject to noise from other sand extraction operations and do not contribute any meaningful data to noise impact assessments for the project site.

6.3.3 Air Quality Monitoring Program

The Air Quality Monitoring Program approved by the Department of Planning on 8 July 2009 is adequate, appropriate and satisfactory to date.

It is noted that the requirement for Tapering Element Oscillating Microbalance air quality monitoring near Maroota Public School and referenced in the Air Quality Monitoring Program has been deleted from the Environment Protection Licence conditions.

6.3.4 Water Management Plan

The Water Management Plan approved by the Department of Planning on 8 July 2009 is adequate, appropriate and satisfactory to date.

6.3.5 Landscape Management Plan

The Landscape Management Plan approved by the Department of Planning on 26 August 2010 is adequate, appropriate and satisfactory to date.

It is noted that Table 3.3 *Criteria to monitor success of revegetation* in the Landscape Management Plan has been superseded by Appendix 6 *Criteria to monitor success of revegetation* in the Project Approval.

6.3.6 Annual Environmental Management Reports for 2008-2009 and 2009-2010

The AEMRs are adequate, appropriate and satisfactory to date subject to the following corrective actions in future.

The AEMRs do not make any direct reference to the Quarry Manager. The organisational framework in the Environmental Strategy states the Site Manager, Mr Peter Watts, is also the Quarry Manager. At present the Environmental Manager and Environmental Officer are the same person, Mr Joshua Graham, and this also needs to be acknowledged in the AEMRs.

As required, the AEMRs do not include copies of the standard form for annual production data produced for the Department of Primary Industries. These forms for 2008-2009 and 2009-2010 were both completed by PF Formation on 29 November 2010.

The 2008-2009 AEMR included a figure showing incorrectly labelled Lots 1 and 2 DP 57096 (rather than the correct Lots 1 and 2 DP 570966) located in the northern portion of the project site. This was corrected in the 2009-2010 AEMR.

The 2009-2010 AEMR included a plan of revegetation areas and survey sites. All future AEMPs need to provide a location plan showing all areas of in-progress rehabilitation (approximately 3 hectares to date) and completed rehabilitation. The rehabilitation location plan should be based on the Vegetation Offset Plan included as Appendix 5 in the Project Approval.

Annual reports on the effectiveness of the retention basins need to be produced and included in the AEMRs.

7. Audit Conclusions

Full cooperation was obtained from PF Formation staff during the audit with full access granted to records and copies made of records if requested. No obstacles were encountered during the audit and subsequent queries. Based on the audit findings the audit conclusions are as follows.

Based on completion of the environmental audit tasks (section 3), audit evidence and environmental monitoring results (section 4), consultation with agencies (section 5) and assessment of the compliance tables and audit findings (section 6) the environmental performance of the sand project is satisfactory with some non-conformances. The project is generally complying with the relevant standards, performance measures and statutory requirements including project approval conditions, project approval commitments and Environment Protection Licence conditions with some non-conformances that can be rectified. There is a need to improve on some environmental commitments and record keeping.

The effects of the Hitchcock Road sand project on the surrounding environment appear to be relatively minor, nevertheless acceptable and manageable with some improvements and corrective actions needed. This assumes that the environmental management measures continue to be implemented by PF Formation.

All strategies/plans/programs required under the project approval to date are adequate with some corrective actions proposed.

There is nothing confidential in this audit report and it can be distributed as required.

8. Audit Recommendations

Based on the results of the audit, it is recommended that the following corrective actions, in no particular order or priority, be implemented by PF Formation generally within three months after assessment by the Department of Planning and Infrastructure so that operations of the project comply with all of the project approval conditions, project approval statement of commitments and Environment Protection Licence conditions. This will help reduce any potential adverse environmental impacts of operations, improve the environmental performance of the project and reduce the risk of any third party environmental action.

1. Improve screen planting on Lot 1 DP 570966 along Old Northern Road between Wisemans Ferry Road and 200 metres south and also near the project site access point on Wisemans Ferry Road.
2. Old tyres need to be removed from public view near the project site access point on Wisemans Ferry Road and either stored within the main processing plant workshop area or legally disposed of.
3. The survey plan provided to the Department of Planning in May 2009 in the form of an orthophoto-map (see Appendix 5) needs amendment taking into account the approved Landscape Management Plan and re-submission to the Department of Planning and Infrastructure to show the following:
 - a. A 10 metre buffer area (rather than 30 metres) along Old Northern Road near Lot 2 DP 570966 and Lot 2 DP 1063296.
 - b. Areas of vegetation to be conserved including Sydney Hinterland Transition Woodland.
 - c. An area of at least 12 hectares to be rehabilitated and revegetated.

4. Any encroachment of the extraction area within Lot 2 DP 570966 and the 10 metre buffer area near the intersection of the disused access way/Crown Road and Old Northern Road needs to be rehabilitated and revegetated during the spring months of 2011.
5. All buffer setback areas need to be clearly delineated on the ground with a peg out survey and use of permanent markers such as star posts and high visibility tape, coloured stakes, fences or similar.
6. A Traffic Noise Management Strategy needs to be included in the Noise Management Plan and to refer to the Maroota local traffic management policy agreed with Maroota's major quarry operators.
7. The Environmental Strategy needs to be updated including the date of publication, new names of NSW government departments, new legislation, revised Australian Standards and references.
8. As required by the Environmental Strategy an annual internal audit needs to be completed and documented by the Environmental Manager and the Site Manager to provide the basis for the management of potential non-conformances and for annual reporting of environmental performance.
9. Annual reports on the effectiveness of the retention basins need to be produced and included in the AEMRs.
10. In addition to the water truck the irrigation system along parts of the internal haul roads near the revegetation (other woodland) area needs to be fixed for regular use during dry windy periods.
11. The concrete pipes and a large disused oil tank within the project site need to be removed off-site to reduce any risk of the items being buried within the areas of site excavation.
12. The depth of mining contours plan dated 08/05/2009 (see Appendix 6) and supplied to the Department of Planning needs to be updated to cover the whole extraction area of the site.
13. The water table contours plan dated 08/05/2009 (see Appendix 7) and supplied to the Department of Planning needs to be updated to cover the whole extraction area of the site.
14. Current calibration certificates for the weighbridge need to be included in the AEMRs.
15. Modified copies of the annual production data produced for the Department of Primary Industries using the standard form for that purpose need to be included in the AEMRs. With the consent of the Department of Planning and Infrastructure and to avoid disclosure of commercially sensitive information to the public and competitors, production data should be provided in 100,000 tonne bands in the AEMRs.
16. Annual production data needs to be separated for Hornsby Shire and The Hills Shire in annual returns so that the maximum throughput of 400,000 tonnes/annum for the project can be independently verified.
17. The Complaints Register needs to be recorded in full in response to any complaints on the project and any corrective actions undertaken.
18. Within the workshop area in PF Formations main processing area an impervious bund under a shelter needs to be provided as a storage area for disused and empty fuel, lubricant and chemical drums and containers. The bund must be designed to contain at least 110% of the volume of materials stored within the area.

19. With the consent of the Department of Planning and Infrastructure only the three closest noise assessment locations to the project being R3 Jurd, R5 Pignataro, R10 Tornatola plus R7 Maroota Public School need be monitored in future.
20. Future AEMRs need to make reference that the Site Manager and the Quarry Manager are interchangeable and the same person. Similarly future AEMRs need to make reference that the Environmental Manager and Environmental Officer positions are either one or two persons.
21. The AEMPs need to provide a plan showing all areas of in-progress rehabilitation and completed rehabilitation. The rehabilitation location plan should be based on the Vegetation Offset Plan and areas for new plantings included as Appendix 5 in the Project Approval.
22. In the interests of ecologically sustainable development the volume or quantity of fuels/lubricants, electricity and water/groundwater consumed by PF Formation's operations including the on-site and off-site processing plants should be monitored quarterly and an efficiency programme implemented to reduce annual consumption.
23. The PF Formation website needs regular updating for progress on approvals from the Department of Planning and Infrastructure and the audit.
24. The document *Methodology to assess success of revegetation within Hitchcock Road site*, September 2008, Parsons Brinckerhoff Australia Pty Limited needs to be added to PF Formation's website as an addition to the Project Approval.
25. A full legible copy of the Project Approval including all Appendices as provided by the Department of Planning on 7 March 2011 needs to be included on PF Formation's website.

After consideration of the audit recommendations by PF Formation and endorsement by the Department of Planning and Infrastructure, implementation of the audit recommendations should be verified in the next AEMR for the project.

Appendix 1

Project Approval 06_0104

Project Approval

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

I approve the project referred to in Schedule 1, subject to the conditions set out 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 on-going environmental management of the project.

Hon Kristina Keneally MP
Minister for Planning

Sydney

2009

SCHEDULE 1

Project Application:

06_0104

Proponent:

PF Formation

Approval Authority:

Minister for Planning

Land:

See Appendix 1

Project:

Hitchcock Road Sand Project

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DEFINITIONS

AEMR	Annual Environmental Management Report
Council	The Hills Shire Council
Day	The period from 7.00am to 6.00pm on Monday to Saturday, and 8.00am to 6.00pm on Sundays and Public Holidays
DECC	Department of Environment and Climate Change
Department	Department of Planning
Director-General	Director-General of the Department of Planning, or delegate
DPI	Department of Primary Industries
DWE	Department of Water and Energy
EA	Environmental Assessment for the project titled <i>Hitchcock Road Sand Extraction and Rehabilitation Project Environmental Assessment and Appendices</i> (3 volumes), dated November 2007, prepared by DFA Consultants, including the response to submissions and preferred project report
EP&A Act	<i>Environmental Planning and Assessment Act 1979</i>
EP&A Regulation	<i>Environmental Planning and Assessment Regulation 2000</i>
EPL	Environment Protection Licence issued under the <i>Protection of the Environment Operations Act 1997</i>
Evening	The period from 6.00pm to 10.00pm
Extraction Area	The land described as the extraction area in Appendix 1
Land	Land means the whole of a lot, or contiguous lots owned by the same landowner, in a current plan registered at the Land Titles Office at the date of this approval
Minister	Minister for Planning, or delegate
Night	The period from 10.00pm to 7.00am on Monday to Saturday, and 10.00pm to 8.00am on Sundays and Public Holidays
Privately owned land	Land not owned by a public agency or the Proponent or its related companies
Preferred Project Report	The Proponent's Preferred Project Report dated September 2008, prepared by DFA Consultants, as modified in the Proponent's email to the Department of 18 November 2008
Project	The development as described in the EA
Proponent	PF Formation, or its successors in title
Response to Submissions	The Proponent's response to issues raised in submissions, dated March 2008, prepared by DFA Consultants, and subsequent submissions to the Department dated 27 August 2008
RTA	Roads and Traffic Authority
SHTW	Sydney Hinterland Transition Woodland
Site	Land to which the project application applies
Statement of Commitments	The Proponent's commitments in Appendix 3
Strategy A, Strategy B	The alternative rehabilitation proposals described in the preferred project report
Vegetation Offset	The conservation and enhancement program described in the preferred project report, to occur on the land shown on the plan in Appendix 5
VENM	Virgin Excavated Natural Material, as defined in the <i>Protection of the Environment Operations Act 1997</i>

SCHEDULE 2 ADMINISTRATIVE

Obligation to Minimise Harm to the Environment

1. The Proponent shall implement all reasonable and feasible measures to prevent and/or minimise any harm to the environment that may result from the construction, operation, or rehabilitation of the project.

Terms of Approval

2. The Proponent shall carry out the project generally in accordance with the:
 - (a) EA;
 - (b) preferred project report;
 - (c) statement of commitments; and
 - (d) conditions of this approval.

Notes:

- The layout of the project is shown in the figure in Appendix 2; and
- The statement of commitments is included in Appendix 3.

3. If there is any inconsistency between the above:
 - (a) the preferred project report shall prevail over the EA;
 - (b) the conditions of this approval shall prevail generally, to the extent of the inconsistency.
4. The Proponent shall comply with any reasonable requirement/s of the Director-General arising from the Department's assessment of:
 - (a) any reports, plans, programs or correspondence that are submitted in accordance with the conditions of this approval; and
 - (b) the implementation of any actions or measures contained in these reports, plans, programs or correspondence.

Existing Sand Mining Consent

5. Subject to an agreement in accordance with condition 7 below, the Proponent may accept material extracted from Lot 2 DP 555184 and Lot 1 DP 34599 in accordance with the development consent issued by the Land and Environment Court on 14 July 1998 to be transported across the site and to the slurry plant on Lot 1 DP 570966 via the slurry pipeline and processed on Lot 198 DP 752025.

Limits on Approval

6. Extraction and processing operations may take place until 30 November 2028.

Note: Under this approval, the Proponent is required to rehabilitate the site and provide offsets to the satisfaction of the Director-General. Consequently this approval will continue to apply in all other respects other than the right to conduct extraction and processing operations until the site has been rehabilitated and the offset provided to a satisfactory standard.

7. The quantity of processed material produced at the site, together with material produced on Lot 2 DP 555184 and Lot 1 DP 34599 in accordance with the development consent issued by the Land and Environment Court on 14 July 1998, shall not exceed 400,000 tonnes a year.

Prior to the commencement of any processing of extractive material (under the above consent) from activities on Lot 2 DP 555184 or Lot 1 DP 34599, the Proponent shall demonstrate, to the satisfaction of the Director-General, that it has reached an agreement with the owners of those Lots regarding the proportion of the extraction limit as it applies to each Lot.

8. The Proponent shall restrict total laden truck movements associated with the project to:
 - (a) 200 per day, for the Proponent's combined operations at Maroota;
 - (b) 20 per day, for trucks importing VENM to the site; and
 - (c) 10 per day, for trucks entering/exiting the site between 6.00am and 7.00am.

Note: For the avoidance of doubt, 200 is the maximum laden truck movement volume allowed on any one day, including the VENM and early morning truck movements.

9. The Proponent shall not undertake any extraction within 2 metres of the established wet weather groundwater level.

Note: The wet weather groundwater level shall be established in accordance with condition 3 of Schedule 3.

10. The Proponent shall not disturb any SHTW vegetation (as shown on the plan in Appendix 5) on site without the prior written approval of the Director-General. In seeking this approval the Proponent shall demonstrate, to the satisfaction of the Director-General, that it has established at least 3.7 hectares of SHTW on the site, to a standard that meets the criteria in Appendix 6.

Note: This demonstration must include an assessment by a suitably qualified and independent ecologist.

Management Plans / Monitoring Programs

11. With the approval of the Director-General, the Proponent may submit any management plan or monitoring program required by this approval on a progressive basis.

Demolition

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

Protection of Public Infrastructure

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

Operation of Plant and Equipment

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

Crown Land

15. The Proponent shall not commence any development authorised by this approval on Crown land without the prior approval of the Department of Lands.

Section 94 Contributions

16. The Proponent shall pay a monthly contribution to the Council for the upgrade and maintenance of roads in accordance with Baulkham Hills Shire Council's section 94 plan in force at the date of this approval.

SCHEDULE 3 ENVIRONMENTAL PERFORMANCE

GENERAL EXTRACTION AND PROCESSING PROVISIONS

Identification of Boundaries

1. Within 3 months of the date of this approval, or as otherwise agreed by the Director-General, the Proponent shall:
 - (a) engage an independent registered surveyor to survey the boundaries of the approved limit of extraction and the approved ancillary work areas;
 - (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 and ancillary areas is shown conceptually on the layout plans in Appendix 2, as amended/clarified by the conditions below.

General Limits of Extraction

2. Notwithstanding the layout plans in Appendix 2, the Proponent shall not undertake extraction within:
 - (a) 30 metres of Hitchcock Road; and
 - (b) 10 metres of the property boundary of Lot 2 DP 555184, unless sand extraction has commenced on that lot, and extraction in this buffer has been agreed by the Director-General.

Maximum Extraction Depth Map

3. The Proponent shall:
 - (a) establish the wet weather groundwater level for the site based on all available (and at least 12 months) site specific groundwater monitoring data;
 - (b) engage a suitably qualified and experienced expert to establish the maximum extraction depths to which extraction can be undertaken on site, to comply with condition 9 of Schedule 2;
 - (c) submit a Maximum Extraction Depth Map (contour map or similar) for the project to the Director-General within 3 months of the date of this approval; and
 - (d) comply with the extraction depths specified in the map, to the satisfaction of the Director-General.
4. Within 3 months of the completion of the Independent Environmental Audit (see condition 6 of Schedule 5), the Proponent shall review and update the Maximum Extraction Depth Map for the project to the satisfaction of the Director-General.

NOISE

Operational Noise Assessment Criteria

5. The Proponent shall ensure that the noise generated by the project does not exceed the noise impact assessment criteria in Table 1 at any residence or on more than 25 per cent of any privately-owned land.

Noise Assessment Location	Day	Night	
	L _{Aeq} (15 minute)	L _{Aeq} (15 minute)	L _{A1} (1 minute)
R1 - Hammond	41	35	45
R2 – Hitchcock	40	35	45
R5 – Pignataro	42	35	45
R6 – Camilleri	40	35	45
R7 – Maroota Public School	36(L _{Aeq} (1 Hour))	N/A	N/A
R8 – Portelli	39	35	45
R9 – Young	39	35	45
R10 - Tornatola	39	35	45

Table 1: Noise Impact Assessment Criteria

Notes:

- To determine compliance with the L_{Aeq}(15 minute) noise limits, noise from the project 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 where the dwelling is more than 30 metres from the boundary. Where it can be demonstrated that direct measurement of noise from the project is impractical, alternative means of determining compliance

may be accepted (see Chapter 11 of the NSW Industrial Noise Policy). The modification factors in Section 4 of the NSW Industrial Noise Policy shall also be applied to the measured noise level where applicable.

- To determine compliance with the $L_{A1(1 \text{ minute})}$ limit, noise from the project is to be measured at 1 metre from the dwelling façade.
- The noise limits apply under meteorological conditions of:
 - wind speed up to 3m/s at 10m above ground level;
 - temperature inversion conditions of up to 3 degrees C/100m and wind speed up to 2m/s at 10m above the ground;
 where the wind velocity and temperature gradients are determined to be relevant to the project site in accordance with the NSW Industrial Noise Policy.
- The Director-General may relax the noise limits in Table 1 for any property where the Proponent has an agreement with the relevant owner/s to generate higher noise levels, and the Proponent has advised the Department in writing of the terms of this agreement.
- For more information on the noise assessment locations see Appendix 4.

Cumulative Noise Criteria

- The Proponent shall take all reasonable and feasible measures to ensure that the noise generated by the project combined with the noise generated by other extractive industries 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.

Operating Hours

- The Proponent shall comply with the operating hours in Table 2.

Activity	Day	Time
Construction work	Monday - Friday	7.00am to 6.00pm
	Saturday	8.00am to 1.00pm
	Sunday and Public Holidays	None
Quarrying and Processing, (inc. overburden removal)	Monday – Saturday	7.00am to 6.00pm
	Sunday and Public Holidays	None
Product Transportation	Monday – Saturday	6.00am to 6.00pm
	Sunday and Public Holidays	None
Maintenance	Monday – Saturday	7.00am to 6.00pm
	Sunday and Public Holidays	None

Table 2: Operating Hours

Notes:

- Product transportation prior to 7.00am is restricted as per condition 8 of Schedule 2.
- Maintenance activities may be conducted outside the hours in Table 2 provided that the activities are not audible at any residence beyond the boundary of the site.
- This condition does not apply to delivery of material if that delivery is required by police or other authorities for safety reasons, and/or the operation or personnel or equipment are endangered. In such circumstances, notification is to be provided to DECC and the affected residents as soon as possible, or within a reasonable period in the case of emergency.

Noise Management Plan

- The Proponent shall prepare and implement a Noise Management Plan for the project to the satisfaction of the Director-General. This plan shall:
 - be submitted to the Director-General within 3 months of the date of this approval;
 - be prepared in consultation with DECC;
 - include details of how the noise performance of the project would be monitored, and include a noise monitoring protocol for evaluating compliance with the relevant noise limits in this approval; and
 - include an investigation and assessment (including modelling) of additional reasonable and feasible noise mitigation measures that would be implemented to ensure that noise emissions at all stages of the project comply with the noise impact assessment criteria in Table 1.

Note: The EA predicted that receiver locations R5, R6, R9 and R10 would exceed the applicable noise criteria by between 2 and 5 decibels, during worst case operations.

- If the additional noise mitigation measures identified in condition 8(d) are not able to reduce noise levels to within 2 decibels of the impact assessment criteria in Table 1 then, upon receiving a written request from the applicable landowner, the Proponent shall implement additional noise mitigation

measures such as double glazing, insulation, and/or air conditioning at any residence on the land in consultation with the landowner.

These additional mitigation measures must be reasonable and feasible.

If within 3 months of receiving this request from the landowner, the Proponent and the landowner cannot agree on the measures to be implemented, or there is a dispute about the implementation of these measures, then either party may refer the matter to the Director-General for resolution.

AIR QUALITY

Impact Assessment Criteria

10. The Proponent shall ensure that dust generated by the project does not cause exceedances of the criteria listed in Tables 3, 4 and 5 at any residence or on more than 25 per cent of any privately owned land.

Pollutant	Averaging period	Criterion
Total suspended particulate (TSP) matter	Annual	90 $\mu\text{g}/\text{m}^3$
Particulate matter < 10 μm (PM ₁₀)	Annual	30 $\mu\text{g}/\text{m}^3$

Table 3: Long Term Impact Assessment Criteria for Particulate Matter

Pollutant	Averaging period	Criterion
Particulate matter < 10 μm (PM ₁₀)	24 hour	50 $\mu\text{g}/\text{m}^3$

Table 4: Short Term Impact Assessment Criteria for Particulate Matter

Pollutant	Averaging period	Maximum increase in deposited dust level	Maximum total deposited dust level
Deposited dust	Annual	2 $\text{g}/\text{m}^2/\text{month}$	4 $\text{g}/\text{m}^2/\text{month}$

Table 5: Long Term Impact Assessment Criteria for Deposited Dust

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.

Operating Conditions

11. The Proponent shall ensure any visible air pollution generated by the project is assessed regularly, and that quarrying operations are relocated, modified, and/or stopped as required to minimise air quality impacts on privately owned land.

Air Quality Monitoring

12. The Proponent shall prepare and implement an Air Quality Monitoring Program for the project to the satisfaction of the Director-General. This program shall:
 - (a) be submitted to the Director-General for approval within 3 months of the date of this approval;
 - (b) be prepared in consultation with DECC;
 - (c) include details of how the air quality performance of the project would be monitored, providing for additional dust deposition monitoring in the vicinity of clusters of residences to the north and west of the site; and
 - (d) include a protocol for evaluating compliance with the relevant air quality criteria in this approval.

METEOROLOGICAL MONITORING

13. The Proponent shall ensure the project has a suitable meteorological station on the site or in the immediate vicinity that complies with the requirements in the *Approved Methods for Sampling of Air Pollutants in New South Wales* publication.

WATER

Water Supply

14. The Proponent shall ensure that it has sufficient water for all stages of the project, and if necessary, adjust the scale of operations to match its water supply.

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

Discharges

15. The Proponent shall not discharge any water from the quarry or its associated operations except in accordance with an EPL.

Water Management and Monitoring

16. The Proponent shall prepare and implement a Water Management Plan for the project to the satisfaction of the Director-General. This plan shall:
- (a) be submitted to the Director-General within 3 months of the date of this approval;
 - (b) be prepared in consultation with DWE and DECC; and
 - (c) include a:
 - Site Water Balance;
 - Erosion and Sediment Control Plan;
 - Surface Water Monitoring Program; and
 - Groundwater Monitoring Program.
17. The Site Water Balance shall:
- (a) include details of:
 - sources and security of water supply;
 - water use on site;
 - water management on site, including the location and capacity of water storages on site and the means of access;
 - off-site water transfers; and
 - reporting procedures; and
 - (b) investigate and describe measures to minimise water use by the project.
18. The Erosion and Sediment Control Plan shall:
- (a) be consistent with the requirements of *Managing Urban Stormwater: Soils and Construction, Volume 1, 4th Edition, 2004* (Landcom);
 - (b) identify activities that could cause soil erosion and generate sediment;
 - (c) describe measures to minimise soil erosion and the potential for the transport of sediment to downstream waters;
 - (d) describe the location, function, and capacity of erosion and sediment control structures;
 - (e) demonstrate that the design capacity of basins intended to collect storm runoff will not be compromised by storage of operational water; and
 - (f) describe what measures would be implemented to maintain (and if necessary decommission) the structures over time.
19. The Surface Water Monitoring Program shall include:
- (a) detailed baseline data on surface water flows and quality in downstream watercourses that could be affected by the project;
 - (b) surface water quality and stream health assessment criteria, including trigger levels for investigating any potentially adverse surface water impacts; and
 - (c) a program to monitor:
 - surface water flows, quality, and impacts on water users;
 - stream health; and
 - channel stability.
20. The Groundwater Monitoring Program shall include:
- (a) provision of additional monitoring bores around the periphery of the site;
 - (b) detailed baseline data on groundwater levels, flows and quality in the region, and particularly any groundwater bores, springs and seeps (including spring and seep fed dams) that may be affected by operations on site;
 - (c) groundwater assessment criteria, including trigger levels for investigating any potentially adverse groundwater impacts;
 - (d) a program to monitor:
 - groundwater levels and quality in new and existing monitoring bores;
 - the impacts of the project on:
 - any groundwater bores, springs and seeps (including spring and seep fed farm dams) on privately-owned land; and

- any groundwater dependent ecosystems; and
- (e) a protocol for further groundwater modelling to confirm the limits to excavation depth across the site permitted in accordance with condition 9 of Schedule 2.

LANDSCAPE MANAGEMENT

Rehabilitation

21. The Proponent shall progressively rehabilitate the site to the satisfaction of the Director-General, in a manner that is generally consistent with the concept final landform (Strategy A or Strategy B) in the preferred project report (as reproduced in Appendix 7).

Offset Strategy

22. The Proponent shall implement the Offset Strategy described in the preferred project report, and summarised in Table 6 (shown conceptually on the plan in Appendix 5), to the satisfaction of the Director-General.

Area	Minimum Size (hectares)
On-Site Revegetation Area (SHTW)	7.9
On-Site Revegetation Area (Other Woodland)	4.1
Total	12

Table 6: Offset Strategy

23. Within 3 years of the date of this approval, the Proponent shall make suitable arrangements to provide appropriate long term security for the offset areas to the satisfaction of the Director-General.

Note: The Department acknowledges that the arrangements may provide for staged or delayed implementation, in accordance with the extraction in these areas.

Landscape Management Plan

24. The Proponent shall prepare and implement a Landscape Management Plan for the project to the satisfaction of the Director-General. This plan must:
- (a) be prepared in consultation with DECC by suitably qualified expert/s whose appointment/s have been approved by the Director-General;
 - (b) be submitted to the Director-General for approval within 6 months of the date of this approval; and
 - (c) include a:
 - Rehabilitation and Offset Management Plan; and
 - Quarry Closure Plan.

Rehabilitation and Offset Management Plan

25. The Rehabilitation and Offset Management Plan must include:
- (a) the rehabilitation objectives for the site, vegetation offsets and landscaping;
 - (b) a description of the short, medium, and long term measures that would be implemented to:
 - rehabilitate the site;
 - implement the Offset Strategy; and
 - maintain and enhance existing site vegetation outside the disturbance area;
 - (c) detailed performance and completion criteria for the site rehabilitation and implementation of the Offset Strategy;
 - (d) a detailed description of the measures that would be implemented over the next 3 years, including the procedures to be implemented for:
 - progressively rehabilitating disturbed areas;
 - implementing vegetation offsets;
 - protecting vegetation and soil outside the disturbance areas;
 - rehabilitating creeks and drainage lines on the site to ensure no net loss of stream length and aquatic habitat;
 - undertaking pre-clearance surveys;
 - managing impacts on fauna;
 - landscaping the site to minimise visual impacts;
 - conserving and reusing topsoil;
 - collecting and propagating seed for rehabilitation works;
 - salvaging and reusing material from the site for habitat enhancement;
 - controlling weeds and feral pests;

- controlling access; and
 - bushfire management;
- (e) a program to monitor the effectiveness of these measures, and progress against the performance and completion criteria;
- (f) a description of the potential risks to successful rehabilitation and/or revegetation, and a description of the contingency measures that would be implemented to mitigate these risks; and
- (g) details of who would be responsible for monitoring, reviewing, and implementing the plan.

Quarry Closure Plan

26. The Quarry Closure Plan must:
- (a) include provision for certification from a qualified geotechnical engineer that the final proposed landform is stable;
 - (b) define the objectives and criteria for closure of the quarry;
 - (c) investigate options for the future use of the site, including any final void;
 - (d) describe the measures that would be implemented to minimise or manage the ongoing (post closure) environmental effects of the project; and
 - (e) describe how the performance of these measures would be monitored over time.

Rehabilitation and Offset Bond

27. Within 3 months of the approval of the Landscape Management Plan, the Proponent shall lodge a rehabilitation and offset bond for the project with the Director-General. The sum of the bond shall be calculated at:
- (a) \$2.50/m² for the area of disturbance in each 3 year review period, including the offset areas; and
 - (b) \$1.00/m² for the total area of land previously disturbed by the quarry, or as otherwise directed by the Director-General.

Notes:

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

ABORIGINAL HERITAGE

28. Should the Proponent discover material suspected of being Aboriginal relics or skeletal remains, work in that area shall cease and the Proponent shall advise DECC and proceed in accordance with DECC instructions.

TRAFFIC AND TRANSPORT

Materials Transport

29. The Proponent shall transport all excavated material between the extraction site and processing plant site, including processing residues, via slurry pipelines.

Note: When the slurry system is unusable by reason of breakdown or essential maintenance, extractive material may be transported by truck during the period of such breakdown or maintenance. The Proponent shall ensure that such periods are as brief as possible and shall advise the Council each day that truck transport is to be used.

Haulage Records

30. The Proponent shall record and maintain a log of the extraction quantities and traffic movement in and out of the site, available for inspection at the request of the Director-General or the Council.

Road Haulage

31. The Proponent shall ensure that:
- (a) all loaded vehicles entering or leaving the site are covered; and
 - (b) all loaded vehicles leaving the site are cleaned of materials that may fall on the road, before they leave the site.

VISUAL

Visual Amenity

32. The Proponent shall minimise the visual impacts of the project to the satisfaction of the Director-General.

Lighting Emissions

33. The Proponent shall:
- (a) take all practicable measures to mitigate off-site lighting impacts from the project; and
 - (b) ensure that all external lighting associated with the project complies with *Australian Standard AS4282 (INT) 1995 – Control of Obtrusive Effects of Outdoor Lighting*, to the satisfaction of the Director-General.

Advertising

34. The Proponent shall not erect or display any advertising structure(s) or signs on the site without the written approval of the Director-General.

Note: This does not include traffic management and safety or environmental signs.

WASTE MANAGEMENT

Waste Minimisation

35. The Proponent shall:
- (a) only import VENM to the site; and
 - (b) minimise the amount of waste generated by the project to the satisfaction of the Director-General.

EMERGENCY AND HAZARDS MANAGEMENT

Dangerous Goods

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

Safety

37. The Proponent shall secure the project to ensure public safety to the satisfaction of the Director-General.

Bushfire Management

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

PRODUCTION DATA

39. The Proponent shall:
- (a) provide annual production data to the DPI using the standard form for that purpose; and
 - (b) include a copy of this data in the AEMR.
-

SCHEDULE 4 ADDITIONAL PROCEDURES

NOTIFICATION OF LANDOWNERS

1. If the results of monitoring required in Schedule 3 identify that impacts generated by the project are greater than the relevant impact assessment criteria, then the Proponent shall notify the 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 project is complying with the relevant criteria.

INDEPENDENT REVIEW

2. If a landowner of privately owned land considers that the operations of the quarry are exceeding the impact assessment criteria in Schedule 3, then he/she may ask the Proponent in writing for an independent review of the impacts of the project on his/her land.

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

- (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 project is complying with the relevant criteria in Schedule 3, and identify the source(s) and scale of any impact on the land, and the project's contribution to this impact; and
 - (c) give the Director-General and landowner a copy of the independent review.
3. If the independent review determines that the quarrying operations are complying with the relevant criteria in Schedule 3, then the Proponent may discontinue the independent review with the approval of the Director-General.
 4. If the independent review determines that the quarrying operations are not complying with the relevant criteria in Schedule 3, and that the quarry is primarily responsible for this non-compliance, then the Proponent shall:
 - (a) implement all reasonable and feasible measures, in consultation with the landowner, to ensure that the project 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 quarrying operations are complying with the relevant criteria in Schedule 3, then the Proponent may discontinue the independent review with the approval of the Director-General.

If the Proponent is unable to finalise an agreement with the landowner, then the Proponent 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 8).

5. If the landowner disputes the results of the independent review, either the Proponent 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 8).

SCHEDULE 5

ENVIRONMENTAL MANAGEMENT, MONITORING, REPORTING & AUDITING

ENVIRONMENTAL MANAGEMENT STRATEGY

1. The Proponent shall prepare and implement an Environmental Management Strategy for the project to the satisfaction of the Director-General. This strategy shall be submitted to the Director-General within 3 months of the date of this approval, and;
 - (a) provide the strategic context for environmental management of the project;
 - (b) identify the statutory requirements that apply to the project;
 - (c) describe in general how the environmental performance of the project would be monitored and managed;
 - (d) describe the procedures that would be implemented to:
 - keep the local community and relevant agencies informed about the construction, operation and environmental performance of the project;
 - receive, handle, respond to, and record complaints;
 - resolve any disputes that may arise during the life of the project;
 - respond to any non-compliance;
 - manage cumulative impacts; and
 - respond to emergencies; and
 - (e) describe the role, responsibility, authority, and accountability of the key personnel involved in the environmental management of the project.

ENVIRONMENTAL MONITORING PROGRAM

2. The Proponent shall prepare an Environmental Monitoring Program for the project to the satisfaction of the Director-General. This program shall be submitted to the Director-General concurrently with the submission of the various monitoring programs and consolidate the various monitoring requirements in Schedule 3 of this approval into a single document.

REPORTING

Incident Reporting

3. Within 24 hours of detecting an exceedance of the limits/performance criteria in this approval or the occurrence of an incident that causes (or may cause) harm to the environment, the Proponent shall notify the Department and other relevant agencies of the exceedance/incident.
4. Within 6 days of notifying the Department and other relevant agencies of an exceedance/incident, the Proponent shall provide the Department and these agencies with a written report that:
 - (a) describes the date, time, and nature of the exceedance/incident;
 - (b) identifies the cause (or likely cause) of the exceedance/incident;
 - (c) describes what action has been taken to date; and
 - (d) describes the proposed measures to address the exceedance/incident.

Annual Reporting

5. Within 12 months of the date of this approval, and annually thereafter, the Proponent shall submit an AEMR to the Director-General, relevant agencies and CCC. This report shall:
 - (a) identify the standards and performance measures that apply to the project;
 - (b) describe the works that will be carried out in the next 12 months;
 - (c) include a summary of the complaints received during the past year, and compare this to the complaints received in previous years;
 - (d) include a summary of the monitoring results for the project during the past year;
 - (e) include an analysis of these monitoring results against the relevant:
 - impact assessment criteria/limits;
 - monitoring results from previous years; and
 - predictions in the EA;
 - (f) identify any trends in the monitoring results over the life of the project;
 - (g) identify any non-compliance during the previous year; and
 - (h) describe what actions were, or are being, taken to ensure compliance.

INDEPENDENT ENVIRONMENTAL AUDIT

6. Within 12 months of the date of this approval, and every 3 years thereafter, unless the Director-General directs otherwise, the Proponent shall commission and pay the full cost of an Independent Environmental Audit of the project. This audit shall:
 - (a) be conducted by a suitably qualified, experienced, and independent person(s) whose appointment has been approved by the Director-General;
 - (b) include consultation with the relevant agencies;

- (c) assess the environmental performance of the project, and its effects on the surrounding environment;
- (d) assess whether the project is complying with the relevant standards, performance measures and statutory requirements; and
- (e) review the adequacy of any strategy/plan/program required under this approval, and, if necessary, recommend measures or actions to improve the environmental performance of the project, and/or any strategy/plan/program required under this approval.

Note: The person(s) conducting the audit should have expertise in flora and fauna assessment, hydrogeology and quarry rehabilitation.

- 7. Within 6 weeks of completion of each Independent Environmental Audit, the Proponent shall submit a copy of the audit report to the Director-General, with a response to any of the recommendations in the audit report.
- 8. Within 3 months of submitting a copy of the audit report to the Director-General, the Proponent shall review and if necessary revise:
 - (a) each of the environmental management and monitoring strategies/plans/programs in Schedules 3 and 5; and
 - (b) the sum of the Vegetation Offset Bond (see Schedule 3). This review shall consider:
 - the effects of inflation;
 - any changes to the total area of disturbance; and
 - the performance of the vegetation offsets against the completion criteria of the Rehabilitation and Vegetation Offset Management Plan,
 to the satisfaction of the Director-General

COMMUNITY CONSULTATIVE COMMITTEE

- 9. The Proponent shall establish a Community Consultative Committee (CCC) for the project to the satisfaction of the Director-General, in general accordance with the Department's *Guideline for Establishing and Operating Community Consultative Committees for Mining Projects*.

Note: The Proponent may continue the operation of the Liaison and Review Committee established under condition 6.7 of the development consent issued by the Land and Environment Court on 14 July 1998 to fulfil this condition.

ACCESS TO INFORMATION

- 10. Within 1 month of the approval of any plan/strategy/program required under this approval (or any subsequent revision of these plans/strategies/programs), or the completion of the audits or AEMR required under this approval, the Proponent shall:
 - (a) provide a copy of the relevant document/s to the relevant agencies and to members of the general public upon request; and
 - (b) ensure that a copy of the relevant document/s is made publicly available on its website and at the Proponent's office.
- 11. During the project, the Proponent shall:
 - (a) make a summary of monitoring results required under this approval publicly available on its website and at the site office; and
 - (b) update these results on a regular basis.

**APPENDIX 1
SCHEDULE OF LAND**

Extraction Area	<ul style="list-style-type: none">• Lots 1 & 2 DP 570966• Lots 1 & 2 DP 1063296• Lot 1 DP 1013943• Lot 2 DP 233818• Lot 1 DP 1091018• Lot 1 DP 223323
Processing Plant	<ul style="list-style-type: none">• Lots 167 & 214 DP 752039• Lot 198 DP 752025

APPENDIX 2 GENERAL LAYOUT OF PROJECT



- Area already extracted and partially rehabilitated
- Area for future extraction
- Clean water dam
- Existing internal haul road
- Land included in the application

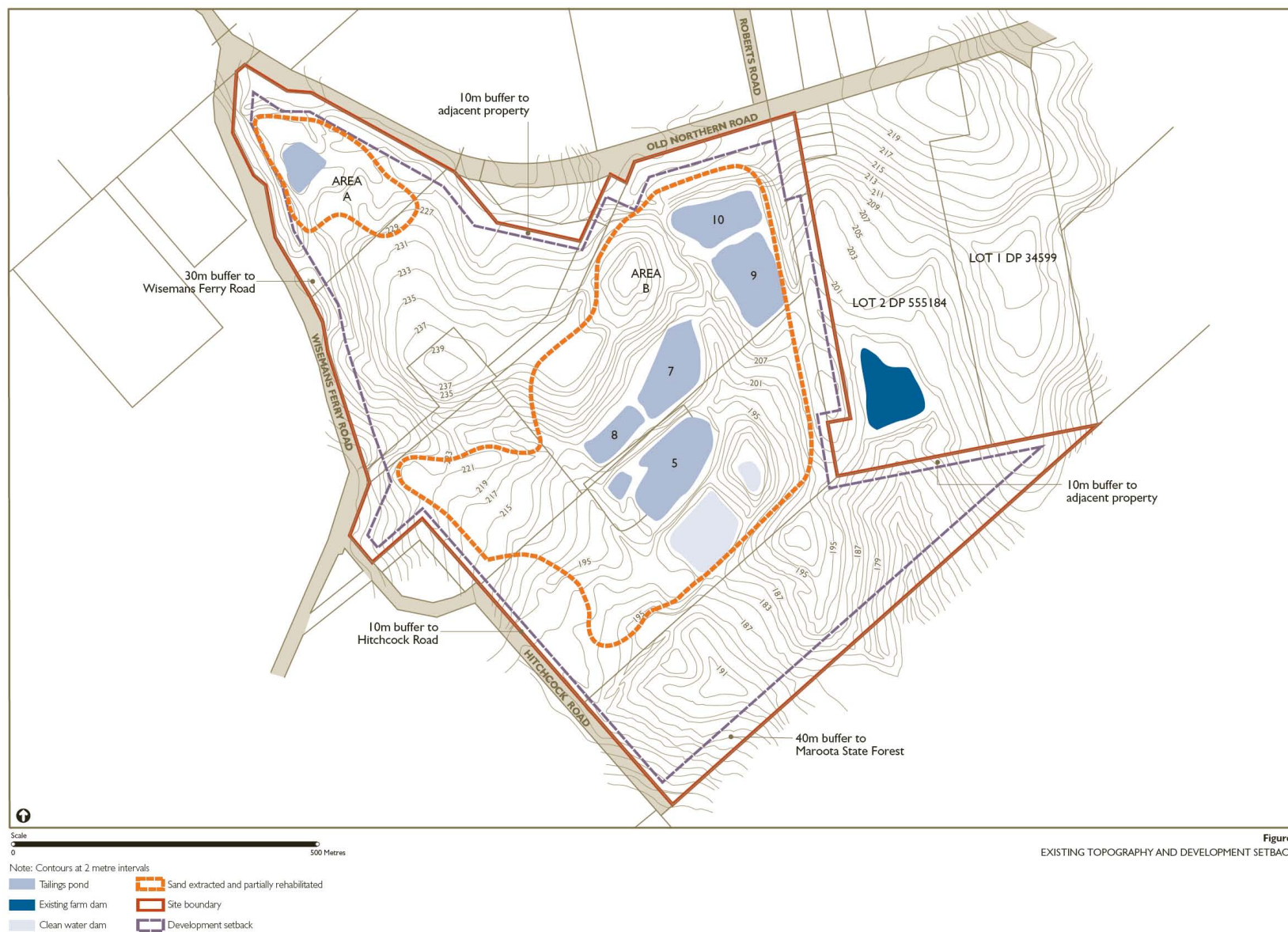


Figure 4
EXISTING TOPOGRAPHY AND DEVELOPMENT SETBACKS

APPENDIX 3 STATEMENT OF COMMITMENTS

Noise and Vibration

- Site activities will be managed so that any necessary high noise and vibration levels occur at times of least impact.
- All site activities will be undertaken incorporating noise attenuation measures such as restricting working hours for certain works required in the proximity of sensitive receptors.
- All equipment used on site will be certified in relation to noise performance.
- Panels and covers of silenced plant will be kept shut and plant and equipment switched off when not in use.
- All mechanical equipment will be silenced by the best practical means using current technology, prior to use. Noise suppression devices will be fitted according to manufacturer's instructions. Noise control kits will be fitted to noisy mobile equipment and shrouds provided around stationary equipment where necessary.
- All plant and equipment will be inspected regularly to ensure that it is well maintained to minimise noise emissions.
- The L_{10} noise level at the boundary of adjacent receivers where baseline data has been obtained will not normally exceed the background level by more than 5 dB(A).
- Compliance monitoring of noise levels will be undertaken and appropriate records of measurements kept.
- The local community will be informed of the level and duration of noise to be expected during specific activities and phases of development when necessary. Communication of concerns to the Environmental Manager will be invited.

Air Quality and Greenhouse Gas Emissions

- Ambient air quality monitoring will be conducted at identified sites.
- Dust suppression equipment will be fitted to all processing plant on the site. This will be regularly inspected and maintained in good working order at all times.
- Trafficable areas will be defined to prevent unnecessary vehicle movement into other parts of the site.
- All unsealed trafficable areas and working areas will be kept damp by spraying regularly with a water cart, water sprays or sprinklers to minimise dust emissions. Frequency of spraying to be determined based on weather conditions, soil erodibility and the observation of any visible dust.
- Speed controls will be applied to all unsealed areas (maximum speed of 20 km/h) and signposted accordingly.
- All semi-permanent stockpiles will be vegetated with suitable groundcover and regularly watered until the vegetation is well established.
- Work on any extraction activity producing dust will cease due to high winds if control cannot be achieved by watering or other means. Work will not resume until the wind velocity decreases and any dust generation can be controlled by normal means.
- All loaded trucks leaving the central processing plant on Lot 198 DP 752025 will have their payloads fully covered by a suitable material to prevent spillage.
- No fires will be permitted on-site without a permit.
- A mechanical road sweeping unit and water cart will be maintained for use as required to keep all roads including the intersection of the haul road and Wisemans Ferry Road free from deposited material.
- Exhausts from all vehicles and plant/equipment will be inspected to ensure that they are maintained at an acceptable level.
- All vehicles will be regularly serviced to ensure that exhaust emissions comply with the regulations. Appropriate service records will be maintained.

- Any opportunities to minimise machinery use and ensure that all equipment used on the site is energy efficient will be identified.

Access and Traffic

- If the sand slurry plant and transport system is unusable due to breakdown or during maintenance periods, trucks will be used for the transport of extractive material on a temporary basis. This will cease once the system is operating satisfactorily.
- The number of laden vehicle movements will not exceed a combined total of two hundred per day via the intersection of the haulage road and Wisemans Ferry Road. This is the total of laden vehicle movements allowed for PF Formation's combined extractive industry operations in Baulkham Hills Shire.
- Operations involving the transportation of material on the site will only be undertaken between 07.00 and 18.00 hours, Monday to Saturday, except a maximum of 10 laden vehicles will be allowed to enter and leave the site between 06.00 and 07.00 hours, Monday to Saturday only. Vehicles will not be allowed to arrive at the site prior to 05.45 hours on any day.

Erosion and Sediment Control

- Soil and Water Management Plan will be reviewed and revised, if required.
- Temporary erosion and sedimentation control structures such as detention basins and catch drains will be constructed as appropriate to collect runoff from cleared land including extraction areas and access roads.
- Silt traps and erosion control fencing will be erected as appropriate along extraction area boundaries and drainage lines.
- Sediment basins with a minimum storage capacity of 400 m³ per hectare of catchment will be constructed. Spillway capacity and stability will be designed as follows:
 - life of less than 5 years, adopt the 20 year tc event;
 - life between 5 and 10 years, adopt the 50 year tc event; and
 - life greater than 10 years, adopt the 100 year tc event.
- Stormwater control measures will be assessed and routine inspections conducted to ensure that compliance with best practice guidelines and relevant legislation is achieved.
- Locations for topsoil and material stockpiles will be selected on level ground and away from drainage lines. Diversion drains and sediment filter fences will be installed up slope as appropriate.
- Training will be provided to operational personnel on the importance of erosion control measures and drivers informed of the damage that can be caused to the environment by heavy vehicles.
- Areas of exposed land will be kept to a minimum compatible with operational requirements.
- Exposed areas not in use will be stabilized with an appropriate cover crop and watered until well established.
- Erosion and sediment controls will be monitored regularly and immediately following a rainfall event. Monitoring will take place initially on a weekly basis, then monthly once operating correctly. Sediment will be cleared when the traps have collected 60% of the capacity of the basin or where sediment build-up is less than 300 mm below the spillway crest. Sediment will be removed to a location where further pollution to downslope lands and waterways will not occur.
- Maintenance of erosion and sediment controls will be undertaken when any deterioration is identified or when replacement is necessary.
- Stored stormwater will be reused for dust control and the watering of site vegetation.
- Soil stockpiles will be seeded where these are to remain unused for a period in excess of four weeks. The area will be watered until the vegetation is well established.

Water Management

- Maximum depth of extraction will be restricted to not less than two metres above the wet weather high groundwater level. (nominally 181 m AHD).

- The groundwater will not be breached or contaminated. In the event that either should occur, operations will cease in the affected area and the Department of Environment and Climate Change consulted to determine the basis on which extraction may recommence.
- Retention basins will be designed to accommodate the 100-year tc event. The minimum basin capacities are:
 - Northern catchment 10,000 m³
 - Southern catchment 38,000 m³

The volume of these basins can be varied depending on the extent of the area exposed for extraction within each catchment.

- All retention basins will be regularly inspected and an annual report prepared on their effectiveness.
- A minimum of two groundwater monitoring bores will be installed. One will be located within or near the extraction area and another at some location within the site beyond the area of any direct extraction influence. The location of these bores will meet the requirements of the Department of Environment and Conservation and Baulkham Hills Shire Council.

Flora and Fauna

- All areas which are not to be disturbed will be clearly marked.
- Topsoil will be separated and stored or use in rehabilitation works.
- An area of not less than 12 hectares will be identified, and indicated on the site survey. This will be identified as a revegetation area and access controlled.
- Seed will be collected from the existing woodland communities (Sydney Hinterland Transition Woodland), stored under controlled conditions, made available for future broadcasting and a suitable proportion propagated to provide tubestock for revegetation.
- Stored topsoil and that derived from suitable areas adjacent to the woodland communities will be spread over the defined revegetation area and seed broadcast over the site to augment the soil-borne native seed bank. Tube stock suitably protected against animal predation will also be used in appropriate locations.
- Access to bushland will be restricted to minimise the potential for damage. These areas will be marked and signs erected to ensure that this prohibition is made clear. The boundary of the site will be fenced to prevent external access.

Rehabilitation

- The Rehabilitation Plan will be reviewed and amended as necessary to reflect changing operational conditions. This will include a revised phasing plan and implementation programme.
- Setbacks to all roads and adjacent properties will be defined taking account of existing trees and other features. Programmes of mound construction and screen planting will be undertaken as required in the Rehabilitation Plan. All plant material used will reflect the species mix existing in the area.
- A staged seeding and planting programme will be undertaken as areas become available following completion of extraction and capping of sediment basins. This will be aimed at producing a dense plantation on the steeper slopes derived from the flora resources already established. The aim is to replicate as far as possible the mix and density of planting which is currently present.
- All suitable plant material will be used on the site as a seed and planting medium. Topsoil will be stored in appropriately marked low stockpiles for reuse in locations as close as possible to their source. Care will be taken to ensure that this does not become contaminated with the seeds of exotic species and weeds.
- The site will be rehabilitated in stages leaving areas exposed for as short a time as possible. This will be undertaken in conformity with the approved Rehabilitation Plan with maximum final batter grades of 4(H):1(V) on north and west facing slopes and 3(H):1(V) on those facing south and east. Final slopes will be as gentle as possible depending on the availability of fill material.
- All soil stockpiles and exposed areas will be seeded with an appropriate vegetation cover where no activity is to take place for more than four weeks.
- Revegetation of the site will be undertaken on the following basis:
 - as far as possible re-establish the Sydney Hinterland Transitional Woodland using seed and mulch collected from the area ;

- rehabilitate other areas to native species with a light sowing of cereal and allowing natural regeneration;
 - rehabilitate the soil to achieve a full profile;
 - lime, fertilise and sow areas where improved grass cover is required; and
 - suitably turf surfaces expected to experience high surface flows leaving the site.
- A maintenance programme aimed at promoting and protecting the growth of the rehabilitated areas will be established.

Social Impact Management

- Material concerning activities at the site will be prepared and published on the company's website which will allow the community and others to be informed about current news on the site.
- Regular bi-annual meetings of community representatives will be established to discuss issues in relation to sand extraction on the site.
- A Complaints Register will be established incorporating date and time, type of communication, contact details of the complainant, nature of the complaint and response taken.

Heritage

- All work will cease in the area if an archaeological or heritage item is identified during extraction operations and the National Parks and Wildlife Service, the Deerubbin Aboriginal Land Council or the Heritage Office consulted to determine any appropriate course of action prior to recommencement of the work.
- Any additional survey work required for submittal of application to destroy artefact scatters located in the later stages of the development will be undertaken. Reasonable requirements of the National Parks and Wildlife Service (DECC), the Deerubbin Aboriginal Land Council and the Heritage Office arising out of any additional studies will be implemented.

Visual Amenity

- Peripheral bunds will be constructed within the established setbacks where necessary to screen extraction activities. These will be a minimum of three metres high with slopes ranging from 3(H):1(V) to 6(H):1(V) depending on the location using overburden stripped from the site.
- Screen planting works will be undertaken in the peripheral areas to an agreed specification using mulch to allow for native plant regeneration. This species mix will be reinforced using appropriate plantings at specified intervals.
- A tree planting programme will be undertaken within the ten metre buffer zones and in other defined parts of the site to establish a dense plantation using an appropriate mix of species reflecting that of the existing community.
- The final rehabilitated landform will be established in conformity with the Rehabilitation Plan.
- All temporary fencing will be removed when no longer required.
- Vegetation in areas suitable for agricultural/horticultural uses will be re-established.
- All site infrastructure including the slurry plant and its associated pipelines will be removed. Those areas affected by the plant will be restored and rehabilitated.
- All waste materials will be removed and disposed of in an appropriate manner.
- The final Rehabilitation Plan will be reviewed and proposals for future use of the site prepared.

Waste Management

- Waste handling areas will be clearly delineated.
- Specific areas for the collection of materials for reuse and recycling will be defined and clearly labelled.
- Cleared vegetation will be used within the landscape programme.
- All topsoil will be stored in stockpiles for later use in site rehabilitation.

- Bins or skips will be provided for the collection and storage of recyclable material and waste. General construction waste will be stored in a skip located at the workshop on Lot 198 DP752025. Waste food will be removed and stored in a vermin proof bin for collection by a waste contractor. Paper waste generated from site offices, plastics and glass will be collected separately for recycling.
- Hazardous wastes (including empty drums, rags, soil contaminated with oil) will be separated from nonhazardous wastes and managed in accordance with the relevant legislation.
- Liquid wastes (chemicals, oils and greases) will be temporarily stored in an appropriately bunded area and disposed of via a licensed contractor. Wash down water will be directed to an appropriate settlement basin if quality is acceptable.
- Copies of current licences of all waste removal contractors on site will be retained.
- All documentation relating to waste removal and disposal will be retained on file at the site. This documentation will include dockets for the removal and disposal of waste at a licensed facility.
- Waste material will be progressively separated and stockpiled in designated areas for collection. Adequately secure waste disposal areas to prevent access by wildlife.
- All waste licences will be reviewed and terms and conditions for compliance monitored.
- Any materials and waste remaining on the site following completion of extraction operations will be recycled or sent for disposal. This will be either recycled or disposed of in an appropriate manner.

Emergency Response

- All personnel on site during operations will be trained in appropriate procedures including site induction, materials handling and response procedures.
- Emergency response procedures will be developed and put in place. Appropriate individuals will be appointed as emergency services liaison officers.
- An emergency response table listing contact details of all relevant parties required in an environmental emergency will be prepared.
- A Register of Environmentally Hazardous Materials to be stored and used on site will be established.
- Appropriate safety and spill response equipment will be made available on site.
- All materials to be used and stored on site will be clearly labelled.
- Emergency response procedures will be reviewed and updated bi-annually.
- Appropriate safety and response equipment will be available at all times.

Hazard, Risk and Safety

- A licence to keep dangerous goods will be obtained from WorkCover NSW for all materials stored on site which require licensing.
- A Register of Hazardous Materials setting out details of quantities, storage and specific handling requirements for all relevant materials stored on site will be established.
- Material Safety Data Sheets for all hazardous materials stored on site will be obtained.
- Appropriate storage and secondary containment facilities for all hazardous materials stored on site will be provided. All bunded areas will be designed to contain at least 110% of the volume of materials stored within the area.
- A Safety Officer will be appointed for the development.
- All flammable material storage areas will be located at least ten metres from possible ignition sources.
- Contents of all above ground storage areas will be clearly labelled.
- All hazardous and dangerous goods storage areas will be secured and appropriate signage displayed. All incompatible material will be segregated.

- All personnel will be trained in the handling and safety procedures required for the hazardous materials stored and used on site.
- An Emergency Response Plan will be developed and put in place.
- A mobile spill control kit containing appropriate absorbent materials, neutralising chemicals and other spill containment equipment will be provided.
- Personal protective equipment will be provided and personnel instructed in its use.
- Any spills beyond the bunded area will be cleaned up immediately and the contaminated material disposed of in an appropriate manner.
- The relevant authorities will be contacted in the event of a leak or spill and any instructions followed. Any contamination will be remediated to the satisfaction of the regulatory authorities.
- Any spills or hazardous wastes that cannot be recycled will be collected and disposal by a licensed waste contractor arranged. All records of waste removal on site will be retained.

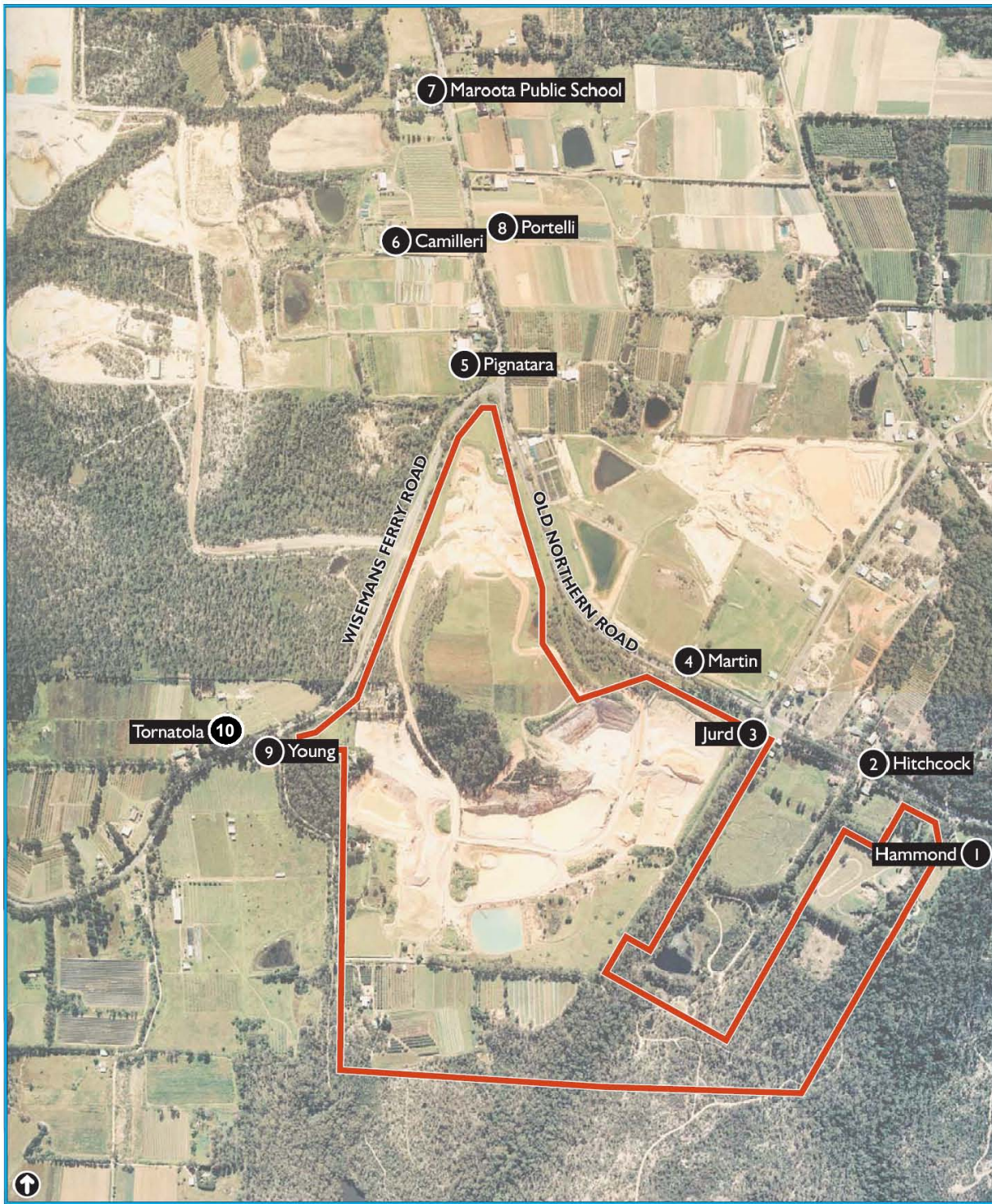


Figure 4.7

NOISE MONITORING AND ASSESSMENT LOCATIONS

Scale
0 500 Metres

— Hitchcock Road site boundary

● Monitoring locations

APPENDIX 4 NOISE ASSESSMENT LOCATIONS

APPENDIX 5 VEGETATION OFFSET PLAN

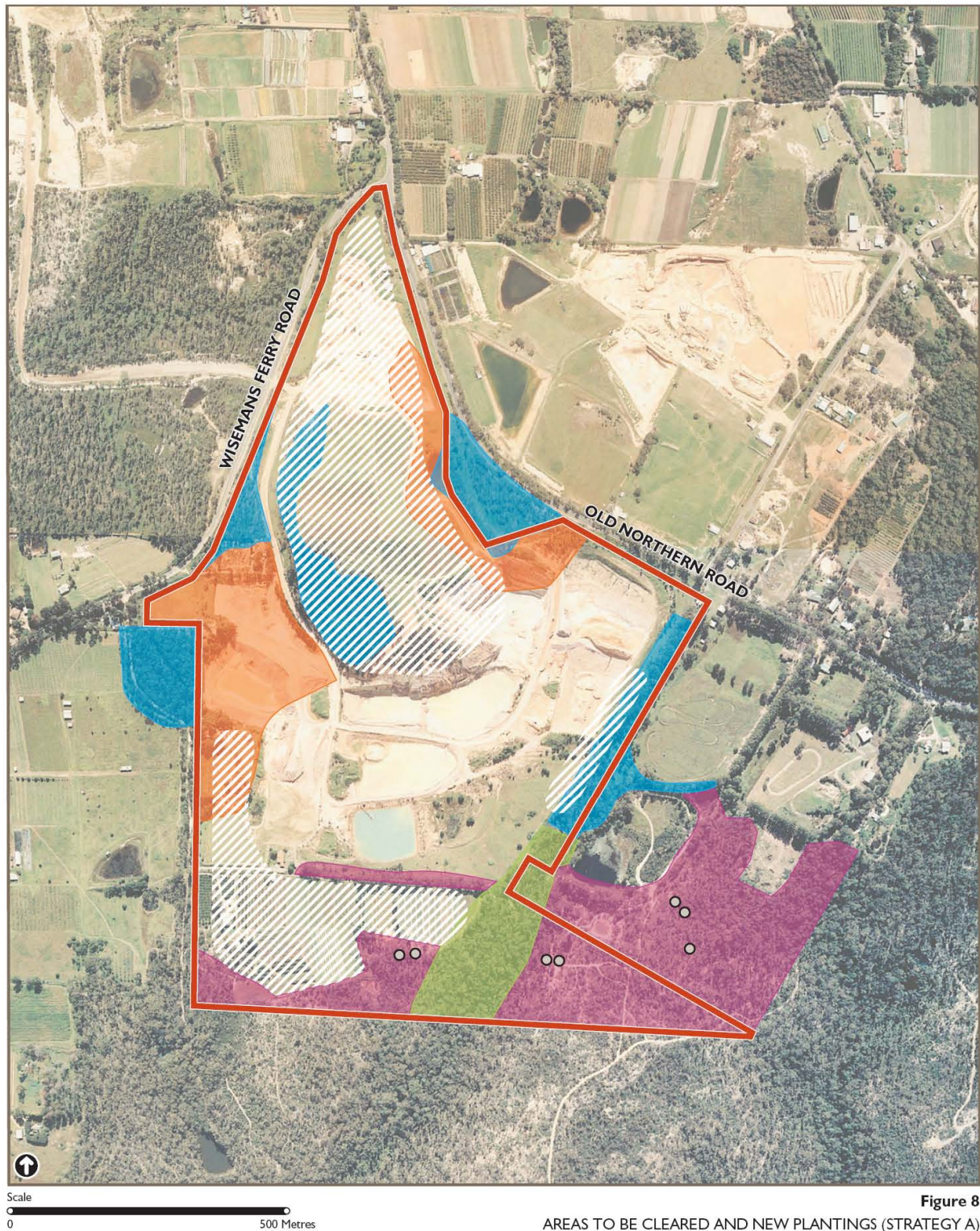


Figure 8

AREAS TO BE CLEARED AND NEW PLANTINGS (STRATEGY A)

- Hitchcock Road site
- Areas for new plantings
- *Tetratheca glandulosa*
- Sydney Sandstone Gully Forest
- Sydney Sandstone Ridgetop Woodland
- Sydney Hinterland Transition Woodland
- ▨ Area to be cleared

Note: Sydney Hinterland Transition Woodland shown at time of photograph (2005)
Parts of this area can be cleared under the current consent

APPENDIX 6 CRITERIA TO MONITOR SUCCESS OF REVEGETATION



Methodology to assess success of revegetation
within Hitchcock Road site

Table 3-1 Criteria to monitor success of revegetation

Category	Criteria	Target			Existing condition of vegetation to be removed
		5 years	10 years	15 years	
Native species	Native species diversity (average number per 400m ² quadrat)	20	35	40	46
	Average number of characteristic species for the site occurring within 400m ²	15	20	27	34.5 (+/- 1.5)
	Native species cover (% of vegetation cover in 400m ² quadrat)	>50	>85	>95	99
Weeds	Weed abundance (% of vegetation cover in 400m ² quadrat)	<50	<15	<5	<1
	Invasive or Noxious weed species (e.g. Lantana, Blackberry, exotic vines)	Controlled	Controlled	Controlled	Restricted
Vegetation structure	Vegetation structure	Canopy, shrublayer and groundcover species present. However, structure limited, generally consisting of low canopy and ground cover.	Canopy, shrublayer and groundcover species present. Structure beginning to develop.	Well structured and includes canopy, mid- storey and ground cover units	Well structured and includes canopy, mid- storey and ground cover units
Canopy ^a	Average canopy height (m)	4	8	12	12-16
	Native canopy cover (minimum % cover) [modified braun blanquet scale] ^b	5 [3]	5 [3]	5 [3]	5 [3]
Shrub layer ^a	Native shrub cover (minimum % cover) [modified braun blanquet scale] ^b	10 [3]	15 [3]	25 [4]	32.5 (+/-7.5) [4]
	Average shrub layer height (m)	0.5	1	1	1.25
Ground cover	Native ground cover (minimum % cover) [modified braun blanquet scale] ^b	5 [3]	10 [3]	10 [3]	15 (+/-5) [3]

PB

2116893A PR_8673

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Category	Criteria	Target			Existing condition of vegetation to be removed
		5 years	10 years	15 years	
Ecosystem function	Habitat values	Vegetation structure beginning to develop.	Woodland birds recorded. Habitat structure beginning to develop, including groundcover such as leaf litter and fallen timber.	Woodland birds recorded. Habitat structure beginning to develop, including groundcover such as leaf litter and fallen timber.	Provides minimal habitat for fauna, however, many woodland birds present. Well structured habitat, includes moderate levels of leaf litter and fallen timber.
	Natural regeneration indicating dispersal of seed into site and/or presence of soil seed bank	Yes	Yes	Yes	Yes

Notes: a) cover of canopy species and shrubs may be higher initially due to successional changes with dense growth potentially occurring initially particularly due to the presence of colonising species. Natural thinning is expected as colonising species senesce and canopy species mature, however, some thinning of vegetation may be required after 10 years if too dense.

b) Modified braun blanquet scale:

1. <5%- rare or few individuals
2. <5% common
3. 5-25%
4. 25-50%
5. 50-75%
6. 75-100%

APPENDIX 7 FINAL LANDFORM PLANS



Figure 9
FINAL LANDFORM (STRATEGY A)

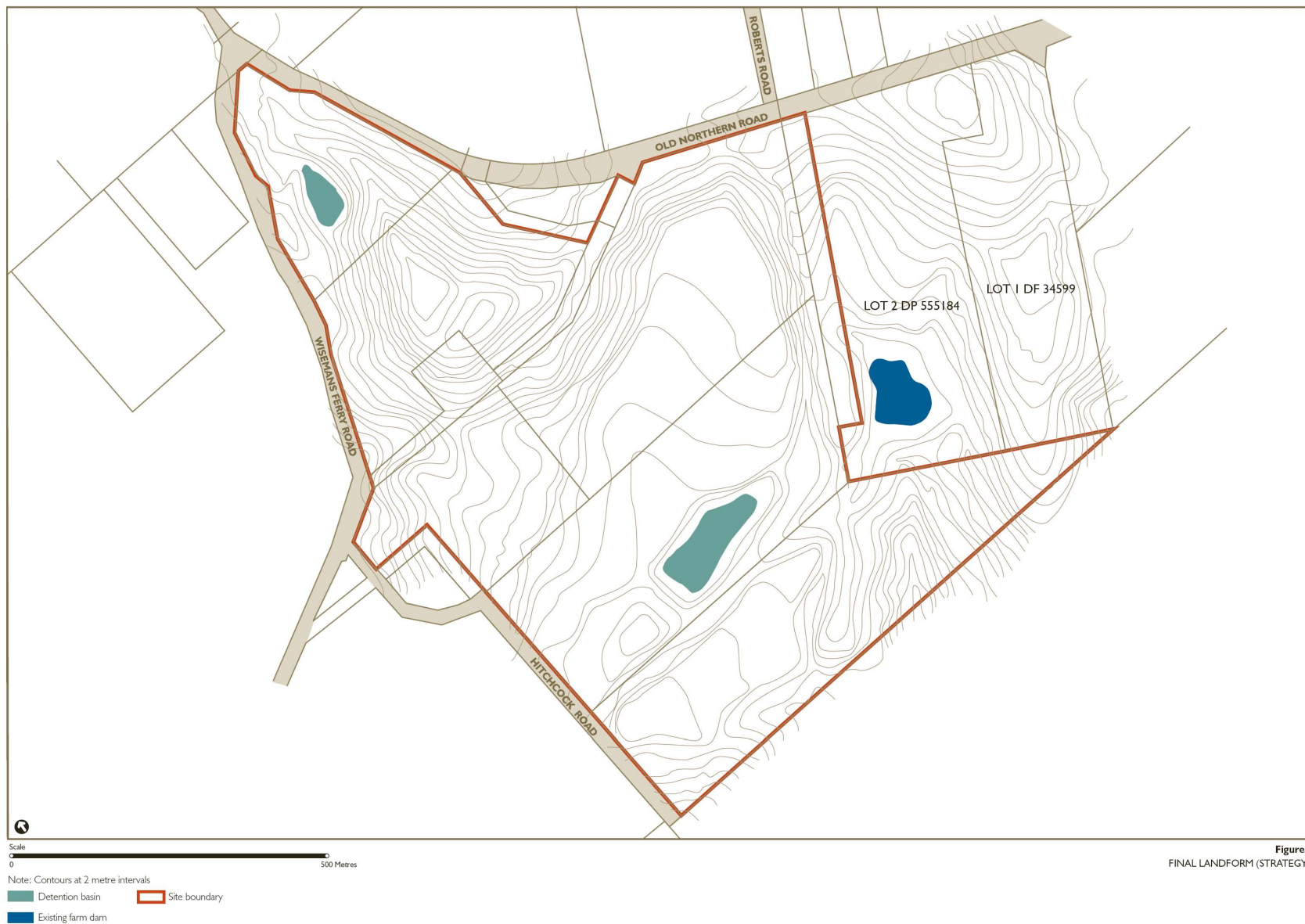
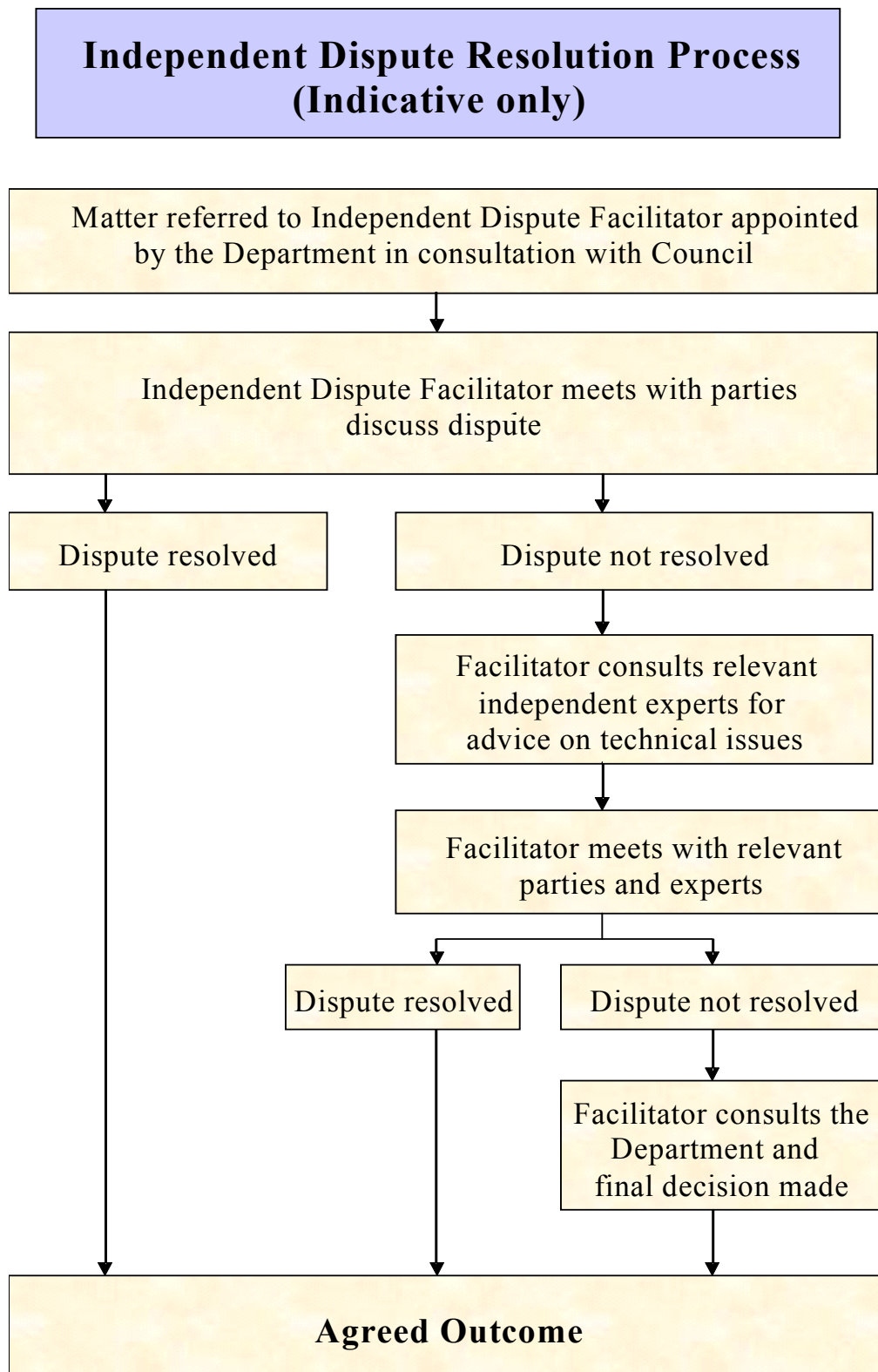


Figure 10
FINAL LANDFORM (STRATEGY B)

**APPENDIX 8
INDEPENDENT DISPUTE RESOLUTION PROCESS**



Appendix 2

Department of Planning Letter Dated 13 July 2010



Planning

Mining & Industry Projects

Phone: (02) 9228 6298

Fax: (02) 9228 6466

Email: kane.winwood@planning.nsw.gov.au

Mr Peter Cummins
PF Formation
1774 Wisemans Ferry Road
MAROOTA, NSW 2756

Dear Mr Cummins,

**Hitchcock Road Sand Project (06_0104)
Independent Environmental Auditor**

I refer to your email dated 28 June 2010 requesting the approval of Mr Bruce Adcock of Environmental Planning Pty Ltd to conduct the independent environmental audits for the project.

I wish to advise you that the Director-General has approved the appointment of Mr Adcock in accordance with condition 6 of Schedule 5 of the project approval (06_0104).

If you have any further enquiries please contact Kane Winwood.

Yours sincerely

DKitto 13/7/10

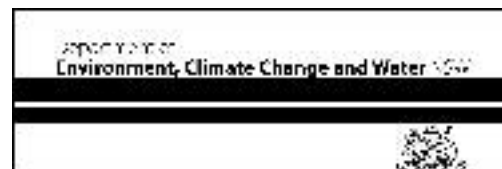
David Kitto
Director
Mining & Industry Projects
as Delegate for the Director-General

Appendix 3

Environment Protection Licence No. 3407

Environment Protection Licence

Licence - 3407



Licence Details

Number:	3407
Anniversary Date:	30-September
Review Due Date:	05-May-2011

Licensee

ETRA PTY LTD
1774 WISEMANS FERRY ROAD
MAROOTA NSW 2756

Licence Type

Premises

Premises

ETRA PTY LTD
WISEMANS FERRY ROAD
MAROOTA NSW 2756

Scheduled Activity

Extractive activities

Fee Based Activity

Land-based extractive activity

Scale

> 100000 - 500000 T obtained

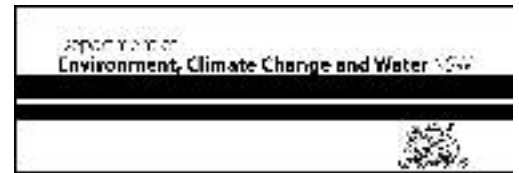
Region

Metropolitan
Level 3, NSW Govt Offices, 84 Crown Street
WOLLONGONG NSW 2500
Phone: 02 4224 4100
Fax: 02 4224 4110

PO Box 513 WOLLONGONG EAST
NSW 2520

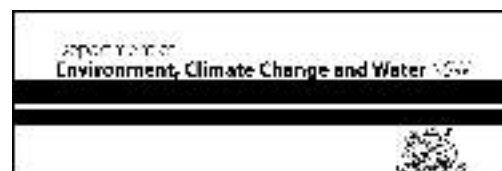
Environment Protection Licence

Licence - 3407



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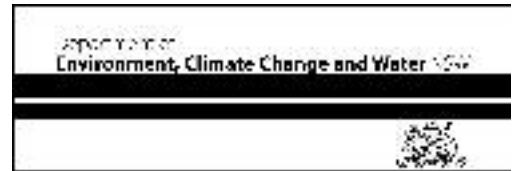


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Information about this licence

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

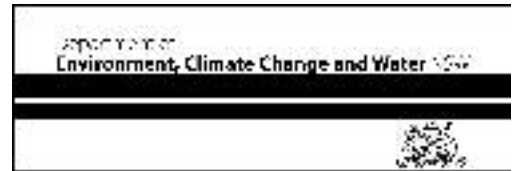
For each licence fee period you must pay:

- 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

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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:

ETRA PTY LTD
1774 WISEMANS FERRY ROAD
MARROOTA NSW 2756

subject to the conditions which follow.

1 Administrative conditions

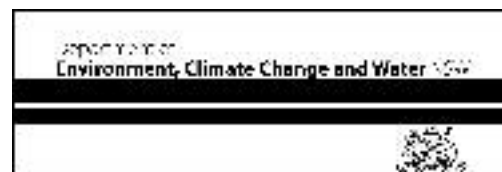
A1 What the licence authorises and regulates

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.

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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.

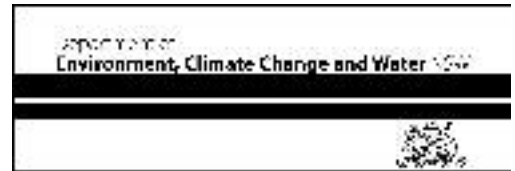
Scheduled Activity
Extractive activities

Fee Based Activity	Scale
Land-based extractive activity	> 100000 - 500000 T obtained

A1.3 Not applicable.

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A2 Premises to which this licence applies

A2.1 The licence applies to the following premises:

Premises Details
ETRA PTY LTD
WISEMANS FERRY ROAD
MARROOTA
NSW
2756
PARISH OF CORNELIA: LOT2DP703821; LOT198DP752025; LOT 1 DP 588936; LOTS1DP595538; WR35733
PARISH OF MARROOTA LOT 1DP1013943; LOT2DP555184; LOT167 & 214 DP752039; LOT2DP233818; LOT1DP34599;
LOT 1 and 2DP570966; LOTS 1 & 2 DP1063296; LOT 1DP1091018 and LOT LOT 1DP223323

A3 Other activities

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

Concrete Works

A4 Information supplied to the EPA

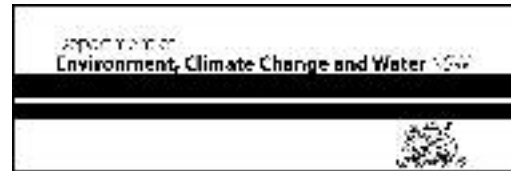
A4.1 Works and activities must be carried out in accordance with the proposal contained in the licence application, except as expressly provided by a condition of this licence.

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

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- (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 The following points referred to in the table below are identified in this licence for the purposes of monitoring and/or the setting of limits for the emission of pollutants to the air from the point.

Air

EPA Identification no.	Type of Monitoring Point	Type of Discharge Point	Description of Location
1	Dust monitoring		Dust gauge labelled "1- School" on the Map faxed to the EPA on 5 August 2002
2	Dust monitoring		Dust gauge labelled 2 - intersection of Hitchcock and Wisemans Ferry Road
3	Dust monitoring		Dust gauge labelled as "Jurds Paddock - 3 Por168" on the map faxed to the EPA on 5 August 2002

- 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.

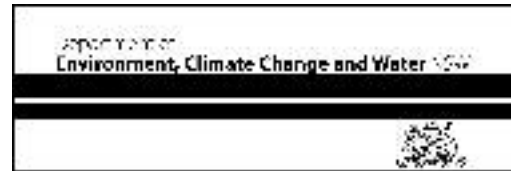
L2 Load limits

- L2.1 Not applicable.

- L2.2 Not applicable.

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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 The licensee must not cause, permit or allow any waste generated outside the premises to be received at the premises for storage, treatment, processing, reprocessing or disposal or any waste generated at the premises to be disposed of at the premises, except as expressly permitted by the licence.

L5.2 This condition only applies to the storage, treatment, processing, reprocessing or disposal of waste at the premises if those activities require an environment protection licence.

L6 Noise Limits

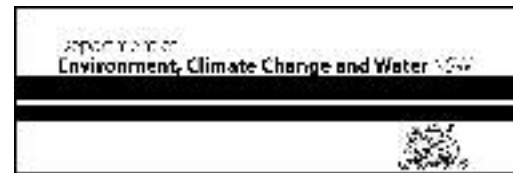
L6.1 Noise generated at the premises must not exceed the noise limits presented in the table below. Note that the noise limits represent the noise contribution from the activity on the premise.

Noise Limits (dB(A))

Location	Day	Night	
	L _{Aeq} (15 minute)	L _{Aeq} (15 minute)	L _{A1} (1 minute)
Maroota Public School	40	NA	NA
Pignataro	40	37	52
Tornatola	39	38	52

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Note the Locations are as described in the Richard Heggie Associates Pty Ltd, 13 April 2005, *Lot 198 DP 752025 Old Northern Road, Maroota Sand Extraction Project Noise Impact Assessment*. Report 10-3138-R1.

L6.2 For the purposes of condition L6.1:

- Day is defined as the period from 7am to 6pm Monday to Saturday and 8am to 6pm Sundays and Public holidays.
- Evening is defined as the period 6pm to 10pm,
- Night is defined as the period from 10pm to 7am Monday to Saturday and 10pm to 8am Sundays and Public Holidays.

L6.3 Noise from the premises is to be measured at the most affected point or within the residential boundary or at the most affected point within 30m of the dwelling (rural situations) where the dwelling is more than 30m from the boundary to determine compliance with the noise $L_{Aeq,(15min)}$ limits in condition L6.1

Noise from the premises is to be measured at 1m from the dwelling façade to determine compliance with the $L_{A1(1\text{ minute})}$ noise limits in condition L6.1

Where it can be demonstrated that direct measurement of noise from the premises is impractical, the EPA 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 levels where applicable.

Definition

$L_{A10(15\text{ minute})}$ is the sound pressure level that is exceeded for 10% of the time when measured over a 15 minute period.

Note: Noise measurement

For the purpose of noise measurements required for this condition, the L_{A10} noise level must be measured or computed at any point specified in L6.3 over a period of 15 minutes using "FAST" response on the sound level meter.

For the purpose of the noise criteria for this condition, 5dBA must be added to the measured level if the noise is substantially tonal or impulsive in character. The location or point of impact can be different for each development, for example, at the closest residential receiver or at the closest boundary of the development. Measurement locations can be:

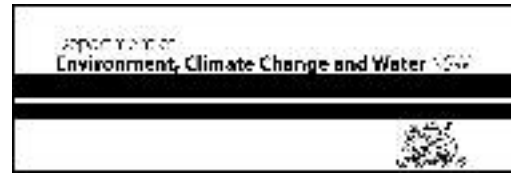
1 metre from the facade of the residence for night time assessment;

at the residential boundary;

30 metres from the residence (rural situations) where the boundary is more than 30 metres from residence.

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- L6.4 The noise emission limits identified in **L6.1** apply for prevailing meteorological conditions (winds up to 3m/s at 10 metres above ground level), temperature inversion conditions of up to 3°C/100m and wind speed up to 2m/s at 10 metres above the ground. Noise impacts that may be enhanced by temperature inversions must be addressed by:
- documenting noise complaints received to identify any higher level of impacts or patterns of temperature inversions;

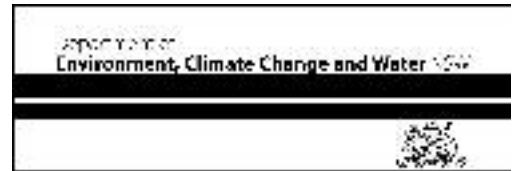
where levels of noise complaints indicate a higher level of impact then actions to quantify and ameliorate any enhanced impacts under temperature inversion conditions should be developed and implemented.

- L6.5 The proponent shall prepare and implement a Noise Management Plan (NMP). The NMP must include but need not be limited to:
- a) The primary objective of minimising noise emissions from the premises
 - b) A system that allows for periodic assessment of Best Management Practice (BMP) and Best Available Technology Economically Achievable (BATEA) to minimise noise emissions at all times and to seek to achieve noise contributions not exceeding the Project Specific Noise Levels at all receiver locations.
 - c) Measures to monitor noise performance and respond to complaints.

- L6.6 The proponent shall develop and implement a Traffic Noise Management Strategy (TNMS). The TNMS shall include all feasible and reasonable noise management strategies for vehicle movements associated with the facility, that should include but are not necessarily be limited to;
- driver training to ensure that noisy practices such as the use of compression engine brakes are avoided or minimized near sensitive receivers,
 - best noise practice in the selection and maintenance of vehicle fleets,
 - movement scheduling where practicable to minimize noise impacts during sensitive times of the day,
 - a system of audited management practices that identifies non conformances, initiates and monitors corrective and preventative action (including disciplinary action for breaches of noise minimization procedures) and assesses the implementation and improvement of the TNMS,
 - clauses in conditions of employment, or in contracts, of drivers that require adherence to the noise minimization procedures and facilitate effective implementation of the disciplinary actions for breaches of the procedures.

L7 Hours of Operation

- L7.1 Activities covered by this licence must only be carried out between the hours of 0600 and 1800 Monday to Friday, and 0600 and 1800 Saturday, and at no time on Sundays and Public Holidays.



4 Operating conditions

O1 Activities must be carried out in a competent manner

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

This includes:

- (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.

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 Dust Control

O3.1 The premises must be maintained in a condition which minimises or prevents the emission of dust from the premises.

O3.2 All loaded trucks entering and leaving the premises must have their loads covered.

O4 Potentially offensive odour

O4.1 The licensee must not cause or permit the emission of offensive odour beyond the boundary of the premises.

Note: Section 129 of the Protection of the Environment Operations Act 1997, provides that the licensee must not cause or permit the emission of any offensive odour from the premises but provides a defence if the emission is identified in the relevant environment protection licence as a potentially offensive odour and the odour was emitted in accordance with the conditions of a licence directed at minimising odour.

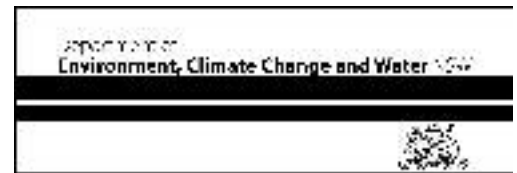
5 Monitoring and recording conditions

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.

Environment Protection Licence

Licence - 3407



- M1.2 All records required to be kept by this licence must be:
- in a legible form, or in a form that can readily be reduced to a legible form;
 - kept for at least 4 years after the monitoring or event to which they relate took place; and
 - 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:
- the date(s) on which the sample was taken;
 - the time(s) at which the sample was collected;
 - the point at which the sample was taken; and
 - the name of the person who collected the sample.

M2 Requirement to monitor concentration of pollutants discharged

- M2.1 For each monitoring/discharge point or utilisation area specified below (by a point number), the licensee must monitor (by sampling and obtaining results by analysis) the concentration of each pollutant specified in Column 1. The licensee must use the sampling method, units of measure, and sample at the frequency, specified opposite in the other columns:

Air

POINT 1

Pollutant	Units of measure	Frequency	Sampling Method
Particulates - Deposited Matter	grams per square metre per month	Monthly	AM-19

POINT 2

Pollutant	Units of measure	Frequency	Sampling Method
Particulates - Deposited Matter	grams per square metre per month	Monthly	AM-19

POINT 3

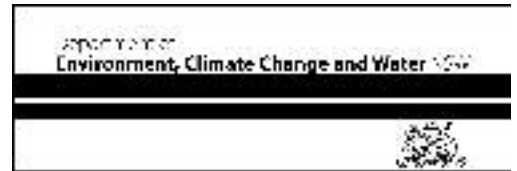
Pollutant	Units of measure	Frequency	Sampling Method
Particulates - Deposited Matter	grams per square metre per month	Monthly	AM-19

M3 Testing methods - concentration limits

- M3.1 Monitoring for the concentration of a pollutant emitted to the air required to be conducted by this licence must be done in accordance with:
- any methodology which is required by or under the Act to be used for the testing of the concentration of the pollutant; or

Environment Protection Licence

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- (b) if no such requirement is imposed by or under the Act, any methodology which a condition of this licence requires to be used for that testing; or
- (c) if no such requirement is imposed by or under the Act or by a condition of this licence, any methodology approved in writing by the EPA for the purposes of that testing prior to the testing taking place.

Note: The Protection of the Environment Operations (Clean Air) Regulation 2002 requires testing for certain purposes to be conducted in accordance with test methods contained in the publication "Approved Methods for the Sampling and Analysis of Air Pollutants in NSW".

M3.2 Not applicable.

M4 Recording of pollution complaints

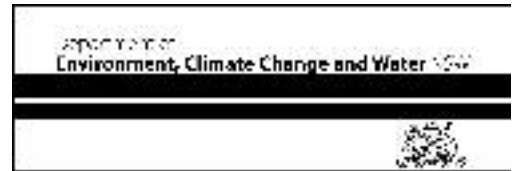
- M4.1 The licensee must keep a legible record of all complaints made to the licensee or any employee or agent of the licensee in relation to pollution arising from any activity to which this licence applies.
- M4.2 The record must include details of the following:
 - (a) the date and time of the complaint;
 - (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.

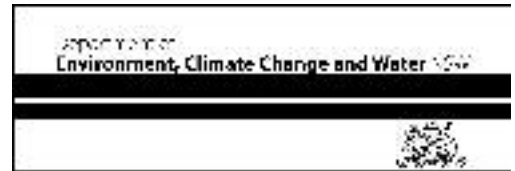
- R1.3 Where this licence is transferred from the licensee to a new licensee:
- (a) the transferring licensee must prepare an Annual Return for the period commencing on the first day of the reporting period and ending on the date the application for the transfer of the licence to the new licensee is 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.

Environment Protection Licence

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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.

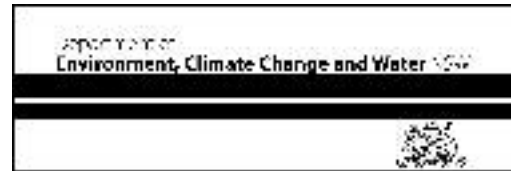
- R2.1 Notifications must be made by telephoning the Environment Line service on 131 555.
- R2.2 The licensee must provide written details of the notification to the EPA within 7 days of the date on which the incident occurred.

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.

Environment Protection Licence

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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:
- the cause, time and duration of the event;
 - the type, volume and concentration of every pollutant discharged as a result of the event;
 - 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;
 - 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;
 - action taken by the licensee in relation to the event, including any follow-up contact with any complainants;
 - details of any measure taken or proposed to be taken to prevent or mitigate against a recurrence of such an event; and
 - 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.

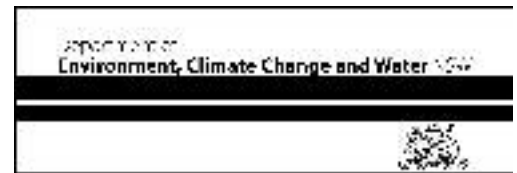
Pollution studies and reduction programs

U1 Completed Pollution Reduction Programs (PRP)

PRP No	PRP	Description	Completed Date
1	Impervious bunded area to fuel storage	The bunded area serving the above ground fuel storage tank located outside the main workshop made impervious	1 May 2008

Environment Protection Licence

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2	tank Roofed bundled area to fuel storage	The bunded area serving the above ground fuel storage tank located outside the main workshop fitted with roof to exclude rainwater	1 May 2008
3	tank Upgrade overflow point of sediment dam	The overflow point to the sediment dam upgraded	1 May 2008
4	Prevent mud tracking from premises	Upgraded controls to help prevent mud tracking from the premises onto Wiseman's Ferry Road	1 May 2008
5	PM10 dust monitoring	PM10 dust monitoring conducted from 1 March 2008 to 1 March 2009	1 March 2009

Special conditions

Dictionary

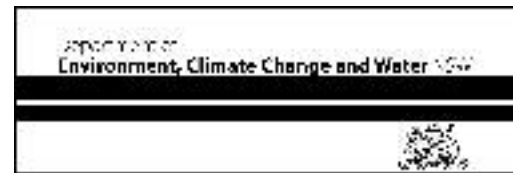
General Dictionary

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

Environment Protection Licence

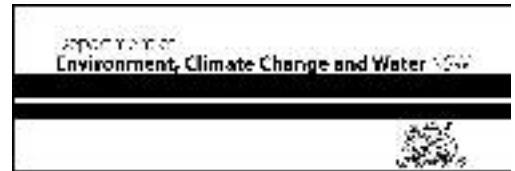
Licence - 3407



pollutants	
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.
general solid waste (non-putrescible)	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
general solid waste (putrescible)	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
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
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.

Environment Protection Licence

Licence - 3407



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.
restricted solid 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
special 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> .
TSP	Means total suspended particles
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 type	Means liquid, restricted solid waste, general solid waste (putrescible), general solid waste (non-putrescible), special waste or hazardous waste

Mr Nigel Sargent

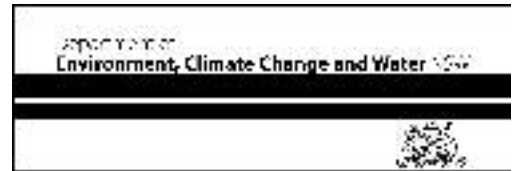
Environment Protection Authority

(By Delegation)

Date of this edition - 31-Mar-2010

Environment Protection Licence

Licence - 3407



End Notes

- 1 Licence varied by notice V/M Upgrade, issued on 06-Jul-2000, which came into effect on 06-Jul-2000.
- 2 Licence varied by notice 1007929, issued on 02-Jul-2001, which came into effect on 27-Jul-2001.
- 3 Licence varied by notice 1010310, issued on 23-Aug-2002, which came into effect on 17-Sep-2002.
- 4 Licence varied by notice 1024315, issued on 16-Jan-2003, which came into effect on 10-Feb-2003.
- 5 Licence varied by notice 1076205, issued on 29-Feb-2008, which came into effect on 29-Feb-2008.
- 6 Licence varied by Change to Schedule 1 , issued on 02-May-2008, which came into effect on 02-May-2008.
- 7 Condition A1.3 Not applicable varied by notice issued on <issue date> which came into effect on <effective date>
- 8 Licence varied by notice 1099065, issued on 18-May-2009, which came into effect on 18-May-2009.
- 9 Licence varied by notice 1111706, issued on 31-Mar-2010, which came into effect on 31-Mar-2010.

Appendix 4

Letters to Agencies and Response



**ENVIRONMENTAL
PLANNING Pty Ltd**

Unit 8 1051 Pacific Highway
PO Box 6112
Pymble NSW 2073
Phone (02) 9983 1500

bruce@eplanning.com.au
www.eplanning.com.au
ABN 23 064 176 174

26 November 2010

Ms Kristine McKenzie
Environment and Planning Group
Baulkham Hills Shire Council
PO Box 75
Castle Hill NSW 1765

Dear Madam,

Independent Environmental Audit of Hitchcock Road Sand Project at Maroota

The above project was approved by the Minister for Planning on 7 February 2009. Schedule 5 Condition 6 of the project approval states as follows.

Within 12 months of the date of this approval, and every 3 years thereafter, unless the Director-General directs otherwise, the Proponent shall commission and pay the full cost of an Independent Environmental Audit of the project. This audit shall:

- (a) be conducted by a suitably qualified, experienced, and independent person(s) whose appointment has been approved by the Director-General;
- (b) include consultation with the relevant agencies;
- (c) assess the environmental performance of the project, and its effects on the surrounding environment;
- (d) assess whether the project is complying with the relevant standards, performance measures and statutory requirements; and
- (e) review the adequacy of any strategy/plan/program required under this approval, and, if necessary, recommend measures or actions to improve the environmental performance of the project, and/or any strategy/plan/program required under this approval.

On 13 July 2010 the Director-General approved the undersigned to conduct the independent environmental audit. With regard to condition (b) above I am writing to you representing one of the relevant agencies.

The 2009-2010 Annual Environmental Management Report and supporting documents for the project are available for download at the proponent's (PF Formation) website by following the links for the Hitchcock Road Sand Extraction Development at <http://www.pfformation.com.au/Pages/news.htm>. For your information the attached A3 color aerial photograph outlines the extent of the project as at April 2009 and the approximate cadastral boundaries.

Could your agency please forward a response including any comments or issues on the project to the undersigned within 21 days or 20 December 2010.

Yours faithfully

Bruce Adcock
Director

Enclosure: A3 colour aerial photograph



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PLANNING Pty Ltd**

Unit 8 1051 Pacific Highway
PO Box 6112
Pymble NSW 2073
Phone (02) 9983 1500

bruce@eplanning.com.au
www.eplanning.com.au
ABN 23 064 176 174

26 November 2010

Mr Iain Paterson
Department of Primary Industries Minerals
PO Box 344
Hunter Region Mail Centre NSW 2310

Dear Sir,

Independent Environmental Audit of Hitchcock Road Sand Project at Maroota

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Yours faithfully

Bruce Adcock
Director

Enclosure: A3 colour aerial photograph



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Pymble NSW 2073
Phone (02) 9983 1500

bruce@eplanning.com.au
www.eplanning.com.au
ABN 23 064 176 174

26 November 2010

Mr K Horkan
Head Sydney Industry
Department of Environment, Climate Change and Water
PO Box 668
Parramatta NSW 2150

Dear Sir,

Independent Environmental Audit of Hitchcock Road Sand Project at Maroota

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Yours faithfully

Bruce Adcock
Director

Enclosure: A3 colour aerial photograph

THE HILLS SHIRE COUNCIL

129 Showground Road, Castle Hill NSW 2154
PO Box 75, Castle Hill NSW 1765

Telephone 02 9843 0555 Email council@thehills.nsw.gov.au

Facsimile 02 9843 0409 www.thehills.nsw.gov.au

DX 8455 Castle Hill ABN No. 25 034 494 656

15 December 2010



Mr Bruce Adcock - Director
Environmental Planning Pty Ltd
PO Box 6112
PYMBLE NSW 2073

Department of Planning Ref:
06_0104

Dear Mr Adcock

**Independent Environmental Audit of Project Approval 06_0104 Issued by
Department of Planning
PF Formation, Hitchcock Road Site, Maroota**

I refer to your letter dated 26 November 2010 in respect to Condition 6 of Schedule 5 of the Project Approval granted by the Department of Planning.

In response to your letter, Council staff have no concerns regarding Hitchcock Road. In this respect the site as a whole was inspected on 11 November 2010 at the bi-annual Liaison and Review Meeting. Please note however that as Council was not the determining authority for this consent the purpose of the site inspection was not to identify non-compliances with conditions of consent.

Thank you for the opportunity to comment on this matter. Should you wish to discuss the matter further please contact me on 9843 0319.

Yours faithfully

Kristine McKenzie
PRINCIPAL EXECUTIVE PLANNER

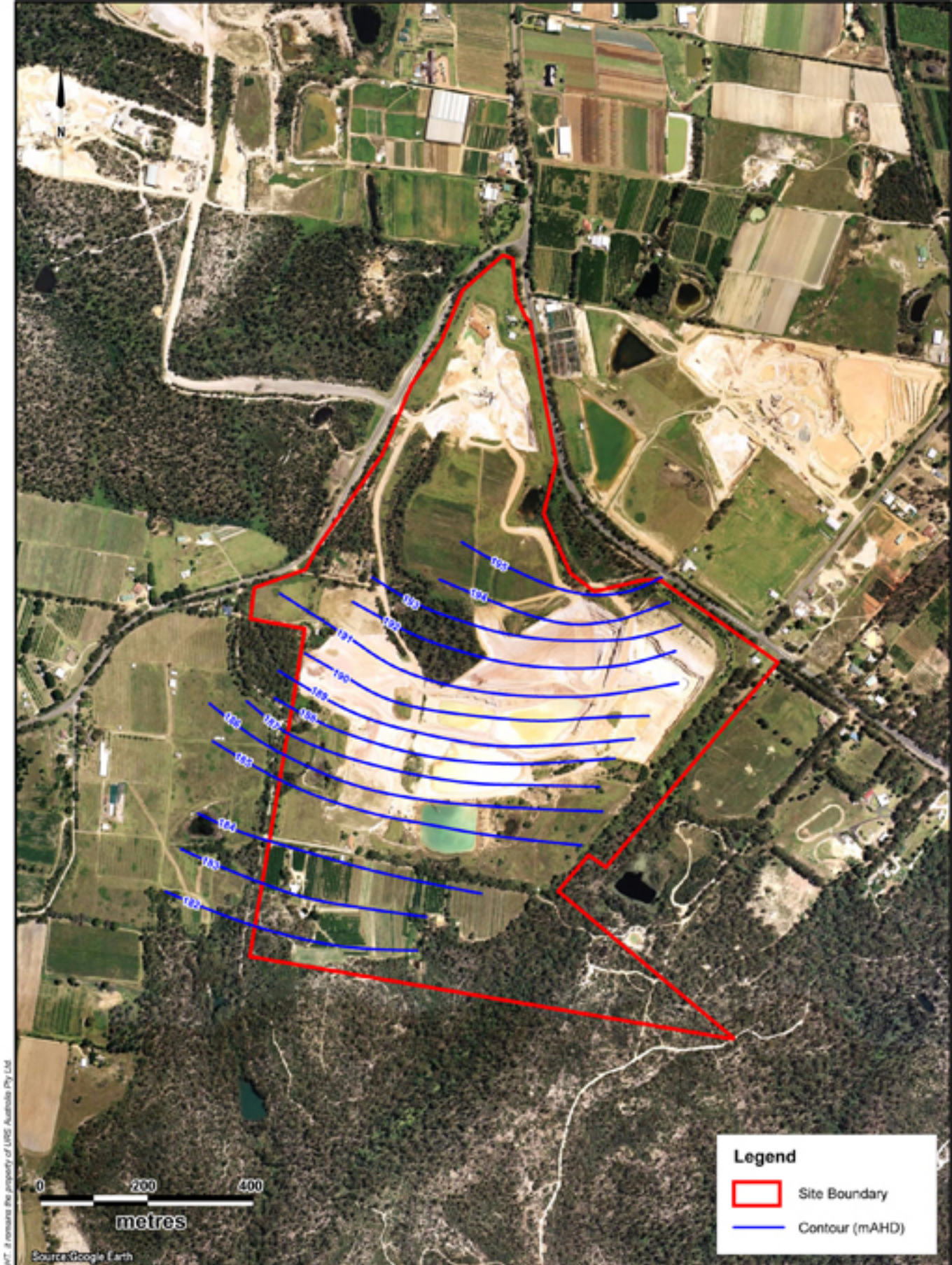
PF Formation, 1774 Wisemans Ferry Road, Maroota NSW 2756

Appendix 5

Hitchcock Road Site Survey Plan

Appendix 6

Hitchcock Road Site Depth of Mining Contours



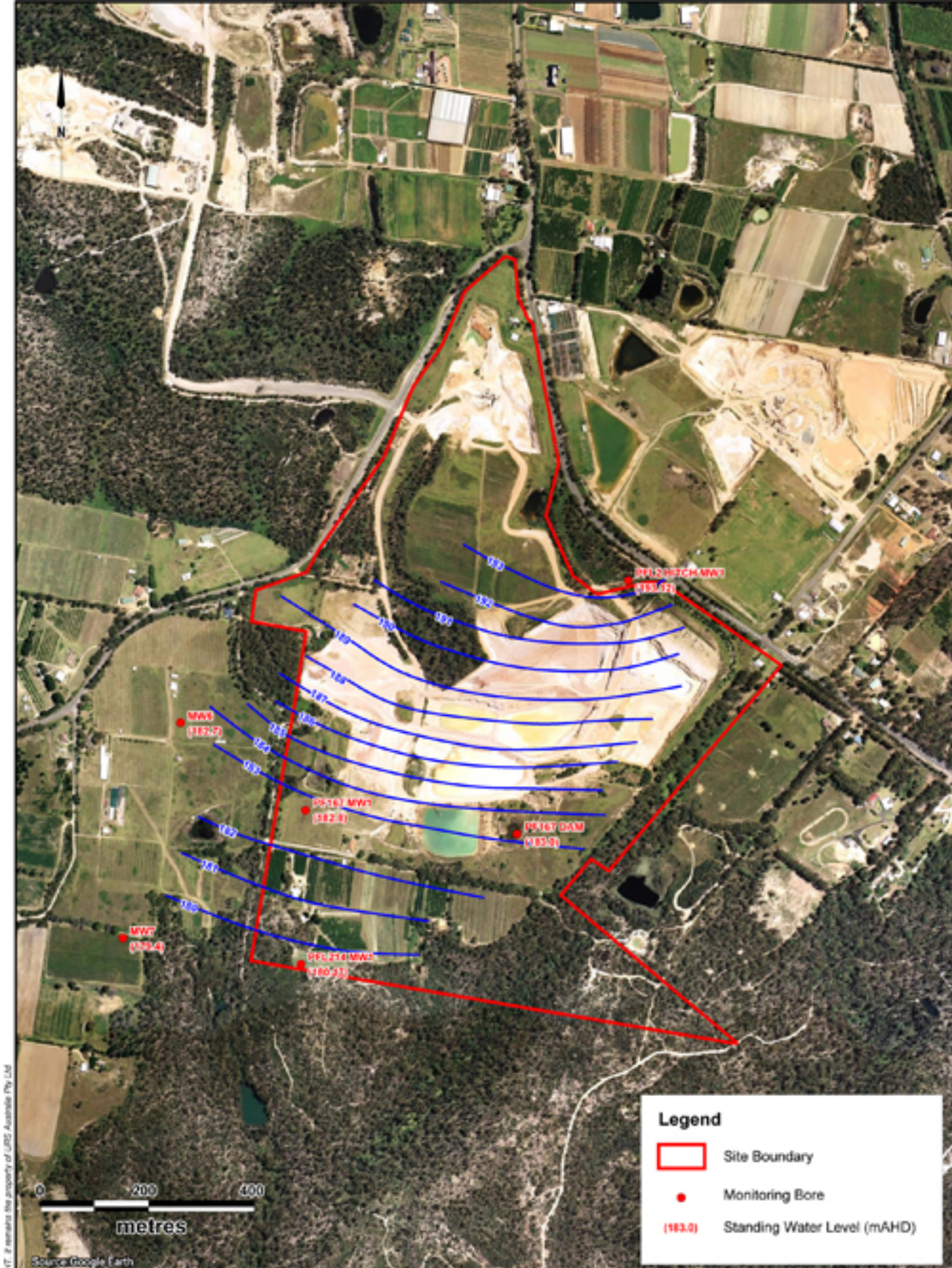
Legend

- Site Boundary
- Contour (mAHD)

Client PF FORMATION	Project HITCHCOCK ROAD, SAND EXTRACTION AND REHABILITATION PROJECT	Title HITCHCOCK ROAD SITE DEPTH OF MINING CONTOURS
	Drawn: AJW Approved: FC Date: 08/05/2009 Job No: 43346029 File No: 43346029-003.wor	Figure: 2

Appendix 7

Hitchcock Road Site Water Table Contours



Client PF FORMATION	Project HITCHCOCK ROAD, SAND EXTRACTION AND REHABILITATION PROJECT	Title HITCHCOCK ROAD SITE WATERTABLE CONTOURS @ 2/4/09
	Drawn: AJW Approved: FC Date: 08/05/2009 Job No: 43346029 File No: 43346029-002.wor	Figure: 1